

LITCHFIELD SCHOOL DISTRICT

Our mission is to provide rigorous and varied educational opportunities that challenge and engage all students to attain their highest level of intellectual, social, physical, and emotional growth. (2007)

**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052**

**Approved Minutes for July 17, 2013
(approved as written 7-31-13)**

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

A. NON-PUBLIC SESSION: RSA 91-A:3II (a,c) 5:00 p.m.

[Minutes of Non-Public Session are written under separate cover.]

The School Board entered into non-public session at 5:00 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting.

Non-Public session ended at 6:45 p.m.

I. PUBLIC SESSION 6:30 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 6:53 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from the June 26, 2013 non-public session:

Mr. York made a motion to approve the non-public minutes of June 13, 2013 as written. Mrs. D'Alleva seconded. The motion carried 4-0-0.

Mr. York made a motion to accept the resignation of Laurie Gatherum, CHS Business teacher. Mr. Bourque seconded. The motion carried 4-0-0.

Mr. York made a motion to accept the resignation of Lisa Petry, CHS Director of Guidance. Mr. Bourque seconded. The motion carried 4-0-0.

Mr. York made a motion to accept the resignation of Liana Wilbur, CHS Math teacher. Mr. Bourque seconded. The motion carried 4-0-0.

Mr. York made a motion to release Liana Wilbur, Laurie Gatherum, and Lisa Petry from their contracts. Mr. Bourque seconded. The motion carried 4-0-0.

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Mr. York made a motion to accept the nomination of Michael O'Keefe as part time Chemistry teacher at CHS at a salary of \$26,822 for the 2013-2014 academic year. Mrs. D'Alleva seconded. The motion carried 4-0-0.

Mr. Bourque made a motion to accept the nomination of Karen Kilgore as part time Chemistry teacher at CHS at a salary of \$23,512 for the 2013-2014 academic year. Mr. York seconded. The motion carried 4-0-0.

Mr. York made a motion to accept the nomination of Eliot Bamford as a Special Education teacher at CHS at a salary of \$60,281 for the 2013-2014 academic year. Mrs. D'Alleva seconded. The motion carried 4-0-0.

Mr. York made a motion to accept the nomination of Danielle Peckham as a Special Education teacher at GMS at a salary of \$38,710 for the 2013-2014 academic year. Mr. Bourque seconded. The motion carried 4-0-0.

E. Presentations & Recognitions

There were no presentations or recognitions.

F. Correspondence

There was no correspondence.

G. Approval of Draft Minutes:

- Public Session June 26, 2013

A minor revision was made to the minutes.

Mr. York made a motion to approve the public minutes of June 26, 2013 as amended. Mrs. D'Alleva seconded. The motion carried 4-0-1, with Mr. Miller abstaining.

H. Community Forum

There was no community forum.

I. Superintendent's Comments

- AP Exam Results

Dr. Cochrane reported that the District recently received the 2013 AP Exam results for CHS. He indicated that 36 students took 77 exams. He noted that the number of students that took the exams is slightly lower than the previous year, the average score is 2.95, which compares favorably with global numbers. Dr. Cochrane commented that the scores were approximately 6% higher than the previous year and was pleased that our very best student are performing very well. He indicated that he was proud of the results.

- ESEA Waiver Update

Dr. Cochrane presented information on the Elementary and Secondary Schools Act (ESEA) Waiver to the Board. He noted that New Hampshire has been working on a waiver to ESEA (NCLB) for 18 months. That waiver was recently approved by the United States Department of Education. The waiver allows the New Hampshire Department of Education (NHDOE) to provide more support to targeted schools to improve the educational opportunity of their students. The methodology for identification of schools who are identified as receiving support also changed. Under the ESEA waiver only schools which receive Title I funding are eligible for the supports. Dr. Cochrane reported that he was contacted by phone by staff from the Commissioner of Education's Office on June 28, 2013 and informed that the AYP Index Score data had been rerun and as a result of the latest data Campbell High School had been identified as a "Priority" School. Even though CHS AYP results are higher than the state high school average for the 2010-2012 period, CHS was identified because the majority of high schools in the state do not receive Title I funds.

Once he received the news Dr. Cochrane informed the School Board via email and indicated that the resources that would be provided by the NHDOE for Priority Schools aligned well to the strategic work that CHS, and the district generally, would be engaged in over the next several years. Dr. Cochrane also mentioned that he spoke with Principals Thompson and Lecklider regarding structuring the strategic work at all three all schools so that it was consistent across the district.

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Dr. Cochrane reported that he and Principal Rothhaus participated in a follow-up phone conversation with the Commissioner's Office staff the next Monday, July 1. He explained that most of the conversation dealt with the substantive aspects of the Priority School process. However, NHDOE staff did indicate that the NHDOE anticipated announcing the Priority Schools list as early as Friday July 5 and that if we were considering not accepting the designation we should inform the NHDOE before Friday. Dr. Cochrane indicated that he did not interpret that information as an indication that Wednesday July 3, only five days after the notice of the data being rerun and Campbell High School being designated as a Priority School, was an absolute deadline for refusal of Federal funds and subsequent removal of the designation but rather as a deadline for the pending announcement of the list of priority schools.

Mr. Miller expressed concerned about the possible negative impact of the "Priority School" designation and also about the conditions attached to the receipt of Title I funding. Mrs. D'Alleva expressed similar concerns and asked about the result if we do not accept the funds. Dr. Cochrane indicated that he had broached that topic with the Commissioner of Education that afternoon and that he was unsure if refusal of Title I funding at this point would remove the Priority School designation.

Mr. Miller commented that the understanding is that if we return the funds we opt out. Dr. Cochrane indicated that when he spoke to the Commission of Education today she indicated that there was a window of time to refuse the funding, but we missed the opportunity. Dr. Cochrane indicated that during the conversation with the Commissioner's Office on June 28 it was implied that it would be possible to avoid the Priority School designation if the District chose to decline Federal Title I funds. However, there was no specific discussion of the process involved (whether Federal funds that had been used by CHS could be reallocated to other Litchfield schools, whether the district would have to refuse all Title I funds, etc.).

Mr. Miller indicated that this is a conversation that must happen at the Board level. He commented that we do not know the impact this will have on our school and we do not want the State in our business. He noted that if there is no way to opt out, then the Board made an error by not having the discussion.

Mr. York indicated that there was nothing in the materials the Board received regarding a timeframe.

Mr. Miller commented that there is some good that can be done with the funds, but there is a larger down side as this is three years of loss of some local control. He noted that there is much buried in the information, such as requirements that could impact the way we teach in this district.

Dr. Cochrane indicated that there is no part of the strategic school improvement work that is an absolute mandate and that the school and district would have a great deal of choice in the strategic initiatives that we engaged in to improve the schools. Mr. Miller commented that if we do not meet the requirements it could result in the State requiring us to fund a "school improvement" position.

Dr. Cochrane commented that there is an appeals timeline to give notice by this Friday, July 19. He indicated we will put forth an appeal under special circumstances based on the process and especially the timeframes required as the Board has had no time to meet regarding this notification

Mr. York made a motion to recommend the Superintendent submit an appeal on the basis of the length of the timeline to respond to the ESEA notification.

Dr. Cochrane indicated that the appeal must be filed by Friday, July 19 at 4:30 pm. On August 19, we will have to speak on the appeal to the State Board of Education.

Mr. York requested that further information regarding implications of the appeal be provided for the Board at the next meeting.

Mr. Miller seconded the motion. The motion carried 5-0-0.

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- Enrollment Report – June 2013

Dr. Cochrane presented the June 2013 enrollment report to the Board. He noted that 1,495 students were enrolled during the month of June. Kindergarten registrations are at 57 and 1st grade registrations are at 73.

II. REPORTS

A. School Board Comments

Mr. York commented that he met with Frank Byron, Jason Hoch, the Town Attorney and Dr. Cochrane to discuss the biennial budgeting process. He indicated that everything is in place for biennial budgeting to occur. He noted that the Board needs to decide if we should move forward and provide benefits and disadvantages for the process. Mr. York indicated that if the Board decides to move forward with the two year budgeting process, a warrant article will need to be drafted. He commented that there were questions regarding how the process will work with the default budget. Mr. York indicated that the Board would move forward with a budget the first year and the second year budget could mirror the default budget. He noted that it was discussed that three types of reserve funds would be needed: special education, health and benefits, and capital). He indicated that year end funds from year one would carry over to year two.

Mr. Miller commented that since this is law, could the Board just implement a biennial budget without the voters' approval. Mr. York indicated that the Board could vote to adopt the RSA and then move forward without voter approval.

- School Budget Process

Mr. York commented that the budget process should be determined by the August 22 Board meeting. He indicated that the budget should be final by the first week of November by streamlining the process. He noted that the Board does not need every department manager to present and speak about their budget.

Mr. Miller asked Mr. York to draft the process and bring it forward to the Board at the next meeting.

Dr. Cochrane reported that he spoke with the administrative team regarding setting goals and defending any significant increase in that category. He recommended the Board does not have line by line discussions when reviewing the budget. He mentioned that the District will be projecting a \$400,000 decrease from the high school bond. Dr. Cochrane indicated that he does not foresee additional spending money for the District.

Mr. York expressed concern regarding the membership of the Negotiations Committee. He commented that there was no discussion by the Board regarding the current membership. He indicated Mr. Bourque expressed an interest in serving on that committee.

Mr. Miller commented that he would be happy to discuss the topic further in non-public session.

B. Committee Reports

- Budget Committee

Mr. York reported that the Budget Committee met on June 27, 2013. He noted that the Budget Committee discussed Board representatives to the Budget Committee.

III. OLD OR UNFINISHED BUSINESS

A. 2013 School Board Audit Questionnaire Signature

Board members signed completed the 2013 audit questionnaire.

B. Policies: 2nd Reading:

- Homework Guidelines (IKB)

Board members reviewed the policy and agreed that it provides good homework guidelines.

Mr. Miller made a motion to approve the Homework Guidelines policy. Mrs. D'Alleva seconded. The motion carried 5-0-0.

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- Communicating Electronically with Students (GBEBD)

Mr. York asked if student emails will be provided this year and how this will occur with younger students (elementary). He also suggested that parents should monitor their children's school email and that filters are in place for student protection.

Dr. Cochrane noted that [in Nashua] student emails were provided to students in grades 5-12.

Mr. York commented that this policy may already be outdated in comparison to mobile technology. Mr. Miller agreed.

Mr. York commented that constant review should be provided by IT and the high school Principal.

Dr. Cochrane commented that one of the features of this policy sets the expectation that staff and students take what they are communicating into consideration.

Mr. Miller indicated that there is no mention of repercussion for violations in the policy. Dr. Cochrane noted that the expectation for violations is normal progression of discipline.

Board members requested to review the policy further and revisit on July 31.

Dr. Cochrane mentioned that the Principals asked if the Board would consider revisiting the cell phone policy.

Mr. Miller suggested asking the Principals for their input regarding the content.

- Investment Policy (DFA) (annual approval)

Board members were asked to re-approve the Investment Policy. According to law, the Investment Policy must be re-approved annually.

Mr. York made a motion to approve the Investment Policy. Mr. Bourque seconded. The motion carried 5-0-0.

C. Policies: Review/Discussion:

- Staff Acceptable Use (EGA)
- Student Acceptable Use (IINDB)

Mr. Miller previously expressed concern regarding updating the acceptable use policies relative to the guest network. He asked that the District ensure all policies and practices are in alignment.

Dr. Cochrane provided responses to questions Mr. Miller asked via email regarding student access to the guest network. He commented that in answer to Mr. Miller's question regarding access to the District's system, a student does not have access to our system – only our network as they are part way through the firewall. He noted the definition of our network is inside the firewall.

Dr. Cochrane noted that in response to Mr. Miller's question regarding filtering settings, the filters are more restrictive on the guest network than on our own.

Mr. Miller indicated if we are providing an access point that is our network. He suggested a separate policy be written regarding the guest network.

IV. NEW BUSINESS

A. School Board Facilities Committee

Dr. Cochrane presented to the Board a proposal for committee membership requested by the Board. He noted that the proposal was written to start a conversation with the Board regarding steps for long term Capital Assets or Maintenance Plan. He indicated that funds have been placed in the budget for generating reports from School Dude. He noted that these funds are removed during the budget process. Dr. Cochrane recommended that a plan must be in place before the 2014-2015 year to enable the District to move forward. He asked Board members to review the proposal and post it for feedback from the community.

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Mr. Barka suggested posting for volunteers.

Mr. York suggested sending the proposal to Mr. Cutter, Budget Committee Chair, to include on their next agenda. He commented that the committee should be established and ready to go forward by September.

B. GMS Parking Lot Bid Results

Mr. Markiewicz presented to the Board bid results for the GMS parking lot replacement. He reported that all bids were received by the deadline. The funds have been encumbered for the project and is ready to proceed. Mr. Markiewicz reported that five bids were received and DLB Paving submitted the lowest bid.

Referring to the future agenda topic item, Senior and Sophomore Projects, Mr. York asked if CHS would reach out to seniors and sophomores to address the Board on July 31. He expressed concern that some gifted seniors are assisting struggling seniors to complete their projects. Mr. York indicated that he has heard that students support Sophomore projects, but feel their senior schedule is full and they are focusing on their college goals. He noted that his concern is that this project needs to be updated.

Mr. Miller commented that in the past the purpose of the projects was for seniors to explore what they wanted to do after they graduate college.

Dr. Cochrane indicated that he will have CHS reach out to the appropriate students as well as ask the project advisor to attend.

C. August Meetings

Dr. Cochrane asked Board members if they required a second meeting in August.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

There was no community input.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered into non-public session at 8:46 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mrs. D'Alleva seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller, the Board returned to public session at 10:11 p.m. Mr. York seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. Miller made a motion to adjourn at 10:12 p.m. Mr. Bourque seconded. The motion carried 5-0-0.

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Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

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SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052**

**Approved Minutes for July 31, 2013
(approved as written 8-28-13)**

In Attendance: Derek Barka, Chair (*excused*)
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Tracy Micali, Director of Human Resources
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

A. NON-PUBLIC SESSION: RSA 91-A:3II (a,c) 5:30 p.m.
[Minutes of Non-Public Session are written under separate cover.]

The School Board entered into non-public session at 5:30 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting.

Non-Public session ended at 6:50 p.m.

I. PUBLIC SESSION 6:30 p.m.

A. Call to Order
Mrs. D'Alleva called the meeting to order at 7:02 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda
Revisions to the agenda included the removal of Senior Projects under Presentations to the Board; ESEA Waiver Appeal Update under Superintendent's Comments.

Mr. York commented on Senior and Sophomore Projects. He indicated that he researched the project page on the CHS website. He encouraged Board members who have not done so to read the information on those web pages. He recommended that if the Senior and Sophomore projects are going to continue, they should be based on STEM (Science, Technology, Engineering, Math). Mr. York was concerned that the projects do not benefit the learning process of the students. He requested the topic be a high priority School Board agenda item for the fall. He believes that the criteria for the projects must be vetted and strengthened to impact the learning process.

Mr. Miller indicated that the Sophomore Project was meant to be community-based and the Senior Project to be career-based. He commented that projects over the years may have strayed from their original purpose. He indicated that it may be difficult to apply STEM to the projects if a student has a career goal to which STEM does not apply (i.e. veterinarian).

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Dr. Cochrane commented that higher achieving students do much work on these projects and deserve to receive credit toward graduation. He suggested that the Sophomore and Senior Projects advisors and the CHS Principal speak to the Board regarding what is required and how the projects fit into the learning process of the students. He indicated that he would request the appropriate staff plan to come before the Board for that purpose.

Mr. York commented that he is looking for a change, but does not expect a change this year.

Mrs. D'Alleva indicated that Sophomore and Senior Projects will be made a top priority topic for the Board.

D. Summary of Non-Public Actions from the July 17, 2013 non-public session:

Mr. York made a motion to approve the non-public minutes of June 26, 2013 as written. Mr. Bourque seconded. The motion carried 4-0-1, with Mr. Miller abstaining.

Mr. Miller made a motion to approve the nomination of Michael O'Keefe as part time Chemistry teacher at CHS for a salary of 27,652 for the 2013-2014 year. Mr. York seconded. The motion carried 5-0-0.

Mr. Miller made a motion to approve the Superintendent's recommendation to reinstate 100% full time position (from 87.5%) to Phil Martin, CHS Music teacher, for a total salary of \$62,781 for the 2013-2014 academic year, and Paula Barry, CHS Tech Ed teacher, for a total salary of \$37,963 for the 2013-2014 academic year. Mr. York seconded. The motion carried 5-0-0.

Mr. Miller made a motion to accept the nomination of William Raymond as part time Guidance Counselor at CHS for a salary of \$30,866.50 for the 2013-2014 academic year. Mr. York seconded. The motion carried 5-0-0.

Mr. Miller made a motion to accept the nomination of Magdala Johnson as a Math teacher at CHS at a salary of \$35,070 for the 2013-2014 academic year. Mr. York seconded. The motion carried 5-0-0.

Mr. Miller made a motion to accept the nomination of Yesenea Schuler as School Psychologist at CHS for a salary of \$61,992 for the 2013-2014 academic year. Mr. York seconded. The motion carried 5-0-0.

Mr. Miller made a motion to approve the requested tuition waiver as presented. Mr. York seconded. The motion carried 5-0-0.

E. Presentations & Recognitions

There were no presentations or recognitions.

F. Correspondence

There was no correspondence.

G. Approval of Draft Minutes:

- Public Session July 17, 2013

Mr. York made a motion to approve the public minutes of July 17, 2013 as written. Mr. Bourque seconded. The motion carried 4-0-0.

H. Community Forum

There was no public input.

I. Superintendent's Comments

Dr. Cochrane provided an update regarding the ESEA Priority School status appeal discussed at the July 17 meeting. He indicated that he spoke to the Commissioner of Education at a recent conference in Keene and indicated the rationale for the appeal regarding the priority school status of CHS. He conveyed concerns regarding the terms of the process. Dr. Cochrane commented that the Commissioner indicated that we should move forward with the appeal based on the noted concerns. Dr. Cochrane acknowledged that he did not detect any change in the Commissioner's stance since her first response that although a district refuses Title I funds, the school(s) would retain the priority school status.

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Dr. Cochrane commented that the priority school status is unfair to the school and the community, and places the Board in an unfair position to respond in a short timeframe with little direction. He noted that there are no instructions for writing the appeal. He believes that CHS should not be characterized as a priority school based on the resulting scores for 2012 Title I schools. He indicated that CHS scored well above the “cut” score. Dr. Cochrane commented that the designation should not be based on 2013 scores since the 2013 Title I grant has not yet been submitted. Dr. Cochrane indicated that unless we win the appeal, the Board will be denied the ability to respond to the issue. He noted that he will send the appeal to the Board for review before delivering it to the State Board of Education.

Mr. Miller suggested contacting legal counsel regarding the legitimacy of the designation.

Mr. York commented that only nine schools were designated as priority schools.

Dr. Cochrane clarified that the original document stated that there were 228 Title I schools at the end of October 2012. He noted that 5% refused Title I funds and only 9 were identified as Priority Schools. He believes an error has been made in the data, which he noted is one of the criteria for an appeal. Dr. Cochrane indicate that after delivering the appeal to the State Board of Education, he must appear regarding the appeal on August 19.

Mr. Miller suggested asking legal counsel to attend as well. Dr. Cochrane suggested that a Board member attend. He noted that a disservice has been done to the Board and their rightful role in management of the district.

II. REPORTS

A. School Board Comments

- RSA 32:25 Clarification

Mr. York provided clarification for statements that he made regarding voter approval for a biennium budget process at the July 17, 2013 meeting. He indicated that RSA 32:25 does not call for a vote of citizens to approve biennial budgeting. He noted that RSA 32:26 mentions that biennial budgeting must be approved by the voters.

Mr. Miller complimented the district on the appearance of the CHS parking lot, which has been resealed and relined.

III. OLD OR UNFINISHED BUSINESS

A. Policies: 2nd Reading:

- GBEBD Staff Communication with Students

Board members reviewed revisions to the draft policy. A minor revision was suggested.

Mr. Miller made a motion to approve the Staff Communication with Students policy as revised. Mr. Bourque seconded. The motion carried 4-0-0.

B. Facilities Committee Proposal

Dr. Cochrane provided a revised proposal to the Board. He commented that the charge is sufficient to set up a committee. He recommended that the Board discuss the approval of community members. He suggested that the request for volunteers be posted on the website as soon as possible.

Board members agreed to post the request for volunteers on the website for the month of August and to post a public notice in the HLN the week after school begins.

Mr. Miller made a motion to approve the Litchfield School Board Planning and Building Advisory Committee charter. Mr. Bourque seconded. The motion carried 4-0-0.

IV. NEW BUSINESS

A. Business Administrator’s Report – June 2013

Mr. Markiewicz presented the June 2013 finance report to the Board. He reported that:

- A start date is anticipated for the GMS parking lot paving project;
- The LMS portables lease was renewed for another year;
- Auditors have arrived and will be in the district offices for the remainder of the week;
- The district end of year underspend is \$175,751, which was due to higher than anticipated revenues.

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Mr. Markiewicz noted that revenue was adjusted almost \$200,000 for the year due to Medicaid reimbursements.

Mr. Miller asked if that was driven by the large amount of students that was identified the past year.

Mr. Markiewicz indicated that was a possibility if that population is receiving reimbursements from Medicaid. He noted that he will review the process for recording Medicaid reimbursements during the budget process.

Dr. Cochrane reported that he received notice from the Commissioner of Education that projections for adequacy aid will be based on a decrease of 1.5% of total student population. This will be calculated across all districts equally. He indicated that a decrease in aid to Litchfield would equate to \$295,000. Referring to the actual Average Daily Membership (ADM) for 2012-13 (1456.18 students), Dr. Cochrane indicated that the actual numbers would have to differ significantly from the 10 monthly summaries to result in a decrease of adequacy aid. He noted that by his calculations (which he provided for the Board) it is unlikely the ADM will result in a substantial decrease.

B. 2014-2015 District Budget Process Discussion

Dr. Cochrane indicated that there was some discussion at the previous Board meeting regarding streamlining the budget process. He agrees with Mr. Miller that there is value in a line item review; however, that process is repeated several times before the budget is presented to the voters. He commented that it is time consuming for administrators to present their budget three times during the process. Dr. Cochrane asked Board members for their input regarding streamlining the process.

Mr. Miller commented that there is much value in line item review as the community looks to us to be thorough. He indicated that he would be satisfied if administrators would be present to answer questions.

Mrs. D'Alleva commented that it would still give opportunity for people to hear the rationale on the increase or decrease of an item.

Mr. York commented that the Board should spend more time discussing the needs requests of the schools rather than line items. He indicated it is these types of discussions that will help start the conversations with the Budget Committee.

Mr. Miller suggested that the administration provide the budget to the Board ahead of time in order for Board members to review it. He noted that administrators can present a summary of what is in their budget as well as what is not included in the budget.

Dr. Cochrane indicated that he and Mr. Markiewicz will set basic guidelines. He noted that there will be a list of strategic areas at district and school levels. Change lines and strategic pieces should be the discussions. Dr. Cochrane commented that he was pleased with the level of knowledge all three administrators brought to the meetings last year.

Mr. Markiewicz agreed that streamlining the budget process is the best approach.

Mr. York requested that a larger, more detailed IT presentation. He commented that he would like to see a plan that outlines in detail what is needed for all three schools so the Board can determine the best approach. He indicated that the plan changes each year and something is always delayed.

Mr. Miller suggested the following layout:

- Present the plan for this year;
- Determine what we know we can do with the current funds;
- Modify the plan for next year.

Dr. Cochrane agreed with Mr. Miller's methodology. He explained that we currently are working off of an official five year plan that is approved by the State and we use to receive E-Rate funds.

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Mr. York mentioned that we need to be prepared to plan for two budget cycles and explain to the voters that we will need to modify the plan in two years.

Dr. Cochrane agreed that a biennial budget would result in stabilization. He mentioned the amount the federal government sends to the State for student assessments and indicated that will not change when the Smarter Balance tests are implemented.

Assessment score parameters and Common Core State Standards was briefly discussed.

Board consensus regarding budget process: complete and approve the 2014-2015 budget by the first week of November. The requested budget should be submitted to the Budget Committee by the week of November 13.

Dr. Cochrane referred to the earlier comments regarding Smarter Balance assessments. He noted that there is some conjecture that states would be allowed to vote to have juniors take the SAT and use that in place of the Smarter Balance assessment. He noted that SAT's are being changed. Dr. Cochrane indicated that he will be providing to the Board input on this topic and will expect feedback from the Board.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

There was no public input.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. York, the Board entered into non-public session at 8:20 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Miller seconded. The motion carried by roll call vote: Mrs. D'Alleva, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller, the Board returned to public session at 9:14 p.m. Mr. York seconded. The motion carried by roll call vote: Mrs. D'Alleva, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. Miller made a motion to adjourn at 9:15 p.m. Mr. York seconded. The motion carried 4-0-0.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

LITCHFIELD SCHOOL DISTRICT

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052**

**Approved Minutes for August 28, 2013
(approved as amended 9-4-13)**

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Tracy Micali, Director of Human Resources
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION 6:15 p.m.
A. Call to Order

Mr. Barka called the meeting to order at 6:15 p.m.

II. NON-PUBLIC SESSION: RSA 91-A:3II (c)
[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. York, the Board entered into non-public session at 6:15 p.m. under RSA 91-A:3II (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Miller seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

III. RETURN TO PUBLIC SESSION
Upon a motion by Mr. Miller, the Board returned to public session at 6:45 p.m. Mrs. D'Alleva seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

B. Pledge of Allegiance

C. Review & Revision of Agenda

Revisions included moving Mosquito Control District Recommendations under Presentations to the Board.

D. Summary of Non-Public Actions from the July 31, 2013 non-public session:

Mr. Miller made a motion to approve the non-public minutes of July 17, 2013 as written. Mr. York seconded. The motion carried 4-0-0.

Mr. Miller made a motion to accept the nomination of Lara Moody as part time Science teacher at CHS for a salary of \$15,484 for the 2013-2014 year. Mr. Bourque seconded. The motion carried 4-0-0.

Mr. Miller made a motion to accept the nomination of Alex Scarelli as English teacher at CHS for a salary of \$37,051 for the 2013-2014 year. Mr. Bourque seconded. The motion carried 4-0-0.

E. Presentations & Recognitions

- Bass Fishing – J. Patterson

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Coach Patterson presented a Bass Fishing proposal to the Board. He explained that the sport is becoming more popular. He noted that CHS has competed in some exhibitions and has performed well. Coach Patterson indicated that the sport is beginning this fall, although it was to be a spring sport. The sport is being proposed as a self-funded sport with no regular season and an inexpensive registration fee to the student. Coach Patterson commented that the NHIAA holds two meets and schools are only allowed to enter four competitors. He mentioned that once the four competitors are determined, boats are required to compete in the meets. Coach Patterson noted that there is a possibility that the State may provide boats and captains for the teams that do not have their own.

Mr. York made a motion to approve Bass Fishing as a self-funded sport at CHS. Mr. Bourque seconded. The motion carried 5-0-0.

- Update CHS Lacrosse

Bob Desmarais presented an update regarding Lacrosse to the Board. Several parents, coaches and student athletes attended to show their support for adding the sport to the CHS athletic department repertoire. Mr. Desmarais indicated that the program would be self-funded and would be open to both boys and girls. He noted that the Booster Club met with CHS Administration and discussed the program, game schedule, practice and transportation. At the August 12 parent athletic meeting, the club collected the names of 28 girls and 28 boys who were interested in playing Lacrosse in the spring. Mr. Desmarais commented that the Booster Club is seeking Board approval and will answer Board member questions.

Mr. Barka asked if Coach Patterson had any concerns. Coach Patterson indicated all concerns were addressed in the meetings and common ground was reached.

Mr. York asked if the Booster Club discussed field use with the Recreation Committee. Mr. Desmarais indicated that they discussed use of the fields with the Recreation Committee and they are supportive.

Mr. Miller asked about their expectations on transportation. Coach Patterson indicated that the main goal is to use Darrah Pond fields as the students can walk to the area. He noted that for the Sawmill fields, school buses can transport the students and parents can pick them up at the fields.

Mr. York asked where the teams would play home games. Coach Patterson indicated that there are some track and field concerns regarding the CHS fields. He commented that it would be more appropriate for the teams to use CHS fields for games rather than practice.

Mr. York made a motion to approve Lacrosse as a self-funded program at CHS. Mr. Miller seconded.

Mr. Miller was concerned with player provided helmets. Coach Patterson indicated that some student provide their own helmets, which will not be an issue.

Mr. York was concerned about the cost of the equipment. Mr. Desmarais indicated that parents absorb the cost of the equipment.

Deb Briggs, a coordinator of the program, commented that she applied to U.S. Lacrosse for a grant for equipment.

Coach Patterson complimented the Boosters for their thoroughness and dedication.

The motion carried 5-0-0.

F. Mosquito Control District Recommendations

Al Raccio, Mosquito Control District, expressed concerns with the conditions observed in and around the school district facilities. He explained that members of the committee met in an unscheduled urgent meeting Thursday evening to discuss recommended actions that will help to correct and minimize potential health issues in and around district facilities. Mr. Raccio indicated that surrounding communities have mosquitos testing positive for EEE and West Nile. He noted that as a result of the survey of not only district properties, but parks and general habitats that we treat, the committee felt compelled to initiate Stage 1 of their Action Plan – sending formal recommendations to

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the SAU. Mr. Raccio indicated that the Mosquito Control District (MCD) is pleased with the response from the district and their embracing of the recommendations from the MCD. He noted that the district has acted on 3 out of the 5 recommendations. Mr. Raccio indicated that a one-time larvicide treatment is recommended for all drainage culverts and runoffs in and around the schools. He noted that the larvicide application will be done at no charge. However, the recommended barrier spray application will cost approximately \$1,500 as it is not covered under the town's current contract.

Dr. Cochrane commented that based on conversations with Mr. Raccio and Mr. Bennett, the barrier spray has been applied twice in the past and has been paid for by state grant funds. Mr. Raccio clarified that it was not paid with grant funds as there are no more grant funds for mosquito control. He noted that the application was paid out of the town contingency funds.

Dr. Cochrane thanked Mr. Raccio for keeping the Board and the District informed.

G. Correspondence

Mr. Barka mentioned that he received correspondence from Mr. Pascucci expressing support of Jason Guerrette as a member of the LSB Planning and Building Advisory Committee.

H. Approval of Draft Minutes:

- Public Session July 31, 2013

Mr. York made a motion to approve the public minutes from July 31, 2013 as written. Mr. Bourque seconded. The motion carried 4-0-1, with Mr. Barka abstaining.

I. Community Forum

Jason Guerrette, 11 Perry Court, thanked Mr. Pascucci for supporting his membership on the LSB Planning and Building Advisory Committee. He commented that he asked to be part of the committee when it was first discussed by the Board. He offered his time and expertise to the district free of charge.

Mr. Guerrette commented on Blizzard Bags. He expressed his opposition for Blizzard Bags and commented that he would prefer his children do their work in the classroom. He indicated that children are better educated in the classroom by the teachers.

Mr. Guerrette commented on CHS Priority School Status. He indicated that it is an unfortunate designation, but part of the price of accepting Title I money. He noted that the designation may not be good or could be wrong; however, we know that we are not where we should be in terms of Math. Mr. Guerrette indicated that we may get extra funding, but will be in a better position to adopt accountability and controls to make ourselves better.

Mr. Guerrette commented on the default budget calculation. He provided copies of the RSA to Board members and asked Board members to consider what is in the law regarding default budget calculations. He commented that his goal is to pay full attention to the default budget and intends to hold the Board accountable to the law.

J. Superintendent's Comments

1) Priority School Status

Dr. Cochrane discussed the priority school status of CHS with the Board. He reported that he received two letters from the State – a letter from the State Board stating the appeal was denied; a letter from the Commissioner of Education offering assistance to the District and offering to meet with the Board on August 28. Dr. Cochrane indicated that the Commissioner's letter arrived today and was dated yesterday.

Dr. Cochrane addressed the academic status of CHS. He indicated that the criteria for priority school status state that a school must be in the bottom five percent of Title I schools in the state. He noted that CHS was actually above the state average in FY12 in math and reading. Dr. Cochrane commented that CHS has shown significant growth over the last few years and was above the state average in several areas this year. He indicated that compared with other high schools, CHS is above the state average in reading, writing and science. Dr. Cochrane noted that he was concerned with the methodology used in the determination of priority schools. He commented

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that he would like CHS to improve in math and that the data he has compiled reflects that CHS is a better than average school and is consistently improving.

Mrs. D'Alleva commented that in accepting those types of funds, there are expectations that go with them. She indicated that the state is going to determine what levels we have to reach for next year. She expressed concern that a similar situation could occur with Common Core State Standards.

Dr. Cochrane expressed his opinion that it was a valid educational decision to move to a better set of standards such as CCSS. He noted the standards have more clarity and set higher expectations.

Mr. York commented that the idea of raising the standards and improving the learning process are the right decisions. He noted that we do not have the funding or infrastructure.

Dr. Cochrane indicated that the Board needs to discuss legal options under the ESEA (Elementary and Secondary Education Act) waiver and the existing laws and processes.

Attorney Graham requested to have that discussion in non-public session.

IV. REPORTS

A. School Board Comments

Mr. Miller expressed interest in the process the State used to determine the designation of Priority School and requested to speak to the appropriate parties in Concord. He asked the Board to empower him to speak as a Board member. He was concerned that there is a conflict regarding whether assistance will be provided and was not convinced that long term ramifications were well understood by all.

The topic was deferred to non-public session.

B. Committee Reports

• Budget Committee

Mr. Bourque reported that the Budget Committee met on August 22 and discussed membership of the LSB Planning and Building Advisory Committee. He indicated that Committee members were concerned that the assigned member would be a voting member of the advisory committee. He reported that the Budget Committee voted to have a member on the advisory committee as a non-voting member. Mr. Bourque indicated that Mrs. Couture has been chosen to be on the advisory committee. He commented that they were concerned about the timeframe for budget input from the advisory committee with respect to the start of budget development.

Mr. Bourque reported that Mr. Spencer was pleased that the district was able to retain the current athletic trainer at a lower cost through the new contract.

V. OLD OR UNFINISHED BUSINESS

A. LSB Planning and Building Advisory Committee

Dr. Cochrane shared plans to advertise for community volunteers for the Committee. He noted that a press release will be placed in the HLN next week. In addition, the release will be placed on the District website, on the Town Bulletin Board and a Blackboard message will be sent to parents.

Dr. Cochrane suggested, with regard to concerns from the Budget Committee, ex-officio members of the Committee and the Budget Committee representative are not voting members. He indicated that the Committee can begin meeting in late September or early October and work over the winter with recommendations to propose a warrant article for maintenance money. He noted that the Committee would provide major input to the Board regarding how that money would be spent. Dr. Cochrane commented that without a group to provide input, the mechanics would fall to the SAU office to do that work.

Mr. Barka believes that the Budget Committee representative should be a voting member.

Mr. York questioned the legality of a Budget Committee member having representation on another committee.

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Attorney Graham explained that it is the School Board's committee and they Board has the right to establish the parameters of that committee. He noted if the Budget Committee is concerned or does not agree, their member can act as a liaison from their committee to facilitate communication within the committees. Attorney Graham indicated there is no specific law preventing the Budget Committee from assigning a member to another committee. However, he agreed that it is understandable to assign a member from the Budget Committee to a committee without that member voting in representation of the Budget Committee.

B. Blizzard Bags

Dr. Cochrane reported that Blizzard Bags will move forward as was done last year. He acknowledged and shared concerns that we may not be doing a complete job in educating with this program. However, Dr. Cochrane indicated that a significant amount of instructors put thought into their Blizzard Bags and make them meaningful. He noted that Blizzard Bags allow for continuity for the student, but do not equal the instruction of the classroom.

Mrs. D'Alleva asked for clarification in the phrase 'continuity for the student'. Dr. Cochrane explained that the content of the Blizzard Bags should be relevant to what they are working on in the classroom at that time. He noted that the material is not meant to be specific to the next day's lesson, but meaningful work that is either an application or a reinforcement of instruction.

Mr. York made a motion to discontinue the Blizzard Bag program. Mrs. D'Alleva seconded.

Mr. York indicated that he was not comfortable that the program is viable.

Mr. Miller suggested finding alternatives rather than discontinuing the program. He noted that during snow days, more often than not residents lose power. He suggested adding two days after the power is restored and a day to ask questions for students to complete their Blizzard Bag assignments.

Mrs. D'Alleva commented she is not a fan of cancelling the program.

Dr. Cochrane indicated that Blizzard Bags were discussed at the Administrative Retreat and their use was supported if we go above our snow days. He noted that we can have them ready for November 1.

The motion failed 2-3-0, with Mr. York and Mrs. D'Alleva in support.

Board members requested a discussion on the topic in September.

VI. NEW BUSINESS

A. Hiring Update

Mrs. Micali provided a hiring summary for July and August. She reported that there have been 47 new hires since July 1, 2013. She noted the district has hired 8 teachers, 5 specialists, 4 administrators, 1 part time guidance counselor, 9 coaches, 1 custodian, 3 tutors, 11 paraprofessionals, 3 monitors, and 2 dining staff. Mrs. Micali indicated that there are some position vacancies that will be filled.

B. Technology Update

Dr. Cochrane presented the Board with a summer technology update. He indicated that much has been done over the summer to upgrade the schools and district. Dr. Cochrane reported that the district has transferred to FairPoint Communications and bandwidth has increased significantly. He noted that email for students was discussed at the Administrative Retreat this year. It was decided that students would have district email accounts, with only seniors having the ability to send and receive email from external parties (i.e. college applications, recommendations, etc.).

Mr. York commented that the technology update is excellent. He requested that this type of update be included in the Business Administrator's report on a monthly basis.

Dr. Cochrane mentioned that one of the conversations spawned is that there is now enough bandwidth for students to bring their own devices to school. He commented that we need a new student information system, which will be

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investigated. Dr. Cochrane indicated that a new student information system will be a topic of discussion during budget development sessions.

C. Business and Finance Update

Mr. Markiewicz presented the Board with a summer update. He reported that he will bring projections for revenues at the next business meeting.

Mr. Markiewicz reported that the auditors completed their audit on August 2. He noted they will return on September 23 to perform the single audit for federal funds. Mr. Markiewicz expects a draft of the general fund soon.

Mr. Markiewicz reported that the district received their first check for the LGC Premium Holiday 2011 reimbursement. He noted that 2010 is being held in liability at this time. He indicated that the check amount was \$86,532. He reported that employees and retirees will be provided their medical and dental reimbursements within the next two weeks. Mr. Markiewicz indicated that the district will retain \$53,453 of the medical reimbursement and \$15,455 of the dental reimbursement.

D. Budget Timeline

Mr. Markiewicz presented an FY15 budget schedule to the Board.

Dr. Cochrane commented that draft budget priorities were shared at the Administrative Retreat. He noted that budget priorities for 2013-2014 focus on four areas: CCSS implementation; Special Education; Technology; Facilities. Dr. Cochrane indicated that the budget priorities for 2014-2015 will consist of the following:

1. Technology
 - a. BYOD policy, infrastructure and implementation
 - b. Portable Teacher Technology
 - c. Student Information System
 - d. GMS computer lab and technology integration capability
 - e. LMS additional technology to support “double math” implementation
 2. Math Program/Instruction
 - a. Math curriculum (K-12)
 - b. Development of Grade 7 “double-math” model for 2014-15
 3. Facilities/Safety
 - a. Priority items as identified by Litchfield School Board Planning and Advisory Board
 - b. Implementation of selected recommendations from District Safety Committee
- Monitor
4. Special Education
 5. Performance Assessments

Dr. Cochrane commented that the Student Information System (SIS) will yield better functionality with communications with parents, disseminating information to students and providing a more stable data platform. He indicated that the priorities in Math include a revised math curriculum and the development of a “double math” model in Grade 7.

Dr. Cochrane announced that this year there are only two out of budget paraprofessionals, which reflect the net movement of students into the District. He noted that much work was done with IEP development in May and June.

Budget priorities will be discussed at the next Board meeting.

E. 2013-2014 Bus Routes

Mr. Markiewicz presented the 2013-2014 bus routes to the Board and provided an update regarding transportation. He announced that Tanager Way has been accepted as a road by the town. He reported that he received requests for additional bus stops from parents on Rocky Hill Road and Shirley Way. He indicated that stops can be provided for the morning runs; however, additional stops on the afternoon runs would be problematic for departing students at

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GMS. Mr. Markiewicz indicated that a ridership count will be provided in late September and a decision to add requested bus stops will be made based on the information received.

VII. MANIFEST

The manifest was circulated and signed by the Board.

VIII. PUBLIC INPUT

A. Community Forum

There was no public input.

IX. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

9:00 p.m.

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. York, the Board entered into non-public session at 8:43 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Miller seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

X. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller, the Board returned to public session at 11:20 p.m. Mr. York seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

Referring to Mr. Miller's request to the Board to grant him authority to speak to the NH DOE as a School Board member, the Board made the following decision:

Mr. York made a motion to authorize Mr. Miller to speak to the NH Department of Education as a representative of the Litchfield School Board. Mrs. D'Alleva seconded. The motion carried 5-0-0.

XI. ADJOURN

Mr. Miller made a motion to adjourn at 11:25 p.m. Mr. York seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052**

**Approved Minutes for September 4, 2013
(approved as written 9-18-13)**

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Tracy Micali, Director of Human Resources
Mrs. Michele E. Flynn, School Board Administrative Assistant

I. PUBLIC SESSION

6:30 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 6:32 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from the August 28, 2013 non-public session:

Mr. Miller made a motion to approve the attendance of the requesting student to Campbell High School. Mrs. D'Alleva seconded. The motion carried 5-0-0.

Mr. Miller made a motion to reduce the tuition for the requesting student to attend Campbell High School subject to the terms of the tuition agreement. Mr. York seconded. The motion carried 5-0-0.

Mr. Miller made a motion to approve the non-public minutes of July 31, 2013 as written. Mr. York seconded. The motion carried 4-0-1, with Mr. Barka abstaining.

Mr. York made a motion to accept the resignation of Fern Seiden, GMS Guidance Counselor, and to release her from her contract. Mr. Miller seconded. The motion carried 5-0-0.

Mr. York made a motion to accept the nomination of Dana Bourassa as Part Time Business Education teacher at CHS for a salary of \$31,593 for 2013-2014. Mr. Miller seconded. The motion carried 3-2-0, with Mr. Miller and Mrs. D'Alleva opposing.

Mr. Miller made a motion to accept the nomination of Jocelyn Robinson as Guidance Counselor at GMS at a salary of \$63,186, which was prorated to 183 days at a salary of \$62,166.87 for 2013-2014. Mr. York seconded. The motion carried 5-0-0.

E. Presentations & Recognitions

There were no presentations or recognitions.

F. Correspondence

There was no correspondence.

G. Approval of Draft Minutes:

- Public Session August 28, 2013

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Mr. York made a motion to approve the public minutes of August 28, 2013 as amended. Mr. Miller seconded. The motion carried 5-0-0.

H. Community Forum

Patricia Waggoner, 11 Broadview Drive, commented on sophomore and senior projects. She indicated that she has been attending Senior Project Night for several years. She noted her son graduated last year and both projects were good experience for him. Mrs. Waggoner commented that sophomore project is community service based, but can be career oriented as her son worked with the LMS after school program and received credit. She shared that her son attended Camp Doucet in Nashua where he was a CIT for three years and a camp counselor. Mrs. Waggoner indicated that these projects set good examples later in life and give students a start in community service. She noted that these projects help students with decisions regarding future goals. She indicated that students are eligible for high school credit if they compile enough hours. Mrs. Waggoner commented that students are proud of what they accomplish and enjoy their experiences. She acknowledged that some parents have commented that students who are seniors are busy during the year and projects can be cumbersome. She suggested establishing a committee to investigate further.

Jason Guerrette, 11 Perry Court, commented that his son's sophomore project was approved and it is hobby-based rather than service-based. He indicated that the premise of the projects does not always reflect what is happening in the school. He noted that the projects are a good idea, but should be consistent and valuable to students.

Mr. Guerrette asked if there are there any issues with the CHS student agendas. Dr. Cochrane indicated that the colors used on the cover printing were reversed and the printer is reprinting at no cost.

Mr. Guerrette asked about a motion made in non-public session regarding approval of attendance at CHS for a student. He asked if this is an out of district student. Dr. Cochrane indicated that the student is an out of district student, but the family will pay tuition.

Mr. Guerrette asked if the motion to reduce the tuition was based on a financial hardship. Mr. Miller indicated that information is non-public information. Mr. York commented that those were the votes taken and the story is much greater.

Mr. Guerrette asked if we have the sixth grade math textbooks. Dr. Cochrane indicated that a publisher's error led to the wrong books being sent. He noted that all but one set arrived. He offered to investigate further.

Mr. Guerrette expressed concern with the grade 6 math textbook. He commented that the textbook is the Common Core edition and is fraught with concerning information. He noted that he sent an email regarding the professional development for Common Core and its logic. Mr. Guerrette indicated that the lessons in the book deal with reasonableness and estimation [or guessing] of answers, after which they must find the actual answers. He noted that it is confusing for his son. Mr. Guerrette believes that math is concrete and these texts should not be teaching students to find a reasonable answer. He indicated that children need to understand the relationship between numbers and that is not what these books are teaching.

Dr. Cochrane explained that checking for "reasonableness" in values is checking your solution to determine if an answer makes sense.

Mr. Guerrette commented he does not want that methodology for his son. He noted that guessing does not allow them to learn the math. He noted that this type of learning makes it difficult for parents to help their children when they are doing their homework.

Dr. Cochrane commented that regardless of the instructional methodology there will always be students who may struggle and need remediation. He noted that a particular methodology may make sense to some and not to others. Dr. Cochrane indicated that part of a teacher's expertise should be the ability to help every student and understand the various paths students travel to get to that point.

I. Superintendent's Comments

- Opening Day Update

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Dr. Cochrane provided an opening day update for the Board. He indicated that opening day went well at all schools. He provided a comparison of registrations and opening day head counts for this year and last.

Mr. York expressed concern over the difference in enrollments from last year to this year.

Dr. Cochrane explained that numbers fluctuate during the year as is evident in the data from last year.

Mr. York commented that the data does not reflect the number of students who showed up for school opening day. He wanted to know why there is such a difference between the total that registered and the total head count for that day.

Mr. Miller indicated that typically the head count is lower than the total registrations on opening day. He noted that the state does not base their enrollment projections on the first day of school. Mr. Miller commented that the data the Board historically receives is the second Friday data.

Mr. York was concerned that the enrollment numbers are decreasing significantly. Dr. Cochrane indicated that the enrollment numbers will become a topic of discussion as we move forward with the budget.

Dr. Cochrane reported that opening day at LMS went smoothly in transportation, technology and room assignments. He noted that students are clustered more by grade level, which will result in less passing time. Mr. Lecklider delivered a brief speech to students.

Dr. Cochrane reported that CHS started the day smoothly. He noted that he greeted students at CHS as they arrived. All student reported to advisory to start the day. Mrs. Rothhaus delivered her message to students that focused on getting involved, focusing on learning, and embracing core values.

Dr. Cochrane reported that GMS was fully staffed on opening day and staff greeted students outside when they arrived. Transportation was smooth in the morning, but one bus was late in the afternoon. He noted that students came to school ready for the day as a result of the strong planning and orientation plan GMS had put together.

II. REPORTS

A. School Board Comments

Mr. York commented that he met with Mr. Bryon last week and was informed the Selectmen had a conversation with their new attorneys. He noted that the Selectmen developed a new understanding of impact fees and how they are applied. Mr. York explained that Selectmen understand that impact fee use is not based on growth of population, but is based on growth of need. He noted that the Selectmen recently voted to apply town impact fees to the need (demand) at the town gas pumps. Mr. York indicated that the use of technology in the district prompts a growth need and should be considered. He requested the Board's permission to meet with Dr. Cochrane and Mr. Byron to discuss the use of impact fees across areas of need in the district in order for requests to be brought to the Board of Selectmen in a prompt fashion.

Mrs. D'Alleva asked if the law has changed or if the town's attorney has a different opinion than the previous attorneys.

Mr. York indicated that the law has been changed, but they now believe that use of impact fees is based on need instead of growth in population. He noted that this has been an ongoing topic of discussion for several years between the Board and the Selectmen. Mr. York commented the Selectmen have a different view and have endorsed that belief. He noted that the legal opinion can be sent to Mr. Barka who can distribute it to the Board.

Mr. Miller noted there was a requirement that use of impact fees should be based on items in the capital improvement plan. Mr. York noted that is no longer the requirement. Mr. Miller mentioned that the GMS parking lot was included in the capital improvement plan.

Dr. Cochrane commented that there may be a valid argument for requesting impact fee funds for the increase in technology infrastructure. He noted, for example, there was a large demand in bandwidth on opening day and it is ever-expanding.

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Mr. York suggested using impact fees to return to the taxpayers for the GMS parking lot project.

Mr. Miller suggested that the district request the current impact fee balances.

Board member consensus regarding Mr. York's request: allow Mr. York to pursue impact fee use discussion.

B. Committee Reports

There were no committee reports.

III. OLD OR UNFINISHED BUSINESS

A. Priority School Update

Dr. Cochrane commented that Dr. Heon is working on the Title I grant without making commitments to use funds at CHS. He noted that the district will ensure that no Title I money is received at CHS without School Board approval. Dr. Cochrane commented that Mrs. Rothhaus requested that he provide an update on CHS Priority School Status for the CHS staff. He noted that perceptions regarding priority school status vary in the community. He indicated that some believe the status reflects negatively on the school. Dr. Cochrane indicated that the CHS staff expressed a desire for a press release to be prepared and distributed to address any misconceptions about CHS' academic accomplishments.

Mr. York suggested sending the release to all parents and to the HLN for publication.

Mr. Barka suggested submitting the release to the Telegraph as well.

Board members requested to review the press release before publication. Dr. Cochrane indicated that he will send the press release to the Board to review before it is distributed.

IV. NEW BUSINESS

A. Budget Priorities

Dr. Cochrane reviewed suggested FY15 budget priorities with the Board. He reported that he spoke with administrators and teachers regarding budget priorities. He noted that the general consensus of the administrators and directors is that the budget priorities would be helpful with budget preparation. Dr. Cochrane reported that he spoke about ensuring all schools use the same COLA calculations for supplies and he expects that most areas of the budget will be level funded. He noted that the facilities/safety items will reflect the recommendations of the district and school safety committees.

Mr. York suggested creating one purchase order for all supplies. Mr. Markiewicz commented that he will attempt to coordinate Mr. York's suggestion; however, it will be subject to the quality of vendors' supplies and discounts they offer. He indicated that the cost effectiveness of all areas will be considered.

B. Discussion: Format of Principals Reports

Dr. Cochrane discussed with the Board a suggested format for future principals' reports. He mentioned that a change in format/structure is being discussed with the administrative and the SAU staff. He indicated that the administrative team meets twice monthly for two hours at CHS. Dr. Cochrane noted that he would like to implement a shorter, agenda-driven meeting after school with each administrative team at their respective school and one SAU administrative team meeting on a monthly basis.

Dr. Cochrane commented that he has spoken with the principals about identifying topics of interest at their schools that would be of interest to the Board in order to gain more knowledge of what is happening at each school regarding instruction and programming. He proposed the following:

- Since each school has a team working on Performance Assessments, a single report with representation from each group to update the Board in January;
- LMS can report on the new Literacy with Technology course in December;
- Teachers can present information about digital portfolios ;
- A presentation on new Student Information System;

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- The three schools can present information about the comprehensive guidance program;
- LMS can report in the spring on plans for doubling up on Math in grade 7 for the 2014-2015.

Dr. Cochrane asked for feedback from the Board regarding the proposal for future agenda items.

Mr. York indicated that the Board meets weekly from the end of September until the end of December. He believes that the proposal contains too much information to present and digest over a short period of time. He was concerned that presentations would require a large block of time on the agendas.

Dr. Cochrane indicated that presentations can be kept at 30-45 minutes.

Mr. Miller commented that he would like to know what is happening in the schools and how they tie to the school goals. He noted that in the past the Board held budget meetings at each of the schools. Mr. Miller suggested holding a Board meeting at each school to give parents, staff and principals the Board's attention or that hour.

Mr. York agreed with Mr. Miller. He commented that each school would have the opportunity to discuss what is happening and express their concerns.

Mrs. D'Alleva commented that people may feel less intimidated in more familiar surroundings.

Mr. Barka agreed that people feel more comfortable in their own surroundings.

Board members asked Dr. Cochrane to craft such a schedule with the principals and Dr. Heon.

C. Custodial Market Survey

Ms. Micali provided an updated custodial salaries report to the Board as requested at the August 28 meeting. She noted that at the previous meeting, challenged in filling custodial positions was mentioned. Mrs. Micali indicated that Mrs. Flynn provided the custodial salary survey from October 2012 and updated the report with new information. She noted that Litchfield's custodial salary range is within the market value of other districts. However, she noted that the lead or head custodial range for Litchfield is 8.2% lower than the market value for that position. Mrs. Micali pointed out that Epping and Manchester are two of the districts surveyed that outsource for custodial services. She offered to provide more information upon receipt from other districts.

Mrs. D'Alleva asked about outsourcing in the other districts.

Dr. Cochrane commented that during discussions with Mr. Martin, former Business Administrator, the feedback is that outsourcing could be a significant increase in expense. He noted that many districts do not outsource because of the cost. Dr. Cochrane indicated that we are having difficulty filling the lead/head custodial position and maintaining quality employees in that position. He noted that we need candidates with supervisory skills and expertise. Dr. Cochrane commented that we are not competitive in salary for that position and have lost good employees because of the salary. He indicated that we have tried to fill the position, but those candidates declined the position because of the salary.

Mr. Barka commented that we can discuss this issue during budget sessions.

Mr. York commented that we owe it to the community to research the full cost of benefits as well as salary. He suggested that information regarding outsourcing costs be requested from Epping and Manchester.

Mr. Markiewicz commented that some custodial positions are covered under Collective Bargaining Agreements, which could be the reason some districts outsource.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

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A. Community Forum

Jason Guerrette, 11 Perry Court, suggested to the Board to research the cost of outsourcing custodial labor via a Request for Proposals. He indicated that vendors will have a better idea of the cost if they have clear and specific expectations on what is required by the district with regard to cleaning and maintaining the school buildings. Referring to the discussion regarding custodial salary schedules and comments about difficulty in filling custodial positions, Mr. Guerrette commented that he believes there is a large labor pool in that area.

Mr. Guerrette commented on block scheduling, which he noted was discussed earlier in the meeting. He indicated that he does not support block scheduling. He referred to the discussion regarding the future format of principals' reports. He noted that it was suggested teachers attend monthly Board meetings and provide presentations on programming. Mr. Guerrette commented that anything beyond a 30-45 minute presentation is too lengthy for an audience.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Bourque, the Board entered into non-public session at 8:04 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. York seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. York, the Board returned to public session at 9:39 p.m. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. Miller made a motion to adjourn at 9:40 p.m. Mrs. D'Alleva seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052**

**Approved Minutes for September 18, 2013
(approved as written 9-25-13)**

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Tracy Micali, Director of Human Resources
Dr. Julie Heon, Director of Curriculum & Instruction
Scott Thompson, Principal, GMS
Tom Lecklider, Principal, LMS
Laura Rothhaus, Principal, CHS
Mrs. Michele E. Flynn, School Board Administrative Assistant

I. PUBLIC SESSION

6:30 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 6:30 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from the September 4, 2013 non-public session:

Mr. Miller made a motion to approve the non-public minutes of August 28, 2013 as written. Mr. York seconded. The motion carried 5-0-0.

E. Presentations & Recognitions

- Lowes Donation Request – G Walton

Dr. Cochrane advised the Board that Gil Walton would like to request from Lowes a donation to provide or reduce the cost of a corkboard sign to post results of track events at our outdoor track meets.

Mr. Miller noted that the permission would be to allow Lowes to place their logo on the board.

Mr. York made a motion to allow the CHS Athletic Booster Club to move forward with the request. Mr. Miller seconded. The motion carried 5-0-0.

F. Correspondence

Mr. York indicated he received some email correspondence from Jason Guerrette, 11 Perry Court.

Dr. Cochrane indicated he received an email correspondence from Mark Lapore, 17 Greenwich Road, regarding concerns over class size in Pre-Calculus courses. He noted that the issue will be discussed under CHS Principal's Report.

Mr. Bourque indicated that he received an inquiry regarding the stipend for Scarecrow Jamboree at GMS.

G. Approval of Draft Minutes:

- Public Session September 4, 2013

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Mr. York made a motion to approve the public minutes of September 4, 2013 as written. Mr. York seconded. The motion carried 5-0-0.

H. Community Forum

There was no community input.

I. Superintendent's Comments

Dr. Cochrane thanked all staff members for a smooth start to the school year. He congratulated school and custodial, grounds, maintenance staff who worked through the summer to see that schools were ready to open.

II. REPORTS

A. School Board Comments

Mr. York reported that he met with Dr. Cochrane, Mr. Markiewicz and Mr. Hancock today regarding setting parameters to discuss Impact Fees options at the Board level by October 1. He indicated that the focus should be on technology and security of buildings.

Mr. Miller asked if there was a response regarding the rebate of health insurance previously discussed with the Board. Mr. Markiewicz indicated that a response has been received.

Dr. Cochrane reported that Mr. Hancock will be meeting with a consultant for enhancements for security and safety for the schools next Tuesday. He noted they will look at the safety committee report and recommendations. Dr. Cochrane indicated that we will move forward to request impact fees with work in that area. He commented that he met with the administrative team from CHS and there is consensus on options in the following areas: access controls, cameras and communication systems.

B. Committee Reports

There were no committee reports.

C. Curriculum Report

• AIMSweb

Dr. Heon provided a presentation on AIMSweb, which is a universal screening and progress monitoring system for academic and behavior based on brief, direct and continuous student assessment.

Dr. Heon explained that staff has had extensive training and has decided to pilot this model. She noted that it is a tiered delivery model with three types of assessment: summative (end of unit/semester or year); diagnostic (collected with a particular reason in mind; 1:1 administration); formative (gives teachers info about if students are making adequate progress or different interventions need to be made along the way).

Dr. Heon noted that AIMSweb consists of three components: universal screening/benchmark; strategic monitoring; and frequent progress monitoring. She indicated that AIMSweb utilizes curriculum based measurement, which is a type of general outcome measure/indicator and is tied to what we want students to learn during the year.

Dr. Heon commented that an advantage of AIMSweb is that the focus is on repeated measures of performance and trends in the data – not just one score. She indicated that there are four steps to AIMSweb: briefly assess students; record scores; analyze instant reports; use data regularly to inform instruction. Dr. Heon commented that the presentation contains more information and detail regarding the following:

- Universal screening/benchmark assessments
- Strategic monitoring/monthly assessments
- Frequent progress monitoring
- How to use our data help answer critical questions
- More reporting options.

Mr. York asked if the assessment software conforms with Common Core. Dr. Heon responded that AIMSweb aligns with Common Core.

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Mr. Barka asked when students would first be testing. Dr. Heon indicated students are already testing.

Mr. York asked if results will be presented to the Board. Dr. Heon indicated that once the first benchmark is completed, information will be presented during the year.

Dr. Cochrane indicated that this is “actionable” data that teachers can immediately use to inform their teaching. He noted that the district is piloting AIMSweb this year to see if it gives teachers more data about individual students.

Mr. York asked if other districts are using AIMSweb and if result comparisons are available. Dr. Heon noted that other districts are using it, but result comparisons are national only.

Mr. Miller asked about the cost of the software. Dr. Heon indicated the comprehensive cost is \$6.00 per student and funding is possible through the savings on the MAPS testing. She explained that the cost can be decreased with less services. She noted that the training cost was significant and was paid by a Title II grant.

Mr. Miller wanted to know why the use of this assessment system was not presented to the Board previously. Dr. Heon apologized to the Board and explained that the decision was made very quickly. She indicated that the data is stored in the AIMSweb server.

Mr. Miller asked if there are any FERPA concerns with data storage. Dr. Heon indicated that it is done with MAPS testing.

Mr. Miller asked how a parent can view their child’s information. Dr. Heon indicated that there will be an administrative discussion regarding how parents can access the information. She explained that the staff will need time to become familiar with the administration and interpretation of data, and be confident about their analysis.

Mr. Bourque asked if parents will be informed about the results. Dr. Heon commented that there is no plan in place at this time as there may not be enough information to present to parents. She indicated that the district would release information sometime this year, but a plan needs to be established.

Dr. Cochrane indicated that a traditional report card does not give parents enough information regarding their child’s performance, progress and assessment. He noted that a better way of reporting this information needs to be discussed. He commented that the Board needs to discuss a more appropriate student information system.

- Curriculum Report

Dr. Heon presented the September 2013 curriculum report to the Board. She indicated there is concern regarding interventions and tutoring resources at CHS. She explained that in the past there were resources to help students in both reading and math. Our plan was that we would put additional resources in math and at this point, the only resources we have in place is one tutor who is working with special education students. Dr. Heon noted there are many regular education students that are in need of that support. Guidance and the tutor have already been contacted. Dr. Heon asked for Board guidance regarding what services can be provided for those students.

Mr. Barka asked if the students can receive support in the classroom. Dr. Heon recommended that the support be provided during study period.

Mr. Bourque asked if offering more services in math would mean adding another position. Dr. Heon indicated that the tutor we have is retired from another state and can only work two days. She noted that it is anticipated to have another tutor for the other two days.

Mr. Miller asked if another part time position is being requested and how it would be funded. Dr. Heon commented the only funds that apply are Title I funds.

Mr. Miller commented he is not in support of accepting Title I money. He indicated that the funds should be able to be found given that we under spent the budget last year.

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Dr. Heon indicated that these would be new positions and that new positions require Board permission.

Mr. Miller commented if the position is being driven by an educational need, it is valid.

Mr. Miller made a motion to add a half time math tutor at CHS. Mr. York seconded. The motion carried 4-1-0, with Mrs. D'Alleva opposing.

Mrs. Rothhaus commented that CHS has a problem in that the Pre-Calculus course as enrollment numbers are high. She indicated it is possible to divide the two classes and give the teacher a 6th block stipend to give all students a chance at a comprehensive education. She noted if the Board approves, this can be done and students may have to switch a study period, but not an actual course. Mr. York asked why the reshuffling of 6th period teachers was being presented to the Board as this is an administrative decision.

D. Principals Report

Principals presented their respective reports to the Board.

• **GMS**

Mr. Thompson provided the following report:

- Opening days for teachers were busy;
- There were many workshops including bullying prevention training;
- There were three related workshops on Litchfield's new writing standards, our participation in the Performance Assessment Network, and our new writing prompts and rubrics for fall narrative writing checks;
- There was an overview of AIMSweb;
- First faculty meeting was held on September 4;
- AIMSweb has begun to be administered;
- Some selected students are taking NWEA MAP tests last week and this week;
- Preparing for NECAP tests.

Mr. Thompson made the following acknowledgements:

- Thanks to the parents and staff members who volunteered to work with the grounds crew on the new gardens before the opening of school.
- The PTO held a Back to School Breakfast for teachers last Friday.
- Thanks to the maintenance crew for working hard to keep the building cool and reduce humidity last week.

Mr. Thompson reported that all professional positions have been filled at GMS and we are working on filling the position for Scarecrow Jamboree. He noted that school opened smoothly on Monday and transportation issues were resolved quickly. Mr. Thompson commented that enrollment is smaller this year than last. He reported that at an all school assembly the new Math Habits posters were shared and the topic focused on the very first math habit. He indicated that Parents' Night was held on September 10 for PreK – 2 and September 11 for Grades 3-4. Mr. Thompson commented that the first PTO meeting was held on September 16 and their first fundraiser is already underway.

• **LMS**

Mr. Lecklider provided the following report:

- 30 students participated in summer programming for Reading & Math, and ESY;
- There was consistent attendance during the summer programs;
- The focus of instruction during the first week of school has been on not only revised standards, but on moving into deeper levels of understanding and depth of knowledge;
- Performance assessments were discussed;
- Focus on writing calibration with common rubrics in areas of writing (persuasive and informational);
- There are new math resources for grades 6-8 with an online component which will be utilized;
- Students are using the writing workbook;
- Teachers are using the CORE SIX book as a resource this year to focus on implementing sound strategies;

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- Students are currently testing on AIMSweb and results will be used for progress monitoring and differentiation;
- NECAP testing is approaching;
- Thin clients were installed in two computer labs;
- The library was equipped with 20+ think clients;
- There are two new laptop labs;
- The Literacy with Technology course is off to a great start focusing on research skills and identifying reliable sources;
- Yearly goal setting is upcoming;
- Successful Open House;
- Athletics is in full swing;
- Three students from CHS would like to form a First Lego Robotics team at LMS and will meet in October;
- The first PTO meeting was well attended.

Mr. Miller commented that there is a discussion regarding leveling in the community. He asked if AIMSweb is a good tool to determine the spread on higher performing students and lower performing students.

Mr. Lecklider indicated that AIMSweb data is user friendly and coded well. He noted that a more comprehensive plan for math is being planned.

- CHS

Coach Patterson commented that many people in town inquired about the scoreboard. He noted that it was working in June and maintenance was performed last year; however, at the start of this year the scoreboard was not working well. He indicated that diagnostics were ordered and performed. The diagnosis is that all electrical components need to be replaced. Coach Patterson commented that the cost is \$6,200, excluding labor. He noted that a new scoreboard can be replaced at a cost of \$10,000. He indicated that the scoreboard was originally donated by Coca Cola. Coach Patterson commented that he inquired if they were interested in providing another scoreboard. He noted a meeting is scheduled with the Coca Cola representative, Mr. Markiewicz and himself.

Coach Patterson inquired of the Board direction on allowing military recruiters to volunteer in the school. He explained that these recruiters are assigned to this area and are required to complete a specific number of hours in community service. They volunteered to assist in athletics, grounds, and recycling. Coach Patterson spoke to them about their attire while volunteering in the schools.

Board members agreed that it is acceptable for military personnel to volunteer in the schools with the appropriate and required background check and attire.

Coach Patterson provided an update on Lacrosse and Bass Fishing. He reported that Lacrosse is moving forward and the job description(s) for the coach(es). Coach Patterson reported that the Bass Fishing team had their first Fish Off at Darah Pond last week and four students caught bass.

Mr. Miller commented that he heard the Lacrosse team received a two year grant for sticks. Coach Patterson indicated that the group has done a remarkable job of raising funds.

Dr. Cochrane thanked Coach Patterson for researching the details required by Coca Cola for providing a scoreboard.

Mr. Miller made a motion to approve the agreement with Coca Cola regarding providing a scoreboard subject to the Business Administrator's meeting with the representative. Mr. York seconded. The motion carried 5-0-0.

Mrs. Rothhaus provided the following report:

- The high school opening was successful;
- Teachers worked on the alignment of CCSS, the mission and evaluations of assessments;
- Mr. Perez, Mrs. Rothhaus and four teachers attended a conference on Quality Performance Assessments.

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Phil Martin commented on Freshman Seminar. He noted that 100 freshmen are spread over two sections. The course is involved with character building and trust building skills. He indicated that using a book regarding organization, note taking and study skills. Mr. Martin commented that many more activities have been planned.

Mrs. Rothhaus thanked several staff members and members of the fire department for participating in the 9/11 remembrance at CHS. She noted that the National Honor Society is accepting applications for new members; the Girls/Boys Soccer team held a car wash for the Jimmy Fund and Boston Strong. Mrs. Rothhaus indicated that she was pleased with the quality of newly hired faculty this year.

Mr. Bourque mentioned that the funds raised for the car wash were matched in triplicate.

III. OLD OR UNFINISHED BUSINESS

A. Blizzard Bag Discussion [Board Member Request]

A Board member requested that Blizzard Bags be discussed at a September meeting. The Board previously had a discussion regarding Blizzard Bags in August.

Mr. Miller commented that Mr. York made a motion at the August 28 meeting to cancel the program. Mr. Miller noted that he stated he was not in favor of cancelling the program unless the work assigned is relevant to what students are working on in class at that time. He asked if a plan is in place to benefit students with work that is relevant with the work students are doing in class.

Dr. Cochrane mentioned that the requirement from the DOE was for online learning, but if residents are without power computers cannot be used.

Mr. York inquired when Blizzard Bags will be used. He commented that they should not be used until the district has had two snow days. He suggested not to use the first Blizzard Bag until after the second snow day so that the schools can be more consistent with what is being worked on in classes. He suggested teachers can prepare the bags closer to the days they would be used. Mr. York was concerned about the participation numbers.

Mrs. Rothhaus commented that more professional development has been applied to Blizzard Bag methodology and has helped teachers provide quality assignments.

Mr. Miller was concerned that the assignments may not be relevant to what is covered in the classroom if the assignments provided are not used for one to a few months.

Mr. Thompson commented that feedback for Blizzard Bags at the elementary level was that the assignments were quality work and carefully planned.

Mr. York commented that when the program was approved, it was only approved for two years and not for long term use.

Ms. Leite commented that teachers understand the Board's concerns as they have struggled with the same issue. She indicated it takes much time to put assignments into the bags because we are trying to think ahead. She explained that it is difficult to create a plan for the work. Ms. Leite noted at LMS we have spent more time on how to make the work more relevant and are heading in that direction. She explained that sometimes it is related to a concept taught during the year, but increasing reinforcement of that concept is necessary. She noted it may not always be relevant to that moment. Ms. Leite indicated it is more difficult to get blizzard bags ready in a short period of time.

Mr. Miller expressed concern that Blizzard Bag work may not represent the quality of work that is evident in the classroom. He commented that he is not sure there is an answer since creating the bags and grading the work takes a significant amount of time.

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Mr. Barka suggested for this year we should continue with the program as is and discuss the topic more during the year.

Dr. Cochrane commented that the concept of education has changed and that good teachers have good data analysis they can use for this work anytime during the year. He noted that theme-based approaches in courses lead you to tie that work back to a particular theme. He indicated that all subject areas have thematic units that are used out of sequence during the year. Dr. Cochrane commented that the program is worth more consideration.

Dr. Heon noted that one concern is the quality of student work and how their seriousness is reflected in the quality of their work. She indicated that some require parental involvement and the support students have may vary. She commented that we require a quick turnaround on the teachers' part and we are not sure if there is ample time to evaluate the quality of the students' work. Dr. Heon noted that if the criteria we gave to the teachers is adequate, have we given them the resources to create and evaluate the work.

Mrs. D'Alleva commented that she supports keeping the students in front of the teachers and was concerned we are falling short of that concept.

Mr. York commented that his perception is that in some instances the work is simply checked off as completed and in some instances is checked thoroughly. He asked about the criteria for a completed Blizzard Bag.

Hearing no motions on the matter, the Board continued with their agenda.

B. CHS Priority School Status

Dr. Cochrane indicated that he received an email request from the DOE and asked Board members for direction on moving forward and for a decision on the allocation of funds from the State. He noted that the Title I funds are specifically for priority school designation.

Mr. Miller indicated that if the district does not accept the funds they are redistributed. He commented that if accepted, the district must draft a plan on how the money will be used and how the school will improve, with State approval.

Mr. Barka asked if a plan has to be submitted if the district does not accept the funds. Mr. Miller confirmed that a plan must still be drafted and approved.

Dr. Cochrane commented that information was contrary to the Commissioner's comments. He noted that there have been many contradictions to the criteria for priority school status.

Mr. York was concerned that if the district does not allocate funds to CHS while allocating funds to the other schools, the funds will be taken away altogether.

Dr. Cochrane confirmed that is not the case. He noted that in New Hampshire federal regulation cannot exceed State law. He commented that if the Board decides not to accept the funds for CHS, we may have to build into the budget how we provide the needed services this money would have funded.

Mr. Miller believes that people will understand the Board acknowledges the problems we are having and that we are trying to improve.

Mr. Miller made a motion not to allocate Title I funds to CHS this year. Mr. York seconded. The motion carried 5-0-0.

C. LSB Planning and Building Advisory Committee

- Clarification of Purpose/Goals

Mr. Barka commented that after the notification was sent regarding membership on the committee, he received inquiries about the purpose of the committee.

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Mr. York commented that he understood that safety and security improvements were the purpose of the committee.

Dr. Cochrane commented that a major infrastructure report was prepared last year with an associated cost of approximately \$8M dollars. He indicated that it would be helpful to know when building systems, roofs, floors, etc. are approaching end of life so that a plan can be crafted for improvement. He noted that having a contingency fund is functional; however, operating school on a daily basis would be difficult if something were to break down (ie.e roof leaking). Dr. Cochrane indicated that the purpose is to establish, with an unbiased body, the property value that is there and crafting a plan for preventative maintenance and/or establishing contingency fund items.

- Membership Candidates

Dr. Cochrane noted that the LSB Planning/Building Advisory Committee was planned to have four community members. He noted that six people have submitted interest in serving on the committee. Dr. Cochrane recommended to accept all six candidates as members.

Mr. York made a motion to accept all six community member candidates to serve on the LSB Planning/Building Advisory Committee. Mr. Miller seconded. The motion carried 5-0-0.

Dr. Cochrane suggested that Monday nights at 6:00 pm might work and that scheduling a meeting about every three weeks would be appropriate. He noted that the Committee could help to recommend a warrant article to the Board after reviewing the information regarding what is needed to maintain the school buildings.

Mr. Barka notified the Board that he is unable to serve on the Committee. Mrs. D'Alleva indicated she may be able to attend. Mr. York commented that members can rotate attendance to facilitate the meeting.

Mr. Miller suggested the charter be revised to reflect that a Board member is on the facilitator and not the Chair of the committee.

Board members will vote on revisions at their next meeting.

IV. NEW BUSINESS

A. FY15 Budget Development

Dr. Cochrane commented that all budget managers were given direction to create their budgets. He noted that the Superintendent's budget will be a bottom line budget and will be an average of the last three years, plus strategic budget items. He explained that budget managers are budgeting discretionary items with better rationale.

B. CHS Math Tutor

This agenda items was address under CHS Principal's Report.

C. FY14 YTD Budget Update – FYI

Mr. Markiewicz presented a year to date budget update to the Board. He noted this is an update on expenditures and revenues for FY14. He informed the Board that salaries and benefits encumbrances were completed this week. Mr. Markiewicz indicated that a first review reflects that some lines are under budget at this time. He reported that p-cards are being used properly and requisitions/purchase orders are timely.

Mr. Barka commented that Mr. Martin used to manage to a \$200,000 under spend. Mr. Markiewicz indicated that can be done as it is a common practice to have that savings at the end of the year.

D. Student Transportation Contract

Mr. Markiewicz discussed the transportation contract renewal with the Board. He commented that the amendment on the current transportation contract is to June 2014. He asked the Board for direction on either going out to bid for transportation next year or renegotiating with First Student. Mr. Markiewicz reported that for FY15 budgeting purposes, he instructed budget managers to increase rates by 3%. He indicated there are a limited number of contractors in the market.

Dr. Cochrane commented this may be one of those times when a contract extension is warranted.

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Mr. Markiewicz reported that there were some issues this year with new drivers, but all issues have been resolved. He indicated that First Student was very accommodating both to route changes and accommodations for a special education student.

Mr. Miller indicated that in 2009 we wanted to go out to bid and it came to our attention that First Student's bid would be more expensive than the current rates, which was verified.

Mr. Markiewicz commented that Business Administrator's share information and if First Student signs an extension with another district, we will have that information. He indicated that we can enter into negotiations with them almost immediately.

Mr. Miller asked to have a brief discussion regarding this topic in non-public session.

E. Primex Resolution: Workman's Compensation Contribution Program

Mr. Markiewicz asked the Board to sign the Primex Resolution for the Workman's Compensation Contribution Program. He reported that the rate increased by 3.1% since last year and is not negotiable.

Mr. Miller made a motion to approve the Primex Contribution Assurance Program for FY15-17 for the Workman's Compensation Program. Mr. York seconded. The motion carried 5-0-0.

Dr. Cochrane reported that he met with Mr. Markiewicz, Mr. Lynch and Mr. Ross regarding the request from the Historical Society to use the 1930's building. He indicated there is an accessible restroom on the second floor, the fire escape needs work, there are issues with respect to lead-based paint and the presence of asbestos. He noted there are concerns that people who are in that area would have access to the rest of the school, but he indicated they would not. Dr. Cochrane was concerned that with the present issues, it could lead to insurance claims.

Mr. Markiewicz indicated that if there is a claim against Primex regarding asbestos or lead issues, they are exclusionary and would be at the discretion of the district.

Dr. Cochrane commented that the attraction of the building is evident, but given the timeframe he suggested that they use the GMS gym. He indicated that he is concerned about the confluence of potentially negative issue.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Janine Lapore, 17 Greenwich Road, thanked Board members for meeting each week and dealing with the issues that are presented. She indicated that she has the prospective of a parent of a child that has gone through the Litchfield School System and graduated. She noted that the teachers have had an amazing influence on her children's education and are a source of inspiration. Mrs. Lapore indicated that the teachers excited her children about learning and engaged their interest in their courses. She commented that her daughter stated the education she received prepared her for challenging courses in college and felt that she was well prepared. Mrs. Lapore noted she wanted to share the information with the Board because the teachers that work here are fundamental to everything and she hopes the Board will support the teachers as much as possible. She believes that positive feedback should be shared with the Board. She thanked the teachers, district and the Board and noted that our schools are doing an excellent job educating the children.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered into non-public session at 9:50 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2)

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requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller, the Board returned to public session at 10:41 p.m. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. Miller made a motion to adjourn at 10:42 p.m. Mrs. D'Alleva seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052**

**Approved Minutes for September 25, 2013
(approved as written 10-2-13)**

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Devin Bandurski, Director of Special Services
Tracy Micali, Director of Human Resources
Laura Rothhaus, Principal, CHS
John Patterson, Athletic Director, CHS
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION 6:30 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 6:35 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

Revisions to the agenda included moving New Business before Old/Unfinished Business.

D. Summary of Non-Public Actions from the September 18, 2013 non-public session:

Mr. Miller made a motion to approve the non-public minutes of September 4, 2013 as written. Mr. York seconded. The motion carried 5-0-0.

E. Presentations & Recognitions

Mrs. Rothhaus mentioned that three students were named to the National Merit Scholars at CHS: Aaron Bonneau, Adorian Fekete, and Leah Stagnone. She commented that it is quite an accomplishment both for the students and for CHS.

F. Correspondence

Board members noted they received correspondence from various community members.

G. Approval of Draft Minutes:

- Public Session September 18, 2013

Mr. York made a motion to approve the public minutes of September 18, 2013 as written. Mr. Bourque seconded. The motion carried 5-0-0.

H. Community Forum

Jason Guerrette, 11 Perry Court, noted that he sent some emails regarding Common Core to Board members. He indicated that the Alton School Board chose not to adopt Common Core State Standards (CCSS). He commented that the Manchester curriculum committee forwarded CCSS to the School Committee without recommendation. Mr. Guerrette referenced an article he forwarded to Board members stating that CCSS lowers the standard of education. He commented that many states are not funding CCSS or reconsidering funding CCSS because it is different than what has been stated.

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Mr. Guerrette commented that we are adopting a system that is yet to be tested or to succeed. He noted that Common Core State Standards were developed by a consortium of private entities whose only motivation is financial. He asked Board members to more thoroughly research CCSS.

I. Superintendent's Comments

Dr. Cochrane commented that in reading the white paper regarding CCSS, it was stated that Massachusetts standards are better. He agreed that Massachusetts scored significantly higher than other states in recent NAEP testing. He commented that Massachusetts standards are one of the best in the county. Dr. Cochrane indicated that some good questions are being asked about the intent of CCSS. He commented that there is some validity to the criticism of CCSS. Dr. Cochrane indicated that he supports Common Core and believes it is a good set of standards. He noted that the resources will now be written to the standards. He commented that Massachusetts has a strong centralized system. Dr. Cochrane indicated that centralization and support in producing curriculum can work if it is done well.

- Special Education Update

Mrs. Bandurski provided a special education update for the Board. She reported that there was an increase of 50 special education students between May 2012 and May 2013. She noted that the previous year (July 1 – June 30) we had 82 special education referrals, with 15 transferring in from other districts. In the summer of 2012, we had 22 referrals and this past summer (2013) there were 2 referrals.

Mrs. Bandurski provided the results of the parent involvement survey distributed in spring of last year. She noted in comparison to the previous year we doubled our response rates. She reported that 52 parents completed the 2012-2013 survey and we improved in 20 out of 26 areas. She acknowledged that the schools and staff have worked hard communicating with parents.

Mrs. Bandurski provided an ESOL and Home Education update for the Board. She reported that 13 students receive ESOL services and 28 students are educated in the home.

Dr. Cochrane commended Mrs. Bandurski and her staff for their accomplishments over the last year. He commented that there was a backlog of students to be identified prior to hiring Mrs. Bandurski. Dr. Cochrane indicated that we are more proactive in our intervention and are making good strides with different types of issues.

Mrs. Bandurski commented we are moving forward and making sure we are addressing all issues and areas.

Mr. York asked about out-of-district placements. Mrs. Bandurski indicated that there are currently 10 out-of-district placements and two of those students will age out over the course of the year.

Mrs. Bandurski mentioned that in our district we have a full time occupational therapist and a certified occupational therapy assistant COTA. She indicated that the person in the previous position resigned and we have had difficulty filling the position over the summer. Mrs. Bandurski explained that contracting with a service is more costly than hiring a part time occupational therapist. She noted a candidate has been found.

Mr. Barka asked about the behavior specialist. Mrs. Bandurski indicated the specialist is working well. She noted that the specialist has taken on the case load, is consulting with staff and implementing plans.

Mrs. Bandurski updated the Board regarding the early childhood special education program. She indicated that we will be changing the way we classify the make up of the class according to the law. She noted we currently run three sessions and all slots are full at this time.

II. REPORTS

A. School Board Comments

Mr. Miller congratulated Mrs. Rothhaus and Coach Patterson regarding notification of admission for the football game on Saturday.

Coach Patterson mentioned that the contract with Coca Cola is complete. He reported that Coca Cola will provide the scoreboard and will contribute \$2,500 toward its installation.

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B. Committee Reports

Mr. Markiewicz reported that the Safety Committee met yesterday afternoon and reviewed safety reports and walkthrough reports. The next meeting is scheduled for December 10 at 3:00 p.m.

Dr. Cochrane reported that the district meets the criteria for the use of impact fees with regard to safety recommendations. He noted that we are considering communications systems, access controls and security systems. Dr. Cochrane reported that Mr. Hancock met with a security advisor to determine what is necessary for the schools. Dr. Cochrane commented that he will discuss with Mr. Hoch scheduling the impact fees request and recommendation to the Board of Selectmen.

III. OLD OR UNFINISHED BUSINESS

A. LSB Planning and Building Advisory Committee

Board members discussed unfinished business regarding the Litchfield School Board Planning and Advisory Committee.

- Document Revision

Dr. Cochrane presented a change to the number of members on the Committee.

Mr. Miller made a motion to approve the revised LSB Planning and Building Advisory Committee charter. Mr. York seconded. The motion carried 5-0-0.

IV. NEW BUSINESS

A. Job Descriptions:

Dr. Cochrane presented new job descriptions to the Board for approval.

- Boys Lacrosse Coach Job Description
- Girls Lacrosse Coach Job Description

Coach Patterson explained that there were no examples to use when writing the job descriptions. He commented that the descriptions were written for a Junior Varsity schedule; however, the intent is to upgrade the job description to Varsity next year.

Dr. Cochrane commented that changing the job description from Junior Varsity to Varsity is an administrative decision. He indicated that the stipend can be adjusted if the level changes.

Board members made minor revisions to the job descriptions.

Mr. Miller made a motion to approve the Boys and Girls Lacrosse Coaches job descriptions with amendments. Mr. Bourque seconded. The motion carried 5-0-0.

- Professional Learning Facilitator Description

Dr. Cochrane presented a new job description to the Board. He explained that a professional learning facilitator is a member of the Professional Development Committee and would be involved with the teacher recertification process. He noted that teachers must be recertified every three years. Dr. Cochrane commented that having someone in each building to facilitate this process is beneficial and will allow the Curriculum Director to address other important work.

Mr. Miller made a motion to approve the Professional Learning Facilitator Job Description. Mr. Bourque seconded. The motion carried 5-0-0.

B. US Lacrosse First Stick Program Grant

Coach Patterson presented a Lacrosse stick program grant to the Board. He indicated that the grant is product-based and notified Mr. Desmarais that if any money is received it must go to the Student Activities account.

Mr. York made a motion to accept the US Lacrosse First Stick Program grant. Mr. Bourque seconded.

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Mr. Miller amended the motion to accept the US Lacrosse First Stick Program grant pending the value of the grant. Mr. Bourque seconded. The motion carried 5-0-0.

C. FY15 Budget Presentations

Mr. Markiewicz presented the following FY15 requested budgets to the Board:

- CHS Athletics

Coach Patterson reported the following increases/decreases to the budget:

- Athletic Trainer Services: decrease \$2,500
- Game Officials: increase \$7,275
- Repairs/Maintenance: increase \$4,400
- Supplies: increase \$12,261.44

Total CHS Athletics budget changes: increase of \$24,076.44 to the budget total. Coach Patterson indicated that when the self-funded items are moved to their own function, the increase will be lower.

- SAU and School Board
 - District Administration

Dr. Cochrane reported that most lines in the District Administration budget are level funded. He noted there are no major increases or decreases.

- Business/Finance

Mr. Markiewicz reported the following increases/decreases to the budget:

- Software Lease: decrease \$7,151.44

Total Business/Finance budget changes: decrease of \$7,147.44 to the budget total.

- Human Resources

Mrs. Micali reported that most lines in the Human Resources budget are level funded. She noted there are not major increases or decreases.

- School Board

Dr. Cochrane reported that most lines in the School Board budget are level funded. He noted there are no major increases or decreases.

- Transportation

Coach Patterson indicated that a 3% increase was budgeted for all athletic transportation accounts.

Mrs. Rothhaus indicated that a 3% increase was budgeted for all co-curricular transportation accounts.

Mr. Markiewicz reported that he instructed budget managers to increase all transportation accounts by 3%.

Mr. Barka inquired about a final transportation contract. Mr. Markiewicz indicated that he contacted First Student regarding intentions to begin contract negotiations.

- Curriculum Development

Dr. Cochrane reported that all increases in the Curriculum budget are related to strategic goals. He reported the following increases/decreases to the budget:

- Course Reimbursement (non-union): decrease \$2,000
- Course Reimbursement (union): increase \$2,350
- Software: increase \$6,933

Total Curriculum Development budget changes: increase of \$7,785.80 to the budget total.

- Debt Services

Mr. Markiewicz reviewed the FY15 Debt Services budget with the Board. He reported there is a \$357,000 decrease in debt services.

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V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Robin Corbeil, 4 Nesmith Court, expressed concern regarding the family id system mentioned during the athletics budget presentation. She commented that the information stored in the system should have secure access.

Mrs. Corbeil commented that the dual enrollment plan is being offered to juniors and seniors at CHS. She requested that an informational meeting be held for parents regarding this program. She indicated that there is not enough information for parents and noted that having a resource where questions can be answered would be valuable. Mrs. Corbeil indicated that the cost for the program is due Friday. She commented that she does not have enough information to make a decision.

Dr. Cochrane noted that he would pass along Mrs. Corbeil's concerns to Mrs. Rothhaus.

Mrs. Corbeil believes that dual enrollment courses are new. Dr. Cochrane indicated that dual enrollment has been in practice for some time and is typically communicated through the guidance department.

Mrs. Corbeil commented that the program is new to her and requested an information night to discuss her child's education in this area. Dr. Cochrane indicated he will pass the request along to share the information.

Jason Guerrette, 11 Perry Court, commented that he has seen great growth and progress in the special education system and provided positive feedback to the Board.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Bourque, the Board entered into non-public session at 8:40 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Miller seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller, the Board returned to public session at 9:29 p.m. Mr. York seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. Miller made a motion to adjourn at 9:30 p.m. Mr. York seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

One Highlander Court

Litchfield, NH 03052

Phone: (603) 578-3570

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Equal Opportunity Employer

Derek Barka, Chair

Patricia D'Alleva, Vice Chair

Dennis Miller

John York

Brian Bourque

September 25, 2013

Attachment to the September 25, 2013 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the September 25, 2013 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

From: Jason Guerrette [sts3717@gmail.com]

Sent: Wednesday, September 11, 2013 10:04 AM

To: Derek Barka; John York; Brian Bourque; Patricia D'Alleva; Andrew Cutter

Subject: Fwd: THE NH Exec. Branch has NO Authority to Mandate Common Core State Standards or Smarter Balanced Assessments

Good morning

By blindly accepting what is put in front of you as lawful you then turn a blind eye to what is actually the law in NH.

Jason

I would like this added to the minutes.

Jason

Sent: Tue Sep 10 09:47:23 EDT

Subject: THE NH Exec. Branch has NO Authority to Mandate Common Core State Standards or Smarter Balanced Assessments

The NH Executive Branch has No Authority to Mandate Common Core State Standards or Smarter Balanced Assessments

Submitted by ... on 9 September 2013 - 2:20am

The Commissioner of Education, members of the Board of Education and Governor, are members of the New Hampshire Executive Branch and, as such, they have:

- * no authority to sign away the rights of New Hampshire citizens because that power was never delegated to the Executive branch and enumerated in the NH Constitution;
- * no authority under the NH Constitution to sign away state sovereignty, i.e. control, over education to:
 - o non-government organizations, National Governors Association and Council of Chief State School Officers, which hold a public copyright license for Common Core State Standards and thereby control those Standards,
 - o the U.S. Department of Education, which controls the Smarter Balanced assessments, derived from those same Standards and used to measure student performance;
- * no authority under the NH Constitution to mandate federal programs without doing a fiscal analysis of the costs and fully funding them as required by Part 1 Art. 28-a of the NH Constitution;
- * no authority under state law, RSA 193-C, to administer assessments that:
 - o transfer authority to a consortium of states with a commitment to unknown costs for continuance of that consortium without approval,
 - o authorize the U.S. Department of Education and Pearson to conduct research to develop a privately controlled product, evaluating student performance on assessments without Institutional Review Board

standards of informed consent and transparency of effects for assessments that have no reported technical adequacy;

- * no authority to administer student assessments, which evaluate student “dispositions” in opposition to the instruction of the legislature in RSA 193-H, 2013 Senate Bill 48, and which cannot be “objectively scored” as required by law, RSA 193-C:3 II;
- * no authority to overturn state law, RSA 21-N:6 to create and oversee an unauthorized division of the department of education, the Division of Instruction, which administers the Smarter Balanced assessments;
- * no authority to supersede the District organization of our public schools established by the NH legislature in RSA 194 by creating six unauthorized Regional offices under which the Division of Instruction intends to implement Common Core State Standards and other federal policies;
- * no authority to impose competency-based learning upon students through the adoption of rules, Ed 306, bypassing the legislature, which refused to pass legislation on competency-based learning: 2011 Senate Bill 192 & 2013 Senate Bill 82;
- * no authority to promise the U.S. Department of Education that it will impose competency-based learning upon our students under state law;
- * no authority to violate state education law, which protects local School Boards, RSA 189, and local control of student curricular frameworks, curriculum, and curricular materials, RSA 193-E 2a V:
 - o “The general court requires the state board of education and the department of education to institute procedures for maintaining, updating, improving, and refining curriculum frameworks for each area of education identified in paragraph I. The curriculum frameworks shall present educational goals, broad pedagogical approaches and strategies for assisting students in the development of the skills, competencies, and knowledge called for by the academic standards for each area of education identified in paragraph I. The curriculum frameworks shall serve as a guide and reference to what New Hampshire students should know and be able to do in each area of education. The frameworks do not establish a statewide curriculum. It is the responsibility of local teachers, administrators, and school boards to identify and implement approaches best suited for the students in their communities to acquire the skills and knowledge included in the frameworks, to determine the scope, organization, and sequence of course offerings, and to choose the methods of instruction, the activities, and the materials to be used.”
- * no authority to submit a grant application for an ESEA (No Child Left Behind) flexibility waiver to the U.S. Department of Education, making false and misleading promises which violate the NH Constitution and state law, including but not limited to:
 - o promising the U.S. Department of Education to administer Smarter Balanced assessments, which evaluate student "dispositions" in opposition to the instruction of the New Hampshire legislature which refused to authorize the evaluation of student "dispositions" in the original version of 2013 Senate Bill 48, i.e., 2013 RSA 193-H;
 - o promising to tie scores on Smarter Balanced assessments to evaluations of teachers (principals, librarians, and guidance counselors) in violation of Part 1, Art. 6 of the NH Constitution which guarantees that each district “shall at all times have the right of electing their own teachers, and of contracting with them for their support or maintenance or both” without state interference.

Under state law, RSA 193-C:1 II, the statewide assessments “serves as an effective measure of accountability when the assessment exercises or tasks are valid and appropriate representations of the curriculum standards that students are expected to achieve.”

Before using any assessment to determine student success or failure, the assessment itself must pass rigorous criteria of validity and reliability. To date there has been no published data on the technical

adequacy of Smarter Balanced assessments to formal and informal venues for review. Why has SBAC failed to publish the validity and reliability of their tests?

According to the U. S. DoE - SBAC cooperative agreement:

“An eligible applicant awarded a grant under this category must ---

1. Evaluate the validity, reliability, and fairness of the summative assessment components of the assessment system, and make available through formal mechanisms (e.g., peer-reviewed journals) and informal mechanisms (e.g., newsletters), and in print and electronically, the results of any evaluations it conducts; “(p. 11) Pearson is the only corporation developing these SBAC assessments. Yet there is no technical adequacy data, which makes these current pilot tests nothing more than research activities. As research activities under contract with the U.S. Department of Education, the researcher must conform with Institutional Review Board standards, which requires consent from the guardians of minors. Moreover, parents are not compelled to submit their children as participants in a research activity. Moreover, there are penalties for making fraudulent claims on federal grant applications. Any contracts fraudulently made by the Executive branch cannot be considered legally binding upon the citizens of New Hampshire.

For the welfare of all students in public schools:

Districts can not be required to implement Common Core State Standards; Regional offices, implementing this Common Core federal program, must be shut down; Exemptions to the Smarter Balanced Assessments must be made widely available to both individuals and Districts until such time as all these violations are fully resolved.

The U.S. Department of Education must release New Hampshire and other states from these excessive high-stakes testing mandates, and encourage teachers to innovate and evaluate their students' performance independently.

For the past decade, high-stakes standardized tests have eroded the quality of public education. Despite the well-documented problems with these tests, the number of high-stakes tests continue to grow. At a time of shrinking school budgets, rising class sizes and plummeting teacher morale, the last thing our schools need is yet another wave of expensive, time-consuming high-stakes tests.

We can TEACH our way to the top,
but we can not test our way to the top.

<http://nhfamiliesforeducation.org/content/nh-executive-branch-has-no-authority-mandate-common-core-state-standards-or-smarter-balanced>

From: Jason Guerrette [sts3717@gmail.com]
Sent: Wednesday, September 11, 2013 2:32 PM
To: Derek Barka; Patricia D'Allewa; John York; Brian Bourque; Andrew Cutter
Subject: Fwd: THE Case Against Common Core Standards and the CCSS-Aligned Smarter Balanced Assessments

Good afternoon

More on the legality of CCS.

We can simply ignore reality or preserve what is our right to educate our children locally.

Jason

Please add to the minutes

Sent: Wed Sep 11 14:30:28 EDT
Subject: THE Case Against Common Core Standards and the CCSS-Aligned Smarter Balanced Assessments

<http://nhfamiliesforeducation.org/content/case-against-common-core-state-standards-and-ccss-aligned-smarter-balanced-assessments>

The Case AGAINST Common Core State Standards and CCSS-Aligned Smarter Balanced Assessments

Submitted by ... on 10 September 2013 - 11:53pm

The United States Constitution

The U.S. Constitution is also referred to as the "Supreme Law of the Land." Article 1, Section 8 of the U.S. Constitution, which speaks to the powers vested in Congress, does not enumerate education as one of the powers vested in Congress. Likewise, Article 2, which outlines the powers of the executive branch, or the president, does not assign to the position the authority to speak to matters of education. Article 3, which speaks to the powers of the judicial branch, does have the answer, well, at least in part. Article 3, which creates the judicial branch of the federal government, provides that if there is a conflict or a question of law arising as to the U.S. Constitution, that the U.S. Supreme Court shall decide on the issue. Since the U.S. Constitution is silent on the matter of education, the issue has been addressed and resolved by the U.S. Supreme Court, as explained follows:

The United States Supreme Court

In *San Antonio Independent School District v. Rodriguez* (1973), the U.S. Supreme Court held that education “is not among the rights afforded explicit protection under our Federal Constitution. Nor do we find any basis for saying it is implicitly so stated.” This coupled with Article X, otherwise known as the 10th Amendment, of the Bill of Rights which provides that “powers not delegated to the U.S. by the Constitution, nor prohibited by it to the States, are reserved to the States,” establishes that the creation of education policies is reserved to the state and local governments. *San Antonio Independent School District v. Rodriguez*, 411 U.S. 1 (1973) The New Hampshire Constitution Consistent with the foregoing holding from the U.S. Supreme Court, Article 83, Part 2 of the New Hampshire Constitution speaks to the matter of education. More specifically, that “it shall be the duty of the legislators and magistrates, in all future periods of this government, to cherish the interest of literature and the sciences, and all seminaries and public schools, to encourage private and public institutions, rewards, and immunities for the promotion of agriculture, arts, sciences, commerce, trades, manufactures, and natural history of the country.” Article 6, Part 1 further dictates that: “the several parishes, bodies, corporate, or religious societies shall at all times have the right of electing their own teachers, and of contracting with them for their support or maintenance, or both.”

Given the fact that local school board members are elected officials, it follows that the citizenry directly influences local educational policies through their power of the vote.

The New Hampshire Statutes

The New Hampshire Legislature is vested with the power to enact statutes to carry out the intent of the New Hampshire Constitution. To that end, Title I of the New Hampshire Statutes provides the following: “The general court finds that the students, parents, general citizenry, local school teachers and administrators, local governments, local school boards, school administrative units, and state government have a joint and shared responsibility for the quality of education delivered through the public education system in the state of New Hampshire.” RSA 21-N:1 I.

This should speak for itself.

Abuse of Law

Abuse of law happens all the time. Judges make bad law from the bench when they apply or interpret the law incorrectly. Likewise, uninformed or corrupt legislators propose bills that are enacted into law that are either blatantly unconstitutional, or at the very least, serve as the impetus for governmental abuse. The later is what has happened as it relates to the law of education as a result of the enactment of the three (3) federal education acts, as explained below.

It could be argued that these laws are, in and of themselves, unconstitutional for the simple reason that they seek to control matters related to education. And, as the foregoing legal analysis demonstrates, the state and local governments, not the federal government, should be involved in the matters related to education.

Elementary and Secondary School Act of 1965 (ESEA) With the stroke of a pen, in 1965, President Lyndon B. Johnson, changed the extent to which the federal government would be involved in education. At the time the law was enacted, during the Civil Rights Movement, the law was deemed necessary in that it would seek to address the issues of the time. The law reads:

Nothing in the Act shall be construed to authorize an officer or employees of the Federal Government to mandate, direct, or control a State, local educational agency, or school’s curriculum, program of instruction, or allocation of State and local resources, or mandate a State or any subdivision thereof to spend any funds or incur any costs not paid for under the Act. 20 U.S.C. § 7907(a)

Department of Education Organization Act (DEOA) This is the Act, which created the Department of Education (DoE) in 1979. At the time, many members of the U.S. Congress expressed their concerns over the creation of the DoE. Today, many assert that the DoE should be abolished because through the years, it has developed policies and programs that encroach on the constitutional rights that state and

local governments have over matters of education. The DoE has done this in violation of the letter of the law, as well as in disregard of its legislative history and intent.

The DEOA provides that:

No provision of a program administered by the Secretary or by any other officer of the Department shall be construed to authorize the Secretary or any such officer to exercise any discretion, supervision, or control over the curriculum, program of instruction, administration, or personnel of any educational institution, school, or school system, over any accrediting agency or association, or over the selection or content of library resources, textbooks, or other instructional materials by any educational institution or school system, except to the extent authorized by law. 20 U.S.C. § 3403(b) When analyzing any legal primary source, one would be remiss if one only reads the letter of the law. That is, to fully understand the spirit of the law, one also needs to read the written commentaries or the legislative history that follows. In the instant case, as it relates to the DEOA, in Finding 4 of the DEOA, Congress underscored that:

[I]n our Federal system, the primary public responsibility for education is reserved respectively to the States and the local school systems and other instrumentalities of the States. 20 U.S.C. § 3401(4)

It should also be highlighted that Congress made its intentions clear when it said:

It is the intention of the Congress in the establishment of the Department to protect the rights of State and local governments and public and private educational institutions in the areas of educational policies and administration of programs and to strengthen and improve control of such governments and institutions over their own educational programs and policies. The establishment of the Department of Education shall not increase the authority of the Federal Government over education or diminish the responsibility for education, which is reserved to the State and local school systems and other instrumentalities of the States. 20 U.S.C. § 3403(a)

A close reading of the ESEA and the DEOA juxtaposed with the Common Core State Standards (CCSS), especially the implementation of the CCSS, make it clear that the federal government is in fact mandating, directing and controlling curriculum.

Although proponents of the CCSS argue that the CCSS only impose “standards,” rather than “curriculum,” professionals in the field of education understand that curriculum is developed from standards, and therefore, to impose a certain set of standards, as the federal government is doing through the CCSS, is tantamount to also imposing curriculum. Moreover, assessments are based on the curriculum, which assess whether students achieve demonstrated proficiency of the CCSS standards. Standards, curriculum and assessments are all intrinsically linked, such that, the effect is that they are all one and the same.

To make the point take into account what the educational experts say:

Dr. Greene has stated, “To make standards meaningful they have to be integrated with changes in the curriculum, assessment and pedagogy.” Robert S. Eitel and Kent D. Talbert, *The Road to a National Curriculum*, Pioneer Institute, August 5, 2013, <http://pioneerinstitute.org/download/the-road-to-a-national-curriculum/>

The Federal Secretary of Education, Arne Duncan, has also acknowledged the nexus between standards and curriculum when he stated that “curriculum can only be as good as the academic standards to which the assessments and curriculum are pegged.” Robert S. Eitel and Kent D. Talbert, *The Road to a National Curriculum*, Pioneer Institute, August 5, 2013, <http://pioneerinstitute.org/download/the-road-to-a-national-curriculum/>

Thus, for the federal government and the proponents of the CCSS to conclude that the CCSS do not dictate curriculum and assessments, both of which the federal government is prohibited from doing, is to lie to the American people.

General Education Provisions Act (GEPA)

Similar to the above-mentioned laws, GEPA provides:

No provision of any applicable program, shall be construed to authorize any department, agency, office or employee of the United States to exercise any direction, supervision, or control over the curriculum, program of instruction, administration, or personnel of any educational institution, school, or school system, or over the selection of library resources, textbooks, or other printed material by any educational institution or school system, or to require the assignment or transportation of students or teachers in order to overcome racial imbalance. 20 U.S.C. § 1232a

In addition to the above-stated commentaries relating to curriculum, it is noteworthy to underscore that this Act goes a step further to limit the power of the federal government over the “selection of library resources, textbooks, or other printed material by any educational institution or school system.”

This notwithstanding, the federal government has given two state consortia, Partnership for Assessment of Readiness for College and Careers Consortium (PARCC) and SMARTER Balanced Assessment Consortium (SBAC), \$330 million dollars to begin the development of digital tools and libraries.

To use their words, the two consortia have stated as follows:

PARCC has stated:

PARCC’s initial proposal calls for the development of a digital library of tools...the broader set of tools in the library will provide choices and supplemental materials (beyond the instructional units) for teachers to use. The development of the library also will identify materials that can be used to inform the development of the instructional units or even become the instructional units, perhaps with minor modification.

PARCC PROPOSAL FOR SUPPLEMENTAL RACE TO THE TOP ASSESSMENT AWARD 1 (2010), available at <http://www.edweek.org/media/parccsupplementalproposal12-23achievefinal.pdf>

SBAC, also provides that it will:

[D]evelop curriculum materials...contract with professional organizations, universities and non-profit groups...to adapt their curriculum materials to SBAC specifications to upload to the digital library.

Robert S. Eitel and Kent D. Talbert, The Road to a National Curriculum, Pioneer Institute, August 5, 2013, <http://pioneerinstitute.org/download/the-road-to-a-national-curriculum/>

The stated intentions of both consortia juxtaposed with GEPA clearly violate the letter of the law. There is no need for further analysis.

Case Closed: Common Core State Standards is Illegal In light of existing law, the federal government should not be involved in matters as they relate to education. Even the federal statutes confirm that. The Acts’ language is superfluous and their enactment arbitrary.

As stated above, it should come as no surprise to learn that at the time Congress set out to enact the DEOA there were numerous members of Congress, who objected to its enactment. These Congressional leaders, in their infinite wisdom, could anticipate and foresee what is happening today with the implementation of the CCSS when they stated their objections to the enactment of the DEOA and the consequent creation of the DOE. They accurately predicted:

If we create this Department, more educational [decision-making] as to course content, textbook content, and curriculum will be made in Washington at the expense of local diversity. The tentacles will be stronger and reach further. The Department of Education will end up being the Nation’s super [school board]. H.R. REP. No. 95-1531, at 47 (1978) Almost a quarter of a century after those words were memorialized, their prophetic nature becomes apparent. The tentacles of the DoE are infringing on local diversity, such that it is now acting as a national school board. To that end, not a single local school board in the nation had an opportunity, nor the intention, to place the issue of whether “the” local shareholders approved of the CCSS before them.

We, the people, can send a clear message to local school boards objecting to this insidious, subversive and stealth campaign, otherwise known as the Common Core “State” Standards.

The title, Common Core “State” Standards, begs the question: Why is the word “State” part of the title when the states had nothing to do with their creation or development?

The more pressing question is: Will elected officials heed the voices of the people and uphold the sanctity of this Constitutional Republic, remembering that the source of their power was, and is, granted to them by, we, the people.

From: Jason Guerrette [sts3717@gmail.com]

Sent: Wednesday, September 25, 2013 8:23 PM

To: Derek Barka; Patricia D'Allewa; John York; Brian Bourque; Andrew Cutter

Subject: Fwd: [FR] Agency Information Collection Activities; Submission to the Office of Management and Budget for Review and Approval; Comment Request; Early Childhood Longitudinal Study Kindergarten Class of 2010-11 (ECLS-K:2011) Spring Third-Grade National C...

Good evening,

Data mining of private information will be forwarded to the Federal Govt as part of CCS.

Jason Guerrette

https://www.federalregister.gov/articles/2013/09/24/2013-23207/agency-information-collection-activities-submission-to-the-office-of-management-and-budget-for?utm_campaign=subscription+mailing+list&utm_medium=email&utm_source=federalregister.gov

Please add to the minutes.

Jason

----- Forwarded message -----

Date: Wed, Sep 25, 2013 at 8:14 PM

Subject: [FR] Agency Information Collection Activities; Submission to the Office of Management and Budget for Review and Approval; Comment Request; Early Childhood Longitudinal Study Kindergarten Class of 2010-11 (ECLS-K:2011) Spring Third-Grade National Collection, Fourth-Grade Recruitment, and Fifth-Grade Tracking

To: sts3717@gmail.com

You've been sent an article from the Federal Register by sts3717@gmail.com .

[Agency Information Collection Activities; Submission to the Office of Management and Budget for Review and Approval; Comment Request; Early Childhood Longitudinal Study Kindergarten Class of 2010-11 \(ECLS-K:2011\) Spring Third-Grade National Collection, Fourth-Grade Recruitment, and Fifth-Grade Tracking](https://www.federalregister.gov/articles/2013/09/24/2013-23207/agency-information-collection-activities-submission-to-the-office-of-management-and-budget-for?utm_campaign=subscription+mailing+list&utm_medium=email&utm_source=federalregister.gov)

78 FR 58528 - A Notice by the Education Department published on 09/24/2013

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 et seq.), ED is proposing a revision of an existing information collection.

From: Jason Guerrette [sts3717@gmail.com]
Sent: Wednesday, September 25, 2013 11:38 AM
To: Derek Barka; Patricia D'Allewa; John York; Brian Bourque; Andrew Cutter; Brian Cochrane
Subject: Fwd: REPLY from Sandra Stotsky: Common Core moved to full Manchester School Board

Good morning,

My apologies for the missing attachment. I suppose that is what I get for pushing it through my phone.....

Please see the attached reply from the two experts from the CCS validation committee.

Please add this to the minutes.

Jason

-----Original Message-----

From: Sandra Stotsky
Sent: Wed, Sep 25, 2013 9:49 am
Subject: Re: Common Core moved to full Manchester School Board

I am attaching an analysis that mathematician James Milgram and I just finished. It is clear that Common Core's math standards do NOT prepare students for STEM majors at the college level. The standards lower the level of our entire educational system. Why would any state or school district want Common Core's math standards. Ask your high school math teachers and the teaching faculty in your science, math, and engineering departments at institutions of higher education to testify. Sandra

September 24, 2013 11:35PM
Common Core moved to full Manchester school board

ShareThis
By TED SIEFER
New Hampshire Union Leader

MANCHESTER — The Common Core state standards have been dropped in the lap of the full school board.

The board's Curriculum and Instruction Committee voted Tuesday to send the matter to the full board without a recommendation, after several dozen people spoke against the standards and some school board members echoed some of their concerns.

Approximately 50 people turned out for Tuesday's meeting. Many of them reiterated objections to the Common Core standards that have been forcefully made at several school board meetings in recent weeks.

The committee has been asked to sign off on curriculum guides developed over the summer by city teachers in order to align teaching in the district with Common Core. District officials have said that Manchester is well behind other districts in adopting the standards; state education officials have indicated that state and federal aid could be jeopardized if the district does not agree to institute the assessment test derived from the standards.

Critics charge Common Core is an attempt by the Obama administration to impose a rigid educational system that relies on unsound principles and undermines local control. Supporters say its goal is to establish nationwide learning benchmarks and to make U.S. students prepared to compete in the global economy.

Richard Dumont, who served on the school board in the 1990s, said Common Core reminded him of earlier, ill-conceived proposals to revamp the curriculum.

"I can't for the life of me understand why the board would want to implement a massive rewrite on how we teach our kids," he said.

Another critic, Siobhan Tautkus, implored the board, to "ask one question — what does the federal government do well?"

At the same time, three Manchester teachers involved in developing the curriculum guides maintained that the standards were helpful and that they gave teachers more control rather than less.

"I found the standards open enough to adapt my own lessons," said Debra Villiard, a fourth grade teacher.

After more than an hour of public comments, the committee considered a motion from Ward 8 board member Erika Connors to approve the standards on a "draft and pilot basis," while withholding any support for adopting the Common Core assessment test, Smarter Balanced.

Committee member Art Beaudry, Ward 9, said there were still too many unanswered questions, and proposed creating a special advisory committee to review them. "I would like to see us formulate a committee to look at something more in line with best practices in Massachusetts," he said.

Ward 10 school board member John Avard, who is not on the committee, agreed more study is needed. "The more I learn about Common Core, the less I know," he said. "Let's not rush into this blind... We're not ready for this yet."

At times, the audience broke into cheers, prompting committee Chair Sarah Ambrogio, Ward 1, to bring down the gavel.

Connors later withdrew her motion, and proposed that the committee refer the matter to the full board without a recommendation, which the panel voted to accept. After the meeting, Ambrogio acknowledged that the board was being asked to approve something that it had relatively little time to consider.

“I wish that we had begun talking about this three years ago, when the state first adopted the standards,” she said. “That is why we were probably continuing to play catch up... I think the full board is going to have a hard time with this.”

tsiefer@unionleader.com

Lowering the Bar

How Common Core Math Fails to Prepare High School Students for STEM

No. **103**
September
2013

A Pioneer Institute White Paper

by R. James Milgram and Sandra Stotsky





PIONEER INSTITUTE
PUBLIC POLICY RESEARCH


Pioneer's Mission


Pioneer Institute is an independent, non-partisan, privately funded research organization that seeks to improve the quality of life in Massachusetts through civic discourse and intellectually rigorous, data-driven public policy solutions based on free market principles, individual liberty and responsibility, and the ideal of effective, limited and accountable government.

Pioneer's Centers

 **This paper is a publication of the Center for School Reform**, which seeks to increase the education options available to parents and students, drive system-wide reform, and ensure accountability in public education. The Center's work builds on Pioneer's legacy as a recognized leader in the charter public school movement, and as a champion of greater academic rigor in Massachusetts' elementary and secondary schools. Current initiatives promote *choice and competition, school-based management, and enhanced academic performance in public schools*.

 **The Center for Better Government** seeks limited, accountable government by promoting competitive delivery of public services, elimination of unnecessary regulation, and a focus on core government functions. Current initiatives promote *reform of how the state builds, manages, repairs and finances its transportation assets as well as public employee benefit reform*.

 **The Center for Economic Opportunity** seeks to keep Massachusetts competitive by promoting a healthy business climate, transparent regulation, small business creation in urban areas and sound environmental and development policy. Current initiatives promote market reforms to *increase the supply of affordable housing, reduce the cost of doing business, and revitalize urban areas*.

 **The Center for Health Care Solutions** seeks to refocus the Massachusetts conversation about health care costs away from government-imposed interventions, toward market-based reforms. Current initiatives include *driving public discourse on Medicaid; presenting a strong consumer perspective as the state considers a dramatic overhaul of the health care payment process; and supporting thoughtful tort reforms*.

Pioneer Institute is a tax-exempt 501(c)3 organization funded through the donations of individuals, foundations and businesses committed to the principles Pioneer espouses. To ensure its independence, Pioneer does not accept government grants.

Lowering the Bar

How Common Core Math Fails to Prepare High School Students for STEM

R. James Milgram

Sandra Stotsky

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Executive Summary

This paper began as a response to the attempt by Professor Jason Zimba, a lead writer of Common Core’s mathematics standards, to revise in 2013 what he said about the meaning of “college readiness” in 2010. Zimba’s original comments on this topic were uttered at the March 2010 meeting of the Massachusetts Board of Elementary and Secondary Education. In the official minutes of this meeting, we find the following: **“Mr. Zimba said that the concept of college readiness is minimal and focuses on non-selective colleges.”** On August 2, 2013, Common Core Watch at the Thomas B. Fordham Institute posted the first of two blogs by Zimba in which he claimed that this summary statement was inaccurate. He then elaborated in each blog on what he claimed he meant by what he had said.

What was remarkable about Zimba’s claim that his definition of college readiness was not accurately or fully captured by the summary statement in the minutes of a public meeting was, first, that his complaint occurred over three years after the minutes had been approved and, second, that there is a complete video record of the meeting. As we will show, the record does not support Zimba’s claim. In fact, *Zimba said much more about the limitations of Common Core’s mathematics standards than is suggested by the statement in the minutes.* In describing the level of the standards, he stated: “Not only not for STEM, it’s also not for selective colleges. For example, for UC Berkeley, whether you are going to be an engineer or not, you’d better have precalculus to get into UC Berkeley.” Those comments need to be much more widely known and understood.

The purpose of this paper is to explain what the level of college readiness in Common

Core’s mathematics standards is and what this level means for the high school mathematics and science curriculum, post-secondary education, and mathematics-dependent professional programs.

State and national policy makers, educators, and the general public have been misinformed and are thoroughly confused because, after 30 or more years of substandard mathematics instruction in the public schools, most of them no longer understand enough mathematics themselves to figure out what academic level Common Core’s high school mathematics standards designate and how they may affect other levels of education and this country’s economy. They do not seem to understand that Common Core’s standards do not prepare high school students for STEM areas in college.

We end by raising several questions. First, why is this situation not indicated in the Common Core document? Or by the advocates of Common Core’s standards? Or by their many endorsing organizations?

Second, why didn’t those individuals and organizations capable of recognizing the crippling limitations of Common Core’s mathematics standards suggest an additional set of mathematics (and possibly English) standards that would prepare students for the freshman mathematics courses that most majors in science, mathematics, engineering, finance, and economics (and, increasingly, in other areas) must take and pass successfully?

Third, given the limited mathematical literacy of most citizens and education policy makers, where did responsibility lie to inform local and state educators in charge of secondary school curricula about what was missing from Common Core’s standards? Likewise, who was responsible for indicating

what had to be added for pathways that would lead to admission to selective colleges and universities? Who was responsible for indicating what was needed for STEM areas before and after state boards and departments of education adopted them?

Fourth, whose responsibility is it now to ensure that at least some (if not an increasing number of) American high school students will be eligible for admission to selective academic institutions in this country? This is no small matter since their faculty and students have propelled this nation's economic, scientific, and industrial development for over a century.

I. Purpose of Paper

This paper began as a response to the attempt by Professor Jason Zimba, a lead writer of Common Core's mathematics standards, to revise in 2013 what he said about the meaning of "college readiness" in 2010. Zimba's original comments on this topic were uttered at the March 2010 meeting of the Massachusetts Board of Elementary and Secondary Education. In the official minutes of this meeting, we find the following: "**Mr. Zimba said that the concept of college readiness is minimal and focuses on non-selective colleges.**"¹ On August 2, 2013, Common Core Watch at the Thomas B. Fordham Institute posted the first of two blogs by Zimba in which he claimed that this summary statement was inaccurate. He then elaborated in each blog on what he claimed he meant by what he had said.²

What was remarkable about Zimba's claim that his definition of college readiness was not accurately or fully captured by the summary statement in the minutes of a public meeting was, first, that his complaint occurred over three years after the minutes had been approved and, second, that there is a complete

video record of the meeting. As we will show, the record does not support Zimba's claim. In fact, *Zimba said much more about the limitations of Common Core's mathematics standards than is suggested by the statement in the minutes.* And those comments need to be much more widely known and understood.

We are responding to Zimba's two attempts to "clarify" what he had said three years earlier because Common Core's definition of college readiness in mathematics has not been publicly discussed and approved. Yet, *it has extremely serious implications for the high school mathematics and science curriculum, a range of mathematics-dependent undergraduate majors and post-baccalaureate or graduate programs, and an even wider range of post-graduate programs requiring a very high level of mathematical knowledge.*

In addition, it nullifies the main reason the federal government provided over four BILLION dollars in Race to the Top (RttT) funds;³ *it expected these new standards to improve the critical STEM pipeline.*⁴ Zimba's explanation of college readiness together with the requirements for the RttT proposals raise a strong suspicion that many if not most states were seduced into signing on to Common Core's standards by misleading, possibly fraudulent, claims about what the standards were designed to achieve.

The purpose of this paper is to explain what the level of college readiness in Common Core's mathematics standards is and what this level means for the school curriculum, post-secondary education, and mathematics-dependent professional programs. State and national policy makers, educators, and the general public have been misinformed and are thoroughly confused because most of them do not understand enough mathematics

■ Lowering the Bar

themselves to figure out what academic level Common Core’s high school mathematics standards designate and how they may affect other levels of education and this country’s economy. The public, legislators, and the media clearly do not have sufficient information to understand the import of Zimba’s discussions of college readiness in 2013.

II. Background Information

Common Core’s definition of college readiness: Common Core’s mathematics and English language arts standards are described as resulting from “collaboration with teachers, school administrators, and experts to provide a clear and consistent framework to prepare our children for college and the workforce.” The document claims: “These standards define the knowledge and skills students should have within their K-12 education careers so that they will graduate from high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs.” To assure the public that Common Core’s standards reflect their definition, the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO)—the two organizations funded by the Bill and Melinda Gates Foundation to develop Common Core’s standards—also created a Validation Committee (VC).

Common Core’s Validation Committee: The VC consisted of about 29 members during 2009-2010. Some were *ex officio*, others were recommended by the governor or commissioner of education of an individual state. No more is known officially about the rationale for the individuals chosen for the VC. Milgram was the only mathematician on the VC (there were several mathematics educators, people with a doctorate in

mathematics education holding an academic appointment in an education school or engaged full-time in teacher training and professional development), and Stotsky was the only expert on K-12 English language arts standards by virtue of her work in the Massachusetts Department of Education from 1999-2003 and with Achieve, Inc. on its American Diploma Project high school exit standards for English language arts in 2004 and its subsequent backmapped standards for earlier grade levels.

As a condition of membership, all VC members had to agree to 10 conditions, among which were the following:

Ownership of the Common Core State Standards, including all drafts, copies, reviews, comments, and non-final versions (collectively, Common Core State Standards), shall reside solely and exclusively with the Council of Chief State School Officers (“CCSSO”) and the National Governors Association Center for Best Practices (“NGA Center”).

I agree to maintain the deliberations, discussions, and work of the Validation Committee, including the content of any draft or final documents, on a strictly confidential basis and shall not disclose or communicate any information related to the same, including in summary form, except within the membership of the Validation Committee and to CCSSO and the NGA Center.

As can be seen in the second condition listed above, members of the VC could never, then or in the future, indicate whether or not the VC discussed the meaning of college readiness or had any recommendations to offer on the matter. The charge to the VC spelled out in the summer of 2009, before the grade-level mathematics standards were developed, was

as follows:

1. Review the process used to develop the college- and career-readiness standards and recommend improvements in that process. These recommendations will be used to inform the K-12 development process.
2. Validate the sufficiency of the evidence supporting each college- and career-readiness standard. Each member is asked to determine whether each standard has sufficient evidence to warrant its inclusion.
3. Add any standard that is not now included in the common core state standards that they feel should be included and provide the following evidence to support its inclusion: 1) evidence that the standard is essential to college and career success; and 2) evidence that the standard is internationally comparable.

This charge was later reduced in an unclear manner by unidentified individuals to just the first two and least important of the three points above. Culmination of participation on the committee was reduced to signing or not signing a letter in May 2010 asserting that the standards⁵ were:

- 1 Reflective of the core knowledge and skills in ELA and mathematics that students need to be college- and career-ready.
2. Appropriate in terms of their level of clarity and specificity.
3. Comparable to the expectations of other leading nations.
4. Informed by available research or evidence.
5. The result of processes that reflect best practices for standards development.

6. A solid starting point for adoption of cross state common core standards.
7. A sound basis for eventual development of standards-based assessments.

The VC members who signed the letter were listed in the brief official report on the VC (since committee work was confidential, there was little the rapporteur could report), while the five members who did not sign off were not listed as such, nor their reasons mentioned. Stotsky's letter explaining why she could not sign off can be viewed here,⁶ and Milgram's letter can be viewed here.⁷

March 2010 meeting of the Massachusetts Board of Elementary and Secondary Education: The original purpose for part of the March 2010 meeting of the Massachusetts Board of Elementary and Secondary Education was to provide a forum for higher education faculty in Massachusetts and high school mathematics and English teachers to discuss the academic meaning of Common Core's college-readiness standards. Commissioner of Education Mitchell Chester is to be commended for inviting Zimba (and Susan Pimentel) instead. Zimba has rarely spoken to the public since his appointment as a lead writer of Common Core's mathematics standards. Because it is rare for a person in his position to be as straightforward as he was, his comments were informative and refreshing to hear.

III. Zimba's Definition of College Readiness in 2010

To verify the accuracy of the official minutes of the March 2010 meeting, the authors of this paper obtained a copy of the official recording of the meeting. Its sound quality is excellent. Zimba's exact comment in his initial presentation was: "We have agreement to the extent that it's a fuzzy definition, that

■ Lowering the Bar

the minimally college-ready student is a student who passed Algebra II.”

Stotsky (a member of the state board at the time) later asked him to clarify what he meant. Zimba stated: “In my original remarks, I didn’t make that point strongly enough or signal the agreement that we have on this—the definition of college readiness. I think it’s a fair critique that it’s a minimal definition of college readiness.”

Stotsky remarked at this point “for some colleges,” and Zimba responded by stating: “Well, for the colleges most kids go to, but not for the colleges most parents aspire to.”

Stotsky then asked “Not for STEM? Not for international competitiveness?” Zimba responded “Not only not for STEM, it’s also not for selective colleges. For example, for UC Berkeley, whether you are going to be an engineer or not, you’d better have precalculus to get into UC Berkeley.”

Stotsky then said: “Right, but we have to think of the engineering colleges and the scientific pathway.”

Zimba added “That’s true, I think the third pathway [a pathway that does not exist in the final version. See Section V for further discussion] goes a lot towards that. But your issue is broader than that.”⁸

Stotsky agreed saying “I’m not just thinking about selective colleges. There’s a much broader question here. Zimba then added “That’s right. It’s both, I think, in the sense of being clear about what this college readiness does and doesn’t get you, and that’s the big subject.”

Stotsky then summarized her objections to this minimalist definition by explaining that a set of standards labeled as making

students college-ready when the readiness level applies only to a certain type of college and to a low level of mathematical expertise wouldn’t command much international respect in areas like technology, economics, and business. Zimba appeared to agree as he then said “OK. Thank you.”

IV. Zimba’s Explanation of College Readiness in 2010

The above discussion does not fully explain what college readiness in mathematics *signifies*. What does Common Core mean when it says that by addressing its standards “[students] will graduate from high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs?”⁹ In the context of Zimba’s remarks in 2010, college readiness appears to mean that students will (likely) not have to take a remedial course in mathematics or English if they seek to attend a non-selective college or a community college.

In many ways this definition and the dialogue above are remarkable. It is extremely rare for a lead author of a standards document to admit that a major concept (the definition of college readiness) does not apply to high school students capable of entering (or seeking to enter) a selective college or university (roughly the top 20-30 percent of a high school cohort). What the standards document is doing, so far as Zimba’s 2010 comments suggest, is to specify the minimal requirements that its sponsors want mid-level high school students (roughly, those in the 30th to the 70th percentile in their high school cohort) to meet for entry into a community college or a non-selective four-year college. While state standards for high school students typically apply to all students, Common Core’s mathematics standards writer acknowledges that *its college readiness*

level is not for certain professions or for demanding colleges. He implies that “all” is a euphemism for “not all” when referring to Common Core.

V. Zimba’s Explanation of College Readiness in 2013

In contrast, in 2013, Zimba claimed that it’s factually incorrect to say that the definition of college readiness in the Common Core is pegged to a community college level. According to him, the definition of college and career readiness in the standards document is readiness for entry-level, credit-bearing courses in mathematics at all public four-year colleges, as well as courses at two-year colleges that transfer for credit at four-year colleges.¹⁰

However, this 2013 definition not only contradicted Zimba’s comments in 2010, it applied to a weaker document than the one he may have been referring to when he spoke in 2010. Zimba’s comments on the recording refer to either the March 10 public comment draft or further work on the mathematics standards in the next two weeks of March. On pages 51-52 of the March 10 public comment draft, one can see the following place-markers (commonly called stubs) for standards that the writers intended to fill in later:

- Limits and Continuity..... F-LC
- Differential Calculus..... F-DC
- Application of Derivatives..... F-AD
- Integral Calculus..... F-IC
- Applications of Integration..... F-AI
- Infinite Series..... F-IS

These topics are consistent with Zimba’s March 2010 comments. They are the major topics for a full one-year calculus course.

But the March draft does not indicate how the standards writers intended to reach these topics from the algebra II level, which is where the detailed standards in the March 10 draft end. The necessary material in trigonometry is only partially described by a list of nine standards, most of which would be in a full algebra II course but would be reviewed in a regular trigonometry course, and there is no precalculus material. Except for the small amount of trigonometry material, not one of the seven stubs above or any precalculus material appears in Common Core’s final mathematics standards, even as a stub. It is worth noting that a few months earlier, the other lead writer for Common Core’s mathematics standards, William McCallum, was quoted as follows: “The overall standards would not be too high, certainly not in comparison [to] other nations, including East Asia, where math education excels.”¹¹

Not only were no high school topics added to the March 10 draft to strengthen the final version or to create the “third high school pathway,” the final version is weaker in other respects as well. In presumably responding to the comments from the states and other interested parties, “corrections” were introduced that included many mathematical errors and weakened many lower grade standards such as:

6.RP1

Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, “The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak.”
“For every vote candidate A received, candidate C received nearly three votes.”

[Comment: “nearly” does not correspond to ratio or rate in any way. At best it

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corresponds to a range of ratios, but the tools for handling such objects are not covered until college and require advanced calculus.]

6.RP3(b).

Solve unit rate problems including those involving unit pricing and constant speed. *For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?*

[Comment: There is no indication of the size of the lawns or the amount of time it takes to mow each. Rather, the hidden assumption is that they all take the same time to mow. Suppose some were 5000 square feet and some were 8000 square feet. We do not know the amount of time it takes to mow 8000 square feet compared to 5000 or if some lawns were steeply sloped and others level.]

VI. So What if “Common Core is better than 90% of the State Standards”

In his blog on August 8, 2013, Zimba tried to distract from the issue of how low Common Core’s college readiness level is by noting that “it is doubtless thanks in part to Professor Milgram’s input during the development of the standards that they are, at least in his view, ‘better than 90% of the state standards... they replace.’”

Milgram did work with the standards writers as a member of the Validation Committee. Appalled by the minimal amount of material from grade 7 on in an earlier draft, Milgram compared its algebra standards with California’s algebra standards and the list of major school algebra topics in the 2008 report of the National Mathematics

Advisory Panel.¹² The comparison showed how incomplete that draft’s algebra standards were.

Milgram then had a number of conversations with the people at Achieve overseeing the project, as well as with the standards writers themselves. As a possible result of these efforts, the March 2010 public comment draft was considerably stronger than the earlier 2009 draft. It also contained the calculus stubs listed above.¹³ However, the details in the March draft did not go beyond a relatively weak algebra II course, with both logarithms and the standard algebraic analysis of conic sections missing.¹⁴

The calculus stubs were not in the final version, and only a few (+) standards in trigonometry fill the void between the algebra II standards and introductory college mathematics. Common Core’s standards clearly cannot help to prepare students for STEM areas.¹⁵

Thus, Milgram’s remark that Common Core’s standards are better than 90% of the state standards should not be construed as a compliment to Common Core but as an indictment of most state standards. Milgram is saying that as weak as Common Core’s standards are, about 45 states had even weaker standards. This situation requires something other (and much more) than the weak Common Core’s standards to correct.

VII. Academic Implications of Race to the Top (RttT) Agreements

We are surprised that there has been no public discussion of the academic implications of the Race to the Top (RttT) criteria for judging state applications for a RttT award. At least, we know of no discussion by a state board of higher education or by trustees (or regents) of

a public university system when a governor, commissioner of education, and/or state board of education decided to apply for a RttT award. The criteria in the Federal Register should have occasioned some concern, if not some very serious questions.

The federal government published the conditions for RttT awards in the Federal Register on Friday, April 9, 2010 (vol. 75, no. 68, pages 18172-18185). The introduction notes:

We intend to promote collaboration and better alignment between public elementary, secondary, and postsecondary education systems by establishing a competitive preference priority for applications that include commitments from public IHEs¹⁶ or IHE systems to participate in the design and development of the consortium’s final high school summative assessments and to implement *policies that exempt from remedial courses and place into credit-bearing college courses students who meet the consortium-adopted achievement standard (as defined in this notice) for those assessments....*

Eligible applicants addressing this priority must provide, for each IHE or IHE system, a letter of intent that: (a) commits the IHE or IHE system to participate with the consortium in the design and development of the consortium’s final high school summative assessments in mathematics and English language arts in order to ensure that the assessments measure college readiness; (b) commits the IHE or IHE system to implement policies, once the final high school summative assessments are implemented, that exempt from remedial courses and place into credit-bearing college courses

any student who meets the consortium-adopted achievement standard (as defined in this notice) for each assessment and any other placement requirement established by the IHE or IHE system; and (c) is signed by the State’s higher education executive officer (if the State has one) and the president or head of each participating IHE or IHE system.

Although the IHEs clearly have a role in designing the assessments, the two consortia in charge of the tests—Partnership for Assessment of Readiness in College and Career (PARCC) and Smarter Balanced Assessment Consortium (SBAC)—cannot address the mathematics requirements of selective public or private colleges or universities because, as we have already noted, major topics in trigonometry and precalculus are not in Common Core’s standards and the tests cannot address topics that are not in the standards. Moreover, they cannot address even the more advanced standards in Common Core, identified as (+) standards. Nevertheless, the language in the RttT agreement indicates that states must place new students admitted by their major public colleges and universities into credit-bearing mathematics (and English) courses if these students have passed a Common Core-based “college readiness” test.

One might criticize the generality of the statement above by pointing out that these students don’t have to be admitted or that colleges can admit students who haven’t passed such a test. However, in many states including California the top 30 percent of students graduating from high school are guaranteed admission to an IHE or IHE system. Moreover, only the chief administrative officer of an IHE has to sign on to this policy, not the relevant faculty. For

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the most part, this faculty knows nothing about the changes that Common Core will bring.

We find these requirements for Common Core states astounding because they apply to all public institutions of higher education, not just to those for which Common Core's mathematics standards were intended, according to the lead mathematics standards writer, Jason Zimba. And even if these requirements are intended only for non-selective postsecondary institutions, they are problematic because non-selective schools have often had to place newly admitted students (including many who come with credit for Algebra II and sometimes more advanced high school mathematics courses) into Intermediate Algebra (a course lower than "College Algebra") that was remedial at these institutions. To make matters worse, the first for-credit courses at non-selective institutions are often regarded as remedial at other colleges and universities, yet "articulation agreements" between two- and four-year public colleges seem to require that transfer credit be given. All that the PARCC and SBAC tests can verify is whether freshmen have to start with Intermediate Algebra if they do not pass, or could start with "Pre-Calculus Trigonometry" or "Pre-Calculus Algebra," as the first two for-credit courses at a community college are usually described.

VIII. Educational Significance of Common Core's College Readiness Standards in Mathematics

Two major academic consequences loom in these federal conditions for a RttT award. First, they will likely lower the level of introductory mathematics courses at selective public colleges and universities. How so?

Students who are otherwise eligible for a selective institution (i.e., there is no other placement requirement) and are admitted subject to fulfilling the missing admission requirements would, under this agreement, be able to take a credit-bearing mathematics course if they had passed the PARCC or SBAC algebra II test. Because such students would probably fail a regular precalculus course (never mind a calculus course), public colleges and universities would likely feel compelled to provide lower-level (but credit-bearing) introductory mathematics courses for them in order to avoid too high a failure rate.

Second, the federal conditions for a RttT award in effect give a state board and a state department of elementary and secondary education control of the content of entry courses in all Common Core state colleges and universities. For years, there has been a growing gap between the entry-level expectations of our colleges and universities and the typical academic strength of our high school graduates. This has created considerable tension between K-12 and the colleges. High schools insist that college expectations are too high and that current high school preparation is all students really need, while colleges insist on maintaining their existing standards. Applying for a RttT grant in effect requires states to cede control of college entry expectations for ELA and mathematics to state boards of education, departments of education, and education schools—institutions whose policies and practices determine K-12 outcomes.

This is the context for understanding PARCC's definition of college readiness:¹⁷

Students who earn a college.-and career-ready determination in mathematics will have demonstrated the academic

knowledge, skills and practices necessary to enter directly into, and succeed in, entry-level, credit-bearing courses in college algebra, introductory college statistics, or technical courses requiring an equivalent level of mathematics

Over 46 state boards and departments of elementary and secondary education have adopted Common Core's college- and career-ready standards, regardless of whether a few minor changes have been made to the Common Core document or its standards as in Pennsylvania or Alaska, or whether up to 15 percent more standards material was added. All did so without asking for and receiving an analysis of Common Core's definition of college readiness by the faculty who *teach* mathematics to college freshmen in the state's own institutions of higher education. To our knowledge, *not one* state board or department of education is on record as having sought (and obtained) the collective opinion of their own state's higher education teaching faculty in mathematics, science, and engineering (never mind English or the humanities). These state boards and departments of education seem to lack a full understanding of the intellectual purposes of mathematics coursework in higher education.

The government data for STEM are compelling and make our case better than we can. It is extremely rare for students who begin their undergraduate years with coursework in precalculus or an even lower level of mathematical knowledge to achieve a bachelor's degree in a STEM area.¹⁸ Also, students whose last high school mathematics course was Algebra II have less than a 40 percent chance of obtaining a four-year college degree.¹⁹ In addition, the National Center for Education Statistics (NCES) publication *STEM in Postsecondary*

Education shows that only 2.1 percent of STEM-intending students who had to take pre-college mathematics coursework in their freshman year graduated with a STEM degree (see Table 7).²⁰

IX. Significance of Common Core's Standards in Mathematics for High School Science

The traditional 19th and 20th century high school science curriculum consisted of biology (actually just taxonomy), chemistry, and physics. The mathematical requirements for these courses involve only part of the material in Algebra I, Geometry, and Algebra II. Consequently, there should not be many problems with the articulation between the mathematics indicated in Common Core's standards and traditional science courses.

However, there have been many attempts to introduce courses more relevant to today's needs into the high school curriculum, in particular, basic engineering, computer science, and robotics. The major difficulty is that mathematical requirements for these courses are significantly more than for the traditional science curriculum. As an example, basic engineering requires some linear algebra, familiarity with partial fraction decompositions of rational functions, and quite a bit more trigonometry than was previously required. Similarly, it is extremely important in robotics that students can work with polynomials where the variables are the basic elementary trigonometry functions $\sin(t)$ and $\cos(t)$.

Likewise, if high schools want to offer a biology course more in line with current developments, then some molecular biology should be included. Such a course requires significant amounts of statistics and probability, as well as discrete mathematics.

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Clearly, if this country is seriously interested in 21st century mathematics and science, then there is even more reason to question Common Core's mathematics standards.

X. Conclusions

That Common Core's college and career readiness standards aim for admission to non-selective, community colleges can be confirmed by the May 2013 report issued by the National Center on Education and the Economy (NCEE) titled *What Does It Really Mean to Be College and Work Ready*. The Mathematics Panel was co-chaired by Phil Daro, described on p. 44 as chairing the Common Core State Standards Mathematics Workgroup. The question this report pursued was: "What is required to be successful in our nation's colleges and workplaces?" The answer was sought in the "requirements of community colleges, because, by doing so, we can provide a very concrete image of what it means to be 'college and career ready'." The answer was an even lower standard than what Zimba proposed: "*Based on our data, one cannot make the case that high school graduates must be proficient in Algebra II to be ready for college and careers.*"

In September 2013, a Hechinger Institute writer reported Zimba acknowledging that students who do not go beyond Common Core's high school standards could be precluded from attending selective colleges and that these standards are not aligned with expectations at the college level.²¹ Zimba is quoted as saying: "If you want to take calculus your freshman year in college, you will need to take more mathematics than is in the Common Core."

There are several major questions at this point.

First, why is this situation not indicated in the Common Core document? Or by the advocates of Common Core's standards? Or by their many endorsing organizations?

Second, why didn't those individuals and organizations capable of recognizing the crippling limitations of Common Core's mathematics standards suggest an additional set of mathematics (and possibly English) standards that would prepare students for the freshman mathematics course that most majors in science, mathematics, engineering, finance, and economics (and, increasingly, in other areas) must take and pass successfully?

Third, given the limited mathematical literacy of most citizens and education policymakers, where did responsibility lie to inform local and state educators in charge of secondary school curricula about what was missing from Common Core's standards? Likewise, who was responsible for indicating what had to be added for pathways that would lead to admission to selective colleges and universities? Who was responsible for indicating what was needed for STEM areas before and after state boards and departments of education adopted them?

Fourth, whose responsibility is it now to ensure that at least some (if not an increasing number of) American high school students will be eligible for admission to selective academic institutions in this country? This is no small matter since their faculty and students have propelled this nation's economic, scientific, and industrial development for over a century.

We hear no proponents or endorsers of Common Core's standards warning this country about the effects of the college-readiness level in Common Core's mathematics standards on postsecondary and post-baccalaureate academic and professional programs. We hear no proponents or endorsers of Common Core's standards advising district superintendents and state education policy makers on the kind of mathematics curriculum and courses they need to make available in our secondary schools if our undergraduate engineering colleges are to enroll American students.

At this time we can conclude only that a gigantic fraud has been perpetrated on this country, in particular on parents in this country, by those developing, promoting, or endorsing Common Core's standards. We have no illusion that the college-readiness level in ELA will be any more demanding than Common Core's college-readiness level in mathematics.

About the Authors:

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About Pioneer:

Pioneer Institute is an independent, non-partisan, privately funded research organization that seeks to change the intellectual climate in the Commonwealth by supporting scholarship that challenges the “conventional wisdom” on Massachusetts public policy issues.

Recent Pioneer Publications

A Republic of Republics: How Common Core Undermines State and Local Autonomy over K-12 Education, White Paper, September 2013

Looking Back to Move Forward: Charter School Authorizing in Massachusetts, White Paper, June 2013

Shortchanging the Future: The Crisis of History and Civics in American Schools, White Paper, April 2013

Online Learning 101: Starting a Virtual School And Its Challenges, White Paper, February 2013

Hands On Achievement: Why Massachusetts Vocational Technical Schools Have Low Dropout Rates, White Paper, January 2013

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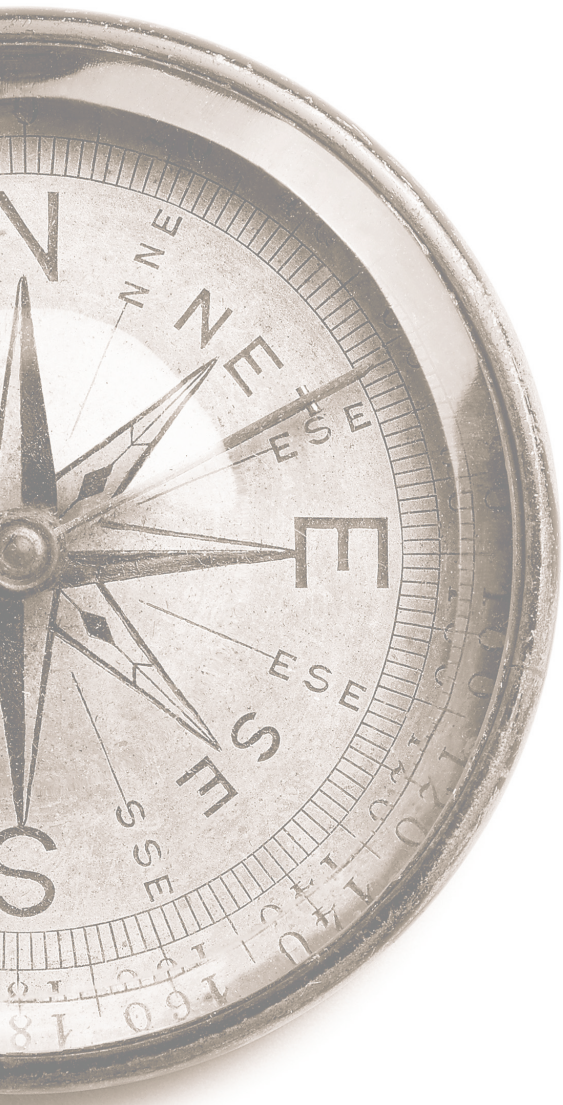
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Endnotes

1. <http://www.doe.mass.edu/boe/minutes/10/0323reg.pdf>
2. Jason Zimba, August 2, 2013, “Critics’ math doesn’t add up.” Common Core Watch. Thomas B. Fordham Institute. <http://www.edexcellence.net/commentary/education-gadfly-daily/common-core-watch/2013/critics-math-doesnt-add-up.html>; Jason Zimba, August 8, 2013, “What I learned about the opposition to the Common Core State Standards when I testified in Indiana,” Common Core Watch, Thomas B. Fordham Institute. <http://www.edexcellence.net/commentary/education-gadfly-daily/common-core-watch/2013/what-i-learned-about-the-common-core-state-standards-when-i-testified-in-indiana.html>
3. <http://www.whitehouse.gov/issues/education/reform>
4. <http://www2.ed.gov/programs/racetothetop/index.html>
5. Keep in mind that the final version was not released until June 2, 2010 and many changes were made behind the scenes to the public comment draft released in March 2010.
6. <http://nyceye.blogspot.com/2013/08/mass-standards-czar-stotskys-letter-on.html>
7. <ftp://math.stanford.edu/pub/papers/milgram/final-report-for-validation-committee.pdf>
8. See Appendix A of the version of the Common Core Mathematics Standards posted in the late summer of 2010, after the release of the final version on June 2, 2010. There is a third pathway, and it is the “calculus pathway.” But since this pathway uses mathematics standards that were in the original version and, as Zimba pointed out in 2013, these standards are insufficient for reaching precalculus in high school, what was gained by listing them again?
9. <http://www.corestandards.org/about-the-standards>
10. <http://www.edexcellence.net/commentary/education-gadfly-daily/common-core-watch/2013/critics-math-doesnt-add-up.html>
11. John Fensterwald, January 17, 2010, “Common-core standards under fire,” Thoughts on Public Education, Silicon Valley Education Foundation. <http://toped.svefoundation.org/2010/01/17/common-core-standards-under-fire/>
12. See <ftp://math.stanford.edu/pub/papers/milgram/validation-for-core-standards.pdf>
13. February 2010 draft, page 32.
14. Section IX will suggest some of the consequences of not having this material.
15. The (non-existent) pathway to calculus was one of the strongest points that the Obama administration used to sell Common Core’s mathematics standards to the states. See endnotes 3 and 4.
16. IHE is the acronym for “Institution of Higher Education.”
17. <http://www.isbe.net/assessment/pdfs/2013/parcc/PARCC-FAA-Spring13.pdf>
18. Statement on Competencies in Mathematics Expected of Entering College Students (2013), <http://icas-ca.org/Websites/icasca/images/ICAS-Statement-Math-Competencies-2013.pdf>. See pps. 13-16 for details of minimal mathematics expectations for STEM.

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19. C. Adelman. *The Toolbox Revisited: Paths to Degree Completion from High School through College*, U.S. Dept. of Education, 2006, Table 5.
20. STEM in Postsecondary Education, 2012, NCES 2013152 (see, especially, Tables 2, 4, 7, and 12).
21. <http://theadvocate.com/home/6914390-125/common-core>



LITCHFIELD SCHOOL DISTRICT

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052**

**Approved Minutes for October 2, 2013
(approved as written 10-9-13)**

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Matt Bennett, Buildings and Ground Coordinator
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION 6:30 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 6:30 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from the September 18, 2013 non-public session:

Mr. Miller made a motion to approve the non-public minutes of September 18, 2013 as written. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Miller made a motion to accept a revision to the nomination of Danielle Peckham, Special Education teacher at GMS, for an adjusted salary of \$41,041 for the 2013-2014 academic year. Mr. Bourque seconded.

Mr. Miller amended the motion to accept the revision to the nomination of Danielle Peckham, Special Education teacher at GMS, for an adjusted salary of \$41,041 for the 2013-2014 academic year effective September 26, 2013. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Miller made a motion to accept the nomination of Rebecca Moore as part time Occupational Therapist for the District at a pro-rated salary of \$21,550.40 for the 2013-2014 academic year. Mrs. D'Alleva seconded. The motion carried 4-0-1, with Mr. Bourque abstaining.

E. Presentations & Recognitions

There were no presentations or recognitions.

F. Correspondence

Mr. Barka announced the CHS National Honor Society sent Board members invitations to attend the National Honor Society induction ceremony for CHS inductees.

Mr. York announced that the Historical Society invited the Board to attend an event at CHS.

Mr. Barka noted that Mr. Guerrette sent correspondence to the Board regarding Common Core State Standards.

Correspondence will be attached to the approved minutes.

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- Lacrosse Grant Update

Mr. Barka presented a Lacrosse grant update to the Board. He noted that Coach Patterson provided answers from Bob Desmarais regarding questions about the grant.

G. Approval of Draft Minutes:

- Public Session September 25, 2013

Mr. Miller made a motion to approve the public minutes of September 25, 2013 as written. Mr. York seconded. The motion carried 5-0-0.

H. Community Forum

Jason Guerrette, 11 Perry Court, commented that he was pleased that some members of the Board went to a meeting with Commissioner Barry this week. He noted that he read the transcripts of the meeting. Mr. Guerrette indicated that Commissioner Barry stated that Common Core is voluntary in the state and that the state has not adopted the standards; however, they were added to the School Approval standards. He commented that loss of federal dollars is not a certainty. Mr. Guerrette noted that Common Core State Standards are a guidepost; however, we should be reaching beyond those standards. He expressed concern with the suggested supplemental materials that may not be up to the standards of our community. He asked Board members to pay close attention to and request to be informed of the recommended materials that will be used in aligning the Common Core standards. Mr. Guerrette stated in his opinion the materials are lacking. He commented that he expects the Board to want better standards.

I. Superintendent's Comments

- Smarter Balance Assessment Consortium Technology Update

Dr. Cochrane presented a Smarter Balance Assessment Consortium (SBAC) technology update to the Board. He indicated that SBAC is scheduled to administer computer adaptive assessments in math, reading and writing in the 2014-2015 year. Testing will take place in a 12-233k window at the end of the year. He noted that the estimated number of hours required to test is less than what is required for NECAP. Dr. Cochrane explained there are many questions with NECAP with ranges above and below grade level. He noted that with the Smarter Balance Assessments (SBA), with each question answered correctly a student will progress to a higher level in that grade level strand. Dr. Cochrane noted that data is received quicker with SBA because there are more questions around the student's ability level, as well as better diagnostic information. Dr. Cochrane commented that the SBA report differs from NECAP in that it is much more aligned with the ability to perform basic functions, problem solve and apply information in more situations.

- Potential Proposal for Impact Fees

Dr. Cochrane discussed a potential proposal for a request for impact fees with the Board. He reported that the town has been notified that the district will bring a proposal to the Board for the use of impact fees. If approved, the request for the use of impact fees will be presented to the Board of Selectmen for approval. Dr. Cochrane indicated that although technology and safety were the original focus, safety is the main focus of the use of impact fees. He noted that there are three areas to address: increased use of video surveillance, access controls and communication. He commented that we will be looking at a VoIP system so that teachers can access 911 from their classrooms. Dr. Cochrane indicated that specifications from the safety consultant are expected.

Mr. York commented that GMS will need much work in the area of security. He noted that there should be enough in elementary impact fees to use for GMS and LMS. He indicated that there should be enough in high school impact fees for a VoIP system.

Dr. Cochrane indicated that the original scope of work will be reviewed by Mr. Markiewicz, Mr. Hancock and himself, and will then be presented to the Board.

- October 1 Report

Dr. Cochrane shared the October 1, 2013 enrollment report to the Board. The report reflects that there are 1,437 students enrolled in the school system.

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II. REPORTS

A. School Board Comments

Mr. York commented that Mr. Cutter, Budget Committee Chair, has shared the budget review schedule with Dr. Cochrane and Mr. Bourque. He noted that the Budget Committee would like to begin review of the FY15 budget on November 21 and review warrant articles by December 10.

Mr. Miller commented that he attended a meeting with Commission Barry (DOE) and many people from the general public attended. He indicated that topics included Common Core State Standards and Priority School Status. He noted there was an interesting exchange and the crowd contained a mix between supporters and those that were critical of the DOE's decision.

Mr. York commented that he received an email from Mr. Byron informing us that the DOE informed the DRA that they will not be able to have the education adequacy numbers until mid-November [the latest] to set the tax rate. He noted there is a concern and the possibility of a two year ripple effect.

B. Committee Reports

- Budget Committee

Mr. Bourque reported that the Budget Committee met on September 26 and reviewed town budgets. He noted that they would like a consensus on the budget review schedule. He reported, with regard to the Building and Planning Advisory Committee (BPAC) that the Budget Committee voted that their representative abstain from every vote the committee may take.

C. Enrollment Report – September 2013

Dr. Cochrane shared the September 13, 2013 enrollment report with the Board. There were 1,437 students enrolled in the district at the end of September.

III. OLD OR UNFINISHED BUSINESS

A. Litchfield Historical Society Request Update

Dr. Cochrane provided the Board with an update on a request made by the Litchfield Historical Society to use the GMS 1930's building as a museum to display historical items. He shared with the Board a response to the Historical Society regarding issues with the building from Primex. He noted that the district would not have the ability to control who enters the proposed museum. Dr. Cochrane indicated that Mr. Ross verified there are students in the school building at all times during the day and evening. He noted that Primex has concerns with accidents that occur from slips/falls. Dr. Cochrane commented that insurance contributions could increase from an increase in insurance claims and that items containing lead and/or asbestos are exclusionary. He indicated that the district would need to apply for a waiver with regard to ADA compliance.

With regard to the list of issues in the 1930's building, Mr. York suggested a warrant article to remove or repair the building. Mr. Miller noted that several years ago the cost to repair/renovate the 1930's building was provided to the Board.

Mr. York suggested tasking the Building and Planning Advisory Committee to recommend what should be done with the 1930's building.

Dr. Cochrane asked for direction from the Board prior to meeting with the group from the Historical Society. Mr. York indicated that the Superintendent inform the members of the Historical Society that the BPAC is tasked with recommendations for that building and that the district does not have the funds to address the issues.

Dr. Cochrane indicated that the district will continue to support the Historical Society as they continue to use other facilities. Mr. York suggested offering different locations to host their events on weekends.

IV. NEW BUSINESS

A. FY15 Budget Presentations

- Food Service

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Mr. Markiewicz presented the FY15 Food Service Requested Budget to the Board. He reported that the FY15 Food Service budget is basically level funded from the current year.

Mr. York asked if any major repairs are anticipated. Mr. Markiewicz indicated that they are actually planning to dispose of some equipment. He noted that all equipment is in good working order at this time.

Mr. Miller asked for the average daily sales at each school. Mr. Markiewicz noted that Mrs. Lawrence can provide the information.

- **Buildings and Grounds**

Mr. Markiewicz commented that there was much cooperation preparing the FY15 Buildings and Grounds Requested budget. He noted that he met with the individual Facility Managers today to review their final requested budgets. Mr. Markiewicz indicated that Facility Managers were asked to include all needs, including historical requests.

Mr. Bennett presented the FY15 Buildings and Grounds Requested Budget to the Board and highlighted major increases/decreases:

DW:

Buildings

- Line 430, Repairs/Maintenance: increase of \$3,500 (fencing, curbing, bleachers)
- Line 442, Equipment Rental: increase of \$2,350 (rental deep tine aerator)

Grounds

- Line 422, Snow Plowing: increase of \$4,000
- Line 580, Travel: increase of \$2,499
- Line 610, Supplies: increase of \$4,000 (various tools, safety equipment)
- Line 738, Equipment Replacement: \$13,000 (exmark mower replacement)

Total FY15 Buildings and Grounds requested budget increase \$32,086.

GMS:

Buildings

- Line 430, Repairs/Maintenance: increase of \$14,848.41
- Line 430, Painting: increase of \$3,200
- Line 434, Air Quality: increase of \$2,760
- Line 622, Electric: increase of 2,576.56

Grounds

- Line 422, Snow Plowing: increase of \$1,700
- Line 610, Supplies: increase of \$3,300

Non-Instructional Equipment

- Overall decrease: \$1,332.08

Building Improvement

- Line 720, Building Improvement: increase of \$12,599

Total FY15 GMS Buildings and Grounds requested budget increase \$42,674.91.

LMS:

Buildings

- Line 430, Repairs/Maintenance: increase of \$14,305.67
- Line 624, Fuel Oil: increase of \$20,777.61

Grounds

- Line 450, Site Development: increase of \$7,600 (add irrigation to courtyard; survey/plan to install soccer/lacrosse field)
- Line 610, Supplies: increase of \$2,000

Non-Instructional Equipment

- Line 430, Repairs/Maintenance: increase of \$4,516 Line 738, Equipment Replacement: decrease of \$11,795

Total FY15 LMS Buildings and Grounds requested budget increase \$54,615.23.

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CHS:

Custodial

- Line 737, Furniture Replacement: increase of \$11,218.20 (4 cafeteria tables)

Buildings

- Line 421, Utilities Disposal: decrease of \$6,244
- Line 430, Repairs/Maintenance: decrease of \$23,631.13
- Line 610, Supplies: increase of \$2,000
- Line 622, Utilities Electric: increase of 3,973.32

Grounds

- Line 422, Snow Plowing: increase of \$4,950
- Line 430, Repairs/Maintenance: increase of \$2,320 (addition of speed bumps)
- Line 442, Equipment Rental: increase of \$2,700
- Line 610, Supplies: increase of \$3,500
- Line 734, Equipment Additional: increase of \$9,500 (top dresser)
- Line 738, Equipment Replacement: increase of \$5,650

Non-Instructional Equipment

- Line 738, Equipment Replacement: increase of \$3,000

Building Improvement

- Line 720, Building Improvement: decrease of \$7,500

Total FY15 CHS Buildings and Grounds requested budget increase \$16,495.84.

Mr. York was concerned about a \$4,000 increase in snow plowing. He commented that he noticed snow plowing is also noted under each school's ground services. He noted that it should only be noted in one place. Mr. York indicated that explanations noted in the budget notes are important in explaining the process.

Mr. Markiewicz noted that the budget notes will include more definition.

Mr. Miller asked about the cost to repair the gator. He commented that if repairs cost \$2,500 it may be wiser to purchase a new one. He suggested choosing to either repair the existing gator or purchase a new one.

Dr. Cochrane commented that history reflects that some equipment requests are not funded until they are too old to repair or stop working.

Mr. Miller was concerned that overall there is a 35% increase in the Buildings and Grounds budget. Mr. Bennett indicated that many items were removed from the budget over the last few years. He noted that he was asked to include all requests in all areas of concern.

Mr. York asked about savings with the PSNH Smart Start program. Mr. Markiewicz indicated that he is not familiar with the program and has asked PSNH to meet with him to review how the program works. He noted that he will ask PSNH to provide an analysis to determine any savings.

Mr. York asked why snow plowing totals are an estimate. Mr. Bennett indicated that the cost of salt and other mixtures used to treat increases and fuel prices are anticipated to increase.

Mr. Miller asked about the ductless a/c unit for the GMS computer lab and mailroom. Mr. Markiewicz indicated this was done at LMS.

Mr. York commented that these are costs that can be covered with impact fees. Mr. Barka asked if the work can be done over the summer if the request to use impact fees is approved. Dr. Cochrane indicated that the work can be done over the summer.

Mr. York asked about the survey to develop and plan for a soccer/lacrosse field on the LMS site. Mr. Bennett indicated that there is concern over the wear and tear on the CHS fields.

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Mr. York disagreed that there is much wear and tear on the fields at CHS.

Mr. Markiewicz mentioned a concern that the CHS cafeteria needs to replace four tables as the existing tables are bent. Mr. Miller asked if the line item should be included in the Food Service budget. Mr. Markiewicz indicated that the replacement of cafeteria tables can be moved to the Food Service budget.

Mr. York asked about the snow plowing budget. Mr. Markiewicz indicated that the plowing RFP will be distributed. He mentioned that he spoke with Mr. Hoch regarding the town plowing for the district as well.

Mr. York asked why speed bumps are planned to be installed on Highlander Court. Mr. Markiewicz indicated that concerns were presented regarding speeding on Highlander Court. He noted that the Safety Committee recommended installing speed bumps to curtail the problem. Mr. Markiewicz commented that he will speak to the town regarding the speed bumps as Highlander Court is a town road.

Mr. York disagreed with rationale regarding the budgeting for a top dresser at CHS. He asked that the explanation be revised.

Mr. Markiewicz reported that the new scoreboard (provided by Coca Cola) will be delivered on Friday.

B. Acceptance of Donation

Dr. Cochrane presented a donation of 12 LCD monitors with a value of \$600 from Kim Raymond of Litchfield.

Mr. Miller made a motion to accept the donation of 12 LCD computer monitors with a value of \$600 from Kim Raymond. Mr. York seconded. The motion carried 5-0-0.

C. NHSBA Proposed Resolutions Information

Dr. Cochrane shared the 2014 NHSBA proposed resolutions with the Board. He asked Board members to review the resolutions as the deadline to submit proposed resolutions is October 25, 2013.

Mr. York asked if district membership should continue.

Dr. Cochrane commented that the district is in a position where we have limited funds. He commented that the NHSBA is there as a resource for the School Board.

Mr. Miller asked about enrollment projections. Dr. Cochrane indicated there are other resources to use to project enrollment.

Mr. Barka asked about membership dues for SERESC. Dr. Cochrane indicated their services are available to non-members as well as members.

D. School Board Comments

Mr. Miller was concerned that there has been an increase in the number of people bringing dogs to events held at the schools. He noted there is mention of prohibition of animals for the track. He recommended posting signs regarding animals on the fields during sporting events.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Jason Guerrette, 11 Perry Court, asked about the total revenue we receive from the federal government for food service for free/reduced lunch. He commented on the rationale for the increase in snow plowing. He indicated that the town road agent noted the state contract for salt decreased, but that he acquired a better price than the state.

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Mr. Guerrette mentioned (in reference to painting the football goal posts) light poles are painted for \$200 each at his place of employment. He noted that the town is using inmates for painting projects. Mr. Guerrette commented that the cost for POD's is high and offered to provide a less expensive vendor.

Mr. Guerrette referred to the Smart Start program and commented that he was on the Board at the time of implementation. He noted that the program is based on the energy price and although there may be kilowatt savings, if the energy price increases any savings is applied to that increase. He indicated that savings may not be realized until the equipment is paid.

Mr. Guerrette commented on catch basin cleaning and indicated that the cost is high. He noted the same with pest control costs. Mr. Guerrette commented that the cost of paving for GMS was too high and should have been publicized for better pricing. He referred to the magnetic releases on doors that need to be replaced. He indicated that they can be repaired. Mr. Guerrette commented that employees should be trained that they must close these doors manually as they do not close on their own.

Mr. Guerrette commented that power sweeping is budgeted too high and can be done for less. He suggested asking tradesmen in the community for opinions on assessment of equipment in the schools. He suggested that the district should bid for landscaping as new equipment will never have to be budgeted.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

9:15 p.m.

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered into non-public session at 9:20 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. York, the Board returned to public session at 10:35 p.m. Mr. Miller seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

Mr. York made a motion to seal the non-public minutes of October 2, 2013 indefinitely. Mr. Miller seconded. The motion carried 5-0-0.

IX. ADJOURN

Mr. York made a motion to adjourn at 10:37 p.m. Mr. Miller seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

One Highlander Court

Litchfield, NH 03052

Phone: (603) 578-3570

Fax: (603) 578-1267

Equal Opportunity Employer

Derek Barka, Chair

Patricia D'Alleva, Vice Chair

Dennis Miller

John York

Brian Bourque

October 2, 2013

Attachment to the October 2, 2013 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the October 2, 2013 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

From: Jason Guerrette [sts3717@gmail.com]

Sent: Tuesday, October 01, 2013 8:12 AM

To: Derek Barka; Patricia D'Alleva; John York; Brian Bourque; Andrew Cutter; Brian Cochrane

Subject: Fwd: IMPORTANT : Attorney for the New Hampshire School Boards Assoc. clarifies \$\$ lost if Common Core is not implemented

----- Original Message -----

Sent: Mon Sep 30 22:22:56 EDT 2013

Subject: IMPORTANT : Attorney for the New Hampshire School Boards Assoc. clarifies \$\$ lost if Common Core is not implemented

This is a transcribed letter from an attorney at the New Hampshire School Boards Association. This was read out loud before the Alton School Board a short time ago.

I wish the answer were that simple. The DOE has a lot of moving parts right now, so I hope I can clarify and answer to the best of my knowledge.

First, the Common Core State Standards (CCSS) is just that – standards. It is not curriculum. While many school districts both federally and in NH have adopted curriculum to align with the CCSS, there is no specific curriculum the state has adopted to implement the CCSS. Likewise, as far I am aware, there is no specific curriculum school districts have to adopt.

Second, because Common Core is standards, the NHDOE is implementing them within the revised Minimum Standards, Ed 306, of which you are aware. The NHDOE adopted new curriculum standards related to the Common Core in 2010 relative to English and Math. Now, with the full revision of Ed 306 occurring, the NHDOE is seeking to implement the CCSS within the state minimum standards.

So – it's not necessarily a matter of local school districts "opting out" of the CCSS or not implementing the CCSS – it would be a matter of local school districts not complying with the State Minimum Standards. The state is incorporating CCSS into the Minimum Standards. Local districts are required by law to implement the State Minimum Standards.

Failure to implement the State Minimum Standards or failure to be in compliance with State Minimum Standards could possibly lead to the school not being approved, which would mean the district would not be allowed to operate schools. However, to my knowledge, this has never happened and the DOE usually puts districts on "alternative compliance" or "conditional approval" status. You may have seen the proposed revised approval standards in the new Ed 306 proposal.

In terms of losing money – I don't see anything in the law that addresses that. Provided the district complies with federal requirements in relation to federal money, I'm not sure you'd lose federal money.

Another consideration is the move to SmarterBalance. Because SmarterBalance is replacing NECAP, your students need to be instructed in a manner that prepares them for this test.

As far as local control goes – it’s being stripped away. NHSBA has been advocating for a return to and maintenance of local control – with the NHDOE, at the legislature, etc. But unfortunately, our concerns have fallen on deaf ears. NHSBA has formally submitted comments in opposition to the revised Minimum Standards. We’ve spoken out against the NCLB waiver, Common Core, and others.

Though the deadline for public comments has passed re: the minimum standards, I would urge your board to contact its local legislators and/or the DOE to continue to express your concerns over the implementation of these initiatives.

I hope this helps clarify. I’m still trying to make sense out of a lot it as well.

Barrett M. Christina, Staff Attorney
NHSBA

LITCHFIELD SCHOOL DISTRICT

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052**

**Approved Minutes for October 9, 2013
(approved as written 10-16-13)**

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Tracy Micali, Director of Human Resources
Scott Thompson, Principal, GMS
Tom Lecklider, Principal, LMS
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION 6:30 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 6:30 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from the October 2, 2013 non-public session:

The minutes of the October 2, 2013 were sealed indefinitely.

E. Presentations & Recognitions

There were no presentations or recognitions.

F. Correspondence

Dr. Cochrane announced that he received an email from Heather Gage, NH DOE, who inquired if the District would be interested in accepting the \$32,275 without accepting Title I funds. He indicated that she mentioned that CHS would remain a priority school, but she would like us to participate in creating a plan for improvement with the funds.

Mr. York asked if there are any requirements attached. Dr. Cochrane commented that he would request in writing that they are not Title I funds.

Mr. York commented that if there are requirements and the NH DOE wants to control how we use the money, the Board should decline.

Mr. Miller commented that in the waiver documentation, it is stated that it would be an additional allocation of Title I funds. He believes that the federal government will view it as acceptance of the Title I grant.

Mr. York asked why the NH DOE is being so aggressive in not accepting our response. Dr. Cochrane indicated that he wanted clarification from the DOE that if CHS accepts the funds they would not be classified as a Title I school.

Mr. Miller expressed his disinterest in accepting the funds.

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Dr. Cochrane commented that a plan to focus on K-12 Math is required regardless of whether we accept the funds. He indicated that if the DOE provides a guarantee in writing the funds will not be designated as Title I funds, it does not extend us any further. He noted that CHS can use the funds to focus on math curriculum, materials, and/or remediation. Dr. Cochrane recommended the dialogue with the NH DOE continue until a clarification and written guarantee is agreed to and provided.

Mr. York suggested that Board members have a future discussion about the removal of Title I funds.

G. Approval of Draft Minutes:

- Public Session October 2, 2013

Mr. York made a motion to approve the public minutes of October 2, 2013 as written. Mrs. D'Alleva seconded. The motion carried 5-0-0.

H. Community Forum

Dennis Miller, 37 Wren Street, clarified that he was making his statement as a parent. He commented that recently his daughter was injured in a soccer game and missed much school. The CHS Administration, Nurse Baker and Coach Patterson have been very supportive about the best situation for her, how to restructure her day as she returns and getting on track with her coursework. He thanked the CHS Administration and staff for their assistance. Mr. Miller expressed satisfaction with the amount of communication with teachers, administration and staff.

Jason Guerrette, 11 Perry Court, referred to the Board's discussion regarding a request for the use of impact fees and asked if details could be provided.

Dr. Cochrane commented that they are anticipating the scope of work within the next week or two. He noted that Jim Cavanaugh, security consultant, toured all three buildings. He indicated that Mr. Cavanaugh's recommendations are forthcoming. Dr. Cochrane commented that there are three major areas of focus: access control, communication and video surveillance. He indicated that video surveillance is expected to include external surveillance for all three buildings, the ability to know when an external door is open, the ability to access 911 from classrooms and some ability to broadcast outside the buildings. Dr. Cochrane commented that the scope of work will be brought forward to the Board.

I. Superintendent's Comments

Dr. Cochrane thanked Mrs. D'Alleva for chairing the first meeting of the LSB Building/Planning Committee last evening. He noted that Committee members Jason Guerrette, Kevin Cormier, Cindy Couture, Kevin Lynch, Tim Otis and Keri Douglas had good conversation about the scope of the group. Dr. Cochrane noted that Mr. Lynch is a tremendous asset to the group. He noted that the Committee decided that GMS is the school with the most need. The Committee will research the depth of information regarding the needs of GMS and the long term infrastructure.

Mrs. D'Alleva commented that the Committee is made up of a great and diverse group of community members. She announced that Mr. Guerrette was elected Vice Chair and Mr. Otis was elected Secretary.

II. REPORTS

A. School Board Comments

There were no Board comments.

B. Committee Reports

- Budget Committee

Mr. Bourque reported that the Budget Committee met on October 3, 2013. He noted that one member asked for information on power sweeping. He reported that the Budget Committee agreed with the recommendation for the submission of warrant articles.

III. OLD OR UNFINISHED BUSINESS

There was no old or unfinished business.

IV. NEW BUSINESS

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A. FY15 Budget Presentations

- GMS

Mr. Thompson presented the FY15 GMS budget to the Board. He highlighted major increases/decreases:

Regular Education

- Line 641, Textbooks New: decrease of \$16,443.13

Physical Education

- Line 738, Equipment Replacement: increase of \$3,739.86

Math Education

- Line 610, Supplies: decrease of \$1,628.70

Student Activities

- Line 734, Equipment Additional: increase of \$3,432

Guidance Services

- Line 330, Professional Service: decrease of \$2,098.50.

Mr. Bourque asked about the replacement of student desks and chairs. He asked if we are replacing the desks and chairs every year.

Mr. Thompson indicated that we are approved to replace 10 desks and 10 chairs each year. He commented as an alternative to replacing the desks and chairs, Mr. Thompson spoke to Mr. Ross about the possibility of steam cleaning the furniture.

Mr. Thompson reported that the current inventory of physical education mats include too many in poor condition. He noted that the budget includes the replacement of some of the mats.

Mr. Miller asked about consumables. He expressed concern that the District is spending a significant amount of money for consumables each year. He asked if providing copies from the book for students is less expensive. Mr. York indicated that it is less expensive to purchase the consumables than it is to make copies. He suggested outfitting students with tablets instead. Board members discussed alternatives to consumables.

Mr. York asked about in district mileage reimbursement budgeted under School Administration. Mr. Thompson indicated that administrators and administrative assistants are reimbursed for travel to various district facilities. Mr. York expressed his disagreement with in district travel reimbursement.

Mr. Thompson presented a request for new/expanded positions:

- Technology: keyboarding instruction

Mr. Thompson explained that with increased computer capability and the Smarter Balance Assessments forthcoming, there is a concern that students do not have the keyboarding skills needed to complete online testing.

- Move Title I tutor into the budget and expand to five day position
- Advisor for the Student Council (currently principal/asst. principal who are constantly called away).

- LMS

Mr. Lecklider presented the FY15 LMS budget to the Board. He highlighted major increases/decreases:

Regular Education

- Line 430, Repairs/Maintenance: increase of \$3,565
- Line 440, Rental/Lease Equipment: increase of \$2,711.98

Math Education

- Line 640, Text Replacement: decrease of \$11,414

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Reading Education

- Line 640, Text Replacement: decrease of \$6,900

Guidance Services

- Line 610, Supplies: increase of \$6,054 (Project Safeguard)
- Line 738, Equipment Replacement: decrease of \$2,080

Mr. Lecklider reported that budgeted for 2015 is the replacement of a stove in Family and Consumer Sciences as the temperature is running high, which creates a safety concern. He noted that LMS is moving to double math next year and math technology software for grade 7 has been budgeted as well. He explained that double math will consist of a component of accelerated math and another class that is guided practice and individualized focused instruction with technology.

Mr. Lecklider presented a request for new/expanded positions:

- Move part time math tutor into the budget
- Part time reading specialist
- Part time music teacher.

Mr. Lecklider indicated that a part time music teacher is being requested as there is a thriving number of students interested in music.

Mr. Miller asked for descriptions for the positions as well as teaching loads and expectations for the position.

Mr. Barka asked why Mr. Lecklider requested moving the Title I tutor into the budget. Mr. Lecklider indicated that Title I requirements limit us and intrude on instruction time with overwhelming paperwork demands.

- Salary Guidelines

Mrs. Micali asked for guidance from the Board regarding guidelines for non-LEA salary schedules and ranges. She indicated that we are waiting to receive the guaranteed maximum rate for health insurance and there is no change in the NH Retirement System rates at this time.

Mr. Barka indicated that salary schedules have been frozen for three years. He suggested no adjustment to the schedules, but allow employees to move up a step on the schedule.

Dr. Cochrane indicated that administrators are on ranges; however, their years of service do not match where they are on the scale.

Mr. York recommended that the Superintendent come to the Board and ask for a set amount of money to distribute among administrators this year. He commented that this was done the previous year as well.

Mr. Miller commented when the Board approved ranges, movement through the range was at 1% for satisfactory performance. He noted the Board would make changes to the ranges subject data on surrounding towns/districts.

Mr. Barka requested to see the total of employees moving on steps and the total for directors on ranges.

B. School Equipment and Supplies Disposition (DN)

Mr. Markiewicz reported that Food Service would like to dispose of five pieces of equipment. He noted there are two pieces at GMS and three at CHS. He indicated that Board policy dictates that the Board approve of disposition of equipment valued at more than \$1,000. Mr. Markiewicz commented that it may be possible to sell some, if not all, of the equipment. He noted that the district can offer the equipment on a listserv that is used by Business Administrators throughout the state for potential interest. He believes that the value of the equipment will not exceed the policy criteria. It was noted that one of the pieces of equipment may be of interest to the Athletic Boosters.

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C. Finance Software

Mr. Markiewicz reported that it came to his attention that there were inconsistent numbers on the monthly budget report. He noted that there is a column entitled 2013 approved/adopted budget on the monthly budget report which is drawing from the revised budget. He commented that he spoke with Mr. Martin who recalls a conversation at the Board level to use data from the revised budget during budget preparations. He asked if it is the Board's wish to continue using this method.

Mr. York indicated that the Board asked to have actual numbers. He noted the Board would like to continue to see the revised numbers.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Janine Lepore, 17 Greenwich Road, commented with regard to math and reading consumables. She indicated that math and reading are two critical areas of focus. She remembered that her children used consumables through the grades at GMS and LMS. Mrs. Lepore commented that she understood that the information was manipulating the material in a different way than the textbook portrayed. She asked if teachers provided feedback regarding the use of consumables. Mrs. Lepore noted it is beneficial when children have the opportunity to think about material in a different way. She asked if there are other sources for these textbooks and consumables.

Dr. Cochrane commented that the text adoption process should be more rigorous. He noted that we should fully report the program needs to PERC.

Mrs. Lepore commented with regard to audio and video tape fees. She asked if they can be downloaded from a reputable online source. She asked if we want to invest in older technology.

Mr. York suggested that question be addressed by Mr. Hancock, Director of IT, as we now have a large infrastructure in the schools.

Jason Guerrette, 11 Perry Court, commented that he noticed that there were two different numbers for the total of students used in different budget supply lines.

Mr. Miller clarified that the lower number is the total student enrollment less the number of students in kindergarten.

Mr. Guerrette indicated that he sent the Board email regarding the use of tablets in Los Angeles. He noted that the district had outfitted students with tablets and found that they are being hacked. He commented that it appears use of tablets is not successful. Mr. Guerrette commented on the request by LMS for a part time music teacher. He stated that the focus should be on advanced performers and providing a program to assist those students. Mr. Guerrette referred to the 2003 and 2004 warrant articles that are relevant to new positions. He noted that the 2003 article states:

As a community operating under Senate Bill 2, R.S.A. 40:13, we support the Litchfield School Board creating separate warrant articles for new positions, increased hours of staff, new equipment, and architectural work. The Litchfield School Board will then be continuing past practice to provide voters with greater choice on increases in school spending. This is a petition warrant article.

He commented that the requirements placed on the School Board restrict the creation of new positions without voter approval. Mr. Guerrette noted that the 2004 article states:

Shall the Litchfield School District support the School Board in placing in the operating budget those positions, agreed to by the Budget Committee, that are needed to meet the minimum state and federal standards or to maintain services at current year levels? This is a non-binding, advisory warrant article.

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He commented that the Board can only add to the budget new positions with Budget Committee approval that are necessary to meet federal, state and local requirements. He indicated that should the School Board ignore the will of the people, it harms trust. He commented that if the Board cannot adhere to the warrant articles, the Board can change them.

Dr. Cochrane commented on Mr. Guerrette's statement regarding the situation in Los Angeles. He explained that they provided iPads without a plan in place and created a generic student user profile to use as a standard without realizing student were able to delete and change the profile.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered into non-public session at 9:18 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mrs. D'Alleva seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller, the Board returned to public session at 10:16 p.m. Mrs. D'Alleva seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. York made a motion to adjourn at 10:17 p.m. Mr. Miller seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

One Highlander Court

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October 9, 2013

Attachment to the October 9, 2013 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the October 9, 2013 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

From: Jason Guerrette [sts3717@gmail.com]

Sent: Tuesday, October 08, 2013 11:41 AM

To: Derek Barka; Patricia D'Alleva; John York; Brian Bourque; Andrew Cutter; Brian Cochrane

Subject: Fwd: A Charter School outperforming all schools including international schools

In my humble opinion....we should be emulating those that achieve the highest results....not ones that are "better than what we have" or ones "that are at least more rigorous than what we have"

Jason

----- Original Message -----

From:

Sent: Tue Oct 08 11:39:14 EDT 2013

Subject: A Charter School outperforming all schools including international schools

The school is 5-12th grade. They use Saxon Math and then require Calculus for graduation. Reading list includes Mark Twain, Shakespeare

Arizona School Outperforms Shanghai on International Exam October 4, 2013

While most U.S. schools struggled to reach even an average score on a key international exam for 15 year olds in 2012, BASIS Tucson North, an economically modest, ethnically diverse charter school in Arizona, outperformed every country in the world, including Shanghai, China's academic gem, says June Kronholz, a former Wall Street Journal foreign correspondent, bureau chief and education reporter. Fifteen years after its founding by two economists, the BASIS network already roosts in the scholastic stratosphere.

The Tucson charter school outscored all 40 countries that administered the 2012 PISA, or Programme for International Student Assessment exam, with a mean math score of 618 -- 131 points above the U.S. average. Its 10-year-old Scottsdale sister school scored even higher: 51 points above the metropolitan Shanghai area in math and 42 points higher in science.

BASIS students take an average of 10 Advanced Placement (AP) exams each, and in 2013 earned an average score on them of 3.9 out of 5.

Princeton, Dartmouth, Brown, Harvard and Williams all accepted at least one of the 54 students in the 2013 graduating class, some of them on full scholarships; Stanford accepted four.

BASIS schools are open admission and operate on a shoestring budget: the Arizona schools operate on about two-thirds of the average funding for a child in a traditional public school. Classes are large: up to 30 students in middle school. Technology is "akin to cuneiform tablets," says Scottsdale's head of school, Hadley Ruggles.

The BASIS curriculum and its hard-charging teachers go a long way toward explaining the schools' success. Fifth graders take Latin and can expect 90 minutes a day of homework. Middle schoolers have nine hours a week of biology, chemistry and physics. Algebra starts in 6th grade; AP calculus is a graduation requirement. The English curriculum separates literature and language, or critical thought; high schoolers take both. There are year-end comprehensives; fail even one and it means repeating the grade.

"We want to get as good as the best in the world," says Michael Block, the affable 71 year old who founded and heads the BASIS network. "Business holds itself to international standards. Why not schools?"

Source: June Kronholz, "High Scores at BASIS Charter Schools," Education Next, Winter 2014.

From: Jason Guerrette [sts3717@gmail.com]
Sent: Tuesday, October 08, 2013 8:56 AM
To: Derek Barka; Patricia D'Allewa; John York; Brian Bourque; Andrew Cutter
Subject: Fwd: Nashua School Board Member: Common Core raises many concerns

----- Original Message -----

Sent: Tue Oct 08 07:04:42 EDT 2013

Subject: Nashua School Board Member: Common Core raises many concerns

Common Core raises many concerns

David Murotake

Letter to the Editor

I'm a Nashua school board member and state representative. I wanted to express my opinion on Common Core State Standards. Gov. John Lynch adopted the CCSS in 2011. Soon afterward, the state board of education published an implementation framework before CCSS was finalized. Neither the Legislature nor our school board has approved CCSS, which may have a cost impact to Nashua of \$3.5 million over the cost of "business as usual."

While I recognize the need for K-12 education reform in Nashua, I don't believe CCSS is the right answer. New Hampshire plans to replace the NECAP assessments with the "core-aligned" Smarter Balanced Assessment (SBA) in spring 2015, meaning we have to be teaching our children to the new standards this year. (Both NECAP and SBA are "summative assessments" meaning they test comprehensive learning from the year before.) Many Nashua teachers don't feel there's enough time to properly "align" their classes so students can be tested properly next year. Both national teachers unions share this opinion and call for a 2-year moratorium. National associations like those representing school boards, superintendents and principals also do. So do I.

Parents have serious privacy concerns with SBA. Testing agencies plan to sell aggregated student (and family) information for profit. With "big data" and "data analytics," this privacy information may be reconstructed later, violating their rights under the Family Educational Rights and Privacy Act (FERPA). Standards like CCSS requiring online entry of privacy information for assessments without "opt-out" should not be adopted without school board approval.

David Murotake

Nashua <http://www.nashuatelegraph.com/opinion/letters/1017925-465/common-core-raises-many-concerns.html>

LITCHFIELD SCHOOL DISTRICT

Our mission is to provide rigorous and varied educational opportunities that challenge and engage all students to attain their highest level of intellectual, social, physical, and emotional growth. (2007)

LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052

Approved Minutes for October 16, 2013
(approved as amended 10-23-13)

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Kyle Hancock, Director of Technology
Laura Rothhaus, Principal, CHS
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION

6:30 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 6:33 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

D. Summary of Non-Public Actions from the October 9, 2013 non-public session:

There were no non-public actions for October 9, 2013.

E. Presentations & Recognitions

- Acceptance of Donation

A donation of Dell laptops was presented for CHS. Deb Briggs from NetScout presented the donation to the Board.

Mr. Miller made a motion to accept a donation from NetScout for Dell laptops to be used at CHS. Mrs. D'Alleva seconded. The motion carried 5-0-0.

F. Correspondence

There was no correspondence.

G. Approval of Draft Minutes:

- Public Session October 9, 2013

Mr. Miller made a motion to approve the public minutes of October 9, 2013 as written. Mrs. D'Alleva seconded. The motion carried 5-0-0.

H. Community Forum

Jason Guerrette, 11 Perry Court, clarified a statement he made that was noted in the October 9, 2013 minutes.

I. Superintendent's Comments

There were no Superintendent comments.

II. REPORTS

A. School Board Comments

There were no School Board comments.

B. Committee Reports

- Budget Committee

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Mr. Bourque reported that the Budget Committee met on October 10, 2013 to review and vote on town budgets.

III. NEW BUSINESS

7:00 p.m.

A. FY15 Budget Presentations

- CHS

Mrs. Rothhaus presented the FY15 CHS requested budget. Board members reviewed each account and asked questions regarding specific line items. Major increases/decreases are as follows:

Regular Education

- Line 610, Supplies: increase of \$3,939.65

Mr. Barka asked why there was an increase of almost \$4,000. Mrs. Rothhaus indicated that last year that line item was overspent and it was necessary for funds to be transferred to that line.

Foreign Languages

- Line 640, Textbook Replacement: decrease of \$2,185.80

-

Physical Education

- Line 610, Supplies: increase of \$2,906

Mrs. Rothhaus noted that the increase is due to the need for new supplies for the Ropes course as equipment is showing much wear and age.

Mr. Miller commented that the Board cut funding of the Ropes course last year. Mrs. Rothhaus indicated that the safety inspection was paid, but we were not allowed to buy new equipment. She noted that the Ropes course is part of the Fit for Life class and ELO students pay to take the Ropes course.

FACS

- Line 738, Equipment Replacement: increase of \$3,530.95 (replace two convection ranges and four reality babies)

Mr. Barka and Mr. Miller asked how many reality babies the FACS class currently has in inventory. Mrs. Rothhaus commented that she will ask the FACS teacher for the total.

Mr. Miller noted that equipment cannot be budgeted under for replacement unless is not working. He suggested that the budget item be budgeted in the correct account.

Technical Education

- Line 738, Equipment Replacement: decrease of \$3,500

Math Education

- Line 641, Textbooks New: increase of \$16,887

Mrs. Rothhaus indicated that 140 new textbooks for Algebra I are being requested. She noted that the book that has been piloted is being requested by the teachers. Mrs. Rothhaus commented that 30 new textbooks and workbooks for AP Statistics (a new course) have been requested.

Mr. York asked about student progress with regard to the new Algebra textbooks. Dr. Cochrane indicated that we will get feedback from Dr. Heon. He commented that teachers are pleased with the pedagogic approach and layout.

Mr. York commented that it is important the investment we are making is the right one. He noted that he is pleased the materials we are using are supported by the teachers, but the end result is student improvement in the classroom. Dr. Cochrane indicated that the feedback received is that students are engaged and making sense of what they are learning.

Mr. Miller observed that money is spread over new classes in the budget. He was concerned that we are off the curriculum review cycle. Dr. Cochrane commented that to some extent that is true. He explained that it was suggested that we refrain from purchasing texts for anything that is not Common Core related, which skewed the cycle. He noted that it creates a budgeting issue. Dr. Cochrane discussed the issue with Dr. Heon. He

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recommended budgeting for 18-20 new AP Statistics textbooks and workbooks. He noted more can be ordered as needed.

Music Education

- Line 734, Equipment Additional: increase of \$3,015

Mrs. Rothhaus commented that the CHS auditorium stage lighting requires 98 lights. She noted that there are 61 to date. More ellipsoidal lights are being requested for the auditorium stage. Mr. Miller suggested that this line item be moved to Buildings and Grounds.

Social Studies

- Line 644, Information Access Fees: decrease of \$2,179.05

Dr. Cochrane mentioned that the Transportation line under the Self-Funded Programs account contains athletic teams that do not belong in that account. He noted that decreases that line item by \$4,702.

Guidance Services

- Line 330, Professional Services: increase of \$2,197
- Line 738, Equipment Replacement: increase of \$2,050

Mrs. Rothhaus explained that the increase is due to the anticipation of two hearing impaired students who will require additional services. She indicated that the increase in equipment replacement is for the replacement of FM systems for two students who use antiquated systems.

Mr. Miller commented on the overtime line item under School Administration. He indicated that the \$7,000 that is budgeted is extensive. Mrs. Rothhaus commented that there a high volume of work in the high school office. She explained that one of the administrative assistants is essentially a full time bookkeeper and assistant to the principal.

Mr. York asked if there are bookkeepers at any of the other schools and who processes accounts payable for the schools. Mr. Markiewicz indicated that the SAU processes all accounts payable. He commented that there are no bookkeepers at the schools.

Mr. York asked for specific duties of the employee with regard to bookkeeping. Mrs. Rothhaus indicated that the employee processes all purchase orders, maintains all student accounts, as well as other school accounts. Dr. Cochrane indicated that there is a great volume of work and there is much accountability with the number of small payments that go through the system. Mrs. Rothhaus added that during graduation there are times when the office employees work extra hours to prepare and coordinate.

Mrs. Rothhaus requested two expanded positions:

- Expand Athletics Administrative Assistant from 15 to 20 hours
- Expand the part time Guidance Counselor from .5 to .6.

Mr. York indicated that the high school proposed budget reflects an increase of \$67,071.91. Dr. Cochrane noted that part of the increase can be attributed to Self-Funded Programs (\$17,000), which will be offset by revenue.

Mr. Miller observed that more than half of the increase is for textbooks.

Mr. York requested a report reflecting all proposed textbooks that have been budgeted.

Mr. York asked about parking fees. Mrs. Rothhaus indicated they are held in a fund. She noted that two years ago she requested to use some of the revenue for the Venture Program and Challenge Day. She commented that she may make a similar request this year.

Mr. York suggested that parking fees should be brought into the budget as revenue. Mr. Markiewicz suggested asking the District auditors if those funds can go into the general budget.

Mr. Barka believed parking fees should be in a separate fund. Mr. Miller suggested adding them to the Self-Funded budget, which should present no conflict.

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- Technology

Mr. Hancock presented the FY15 Technology requested budget. Board members reviewed each account and asked questions regarding specific line items. Major increases/decreases to the budget are as follows:

GMS Computer Instruction

- Software: increase of \$5,200
- Furniture Additional: increase of \$11,000 (includes desks/chairs for new computer lab)
- Equipment Additional: increase of \$17,875 (includes thin clients, projector, smart board for new computer lab)
- Equipment Replacement: increase of \$23,960 (includes replacement classroom student computers with thin clients)

Mr. Miller asked why math software is in the technology budget. Mr. Hancock explained that historically the 2225 function has been in the technology budget as we have to be sure the software will function on our network.

LMS Computer Instruction

- Rental/Lease Instructional Equipment: increase of \$10,612.31 (includes thin clients and laptops)
- Software: increase \$4,000 (includes math software)
- Furniture Additional: decrease of \$20,226.33
- Equipment Additional: decrease of \$6,242.24
- Equipment Replacement: increase of \$5,200 (includes mobile computer lab cart, projectors)

Mr. Barka asked why laptops are budgeted for the math program at LMS. Dr. Cochrane explained that many grade 7 students do not have math fluency or background. He noted to assist in doubling up on math, the ability to spend 45 minutes per day in remediation requires a technology based approach. He indicated that technology is there as an assumption that at least three of those classes will be 45 minutes of instruction and the remaining part will be remediation.

Board members discussed the math issue with regard to addressing the issue in middle school. It was stated that scores and performance on assessment tests are increasing with the implementation of math remediation. Board members also discussed leveling in math with the Superintendent.

CHS Computer Instruction

- Rental/Lease Instructional Equipment: decrease of \$11,786.58
- Equipment Replacement: increase of \$5,300 (includes smart boards, projectors, library netbooks)

District Technology Services

- Equipment Additional: decrease of \$13,000
- Equipment Replacement: increase of \$3,500 (virtual server replacement)

GMS Technology Services

- Data Communications: decrease of \$4,750 (due to contract with FairPoint)
- Software: increase of \$8,125 (includes Rediker Student Management Software, support for thin client concurrent users)
- Equipment Additional: increase of \$29,500 (includes virtual desktop servers)

LMS Technology Services

- Repairs/Maintenance: increase of \$5,350
- Data Communications: decrease of \$4,750 (FairPoint)
- Equipment Additional: decrease of \$5,294.45

CHS Technology Services

- Telephone: decrease of \$2,500
- Data Communications: decrease of \$4,750 (FairPoint)

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- Software: decrease of \$3,220.64
- Equipment Additional: decrease of \$2,500
- Equipment Replacement: increase of \$5,500 (virtual server).

Mr. York commented that the 2014-15 Technology budget reflects an increase of \$58,683. He asked Mr. Hancock where he would reduce the budget if asked to reduce by \$50,000. Mr. Hancock indicated that GMS would not have a computer lab and math technology at LMS would not be funded.

B. Technology Report

Mr. Hancock presented the monthly technology report to the Board.

C. FY14 MS-24

Mr. Markiewicz presented the FY14 MS-24 to the Board. He noted that the MS-24 reflects revenue projections for the fiscal year. He reported that the general fund unassigned fund balance is \$367,596, which will offset taxes. Mr. Markiewicz commented that the report was submitted to the Department of Revenue Administration.

IV. OLD OR UNFINISHED BUSINESS

A. Access to School Video Cameras by Police – Update for Discussion

Dr. Cochrane updated the Board regarding access to school video cameras by police to date and deliverables that need to be received from stakeholders. He noted that the SAU has worked to develop a Memorandum of Understanding with legal counsel and the police department. He indicated that the police department has to set up their procedures and demonstrate that their passcodes work on our servers. Dr. Cochrane commented that we need to ensure that the system is built, tested, and verifiable before it is implemented.

Mr. Miller suggested that the language in the Memorandum of Understanding should state that recordings will be stored according to the retention policy.

Dr. Cochrane mentioned that if someone is in the cruiser they may have recording capability, which should be spelled out as a violation.

B. NHSBA Resolutions

- Potential Proposed Resolutions by the School Board

Dr. Cochrane asked Board members if there were any proposed resolutions to submit to the NHSBA. There were no proposed resolutions.

V. MANIFEST

The manifest was circulated and signed by the Board.

Mr. York mentioned that the town is not printing their annual town report this year. He noted that they are distributing the report on cd's. He suggested that the District have a conversation with Mr. Hoch regarding how the District's annual report is published and distributed.

Mr. Miller indicated that RSA 31 states the annual report must be published. He asked if the town would be meeting the law.

VI. PUBLIC INPUT

A. Community Forum

Jason Guerrette, 11 Perry Court, read an excerpt from the Southern New Hampshire Planning Commission regarding impact fees, which states: *Impact fees cannot be used for the operation, maintenance, repair, alteration, or replacement of capital facilities. They can only be used to finance new facilities or to expand and enlarge existing facilities which are sub-standard or under-capacity due to growth.* He indicated that the town has a new attorney and expressed concern that the Selectmen may want to spend impact fees on items for which impact fees should not be used. He mentioned that there were legalities in Londonderry for improper impact fee use. Mr. Guerrette indicated that the method to determine the use of impact fees is through a properly prepared capital plan.

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Mr. Guerrette commented on the overtime discussion. He noted that in his place of employment, hourly employees are not allowed to work overtime, but that salaried employees are expected to compensate in that area. Mr. Guerrette commented on new positions and the 2003/2004 warrant articles. He indicated that these articles were developed for expanded hours for part time employees and adding new positions. He stated that when hours are added to a part time position, eventually it becomes a full time position with benefits. He noted that is what people are upset about. Mr. Guerrette commented that there are bond monies that will be due back to the taxpayers in excess of \$350,000. He suggested if the School Board would like the proposed budget to pass the total should be lower than the default budget.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered into non-public session at 9:12 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mrs. D'Alleva seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller, the Board returned to public session at 10:33 p.m. Mrs. D'Alleva seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. Miller made a motion to adjourn at 10:34 p.m. Mrs. D'Alleva seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

One Highlander Court

Litchfield, NH 03052

Phone: (603) 578-3570

Fax: (603) 578-1267

Equal Opportunity Employer

Derek Barka, Chair

Patricia D'Alleva, Vice Chair

Dennis Miller

John York

Brian Bourque

October 16, 2013

Attachment to the October 16, 2013 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the October 16, 2013 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

FW: Manchester Dad: Testimony against Common Core from last night

On 10/17/13 10:17 AM, "Jason Guerrette" <sts3717@gmail.com> wrote:

>Good morning

>

>This is so well stated that I have not much to add.

>

>Jason

>

>Please include into the minutes.

>

>

>----- Original Message -----

>

>Sent: Thu Oct 17 10:01:04 EDT 2013

>

>Subject: Manchester Dad: Testimony against Common Core from last night

>

>

>My name is Jon DiPietro and I live on **** in Ward 6. Three of my four
>children are in Manchester schools right now; Memorial, McLaughlin, and
>Green Acres. I'm in year 14 of a 25+ year span in which I will have
>children in school.

>

>There are many aspects of common core that I think are highly
>problematic. In my mind, they range from troubling to truly mind
>boggling:

>

>€ I could talk to you tonight about my disappointment that following
>the standards will mean that our high school graduates will be two
>years behind the rest of the world in math.

>€ Or I could express my deep reservations about the abdication of local
>educational sovereignty.

>€ Or I could share my outrage at the inappropriate, dangerous and
>possibly unconstitutional data sharing that accompanies common core.

>€ Or I could recite the growing list of communities and states who are
>hitting the brakes on common core and questioning its efficacy.

>€ Or I could recount testimony from developmental child psychologists
>who insist that the common core standards ask grade school children to
>perform tasks that require areas of their brains that won't be fully
>developed for several more years.

>€ Or I could repeat stories pouring in from other states about
>exasperated teachers and emotionally drained children who are wrestling
>with a badly and hastily constructed system.

>€ Or I could mention the fact that Sandra Stotsky - credited with
>developing one of the country's strongest sets of academic standards
>for

>K-12 students refused to endorse the common core English language
>arts standards despite being paid to do so.
>€ Or I could mention the fact that James Milgram - professor emeritus
>of mathematics at Stanford University refused to endorse the common
>core mathematics standards despite being paid to do so.
>€ Or I could object to the shift away from knowledge and mastery in
>favor of empty skills, which will lead to a work force full of
>sophomores, which you may know is Greek for ³wise fool.² € Or I could
>explain the danger in a standard that requires children to use
>emotional words to construct persuasive arguments instead of classical
>techniques of rhetoric that instead rely on logic and reason.
>€ Or I could highlight the dangers of a system that favors
>inquiry-based learning that train teachers to become facilitators
>instead of instructors.
>
>In my mind, any one of these concerns is enough to pump the brakes on
>this effort and seriously question whether common core will deliver the
>change that our education system desperately and unquestioningly needs.
>
>But as a parent of four, I have one concern that in my view trumps
>every one of them. I'm here tonight to ask you one very simple
>question: Why are you experimenting with my kids?
>
>Please don't tell me that this isn't experimental when we've adopted a
>system that hasn't even completed the development of all of its standards.
>
>Please don't tell me that this isn't experimental when my daughter's
>algebra teacher unexpectedly gets a shipment of shiny new books dropped
>in his classroom six weeks into the school year, causing him to throw
>out his entire lesson plan and finish out the year flying by the seat
>of his pants.
>
>Please don't tell me this isn't experimental when we have no data to
>support the theory that this will lead to an improvement in education.
>
>Please don't tell me this isn't experimental when the Board of School
>Committee hasn't even decided to adopt common core when the schools
>knee-deep into it.
>
>Please don't tell me this isn't experimental when most teachers I've
>spoken with in the two open houses I've attended shrug their shoulders
>and admit that they don't know where this is going or what's expected
>of them.
>
>Please don't tell me this isn't experimental when my middle school
>daughter comes home crying because she failed a math quiz because she
>got the correct answers using the outdated method she was taught last year.
>

>In my view, what this Board and school administration are doing to
>teachers and students this year is unfair and highly detrimental. I
>know the easiest thing to do would be to push forward and follow the
>herd because everyone else is doing it. I know the hard thing to do is
>to slow down and maybe, just maybe admit that we moved a little too hastily.
>Because instead of condemning you for making a mistake, I and all
>reasonable parents will applaud you for making things right.
>
>This parent respectfully and passionately asks this board to stop
>experimenting on his kids. Thank you.

FW: COMMON CORE gets REJECTED in Manchester

On 10/17/13 10:20 AM, "Jason Guerrette" <sts3717@gmail.com> wrote:

>Good morning

>

>As CCS get more attention, more districts understand the situation and
>are choosing to go in a different direction.

>

>Jason

>

>Please add to the minutes

>

>

>----- Original Message -----

>

>Sent: Thu Oct 17 06:29:17 EDT 2013

>

>Subject: COMMON CORE gets REJECTED in Manchester

>

>

>

>

>

>

>October 16. 2013 10:57PM

>

>Common Core gets rejection in Manchester

>

> ShareThis

>By TED SIEFER

>New Hampshire Union Leader

>

>MANCHESTER ‹ The Board of School Committee voted Wednesday to have the

>district develop its own ³Manchester Academic Standards,² following

>months of debate over the adoption of the Common Core standards.

>

>The city-based standards were proposed by Superintendent Debra

>Livingston following months of acrimonious debate over the national standards.

>

>Under her proposal, the Common Core State Standards would serve as the

>³floor² for the development of the city standards, which would take

>place over the school year and would make use of several sources.

>

>³The Manchester academic standards would be our star,² she said.

>

>The 13-1 vote came after nearly two hours of public comments from

>opponents and, in lesser numbers, supporters of the standards.

>

>Mayor Ted Gatsas said he strongly supported the development of
>city-based standards, after he did not get satisfactory answers about
>Common Core and its implementation.

>

>³I'm sure Manchester students will learn by Manchester standards, which
>will be the highest in the state, because everyone in the state will
>want to follow them,² Gatsas said.

>

>Opponents of the Common Core standards, which have been adopted in more
>than 40 states, have argued that they would undermine local control and
>that they rely on unsound principles.

>

>Ward 4 School Board member Roy Shoults, who has been highly critical of
>Common Core, reacted enthusiastically to Livingston's proposal.

>

>He asked Livingston, ³Voting for Manchester academic standards, does
>that mean 100 percent local control?²

>

>Livingston replied, ³That is correct, with also the understanding we
>can't start at ground zero. We need to look at what we currently have,
>what Common Core offers, the standards in Massachusetts... Let's
>collect the best.²

>

>Chris Stewart, Ward 3, was the only board member to vote against
>Livingston's proposal. He noted that Common Core was recently endorsed
>by the Business and Industry Association of New Hampshire, and he said
>he didn't think the district had the resources to develop its own standards.

>

>The district has already spent \$80,000 on developing new curriculum
>guides over the summer that were designed to align the curriculum with
>Common Core. It appears changes that were adopted by teachers based on
>these guides this school year will continue for the time being.

>

>The state will be implementing a new assessment test based on Common
>Core in the spring of 2015. The board voted to back the
>superintendent's recommendation to consider at a later point whether to
>adopt the test or seek a waiver.

>

>tsiefer@unionleader.com

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052**

**Approved Minutes for October 23, 2013
(approved as written 10-30-13)**

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Mrs. Devin Bandurski, Director of Special Services
Mrs. Tracy Micali, Director of Human Resources
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION 6:30 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 6:30 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from the October 16, 2013 non-public session:

Mr. Miller made a motion to approve the non-public minutes of October 9, 2013 as written. Mr. York seconded. The motion carried 5-0-0.

E. Presentations & Recognitions

There were no presentations or recognitions.

F. Correspondence

Mr. Barka noted that he received a letter from a GMS parent regarding air quality. He forwarded the letter to the Superintendent.

Mr. Barka noted the Board received correspondence from Mr. Guerrette regarding Common Core.

Mr. York noted that the Board received a letter from Mr. Caprioglio regarding technology at GMS.

G. Approval of Draft Minutes:

- Public Session October 16, 2013

Mr. Miller made a motion to approve the public minutes of October 16, 2013 as amended. Mr. York seconded. The motion carried 5-0-0.

H. Community Forum

Jason Guerrette, 11 Perry Court, commented that he sent information to the Board regarding the Alton School Board's refusal to adopt Common Core Standards. He noted that Manchester School District has decided to use Common Core Standards as a base to form standards they believe will better address student instruction and achievement. He indicated that Manchester School Committee members were concerned that the Common Core Standards are not as they were delivered.

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Mr. Guerrette commented that there are two committee members with specific education experience that volunteered to assist in writing the new standards. He indicated that this School Board should keep abreast of what Manchester is doing so that we can adopt what they propose that will “fix” the Common Core Standards.

Mr. Guerrette mentioned there was a letter from the LEA in the HLN last week and he asked if the School Board was aware of that situation. Mr. Barka noted the Board was aware.

I. Superintendent’s Comments

Dr. Cochrane announced that the District received an invitation to participate in a pilot of Smarter Balance Assessments. He forwarded the information to the three principals to determine if there is interest in participating with a subset of each school. Dr. Cochrane commented it has come to his attention from other districts that this pilot will be beneficial as districts will become more familiar with Smarter Balance Assessment format and testing environment. He indicated that concerns with the testing are electronic manipulation and scrolling through long testing forms. Dr. Cochrane commented that fluency with the tools and testing environment is important. He noted that this will help determine if there will be any implications on instruction for the future.

Dr. Cochrane announced that there will be a musical at CHS on November 22-24 and a musical at LMS December 12 and 13. He noted more information will be forthcoming from the schools.

II. REPORTS

A. School Board Comments

Mr. Miller announced that he received an invitation from GMS to their Veterans Day program. He noted that LMS holds a ceremony as well.

Mr. Miller commended the Grounds department for the appearance of the fields at CHS.

Mr. York mentioned that he has seen the new scoreboard is in place at CHS. Dr. Cochrane indicated the old scoreboard was removed and the new one installed. Mr. Markiewicz noted that the scoreboard is functional and operational.

B. Committee Reports

• Budget Committee

Mr. Bourque reported that the Budget Committee met on October 17, 2013. He noted that a Budget Committee member is requesting more information regarding power sweeping. He indicated that the Committee member requested to know when the power sweeping is performed and a breakdown of the actual cost for last year and this year. Mr. Bourque mentioned that he received an email from Mr. Hoch who mentioned that Mr. Pinciario will ask the vendor for a better price if the District goes through the town for their power sweeping.

Mr. Markiewicz mentioned that the town and district have the same vendor. He noted he will provide the information requested to Mr. Bourque.

• PERC

Mrs. D’Alleva reported that the PERC Committee met this afternoon and discussed some books. She indicated that more information was requested on some of the books. She noted that she expressed concern to the Committee regarding consumables.

Mr. York commented that when consumables were discussed at the previous meeting it was not made clear that the increase in the amount budgeted for consumables is across the district. He indicated that we should use the PERC Committee to its full extent, which should include discussing/reviewing consumables.

Mrs. D’Alleva observed that students in lower grades use the consumables, but students in higher grades may not utilize the entire workbook. She indicated that the Committee discussed if consumables should be reconsidered in an effort to save money.

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Mr. Miller commented that we need to consider the ongoing cost for consumables. He suggested researching alternative solutions.

III. NEW BUSINESS

A. FY15 Budget Presentations

- Special Education

Mrs. Bandurski presented the FY15 Special Services Requested Budget to the Board. Major increases/decreases include:

- Professional Services: decrease of \$19,362.85
- Handicapped Tuition: decrease of \$199,704 collectively as the amounts for FY14 were broken out according to the schools in which the students were placed (FY14: \$700,800; FY15: \$510,100)
- Tutor Services: decrease of \$20,750
- GMS Food: decrease of \$6,030
- LMS Textbooks-New: increase of \$18,408 (reading intervention program)
- Psychological Services: increase of \$5,200 in professional services
- District Speech Services: increase of \$11,000 driven by speech services for out of district students
- District OT/PT Services: increase of \$14,500 driven by the Extended Year Program
- Transportation: increase of \$36,127 (required to provide transportation for students who are placed at work sites)

Overall budget decrease of \$171,794.37.

Mr. Miller commented on ink for printers that is budgeted under several departments in the entire district budget. He suggested that this should be budgeted under technology and that the Board should discuss budget item locations in the future.

Mr. Miller asked how many special education students are in the district. Mrs. Bandurski noted that there are 200 identified students.

Mrs. Bandurski discussed new and expanded position requests with the Board.

- Expand ESOL teacher from 75% to 100%

Mrs. Bandurski indicated that the case load has increased. She noted that the amount of hours required for each student and traveling between buildings as well as added to the need for a full time ESOL teacher.

- Additional Special Education teacher at LMS

Mrs. Bandurski indicated that an additional teacher is needed for students transitioning from elementary to middle school.

- 2 Paraprofessionals at GMS

Mrs. Bandurski indicated that both positions are needed for individual student support.

- 2 Paraprofessionals at CHS

Mrs. Bandurski indicated that there are students transitioning from the middle school to the high school.

Mrs. Bandurski indicated that the paraprofessionals and special education teacher are required by IEP.

Mrs. D'Alleva asked if it would be less costly to hire another part time ESOL teacher. Mrs. Bandurski indicated that she research the cost for another part time ESOL teacher and concluded based on the data that it would be more costly to employ two part time ESOL teachers.

- Salaries and Benefits

Mrs. Micali presented the FY15 Salaries and Benefits Requested Budget to the Board. She reported that salaries have been carried over from FY14 and do not reflect increases or steps. She noted that the new benefit numbers have been updated in the budget for new Guaranteed Maximum Rate for health insurance. She indicated that the budget does not reflect new or expanded positions until direction is provided by the Board.

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Mr. Miller commented that non-LEA steps or increases have not been factored into the budget. He asked if the bottom line was accurate. Mrs. Micali indicated the bottom line is not an accurate number at this point.

Mr. York requested a one page summary of increases in the Salaries and Benefits budget.

Mr. Miller wanted to know why custodial at CHS has increased by \$38,000. He asked why there is an increase in the salaries/benefits budget if it is not inclusive of new or expanded positions.

Dr. Cochrane suggested Board members send questions regarding salaries/benefits to him and he will provide answers at the next Board meeting.

- New/Expanded positions:

Mrs. Micali reviewed the new and expanded position requests with the Board. She noted the following requests:

- LMS, half time music teacher (to assist with teaching load)

Dr. Cochrane indicated that a half time teacher will allow us to move chorus from after school to during the school day. He noted there is much interest by students for a general music experience.

Mr. York requested the number of student that have participated in the LMS music program over the last two years.

- LMS, full time enrichment coordinator (to work with students in and out of classroom and assist in writing skills, for example)
- CHS, expand part time guidance counselor from .5 to .6 because additional programming requires additional time especially with students in dual enrollment
- CHS, expand guidance director additional days from 20 to 30
- CHS, expand administrative assistant from school year to full year

Mr. Miller commented that the Guidance Department at CHS was recently reorganized. He was concerned over the requests for expanded positions.

Dr. Cochrane indicated that we should be able to cover the timeline for scheduling well with additional days for director and the expansion of hours for the guidance counselor.

- LMS, Math Tutor to provide additional instruction for struggling students and reach them more deeply at grades 5 and 6

Mr. Barka asked how the math tutor will work with doubling up in math at LMS.

Dr. Cochrane indicated that there is a need for remediation at grades 7 and 8, which should decrease with the remediation program. He noted that grade 7 will receive an extra year's instruction with double math.

Mr. Miller commented if positions are driven by IEP's they should be included in the budget. He noted that the sum of new positions is over \$300,000 and enrollment is declining. He indicated that it will be difficult to prove to the taxpayers that new positions not required by IEP are needed with declining enrollment.

- CHS, two additional days for nurse (to check all physicals for athletes)
- CHS, two additional days for librarian (to inventory library media)
- CHS, expand hours for Athletic Administrative Assistant from 15 to 20.

Mr. Barka asked if it would be appropriate to ask self-funded programs to contribute to the administrative assistant's wages. Mr. York noted that the additional self-funded sports attribute to the need for expanded hours. Mr.

Markiewicz indicated that would need to be investigated.

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- Rate Schedule

Mrs. Micali shared benefit rates with the Board. She noted that all rates are current with the exception of basic life and AD&D. She indicated those rates have not yet been received.

B. Business Administrator's Report – Sep 2013

Mr. Markiewicz presented the September 2013 finance report to the Board. He indicated that the executive summary is being presented in a new format to reflect various comparisons relative to the general fund balance. He reported that the comparisons include:

- General fund revenue
- Food Service fund revenue
- Capital Reserve Funds
- General fund actual expenditures in salaries/benefits, purchased services, supplies, property, and other
- Actual expenditures and encumbrances
- Student activities fund balances and expenditures
- Percentage of remaining general fund available for use.

He noted that these comparisons and graphs will reflect how the budget is managed throughout the year.

Mr. Markiewicz provided a financial report for Food Service. He reported that two major factors are Meals per Labor Hour and Total Staff Hours. He noted that the data reflects that the district is at the recommended guidelines for Meals per Labor Hour and Total Staff Hours.

- Budget Committee Revisited

Mr. York commented that the November 14 Budget Committee meeting will be lengthy. He suggested speaking with the Chair about presenting an overview of the budget that night.

Dr. Cochrane indicated that the order of the budget presentations will be similar to the order presented to the School Board. He noted that the more straightforward budgets will be presented prior to budgets that are more complex.

C. FY13 DOE 25

Mr. Markiewicz presented the FY13 DOE 25 to the Board. He indicated that the DOE 25 is an annual report the district is required to file with the NH DOE and the NH DRA. He explained it is essentially an income statement and balance sheet. Mr. Markiewicz commented that the report is being submitted late this year in order to ensure that the report ties to the draft audit report, which was recently received. He noted that the 2012 ADM was used to project the cost per pupil as the 2013 ADM is not yet available. He indicated that the rate of recapture on federal grants has decreased.

IV. OLD OR UNFINISHED BUSINESS

There was no old or unfinished business.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Jason Guerrette, 11 Perry Court, thanked the district for making the Special Services budget changes. He commented with regard to the requested new positions that services should be provided to students if required by IEP. Mr. Guerrette referenced Mr. Miller's statement regarding new and expanded positions. He commented if a new position is required, provide justification for the voters. He indicated that the new and expanded positions [not required by IEP's] should not be included in the budget as it will be difficult to convince voters they are necessary.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

9:30 p.m.

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[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered into non-public session at 7:56 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller, the Board returned to public session at 8:50 p.m. Mr. York seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. Miller made a motion to adjourn at 8:50 p.m. Mr. Bourque seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the Litchfield School Board



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

One Highlander Court

Litchfield, NH 03052

Phone: (603) 578-3570

Fax: (603) 578-1267

Equal Opportunity Employer

Derek Barka, Chair

Patricia D'Alleva, Vice Chair

Dennis Miller

John York

Brian Bourque

October 23, 2013

Attachment to the October 23, 2013 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the October 23, 2013 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

This is an enquiry email via [Litchfield School District](#) from:
Michael Caprioglio

Name:Michael Caprioglio

Subject:Technology

Message:

Hi.

I read the minutes from your last meeting and Mr York asked where technology will be cut if a reduction is requested. The comment was GMS computer lab and Math Tech. GMS will start having on line standardized testing soon that will require all grades to type. What is your plan to teach these kids how to use a keyboard without have a computer lab? Math scores in town need to improve. What is the justification for cutting an area that will be used to assist kids in math comprehension?

Thanks,
Mike Caprioglio
12 Brandy Circle

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27**

Litchfield, New Hampshire 03052

Approved Minutes for October 30, 2013

(approved as amended 11-6-13)

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member (*excused*)
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Mrs. Tracy Micali, Director of Human Resources
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION

6:30 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 6:30 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from the October 16, 2013 non-public session:

Mr. Miller made a motion to approve the non-public minutes of October 16, 2013 as amended. Mrs. D'Alleva seconded. The motion carried 5-0-0.

E. Presentations & Recognitions

There were no presentations or recognitions.

F. Correspondence

There was no correspondence.

G. Approval of Draft Minutes:

- Public Session October 23, 2013

Mr. Bourque made a motion to approve the public minutes of October 23, 2013 as written. Mr. Miller seconded. The motion carried 4-0-0.

H. Community Forum

Jason Guerrette, 11 Perry Court, commented that he asked Board members at last week's meeting if they were aware of the LEA job action. He indicated that he had conversations with people around town who were surprised that the Board was aware of the job action and took no action. He noted that people want to hear from the Board regarding this issue. Mr. Guerrette suggested that the Board Chair draft a letter of explanation and address the issue.

Robin Corbeil, LMS technology teacher, distributed invitations to the Veterans Day program at LMS that were made by student in grade 7.

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I. Superintendent's Comments

Dr. Cochrane addressed Mr. Guerrette's concern. He indicated that he had some conversation with building administration and building administration met with LEA representatives when job action was taken. Dr. Cochrane commented that the LEA assured the administration they would comply with all aspects of the contract. He noted there is a different feel in a school building when teachers do not have a contract. He indicated that the administration took the job action seriously and has been assured of compliance. Dr. Cochrane commented that student education and instruction is not being compromised.

II. REPORTS

A. School Board Comments

Mr. Miller was complimentary of the CHS scoreboard. He noted that it was a nice sight on Friday night. He congratulated Coach Patterson, Matt Bennett, and all involved in the installation process. He congratulated CHS on a great event.

Mr. Barka read the invitation provided by Mrs. Corbeil aloud regarding the Veterans Day Ceremony and Breakfast at LMS.

B. Committee Reports

- Budget Committee

The Budget Committee will not meet again until November 14, 2013.

- LSB Planning and Building Advisory Committee

Mrs. D'Alleva reported that the October 29 meeting of the Committee was rescheduled.

III. NEW BUSINESS

A. Special Services Position Request

Dr. Cochrane presented a request from the Department of Special Services for an additional paraprofessional at CHS, which is student specific and required by IEP. He noted that this role will be crucial in collecting data, supporting and redirecting the student throughout the day. The position would be 6 hours per day to best meet the needs at this time.

Mr. Miller made a motion to approve the request for an additional paraprofessional at CHS. Mrs. D'Alleva seconded. The motion carried 4-0-0.

B. FY15 Superintendent's Recommended Budget Presentation

Dr. Cochrane presented the FY15 Superintendent's Recommended budget to the Board. He highlighted reductions for the Board.

Dr. Cochrane noted that strategic drivers to the budget included:

- Math curriculum and instruction; math resources; development of Grade 7 "double up" math;
- Technology: increasing capability (students, teachers, administrative) while lowering annual cost of ownership; develop BYOD policy, infrastructure and support for 1:1 computing; portable teacher technology; student information system; GMS computer lab and technology integration capability; additional technology support for double up math at LMS.
- Facilities/Safety: moving maintenance program from reactive to proactive/preventative; implementation of security measures.
- Monitor: Special Education
- Performance Assessments.

Dr. Cochrane commented that the total budget request, without salaries/benefits, reflects an increase of \$130,235 in the general fund and a \$3,774 decrease in the food service fund.

Mr. Markiewicz indicated that inclusive of salaries/benefits, an increase of \$576,686 is reflected in the general fund and a decrease of \$5,174 in the food service fund, which is related to the salary line. He reported that the guaranteed

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maximum rate increase for health insurance is 8.5%. New and expanded positions totaled \$133,219 and are positions that are required by IEP's. Mr. Markiewicz included an overview of the General Fund highlights by object code as well.

Referring to the new LMS special education teacher position, Mr. Miller asked what will happen to the teacher at GMS once the student moves from GMS to LMS. Dr. Cochrane indicated that there is still a need for the teacher at GMS. He indicated that more resources are needed to keep students in-district.

Mr. Miller asked if the recommended budget, excluding food service and grants, reflects an increase or decrease over FY14. Dr. Cochrane indicated he will provide that number to the Board via email. He explained that due to technical difficulties with Internet Explorer 10 updates and operating system incompatibility, budget data compilation was delayed.

Dr. Cochrane reviewed increases and decreases in function accounts with the Board. He mentioned that there were two projects that were originally budgeted for GMS: the circular driveway and the student drop off area. He noted that because the student drop off area is the priority as it presents a safety hazard in the winter when snow and ice build up on the sidewalk. He indicated that the improvement (presented as a pictorial to the Board) would allow students to step onto a sidewalk so there is safety when they are dropped off to school in the morning.

Dr. Cochrane commented that salaries are increasing in special services as we are retaining more student in-district and require more resources for those students. He expressed concern regarding the continued increase in the number of paraprofessionals, but noted that it is an effective system of integrating more students into the district.

Mr. Markiewicz asked Board members about the format for submitting suggested changes to the budget. Board members agreed to keep the practice as it has been done in the past.

Mr. Barka asked about the process of arriving at 1:1 computing as stated in the strategic goals.

Dr. Cochrane explained that 1:1 computing is putting a computer into the hands of every student. He explained that the vision is to utilize a Bring Your Own Device policy in the district. He indicated that, strategically, we have to get back to the point where teachers can connect with students and/or parents through a student information system. Dr. Cochrane commented that we need portable technology for teachers, a system for integration, and develop curriculum and instruction that uses those resources. He noted that with BYOD, schools do not have to provide as many computer labs because students have their own technology. He indicated that this vision can be realized in 3-5 years. Dr. Cochrane commented that he will be working the Director of IT to put together a team to research student information systems. He noted that we can fund a student information system with eRate funds. He indicated that building administrators and other pertinent staff will be involved in making recommendations about the student information systems and their attributes.

Mr. Barka asked for graphs for ratios of students to Special Education teachers. Dr. Cochrane indicated they will be provided by school and grade.

Mr. Miller asked how many years a teacher mentor is provided. Dr. Cochrane believes it is one year, but offered to get verification.

C. Non-LEA and Administrators

Mr. Markiewicz provided information regarding the status of non-LEA staff and administrators' salary schedules and ranges. He indicated that there are 93 total positions with 25 at the top of the scale with no scheduled increase. 68 positions are eligible for schedule increase per their range or salary schedule. Mr. Markiewicz noted that total salaries for all 93 positions is \$1,795,200. He indicated if a 1% increase were approved by the Board, the total increase would be \$17,952. He asked the Board for direction regarding budgeting for any increase in non-LEA and Administrator salaries.

Mr. Barka asked Board members to review the information. He indicated that the topic be placed on the agenda for November 6 for a Board decision.

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Mr. Miller requested costing a modified step for non-LEA employees.

IV. OLD OR UNFINISHED BUSINESS

There was no old or unfinished business.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Mr. Guerrette commended Dr. Cochrane for proposing the removal of NHSBA dues from the budget. He commented on “flip learning” and indicated that it was effective many years ago as the students were sent home with the next day’s lesson and the teacher would instruct students on how to work out the problems the next day in class.

Mr. Guerrette asked if the paraprofessional for the freshmen student transitioning from the middle school to CHS is required by IEP. Dr. Cochrane confirmed that is the case.

Mr. Guerrette commented on the cost of health insurance. He indicated that the costs increase because of the expensive plans that are offered. He commented that as a taxpayer he expects health plans offered in the district would be comparable to the private sector, which includes out of pocket expenses. He noted employees can take advantage of the HSA to save for their deductible or out of pocket expenses.

Mr. Guerrette commented that mentoring should be part of a teacher’s job description and done without additional pay. Mr. Guerrette believes that any salary increases for non-LEA employees should be placed on the warrant.

Robin Corbeil, 4 Nesmith Court, commented that there is a lot of discussion regarding positions that are required by IEP’s. She asked Board members not to forget about the obligations for regular education students and those that are gifted. She asked Board members to consider these students when making budget reductions.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

9:15 p.m.

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered into non-public session at 7:35 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D’Alleva, yes; Mr. Miller, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller, the Board returned to public session at 7:59 p.m. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D’Alleva, yes; Mr. Miller, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. Miller made a motion to adjourn at 8:00 p.m. Mr. Bourque seconded. The motion carried 4-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the Superintendent

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052**

**Approved Minutes for November 6, 2013
(approved as written 11-12-13)**

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Mrs. Tracy Micali, Director of Human Resources
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION 6:30 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 6:30 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from the October 30, 2013 non-public session:

Mr. Miller made a motion to approve the non-public minutes of October 23, 2013 as written. Mr. Bourque seconded. The motion carried 4-0-0.

E. Presentations & Recognitions

There were no presentations or recognitions

F. Correspondence

There was no correspondence.

G. Approval of Draft Minutes:

- Public Session October 30, 2013

Mr. Miller made a motion to approve the public minutes of October 30, 2013 as amended. Mrs. D'Alleva seconded. The motion carried 4-0-1, with Mr. York abstaining.

H. Community Forum

There was no public input.

I. Superintendent's Comments

Dr. Cochrane thanked Jill Deleault, CHS Music teacher, for an invitation for an event at the Presbyterian Church in Bedford on Sunday. He indicated that some members of the CHS Concert Choir performed with the Presbyterian Church choir and were able to work with the guest director, Dr. Renee Kausen, who is a nationally and internationally known composer. He commented that it was an exceptional experience. Dr. Cochrane commented that this type of experience reminds us how important co-curricular and extra-curricular experiences can be, as well as how good our coaches, teachers and people involved in these activities are central to finding those opportunities and allowing our students to participate. He noted that we are fortunate for the quality people we have in our district.

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II. REPORTS

A. School Board Comments

There were no school board comments.

B. Committee Reports

There were no committee reports.

III. NEW BUSINESS

A. Articulation Agreement

Dr. Cochrane reviewed an articulation agreement with SNHU with the Board. He noted it is a fairly standard agreement and is seeking permission for CHS to enter into an articulation agreement with SNHU.

Board members were in agreement to allow CHS to enter into the agreement with SNHU.

B. Snow Removal Bid Award

Mr. Markiewicz presented a report outlining all bids received for snow plowing all three schools in the district for 2013-2014. He reported there were four qualified bidders. The Buildings and Grounds Coordinator reviewed all bids and provided a recommendation. Mr. Markiewicz announced that the Snow Plowing bid was awarded to Nowak Landscaping Construction for a bid of \$33,499.

Mr. Miller asked why the district is paying for repair of damages caused by the company we hire to plow. Dr. Cochrane commented that Mr. Bennett has the same concern. He noted that it has been past practice.

Mr. Miller commented the vendor we hire should be made responsible for repairing any damages they cause. Mr. Markiewicz indicated that he and Mr. Bennett will be meeting with the contractor to discuss expectations and responsibilities regarding damages that occur.

C. Student Transportation

Mr. Markiewicz provided to the Board student head counts for all buses in the district. He noted that there is low ridership at CHS and he asked First Student to provide a count in both April and May. He indicated that once completed, any transportation modifications will be made. Mr. Markiewicz reported that all requests for transportation changes and/or modification have been satisfactorily resolved.

Dr. Cochrane reminded parents that there are two bus passes in the back of the student handbook that will allow children to ride to and from school in inclement weather.

D. School Board Suggested FY15 Budget Changes

Board members reviewed suggested changes for the FY15 budget. Mr. Markiewicz reported:

- The FY15 General Fund budget total is \$20,070,943; a difference of \$108,061 over FY2014;
- Salaries and Benefits is increasing \$478,707, which includes four additional paraprofessionals, health insurance increase of 8.5%, a \$23,000 increase in long term substitutes, a Title I position (\$31,512), and an additional special education teacher (\$62,900);
- Food Service budget reflects a \$3,774 decrease;
- Grants decrease of \$249,099;
- GMS: increase of \$77,418 (new computer lab, thin clients, repair and maintenance);
- LMS: 26% decrease;
- CHS: \$335,000 reduction in handicapped tuition.

Board members presented and discussed their suggested changes to the FY15 budget. The following decisions were made by the Board:

Mr. Miller made a motion to reduce a 2nd grade teacher, which is a reduction of approximately \$86,973.53 from all associated salary and benefit accounts. Mr. York seconded.

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Mr. Miller explained that incoming class size does not support the number of grade two teachers at GMS.

The motion carried 3-2-0, with Mr. York and Mr. Barka opposing.

Mr. Barka made a motion to add a part time computer lab teacher at GMS for an estimated salary of \$23,765.31. Mr. York seconded.

Mr. Barka commented that there is a need for a technology teacher at GMS. He indicated that computer skills should be taught in the lower grades.

Mr. Miller commented that it is not evident that there is a problem at that level. He noted that we do have a baseline to measure for progress or success.

Mr. York agreed that technology needs to be taught in the lower grades.

Mrs. D'Alleva was concerned that a new position is being created and noted that the decision to add a new position should be left to the voters.

Dr. Cochrane indicated that all three schools will participate in the Smarter Balance Assessments. He noted that keyboarding is not taught to students in the lower grades and will become a life skill for children.

The motion carried 3-2-0, with Mr. Miller and Mrs. D'Alleva opposing.

Mr. Miller made a motion to reduce a 3rd grade teacher from account 1011110000-110, which is a reduction of approximately \$50,000. Mrs. D'Alleva seconded.

Mr. Miller explained that enrollments was the driving factor for the reduction.

The motion failed 0-5-0.

Mrs. D'Alleva made a motion to reduce Account 1011110000-610, GMS Regular Education Supplies, by \$2,487.24 (student agendas). The motion failed for lack of a second.

Mr. Barka made a motion to add \$1,882 to Account 1011110000-737, GMS Regular Education Furniture Replacement, for 15 desks/chairs. Mr. York seconded. The motion carried 4-1-0, with Mrs. D'Alleva opposing.

Mrs. D'Alleva made a motion to reduce Account 1021110000-610, LMS Regular Education Supplies, by \$2,915 (student agendas). The motion failed for lack of a second.

Mr. Miller made a motion to reduce Account 1031110011-610, CHS Regular Education Supplies, by \$500 (Batteries). Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Miller made a motion to add \$2,000 for Elipsoidal lights with the recommendation the line item is moved to 1031262000-734, CHS Building Services. Mr. Bourque seconded. The motion carried 4-1-0, with Mrs. D'Alleva opposing.

Mr. Miller made a motion to level fund co-curricular stipends at FY14 levels. Mr. York seconded. The motion carried 5-0-0.

Mr. Bourque made a motion to reduce Account 1031141000-890, CHS Co-Curricular Miscellaneous, by \$980 (t-shirts). Mr. Miller seconded. The motion carried 4-1-0, with Mr. York opposing.

Mr. Miller made a motion to reduce Account 1031142000-110, CHS Athletics, by \$2,152 (Freshman Basketball coach). Mrs. D'Alleva seconded. The motion carried 5-0-0.

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Mr. Miller made a motion to reduce Account 1031142000-534, CHS Athletic Postage, by \$250. Mrs. D'Alleva seconded. The motion carried 5-0-0.

Mrs. D'Alleva made a motion to reduce Account 1031142000-610, CHS Athletics Supplies, by \$3,000. Mr. Miller seconded. The motion carried 4-1-0, with Mr. York opposing.

Mr. Miller made a motion to restore Account 1031142000-610, CHS Athletics Supplies, by \$3,000. Mr. York seconded. The motion carried 4-1-0, with Mrs. D'Alleva opposing.

Mr. Bourque made a motion to reduce Account 1011149000-610, GMS Other Student Services Supplies, by \$400 (Scarecrow supplies). Mr. York seconded. The motion carried 3-2-0, with Mr. York and Mr. Barka opposing.

Mr. Miller made a motion to reduce Account 1000212000-650, DW Guidance Services, by \$3,635. Mrs. D'Alleva seconded. The motion carried 5-0-0.

Mrs. D'Alleva made a motion to reduce Account 1031212000-890, CHS Guidance Services, by \$500. Mr. Miller seconded. The motion carried 5-0-0.

Mr. Miller made a motion to reduce Account 1000221300-110, DW Instructional Staff Training, by \$16,000. Mrs. D'Alleva seconded.

Mr. Barka amended the motion to reduce Account 1000221300-110, DW Instructional Staff Training, by \$10,500. Mr. Miller seconded pending implementation and monitoring of the teacher mentor program. The motion carried 5-0-0.

Mr. Miller made a motion to reduce Account 1000221300-270, DW Instructional Staff Training, by \$5,000 (Non-LEA Course/Tuition reimbursement). Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Miller made a motion to add \$1,000 to Account 1031222200-737, CHS Library Services Furniture Replacement. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Miller made a motion to reduce Account 1011222300-430, GMS Audio Visual Services Repairs/Maintenance, by \$1,000. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Miller made a motion to reduce Account 1011222300-738, GMS Audio Visual Services Equipment Replacement, by \$300.00. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Miller made a motion to reduce Account 1031222300-430, CHS Audio Visual Services Repairs/Maintenance, by \$500.00. Mrs. D'Alleva seconded. The motion carried 5-0-0.

Mr. Miller made a motion to reduce Account 1031222300-610, CHS Audio Visual Services Supplies, by \$293.00. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Barka made a motion to reduce Account 1011222500-734, GMS Computer Instruction Equipment Additional, by \$1,600 (Smart Technologies Learner Response Units). Mrs. D'Alleva seconded. The motion carried 4-1-0, with Mr. York opposing.

Mr. Barka made a motion to reduce Account 1021222500-440, LMS computer Instruction Rent/Lease Equipment, by \$10,611. Mr. Miller seconded. The motion carried 5-0-0.

Mr. Barka made a motion to reduce Account 1021222500-738, LMS computer Instruction Equipment Replacement, by \$2,600. Mr. Miller seconded with the expectation that LMS can acquire the mobile cart from GMS. The motion carried 5-0-0.

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Mr. Bourque made a motion to reduce Account 1011241000-890, GMS School Administration Miscellaneous, by \$500. Mrs. D'Alleva seconded. The motion failed 0-5-0.

Mrs. D'Alleva made a motion to reduce Account 1031241000-550, CHS Other Support Services, by \$4,500. The motion failed for lack of a second.

Mrs. D'Alleva made a motion to reduce Account 1031262000-430, CHS Building Services Repair/Maintenance, by \$7,989.54. Mr. Barka seconded. The motion failed 1-4-0, with Mrs. D'Alleva supporting.

Mr. Miller made a motion to reduce Account 1031262000-622, CHS Utilities-Electric, by \$8,000. Mr. Barka seconded. The motion carried 5-0-0.

Mr. Miller made a motion to reduce Account 1031263000-430, CHS Grounds Repair/Maintenance, by \$7,500 (speed bumps). Mr. Barka seconded. The motion carried 5-0-0.

Mr. Miller made a motion to reduce Account 1031263000-430, CHS Grounds Repair/Maintenance, by \$2,000. Mrs. D'Alleva seconded.

Mr. Miller commented that damage from plowing should be reduced from the vendor's contract.

The motion carried 5-0-0.

Mr. Bourque made a motion to reduce Account 1031264000-430, CHS Non-Instructional Equipment Repair/Maintenance, by \$1,000. Mr. Miller seconded. The motion carried 5-0-0.

Mr. Barka made a motion to reduce Account 1011420000-330, GMS Site Improvements Professional Services, by \$19,999. Mrs. D'Alleva seconded. The motion carried 4-1-0, with Mr. Bourque opposing.

Board members suggested input from Mr. Pinciario regarding the GMS walkway repair or suggestions for an alternate solution that ensures students are safe when they are exiting their parents' cars upon arrival.

Mr. York commented that Special Education tuition costs have decreased and asked why Special Education transportation has increased.

Dr. Cochrane indicated that we have lost the ability to use the in-district bus for transporting students to RSEC. Mr. Miller commented that we would like to budget for what we expect it will cost, but it is unknown.

Mr. York made a motion to reduce Account 1000272200-519, Special Education Transportation, by \$36,127. Mr. Miller seconded. The motion carried 4-1-0, with Mr. Miller opposing.

Mr. Miller made a motion to reduce Account 1000141000-110, DW Co-curricular Salaries, by \$37,000. Mrs. D'Alleva seconded. The motion carried 5-0-0.

Dr. Cochrane indicated that he added \$10,000 into the budget for the GMS swale. He noted that it has not been maintained and water is not running off. He commented that he has received reports that the build up of water is causing severe humidity issues in the building during the months of May – October.

E. Date for Deliberative Session

Dr. Cochrane discussed with the Board setting a date for Deliberative Session for February 2014. Board members decided to set the date for Deliberative Session as February 5, 2014 with an alternate date of February 8, 2014.

IV. OLD OR UNFINISHED BUSINESS

A. Non-LEA and Administrators

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Mr. York asked about creating a pool for performance reviews for administrators. He noted that we have to begin a process whereby the Board allocates the amount of an increase in salary to administrators. He suggested a similar process for non-LEA employees.

Mr. Markiewicz indicated that a program of that type would take time to implement as measurable goals would have to be developed in order to properly measure their performance.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Jason Guerrette, 11 Perry Court, mentioned that he has advocated for the maintenance for the swales for several years. He noted that his cost for the cleaning of catch basins is \$37 each and his cost for power sweeping is \$1400 for 100 acres. Mr. Guerrette commented that the \$20,000 quote for the GMS walkway is not as expensive as one may think. He agreed it is a safety risk.

Mr. Guerrette commented that it has come to his attention that students at CHS can listen to music over their headsets in class. He expressed non-support for this practice. Referring to new positions, he referred to the warrant article relative to new programs and positions. He commented about student stress before testing. He indicated that the Smarter Balance is a tool for teachers as well as an assessment for students. He commented that children are stressed sitting in front of a computer for four hours.

Mr. Guerrette commented on student agendas. He noted that there is no law that mandates districts must supply hard copies of student agendas. He expressed interest in a warrant article to supply tablets to students. Mr. Guerrette commented that the expectation of mentoring is management and leadership. He noted that we mentor people as a matter of routine.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

9:15 p.m.

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered into non-public session at 10:56 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mrs. D'Alleva seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. York, the Board returned to public session at 11:46 p.m. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. York made a motion to adjourn at 11:47 p.m. Mr. Miller seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board

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LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052

Approved Minutes for November 12, 2013
(approved as written 12-4-13)

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Attorney Gordon Graham, District Legal Counsel
Frank Markiewicz, Business Administrator
Mrs. Tracy Micali, Director of Human Resources
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

A. CLOSED SESSION: RSA 91-A:2I (b) 5:30 p.m.
[Minutes of Non-Public Session are written under separate cover.]

I. For the purpose of this chapter, a "meeting" means the convening of a quorum of the membership of a public body, as defined in RSA 91-A:1-a, VI, or the majority of the members of such public body if the rules of that body define "quorum" as more than a majority of its members, whether in person, by means of telephone or electronic communication, or in any other manner such that all participating members are able to communicate with each other contemporaneously, subject to the provisions set forth in RSA 91-A:2, III, for the purpose of discussing or acting upon a matter or matters over which the public body has supervision, control, jurisdiction, or advisory power. A chance, social, or other encounter not convened for the purpose of discussing or acting upon such matters shall not constitute a meeting if no decisions are made regarding such matters. "Meeting" shall also not include: (b) Consultation with legal counsel.

I. PUBLIC SESSION 6:30 p.m.
A. Call to Order

Mr. Barka called the meeting to order at 7:35 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda
There were no revisions to the agenda.

D. Summary of Non-Public Actions from the November 6, 2013 non-public session:
Mr. Miller made a motion to approve the non-public minutes of October 30, 2013 as amended. Mrs. D'Alleva seconded. The motion carried 4-0-1, with Mr. York abstaining.

E. Presentations & Recognitions
There were no presentations or recognitions.

Dr. Cochrane announced that he is extending an invitation to receive recognition to the three CHS students who were recognized as National Merit Scholars for the December 4 School Board meeting. He mentioned that he plans to invite the CHS Concert Choir to a future meeting for recognition as well.

F. Correspondence
There was no correspondence.

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G. Approval of Draft Minutes:

- Public Session November 6, 2013

Mr. York made a motion to approve the public minutes of November 6, 2013 as written. Mr. Miller seconded. The motion carried 5-0-0.

H. Community Forum

There was no public input.

I. Superintendent's Comments

Dr. Cochrane thanked GMS staff for their professionalism this morning during the power failure at the school. He noted that one of the three lines coming into GMS was affected, which caused power failure in part of the building and affected the boilers. He noted that it was too late to cancel school; however, PSNH arrived quickly and restored power to the building. Dr. Cochrane indicated that teachers and staff were welcoming and friendly with students. He mentioned that there may be a day or two delay in sending home report cards due to the power failure.

II. REPORTS

A. School Board Comments

There were no comments.

B. Committee Reports

Mr. York reported that the Budget Committee did not meet; however, communicated that they would like hard copies of the budget this year. He noted they requested the latest enrollment report, the budget summary and School Board recommendations.

C. Enrollment Report October 2013

Dr. Cochrane presented the October 2013 enrollment report. He reported there are 1,437 students enrolled in the district.

D. Technology Report October 2013

Dr. Cochrane presented the October 2013 Technology report to the Board.

III. NEW BUSINESS

A. Impact Fee Request

- 1) Impact Fee Request Letter
- 2) Impact Fee Analysis, Litchfield Planning Board

Dr. Cochrane presented an impact fee request to use \$210,000 of school impact fees to increase and improve access controls, video surveillance, communications and security throughout the Litchfield School District. He noted that the letter is not vendor specific.

Mr. York was concerned that the Board of Selectmen will want more detail included in the request.

Mr. Miller asked if we have legal opinion from the district's legal counsel regarding the new interpretation from the town's new legal counsel.

Mrs. D'Alleva was concerned that the use of impact fees based on the interpretation by the town's legal counsel will create fallout for the School Board. Mr. York disagreed. He noted that the Board presents the request with justification and the Board of Selectmen is responsible for approving or denying the request.

Dr. Cochrane indicated that he compared the stated purpose of the request with the 2009-2014 Capital Improvement Plan and had some discussion with Attorney Graham. He noted that many specifics are in the Capital Improvement Plan. Dr. Cochrane commented that we are deficient in security and vision in the district.

Mrs. D'Alleva requested legal opinion from the district's legal counsel.

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Dr. Cochrane indicated that the town attorney's interpretation of the impact fees law is that the use of impact fees can be driven by growth and increased demand of services or by greater demand of services regardless of growth in population. He commented that we need to do our diligence before presenting the request to the Board of Selectmen.

Mr. York commented that the town attorney has expertise in this area, but it is not the case with the district's legal counsel. He noted that the town should have the citizen's best interest at heart and that the town is comfortable with the direction they were given by their attorneys. He noted that the district's legal opinion should not stop the Board from moving forward to the Board of Selectmen.

Dr. Cochrane noted that he will work on additional detail for the request with the Director of Technology. He indicated that the Board can revisit the revised request at their next meeting on December 4.

Mr. York commented that the Board should go forward with the revised request at the next November meeting of the Board of Selectmen.

B. Job Description:

1) Tech Integration Specialist Teacher

Dr. Cochrane presented a new job description to the Board. He indicated that this position will add an extra class for technology integration at the elementary school.

Mr. York commented that technology envisioned for classrooms (i.e. tablets) should be placed on the warrant.

Board members requested more detail regarding goals and expectations be included in the job description. Some Board members suggested presenting the job description to the Budget Committee when GMS presents their budget.

Mr. Miller expressed disbelief that the person reduced (2nd grade teacher) is moving into this position. He commented that we are voting on a new job description. He indicated that there is currently no demonstrated need for this position. Mr. Miller commented that the district has to demonstrate a defined problem with resolution before going to the Budget Committee. Mr. Miller indicated that we may have data once we pilot the Smarter Balance Assessments. He commented that data may reflect a demonstrated need for the position.

IV. OLD OR UNFINISHED BUSINESS

A. FY15 School Board Recommended Budget

1) FY15 School Board Budget Recommendations

Board members reviewed responses to questions regarding budget recommendations from November 6, 2013.

Mr. Markiewicz noted that he presented information at the previous meeting regarding non-LEA salaries. He asked the Board for direction in this budgeting matter. He noted that a 1% adjustment to the salary schedules for non-LEA staff (excluding administrators) would cost \$17,952. He indicated that a 3% step for the same group would cost \$35,116. He noted that many non-LEA staff in this group are at the top of their schedule or range and will not receive a step.

Mr. Miller made a motion to approve the inclusion of a step increase for non-LEA staff (excluding administrators) in the FY15 School Board Recommended Budget at a cost of \$35,116. Mr. Barka seconded. The motion carried 3-1-1, with Mrs. D'Alleva opposing and Mr. Miller abstaining.

Mr. Miller made a motion to approve the inclusion of a 1% adjustment to the ranges for Administrators in the FY15 School Board Recommended Budget, at a cost of \$11,284, which shall be distributed according the Superintendent's discretion. Mr. York seconded.

Mr. Barka amended the motion to approve the inclusion of a 2% adjustment to the ranges for Administrators in the FY15 School Board Recommended Budget. Mr. York seconded. The amended motion failed 2-3-0.

The original motion carried 4-1-0, with Mrs. D'Alleva opposing.

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Dr. Cochrane presented a proposal to resolve the issue of safety in the GMS student drop off area that he presented to the Board at the previous meeting. He noted that he and Mr. Markiewicz met with Jack Pinciaro, Kevin Lynch, Scott Thompson and Dave Ross at GMS to discuss the issue. The proposal for resolution is to use jersey barriers to create a lane that will enable cars to drop off students in a safer manner and exit the lot without obstruction.

Dr. Cochrane requested Board members add \$2,499 back into the FY15 budget for the purchase of jersey barriers, striping/markings the pavement, and the purchase of signage.

Mr. Miller made a motion to add \$3,000 to Account 1011420000-330, GMS Site Improvement, for the solution to the GMS drop off area in the parking lot. Mr. Bourque seconded. The motion carried 5-0-0.

Dr. Cochrane presented answers to questions on items that the Board placed on hold. The Board was satisfied with the additional information provided.

Mr. Miller made a motion to approve the FY15 School Board Recommended Budget general fund bottom line of \$19,895,584. Mr. Barka seconded. The motion carried 5-0-0.

Mr. Miller made a motion to approve the FY15 School Board Recommended Food Service Budget bottom line of \$594,702. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Miller made a motion to approve the FY15 School Board Recommended Grants Budget bottom line of \$340,090. Mr. Bourque seconded. The motion carried 5-0-0.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Jason Guerrette, 11 Perry Court, commented on the use of impact fees under the law. He noted that Eric Newman, attorney, and the NRPC interpretations of the law indicated their use is intended to draw direct connection for capital improvements from new development. He asked Board members to reconsider the use of impact fees for items not intended under the law. He commented that he would like to see true, transparent and moral decisions made by the Board. He asked the Board not to violate the trust of the community by trying to take something that may be legal, but is not right.

Referring back to Impact Fees Agenda Item

Dr. Cochrane asked Mr. Miller (who left the meeting briefly during the previous impact fees discussion) if he believes the district should have a legal opinion by their own legal counsel regarding the use of impact fees based on the interpretation of the law by the town's attorney. Mr. Miller agreed that the Board should ask for their own legal opinion regarding the use of impact fees as has been done in the past.

VII. NON-PUBLIC MINUTES

A. Approval of Draft Non-Public Minutes:

- November 6, 2013

Mr. Miller made a motion to approve the non-public minutes of November 6, 2013 as written. Mr. Bourque seconded. The motion carried 5-0-0.

IX. ADJOURN

Mr. Miller made a motion to adjourn at 8:56 p.m. Mr. Bourque seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board

LITCHFIELD SCHOOL DISTRICT

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27**
Litchfield, New Hampshire 03052

Approved Minutes for December 4, 2013
(approved as written 12-11-13)

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Dr. Julie Heon, Director of Curriculum and Instruction
Scott Thompson, Principal, GMS
Tom Lecklider, Principal, LMS
Laura Rothhaus, Principal, CHS
Leah Stagnone, Student Representative
Ryan Perigny, Student Representative
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION **6:30 p.m.**

A. Call to Order

Mr. Barka called the meeting to order at 6:30 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

D. Summary of Non-Public Actions from the November 12, 2013 non-public session:
No non-public session was held for November 12, 2013.

E. Presentations & Recognitions

- Student Recognitions
 - National Merit Scholar Commended Students 2013
 - Aaron Bonneau
 - Adorjan Fekete
 - Leah Stagnone

The School Board presented the aforementioned high school students with certificates of recognition for being named National Merit Scholar Commended Students for 2013.

F. Correspondence

Mr. Barka announced he received an email invitation to the School Board and SAU from Anne Marie Banfield of Cornerstone Policy Research for a webinar on Common Core State Standards tomorrow night.

G. Approval of Draft Minutes:

- Public Session November 12, 2013

Mr. York made a motion to approve the public minutes of November 12, 2013 as written. Mr. Bourque seconded. The motion carried 5-0-0.

H. Community Forum

There was no public input.

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I. Superintendent's Comments

Dr. Cochrane asked to move Superintendent's Comments to the end of the Reports agenda item.

II. REPORTS

A. School Board Comments

Mr. Miller commended the Drama and Music departments for the Guys and Dolls production. He commented that it was an excellent production.

Mr. York mentioned that he attended the production as well and it was "standing room only" on Friday night.

B. Committee Reports

• Budget Committee

Mr. York reported that the Budget Committee met on November 21 and December 4 and began their review of district budgets. He commented that the Budget Committee reviewed the LMS and CHS budgets and noted some issues in the CHS budget (i.e. duplicate postings; some items not in the correct place). Mr. York requested a new CHS budget once corrections are completed so the School Board can review that budget again. He indicated that there is concern regarding how self-funded revenues are received and expended through the budget process. He requested that Self-Funded and Student Activity Funds be placed on the agenda to discuss how that money is being expended. Mr. York commented that there is no tracking mechanism for self-funded programs.

Dr. Cochrane indicated there are two unrelated issues: 1) how well do we keep oversight of student activity fees/funds; 2) how we report self-funded revenue and expenditures within the budget and default budget. He noted that Mr. Spencer asked good question about excess money raised for a self-funded program.

Mr. York commented that since expenditures are not going through our traditional budget, there may be an inflated under spend at end of the year.

Mr. Miller commented that we have to be careful to draw the line between self-funded programs and student activities. He noted that the money for some sports that are deemed self-funded comes into the budget, but the money comes out of the regular athletics budget.

Mr. York commented that is not only occurring in the athletics budget, but at all the schools. He indicated that money is being allocated and not tracked against the actual expenditure. He noted that the Board has requested better tracking for the last few years.

Dr. Cochrane mentioned that he and Mr. Markiewicz would like to discuss with the Board different methodology after this budget process is over. He suggested having those discussions across a few meetings prior to beginning the budget process next year.

Mr. York reported that Budget Committee members had questions and concerns regarding supply lines. He reported that the town informed the Budget Committee there will be a 7% - 14% increase in water rates.

Referring to transportation, Dr. Cochrane indicated that the contract with First Student contains a clause that allows the approach of a one or two year extension. He noted we were anticipating a 2% increase. Dr. Cochrane announced that Nashua has decided to request proposals for transportation bids for the first time in 12 years. He explained that Litchfield receives better pricing because we are bundled with Nashua and Hudson. First Student will not be able to provide a quote for Litchfield until bids close for Nashua. Dr. Cochrane commented that if we asked for a quote at this time the increase would be 10%-25%. He noted that if Nashua contracts with another vendor we will be in touch with the new vendor. Dr. Cochrane indicated that high school ridership is low and there is a possibility of reducing a bus next year. He commented that he and Mr. Markiewicz will provide a recommendation for budgeting an increase in transportation for FY15 at the next Board meeting.

Mr. Miller commented that he would be more comfortable adding money to the budget and reducing it at Deliberative Session. Mr. York indicated that we need to provide a new number to the Budget Committee.

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- LEA Negotiations

Mr. Barka reported that the Negotiations Committee met last week. He noted that at this time the LEA and School Board Negotiations Committees are at impasse and will be going to mediation.

C. Curriculum Report

Dr. Heon presented the December 2013 Curriculum report to the Board. She reported that the ICT met in October. She indicated that ICT teachers will incorporate portfolio submissions into their class requirements. She noted that future phases will include capturing student work for portfolios.

She reported that at the December 11 meeting, PERC will be vetting courses and programs. Additional training with math texts is planned for December 11 with a trainer from Pearson. She indicated that teachers are looking to supplement math with other resources, but it takes much time away from creating better lessons, analysis, grading and formative assessments.

Mr. York asked if our curriculum is being elevated above Common Core. He commented that we have adapted to the process of CCSS relative to assessments. He asked if our curriculum will continue to be more rigorous than CCSS.

Dr. Heon indicated that it has not attained the standards of Common Core as yet. He recommended moving toward the standards of Common Core in stages. Dr. Heon commented that teachers believe the draft Math Curriculum Framework the Board will be reviewing is more rigorous than what we expected of our students. She noted that this was a two year project and the framework had to be written in a way that elevates expectations that are reasonable. Dr. Heon indicated that there are states like Massachusetts who already have very high standards in place resulting in high stakes assessment. She noted we do not have that in New Hampshire. Dr. Heon commented that we need to be realistic as a public institution and assess what are reasonable expectations at any given time.

Mrs. D'Alleva mentioned that the Committee has had discussions on increasing rigor and evaluating why a teacher may want a certain book. Dr. Heon explained the teachers created selected text lists last year and had plenty of texts to work with in the interim while PERC is evaluating materials.

Dr. Heon presented PERC Recommendations:

- ICT Rubric

Dr. Heon noted this will be useful for the new part time technology teacher the Board added into the budget.

- Curriculum Resource Tool Revised

Dr. Heon noted that the resource tool from 2010 was amended. She indicated changes are primarily in the scale and questions were added at the end for narrative explanation. Additionally, a question about funding was added for information purposes.

Mr. Miller indicated there are 10 questions in the policy referenced and there are 16 questions on the evaluation tool. He wanted to know why more questions were being asked than are in the policy/procedures.

Dr. Heon explained that some questions were not previously applicable. She commented that knowing the range of materials and videos will require different kinds of questions. She indicated that the Committee can compare the tool with the policy, but would like to use this even if in draft form.

Mr. Miller commented that some things may be over represented and some are not represented. He indicated if that is the correct set of questions, the policy may have to be amended.

Mr. York commented that there is room for flexibility and the policy is not etched in stone. Mr. Miller commented he would like to see them aligned, whether it be the evaluation aligned with the policy or the policy aligned with the tool.

Mr. Barka suggested they continue with that is now in place and compare the tool to the policy. Dr. Cochrane commented they can use the tool in the interim and provide an alignment analysis in March.

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- Diary of Anne Frank Evaluation

Dr. Heon indicated that the book was used in grade 8, but to align with rigor expectations was moved to grade 7. She asked for the Board to approve the change in curriculum.

Mrs. D'Alleva made a motion to approve the use of the Diary of Anne Frank in grade 7. Mr. York seconded. The motion carried 5-0-0.

- A Tale of Two Cities Evaluation

Dr. Heon indicated that A Tale of Two Cities will be used in grade 10 World Studies. She asked for the Board to approve the change in curriculum.

Mrs. D'Alleva made a motion to approve the use of A Tale of Two Cities in grade 10 World Studies. Mr. Bourque seconded. The motion carried 5-0-0.

- Fiddlestix Proposal

Dr. Heon reported that the proposal was submitted for use in GMS Physical Education. She indicated that safety was discussed when reviewing the proposal. She commented that Mr. Haarlander spoke to a Primex representative about the components of the program. Dr. Heon noted that from an instructional point of view this is a tool that can be used among many. She indicated that Lacrosse is a popular sport and can be engaging for younger students. She noted that PERC's consideration was not viewing this as a promotion for any organization, but as becoming a very popular activity that increases skills.

Mr. Miller commented that he did not understand why the proposal came to the Board. Dr. Cochrane indicated it is a different resource to meet curriculum goals. Dr. Heon noted that the Board will be asked to accept a donation for the proposal.

Mr. Thompson indicated that the Litchfield Lacrosse Association is donating 30 sticks, 4 scoring nets and 30 soft type balls for the Fiddlestix Program at GMS.

Mr. Miller made a motion to accept the donation of equipment for the Fiddlestix Program at GMS from the Litchfield Lacrosse Association. Mr. York seconded. The motion carried 5-0-0.

- Math Curriculum

Dr. Heon presented the draft K-12 Math Curriculum to the Board. She asked Board members to review the draft curriculum for approval at a future Board meeting.

Mr. York requested the Board vote on the Math Curriculum on December 18.

D. Principals Reports

Mr. Thompson provided his report regarding GMS for the Board. He reported:

- Staff is focusing on how we do assessments and how we become better teachers
- AIMSweb consultant spent time with staff on what AIMSweb is and how to use it
- Performance Assessment Team attended the NH Quality Performance Network workshop at SNHU in November
- GMS has applied to be a test site for the Smarter Balance Assessment
- Some benchmarks were changed on report cards to align with the new curriculum frameworks
- Students have been engaged in traveling and in-house field trips
- Victoria Mango is the new Scarecrow Jamboree advisor
- Scarecrow Jamboree was a success this year
- PTO does many things for the school that are not acknowledged
- There are six teams this year in Destination Imagination
- Litchfield Fire Department held a presentation on fire safety
- Lions Club held vision screening

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- Plymouth State University TIGER program came to make another presentation at GMS, which was used to incorporate some anti-bullying concepts
- Upcoming Events: PTO Holiday Store is upcoming, Holiday Concert, Father/Daughter dance, Monarchs Night, Annual Bingo Night
- Student Council helped in the recent food drive
- Parent drop off walkway solution has been successful
- Veterans Days Assembly was successful and GMS received a letter from the Veterans Association in Manchester to thank students for handmade cards for veterans.

Mr. Thompson indicated that Tools for Schools had been a committee for many years prior to his arrival. He noted that he revisited it and is expecting revised materials. Mr. Thompson would like to establish a Tools for School Committee.

Mr. Lecklider provided his report regarding LMS. He reported:

- The Quality Performance Assessment Team attended network training in Manchester in November
- Reading specialist and math tutors are using AIMSweb as a monitoring tool with their respective interventions
- LMS is involved in an RTI training cohort sponsored by the DOE
- NECAP testing concluded at the end of October; scores will be mailed in February
- Blizzard Bags were sent home in November
- Using Core Six as a foundation for professional development this year
- Library computers have been beneficial for instruction, research and resourcing for students
- LMS received the Blue Ribbon Award in October
- PTO was recognized for their support
- Lady Raiders Volleyball team won the Tri-County Championship
- Annual Veterans Day ceremony and breakfast was successful
- 26 students were recognized at the Student Council breakfast for representing Core Values
- Lego Robotics team received a teamwork award at the Merrimack competition
- Over 600 food items collected for the food drive
- The fall book fair was successful
- 7 students selected to audition for Honors Band
- Upcoming events: Washington DC trip, parent conference, Rock/Paper/Scissors competition, drama performance, 5th grade movie night.

Mrs. Rothhaus provided her report regarding CHS. She reported:

- CHS is doing Quality Performance Assessments
- Faculty is participating in a book study
- Teachers are working on PLC's on late arrival days
- NHIAA presented Life of an Athlete and student athletes participated in a four hour training at the end of November
- CHS is exploring establishing a writing center next fall
- CHS applied to be a pilot for the Smarter Balance Assessment
- Acknowledged Allison Hrobowchuck for creating a presentation on bullying which she presented to the school community
- Guys and Dolls was a successful musical with thanks to Jill Deleault and Phil Martin
- Student Council collected twice the food collected last year for the food drive
- Three students are serving on the NHIAA leadership team
- Thanks to the Grounds Department for their work during Red Ribbon Week
- A drug search was held on November 19 – no findings
- A student athlete signed for Division 1 in softball
- Trebuchet Day was held
- The Athletic Department was acknowledged for their work in coordinating the new scoreboard
- Penguin Plunge is upcoming.

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Mrs. Rothhaus thanked the Budget Committee for hosting her at their meeting last night.

Mrs. Rothhaus provided a post graduate survey to the Board. She also provided Library usage data to the Board. Mrs. Callinan, Director of High School Guidance, commented on the policy that states independent study course is not calculated in the students' GPA. She indicated that should be considered as students approached guidance to take AP Calculus. She reported that she asked all high school statewide how their school handles independent study, if it receives a grade and if the credit counts toward the students' GPA.

Mrs. Callinan provided a survey from alumni who graduated and gave insight into the types of improvements that can be made at CHS. She also provided college enrollment and completion data to the Board.

Dr. Cochrane thanked Mrs. Callinan for spearheading the Naviance (college application and data software) work.

Mr. Miller commented that there are other policies on alternative credit options or interdisciplinary credits with regard to independent study.

Dr. Cochrane indicated that he would like to have a discussion with the School Board about what counts toward the GPA. He commented he would like to discuss how to offer students more extended opportunities and how those experiences would count toward the GPA.

Mr. York commented that CHS should assist on looking at those policies and suggesting revisions. He indicated that the School Board should begin the process of increasing graduation credits. He noted that if guidance and administrators feel their vision is for 28 credits for a diploma, they should be encouraged to bring a proposal to the Board.

E. Student Representatives Comments

Dr. Cochrane presented Leah Stagnone and Ryan Perigny as the newly elected Student Representatives to the Board.

Ms. Stagnone reported the Student Council held Make a Difference Week in November and 3000 items were collected for the food pantry. She indicated that CHS contributed the majority of the items. Ms. Stagnone reported:

- Astronomy Night is being held tonight
- Sports Awards were held in November
- Key Club is holding a toy drive
- The National Honor Society will be having a winter clothing drive.

Mr. Perigny reported:

- A student gave a moving presentation regarding bullying, which began with the freshmen and sophomore classes and expanded to the junior and senior classes
- The Student Council went to a Statewide conference with multiple workshops on leadership
- Upcoming events: Holly Ball, Tree Lighting.

Mrs. Rothhaus announced that Leah Stagnone is a finalist for the US Senate Youth Program. She noted if she wins, she will be one of two students going to Washington DC and will win a \$5,000 scholarship.

F. Technology Presentation

Dr. Cochrane provided a technology presentation via PowerPoint entitled "Leveraging Technology to Support Career and College Readiness for All K-12 Students". The presentation contained a compilation of sample questions for different grade levels from the Smarter Balance Assessment. The assessment requires students to have keyboarding skills, mouse skills and navigation skills among others. The presentation was used as part of the rationale for the GMS part time computer teacher position. Dr. Cochrane indicated that changes schools need to make are higher expectations for student learning, more independent learning, development of digital literacy layered on top of strong traditional literacy and numeracy skills and increased cognitive rigor. He noted that Smarter Balance Assessments are about determining the student's learning level. Dr. Cochrane commented that a

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requirement of the Smarter Balance Assessment adaptive testing will be more fluency with keyboarding and technology as the student will be expected to interface in a variety of ways.

Dr. Cochrane commented that changes need to be made at the elementary level for technology skills. He noted there will be two fewer classes at GMS next year. He indicated that an existing teacher can be asked to teach this, but some may not have the skill and others have large caseloads. Dr. Cochrane commented that a half time position to support this is the only way we improve students' skills in technology. He noted that we need to provide rationale to the Budget Committee to provide a quality education and an investment in education.

Mr. York commented that this position was added to the budget as a new position and that is where the focus should be with the Budget Committee.

Dr. Cochrane reported that feedback from students in grades 3 and 4 that took the Smarter Balance Assessment reflect that the screens were too small and that students did not know how to use the keyboard. Students were frustrated and emotional throughout the testing.

Mr. Miller asked what happens if a district does not have the technology to implement the testing. Dr. Cochrane indicated they have three years to transition.

Mr. Miller commented that mandating the Smarter Balance Assessment is verging on an RSA 28-A issue. Dr. Cochrane indicated that implementation is required by 2015.

Mr. Miller commented that some of the things on the test are not things done in everyday technology. Dr. Heon indicated that there are multiple steps that have nothing to do with the math component.

Mr. Miller commented that it does not matter what kind of curriculum you use as this is the test they will be using in New Hampshire. He noted that he would argue that this does not comply with state law.

Dr. Heon commented that at some point we will need to address digital text.

III. OLD OR UNFINISHED BUSINESS

A. Impact Fee Request

Dr. Cochrane presented a revised request for the use of impact fees to the Board. He indicated based on a conversation between Mr. York and Mr. Brunelle, the Board of Selectmen would like more detail regarding rationale for the request.

Mr. York commented that the Board has to decide if they want to move forward with the request. He noted that the Board of Selectmen are anticipating the request.

Dr. Cochrane commented that either Mr. Markiewicz or he can meet with Mr. Hoch and Mr. Brunelle for direction regarding detail for the request. He noted that they will review the existing request and advise what needs to be provided. Dr. Cochrane commented that it is worth the effort to submit the request.

Mr. York commented that there should be documentation from the security consultant.

Board members asked again for a legal opinion. Dr. Cochrane indicated that the request has been made of the district's legal counsel for an opinion.

IV. NEW BUSINESS

A. Business Administrator's Report – Nov 2013

The November 2013 Business Administrator's report was provided for the Board. Mr. Markiewicz will provide commentary at the December 11 Board meeting.

B. Warrant Article Review and Development

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School Board direction was requested for warrant article development. Mrs. Flynn asked Board members if they would like to see an article to replenish the Building Maintenance Capital Reserve Fund on the warrant.

Board members were in agreement regarding inclusion of the capital reserve article on the warrant.

A draft warrant will be provided at the December 11 meeting.

Dr. Cochrane commented that Mr. Markiewicz has almost completed the Default Budget and will be presenting a draft to the School Board for direction on December 11.

C. NHSBA Enrollment Projections

Dr. Cochrane provided the 2013 NHSBA enrollment projections to the Board, as well as the Litchfield Projected Enrollment.

D. Enrollment – November 2013

Dr. Cochrane presented the November enrollment statistics to the Board. He noted there are 1,442 students in the district.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Jason Guerrette, 11 Perry Court, commented that the default budget be released to the public as soon as possible. Mr. Guerrette disagreed with the request for the use of impact fees, indicating that what is being requested is not the role of impact fees. He noted that those items should be either placed in the budget or on a warrant article.

Mr. Guerrette commented that he heard comments regarding the lack of resources for CCSS. He indicated that those resources exist in Massachusetts as they decided to put a two year moratorium on CCSS. He believes that school boards in NH are not opposing the implementation of CCSS. Mr. Guerrette mentioned that Professor Milgram, an expert on CCSS, is speaking against CCSS. He indicated that, in mathematics, Common Core goes no further than Algebra II.

Mr. Guerrette commented that at a PERC meeting, a parent spoke about the Honors program at CHS. He indicated that the parent stated that students in Honors are not assigned more challenging assignments, but are assigned more of the same materials students in other programs are assigned.

Mr. Guerrette mentioned that he sent an email to Mr. Barka regarding the part time Computer teacher position for GMS. He believes it should be placed on a warrant article and use Dr. Cochrane's presentation as argument to support it. He indicated if it is presented that way, people will approve it.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered into non-public session at 10:23 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. York seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

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VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller, the Board returned to public session at 11:18 p.m. Mrs. D'Alleva seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. York made a motion to adjourn at 11:19 p.m. Mr. Miller seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board

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LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052

Approved Minutes for December 11, 2013
(approved as amended 12-18-13)

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Leah Stagnone, Student Representative
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION **6:30 p.m.**

A. Call to Order

Mr. Barka called the meeting to order at 6:35 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

D. Summary of Non-Public Actions from the December 4, 2013 non-public session:

Mr. Miller made a motion to accept the nomination of Natalia Umpierrez as part time (40%) Spanish teacher at CHS at a salary of \$14,028 for the 2013-2014 year. Mr. York seconded. The motion carried 5-0-0.

E. Presentations & Recognitions

- Student Recognitions
 - CHS Concert Choir

Mr. Barka presented members of the CHS Concert Choir certificates of recognition for their performance with Rene Clausen, guest director for the Bedford Presbyterian Church Choir in November. Members of the choir who could not be in attendance will be provided a certificate of recognition as well.

Matt Woods and Adam Champaign reported that some members and alumni sang with Kenny Rogers at the Capital Center for the Arts in Concord last week.

F. Correspondence

There was no correspondence.

G. Approval of Draft Minutes:

- Public Session December 4, 2013

Mr. York made a motion to approve the public minutes of December 4, 2013 as written. Mr. Bourque seconded. The motion carried 5-0-0.

H. Community Forum

Jason Guerrette, 11 Perry Court, read RSA 40:13, IX which states: (b): *"Default budget" as used in this subdivision means the amount of the same appropriations as contained in the operating budget authorized for the previous year, reduced and increased, as the case may be, by debt service, contracts, and other obligations previously incurred or mandated by law, and reduced by one-time expenditures contained in the operating budget. For the purposes of this paragraph, one-time expenditures shall be appropriations not likely to recur in the succeeding budget, as determined by the governing body, unless the provisions of RSA 40:14-b are adopted, of the local political subdivision.*

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He noted that LGC presented a PowerPoint presentation regarding how the default budget is calculated. He indicated that the lawyers at LGC called it a budget freeze and work on these things all the time. Mr. Guerrette commented that he has found seven different items that do not fit in the definition. He noted that there is no case law because no one has challenged the RSA. Mr. Guerrette indicated that the School Board from two years ago was willing to let the Budget Committee review the default budget to ensure it is accurate. He stated that he plans on challenging the default budget if he does not believe it is accurate.

Marcus Rothacker and Ben Billings, CHS seniors, spoke to the Board regarding the calculation of the GPA. Mr. Billings commented that he had heard from various sources that AP Calculus B,C will count toward students' GPA. Mr. Rothacker commented that AP students are going above and beyond with our education. He noted that the GPA Association believes if the course does not count toward the GPA it is damaging to those who choose to take those courses that go above and beyond.

Mr. Billings explained that the course began as a ELO, but since then the curriculum was approved by the College Board and the syllabus has been approved. He noted that this is a real course and should be counted as such with awarding of credit for the course and GPA credit at the end of the year.

Mr. Rothacker mentioned that GPA is important to some colleges and there are colleges who do not look at GPA, but review the courses taken by high school graduates.

Mr. Billings indicated that he, Mr. Rothacker and Ms. Stagnone are in the top three, with perhaps 1000th's of a point separating them. He commented that if credit is awarded for the AP course, it should be done fairly. He explained this is a recurring problem, as last year GPA's were calculated up to 1000th's of a point. He noted the issue needs to be addressed.

All three students agreed that the solution should be fair to all students.

Mr. Perigny commented that not receiving credit due their GPA is the same as criticizing their work. He was concerned that it is late in the year to be discussing the issue because the opportunity is not available for all students who would have liked to have gone above and beyond. He indicated there may be other students who would like to be informed. Mr. Perigny commented that he spoke to Mrs. Rothhaus regarding a possible solution for the students for this year. He suggested that they receive an Honors credit as they have done enough work to merit at least some sort of credit.

Ms. Stagnone indicated Mr. Perigny's suggestion would level the field and would come down to who gets the highest grade.

Mr. Rothacker clarified that this is not about who gets the highest GPA, but about fairness to students who go above and beyond in their studies.

Mr. Miller commented that the policies are superseded by the handbook, which states only courses given through CHS are eligible for GPA credit. He noted this is a decision for the administration of the high school. The policy gives the principal significant responsibility in this case.

Dr. Cochrane indicated he did not favor procedural changes to GPA calculations.

Mrs. D'Alleva commented that we need to be sure to reassess the situation going forward.

Mr. Miller and Mr. Barka congratulated the students on their accomplishments.

II. REPORTS

- A. School Board Comments
- B. Committee Reports
 - Budget Committee

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Mr. York reported that the Budget Committee made some reductions to the School Board and SAU budgets. He reported that Mr. Cutter was concerned about the travel and conference budget lines being overfunded. He indicated that Mr. Cutter proposed making a \$30,000 global reduction for those lines. Mr. York noted that Mr. Cutter asked for further research regarding these accounts. Mr. York reported that Mr. Cutter sent a summary of those accounts to Budget Committee members.

Dr. Cochrane indicated there is much value in national conferences as administrators are kept current on national affairs and changes. He noted there are many in-district conferences and workshops that are valued as they are needed to help us run the district.

Mr. Miller commented that conferences required by contract should be included in the budget. He explained that several years ago all administrators gave up their national conferences for a few years. He indicated that the School Board's duty is to support professional learning and we should be able to defend conferences required by contract.

Mr. York reported that the Budget Committee discussed water and transportation increases and was told that the School Board would first discuss those potential increases. He commented that the SAU needs direction on the percentage of the increase with which to amend the budget.

Mr. Miller reported that the Budget Committee reviewed District Wide and Special Services budgets. He noted there was a discussion regarding the Behavior Specialist position and Committee members asked for specific savings information from the position and what is projected next year. He commented to expect a significant reduction in Special Education transportation. Mr. Miller reported that the Budget Committee made reductions to the CHS and LMS. He noted that the Committee had a discussion regarding self-funded programs. Some members were concerned about the reactions of parents and students who participate in self-funded programs. Mr. Miller reported that the town will re-open each budget and the Budget Committee will re-vote the revised budgets.

Mr. York reported the Budget Committee would like a technology plan with a specified budget total for the next three years.

Dr. Cochrane agreed that such a plan is needed. Mr. York noted that the district is tasked to bring forward a plan at the end of March.

III. OLD OR UNFINISHED BUSINESS

A. Business Administrator's Update – Nov 2013

• Self-Funded Programs

Mr. Markiewicz provided a narrative regarding and explanation of self-funded programs. He noted that an extended review of co-curricular and self-funded programs was completed. He indicated that self-funded accounts have to remain in the general ledger for control and expense tracking. Mr. Markiewicz indicated an audit trail was performed and it was discovered that some expenditures that should be expenses in 1501 are going to co-curricular. He commented that we offset those expenses by revenue that is not appropriated by the town and no money is returned to the town if the program(s) is under spent.

Board members discussed where the expenses are being recorded or not recorded and where the process is breaking down.

Mr. Markiewicz indicated the process is not breaking down as there should be a check or checks in the manifest that the Board signs. He commented that there are some inconsistencies with the process. He noted that the revenue should wash with the expenses, which has no tax impact for taxpayers. He indicated that we need to clean up some areas of the process.

Mr. Miller commented that it would be better to have a separate account where self-funded programs are depositing their funds. He noted that food service functions similarly as their expenses are offset by revenues that are not provided by the town.

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- Transportation Budget Update

Mr. Markiewicz updated the Board regarding the potential increase in the transportation contract. He reported that the potential increase was discussed with the Budget Committee last evening. He suggested a 15% increase in the transportation budget lines. He noted that the information will be provided in the December 18 School Board packet. Mr. Markiewicz reported that he is proposing a 12.2% increase in the water utilities budget lines based on information provided by the Budget Committee.

Mr. Bourque asked if the money that is paid by students for bus transportation at CHS come to the district to offset transportation. Mr. Markiewicz indicated that he will research the answer.

B. 2014 Draft Warrant Articles

Draft warrant articles for 2014 were presented to the Board for review and comment.

School Board members discussed repealing the 2003 warrant article regarding new and expanded positions.

Mr. York indicated it is a non-binding article and was crafted when the School Board and Budget Committee were at odds. He noted that is not the case currently.

Mr. Miller commented that in 2002/2003 staffing for the high school was happening at a rapid rate. He noted there was a disagreement because the School Board wanted to do something that was not required by law.

Board members were concerned with the way the 2003 and 2004 articles are being interpreted. Board members asked for legal opinion regarding repealing a warrant article.

C. Impact Fee Legal Opinion

Dr. Cochrane presented the Board with a legal opinion regarding the proposed impact fee request. He noted that legal counsel's opinion reflects that the request for use of impact fees for the stated reasons is not a proper use of those fees.

Mr. Miller did not believe the request should be further pursued. He commented if we believe there is a need we should put it on a warrant article.

Mr. York commented that some of the request is for telecommunications that two schools have outdated systems. He noted that there is some security in the building, but not enough. Mr. York felt that the Board would be pushing off the issues until July 2015, which is not fair to two of the three schools. He indicated that better security is necessary at GMS and LMS.

Mr. Miller indicated that some years ago we brought forth a warrant article for video cameras at the schools and it failed. He noted that we installed buzzers, which was the minimal we could do at the time.

Dr. Cochrane indicated that a communications system is the highest priority.

Mr. York asked if there is a way to request in a warrant article that the funding be spread across two or three years. Mr. Markiewicz commented that the article can be non-lapsing, but the money has to be raised in that fiscal year.

IV. NEW BUSINESS

A. Revenue Projections

Mr. Markiewicz provided a draft of the revenue projections, explaining that it is based on the numbers we have at this time. He indicated that he is waiting for more information regarding school building aid, federal programs grants and disabilities program.

Mr. York commented based on the preliminary projections we lost half a million dollars in revenue.

Dr. Cochrane indicated that he believes the actual reduction will be significantly less than that.

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Mr. Miller indicated that the loss of school building aid is due to the reduction of the bond.

B. FY15 Default Budget

Mr. Markiewicz provided a preliminary default budget calculation for FY15.

Mr. Bourque commented that the increase in the water rate should not be included in the default budget.

Mr. Miller clarified that legal counsel has informed the Board that those types of items can be tied to minimum standards regarding what the district must provide. He noted legal counsel's belief is if it is reasonable then it is reasonable to be included in the default budget.

Mr. Markiewicz mentioned that NHASBO has discussed that the RSA has not been challenged because it is so vague and open to interpretation.

Mr. York commented that you are reducing expenses based on the projected cost for this year and at the same time you should make that same evaluation of the utilities. He indicated that the same evaluation should be made for transportation. Mr. York commented we are putting our default and operating budgets in a quandary of not presenting solid information to voters.

Mr. Markiewicz indicated that these are not his standards. He noted that he prepared the default budget in the best attempt to consider the regulations and what the Board has done in the past.

Mrs. D'Alleva believes that everything should be frozen with the exception of legal and contractual obligations.

C. 2014 NHSBA Resolutions

The Board was asked to review the resolutions prior to voting on them at the next meeting.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Jason Guerrette, 11 Perry Court, commented that the default budget is a fall back position. He read RSA 40:13, IX which states: (b): *"Default budget" as used in this subdivision means the amount of the same appropriations as contained in the operating budget authorized for the previous year, reduced and increased, as the case may be, by debt service, contracts, and other obligations previously incurred or mandated by law, and reduced by one-time expenditures contained in the operating budget. For the purposes of this paragraph, one-time expenditures shall be appropriations not likely to recur in the succeeding budget, as determined by the governing body, unless the provisions of RSA 40:14-b are adopted, of the local political subdivision.*

Mr. Guerrette commented if you do not know what the increase in a contract or obligation may be, you cannot include that increase in the default budget. He asked that the school district attorney review the default budget.

Mr. Guerrette commended the students who spoke to the Board regarding calculating high school GPA. He believes the School Board did not support their request. He commented that they are perfect examples of student centered learning and we are not providing a way to measure their achievement.

Mr. Guerrette commented that the School Board is free to repeal the 2003 warrant article regarding new and expanded positions. He stated that these conversations continue because voters feel the Board is ignoring their voice.

Mr. Bourque responded to Mr. Guerrette's statement regarding the students' request relative to calculating GPA. He disagreed that the Board did not support the students' request.

Mr. York commented it is not fair to change the rules at this time.

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Dr. Cochrane suggested that the CHS administration make the decisions about the GPA.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c) 9:00 p.m.

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered into non-public session at 9:30 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. York seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller the Board returned to public session at 10:06 p.m. Mr. Barka seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. Miller made a motion to adjourn at 10:07 p.m. Mr. Barka seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the Board

LITCHFIELD SCHOOL DISTRICT

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LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27
Litchfield, New Hampshire 03052

Approved Minutes for December 18, 2013
(approved as written 1-8-14)

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Tracy Micali, Director of Human Resources
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

A. NON-PUBLIC SESSION: RSA 91-A:3II (a-c) 6:00 p.m.
[Minutes of Non-Public Session are written under separate cover.]

The School Board entered into non-public session at 6:02 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting.

Non-public session ended at 6:34 p.m.

I. PUBLIC SESSION 6:30 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 6:40 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from the December 4, 2013 non-public session:

Mr. York made a motion to approve the non-public minutes of December 4, 2013 as written. Mr. Miller seconded. The motion carried 5-0-0.

E. Presentations & Recognitions

- Student Recognitions
 - Student Council Officers

The School Board recognized the Student Councils at GMS, LMS and CHS for their outstanding work in their respective schools and in the Litchfield community.

Ryan Perigny, President CHS Student Council, commented that the CHS Student Council asked all school councils to coordinate a food drive for the Litchfield Food Panty. He noted that CHS raised 2000 items and the other school raised items in the high hundreds.

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Leah Stagnone commented that the Food Pantry always appreciates our donations as they help people in the community.

Dr. Cochrane recognized faculty representatives who work with the Student Councils: Shawn McDonough, CHS; Ms. Irvine and Mrs. Sidlau, LMS. He commented that we have two of the most involved School Board Student Representatives at CHS. He noted they have contributed greatly. He encouraged students in the lower grades to continue to serve on the student council and thanked them for the work they do.

- **Boys Basketball Foul Shot Fundraiser**

Coach Patterson presented a new athletic fundraiser to the Board. He explained that every junior varsity and varsity basketball player will shoot 100' throws for donations. He indicated that the date is flexible and the goal is to raise money to fund a trip to Kentucky next year to play in the holiday tournament.

Mr. Miller suggested encouraging 8th grade players to participate as they will be transitioning in to the high school next year and may want to go on the trip. He noted that they should be involved in raising the funds as well.

Mr. Miller made a motion to approve the Foul Shot Fundraiser. Mr. York seconded. The motion carried 5-0-0.

F. Correspondence

Mr. York noted that the Board received correspondence from Chris Pascucci, 12 Colonial Drive, asking that the School Board have legal counsel review the default budget.

Mr. Miller mentioned that the Board received an invitation to the Christmas sing-a-long at GMS on December 20.

G. Approval of Draft Minutes:

- **Public Session December 11, 2013**

Amendments were made to the minutes.

Mr. Miller made a motion to approve the public minutes of December 11, 2013 as amended. Mr. York seconded. The motion carried 5-0-0.

H. Community Forum

Jason Guerrette, 11 Perry Court, commented with regard to correspondence he send the Board from Cornerstone Policy. He indicated that the information was particularly well done with regard to some of the language relative to the DOE proposal to make changes to Ed. 306, which will cause districts to incur additional expenses. He commented that this could be an RSA 28-A issue and encourage the School Board to push back on the DOE. Mr. Guerrette commented that the DOE has usurped the rights of education greatly in New Hampshire.

Mr. Guerrett commented on the FY15 Default budget calculation. He asked if the total increase in salaries is the increase for non-LEA employees.

Mr. Markiewicz indicated that there are some LEA grade or contractual changes, as well as additional staff required by IEP included in the total.

Mr. Guerrette commented that that is not the default budget position as those positions were not included in the appropriations voted last year. He indicated that step raises are based on performance and are a non-default budget item as a pay plan is not a contract. He requested a breakdown of the salary total in the default budget.

Mr. Markiewicz indicated there are no step increases in that figure.

Mrs. D'Alleva thanked Mr. Guerrette for providing the information from Cornerstone Policy.

I. Superintendent's Comments

Dr. Cochrane thanked all those involved at the schools for the student recognition. He noted it is an opportunity for parents and student to see these actions of the Board as well as a showcase for the community.

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Mr. Barka asked if the GPA issue has been resolved at the school level. Dr. Cochrane indicated that the Principal is weighing in on how she would like to proceed. He noted that the high school will make a good decision.

II. REPORTS

A. School Board Comments

Mr. York commented that the LMS held their concert at CHS, which was excellent. He noted that GMS held their recorder and chorus concert last week and the LMS play was held at CHS. Mr. York indicated that all performances were excellent and well done. He complimented the Arts programs at all the schools and commented that we need to fund more for those types of programs.

Mr. Miller commented on the Make a Difference Week activities, noting that a coat drive was held at CHS and the Campbell Athletic Leaders held a Toys for Tots drive.

Dr. Cochrane commented that there is a very strong service orientation in our schools.

B. Committee Reports

• Budget Committee

Mr. York reported that the Budget Committee voted on the GMS and Technology budgets for FY15. He noted that they made reductions to the GMS budget. He indicated that the Budget committee will vote on remaining budgets tomorrow night, as well as propose some bottom line reductions to health benefits and travel/conferences line items. Mr. York commented that Mr. Markiewicz provided his argument against that recommendation. He reported that the Budget Committee is asking for a bottom line budget number for tomorrow night. He noted they would like revenue projections provided as well as the default budget calculation.

Mr. Miller noted that the teachers' contract is not something they present at the budget hearing and can vote on it after the hearing. He asked Mr. York to convey that they have reduced budgets that they have reviewed. He commented that he believes there is no reason for them to propose a bottom line reduction at this time.

Mr. York commented they may have to re-open each budget to make those reductions.

Mr. Miller indicated if they request the detail on each line, they should make adjustments on each line.

Dr. Cochrane commented that there are some areas of the budget where a bottom line reduction will work. He noted that in this case, the travel and conference lines are approximately \$17,000 higher than last year. He indicated that some people are perceiving there are perks of travel in that money and in reality most of the cost is in registrations. Dr. Cochrane commented that seven people go to national conferences and are the seven people who should be leading the district. He agreed that a \$15,000 - \$17,000 reduction is reasonable. He agreed with Mr. Miller that a global reduction in the budget is not warranted.

Dr. Cochrane commented with regard to warrant articles, stating he would like to schedule a meeting of the LSB Building/Planning Advisory Committee to discuss warrant articles for security at GMS and LMS to provide to the Board on January 8, 2014.

Mr. Miller commented that one line for travel and conferences should be considered in the budget.

Mr. York commented that we need to tighten the budget process. He indicated that if travel and conferences are budgeted at the school level they should remain in those budgets. However, he noted if budgeted at the SAU level, there should be one line in the District Wide budget.

Dr. Cochrane expressed concern that some opinions are driven by the notion that budget managers, administrators and the Board do not look at the money that gets spent in the budget. He assured that is not the case. He noted the Board makes sure the money is spent wisely.

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- Safety Committee

Mrs. Flynn reported that the Safety Committee discussed loss reports and a discrepancy in the Safety Book and Emergency Evacuations flip charts, which will be addressed at the next meeting.

C. Technology Report – Nov 2013

Dr. Cochrane provided the November 2013 Technology report to the Board.

Mr. Miller asked for the cost of the server purchased in the FY14 budget. Dr. Cochrane indicated that the cost of the server was \$4,096.65 and that Mr. Hancock explained it was necessary to increase server capacity in order to increase response rates.

Mr. York asked about the issue with MealTime. Mr. Markiewicz indicated that the issue is being examined. He noted in speaking with MealTime, the issue revolves around how we are storing data and not a payment issue.

Mr. York asked if Dr. Cochrane spoke with Mr. Hancock regarding a three year technology budget plan. Dr. Cochrane indicated that with the significant change to the SAU team, we did a good job last time. He commented that the learning intricacies of the software takes time. He noted that he is planning to direct more time to future technology work.

III. OLD OR UNFINISHED BUSINESS

A. 2014 Draft Warrant Articles

The second draft of the 2014 warrant articles was provided for the Board.

Mr. York noted that the Budget Committee suggested placing the part time GMS technology teacher on the warrant.

Mr. Barka asked if the article fails, are we able to hire assistant teachers for this purpose. Mr. Miller indicated that if the article fails, we cannot expend any funds in this area.

Dr. Cochrane suggested drafting articles for school security.

Mr. Markiewicz reported that there is a problem with a boiler at GMS. He explained that it is constructed inside of five pieces of steel frame and fiberglass insulation in between. He indicated a piece of that insulation disintegrated and caused an air flow problem. Mr. Markiewicz commented that the boiler is not running efficiently and is not safe. He reported he was at GMS on Monday morning. The boiler is shut down at night and turned on during the day. He indicated that a new boiler was installed some years ago, but without both boilers working properly it will be difficult to heat the building in the extreme cold. He noted he is waiting for Honewell to install the parts that were ordered, which is scheduled over the winter vacation week. Mr. Markiewicz reported that the cost of repair is \$3,200.

Dr. Cochrane clarified assuming no surprises, the cost will be \$3,200.

Mr. Barka asked about the oil situation at GMS.

Mr. Markiewicz reported that Mr. Ross called and informed him that GMS ran out of oil. Mr. Ross called the vendor for delivery. Mr. Markiewicz indicated that with the boiler not running efficiently and the extreme temperatures that we have had contributed to the consumption of more oil.

Dr. Cochrane indicated that the main boiler will keep the building temperature at 50 degrees. He noted while that temperature is not conducive to have students in the building, it will prevent the pipes from freezing. He commented that he has been reviewing the school emergency plans.

- Warrant Article Legal Opinion

The warrant article legal opinion was not available at the time of the meeting.

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B. Voting:

Mr. Markiewicz provided recommendations for transportation and water increases for the Board. He recommended making a 10% adjustment to transportation and a 12.2% adjustment to utilities: water.

Mr. Miller does not believe that a 10% adjustment for transportation is enough. He noted he would rather adjust the budget at Deliberative Session.

Mr. York commented that the only way to make up this number without adjusting the budget is to take the funds from things that are needed for students. He noted this is not their fault; it is the cost of running the district. Mr. York suggested making a motion to adjust the transportation budget for an increase of more than 10%. He indicated if the warrant article relevant to carrying over funds was supported last year, the district would have the money to fund the increase in transportation costs and without increasing the budget.

Mr. Markiewicz commented that part of the conversation with First Student was about locating an in-district storage facility for the buses. He indicated that First Student has interest in maintaining a relationship with the district and an in-district storage facility is an option we can pursue.

Dr. Cochrane suggested adjusting the transportation budget by 15% in addition to the 3% that has already been budgeted. He commented that if that is not the will of the Board, it can be adjusted higher and the reduction can be made at Deliberative Session.

Mr. Markiewicz commented that there are too many variables at this time. He recommended waiting to see what happens with Nashua and if that contract will be best to serve Litchfield.

- Transportation Budget Increase

Mr. York made a motion to increase the transportation budget by an additional 15% or \$71,473. Mrs. D'Alleva seconded.

Mr. Miller made a motion to amend Mr. York's motion to increase the transportation budget by an additional 20% or \$101,254. Mr. Bourque seconded.

Mr. Miller felt it is better to budget higher and make a reduction at Deliberative Session.

Mrs. D'Alleva was concerned that we may not know by Deliberative Session.

Mr. Miller indicated that we can tell the voters we will make every effort to return any excess. He commented that he is not advocating that we increase transportation because of unforeseen circumstances that may arise in the schools, but based on the recommendation from the Superintendent and the Business Administrator that there is no room in the budget at this time. Mr. Miller commented that he respects the fact that First Student does not know the cost at this time as we are asking them to provide a number with which they do not feel comfortable.

Vote on amended motion: 4-1-0, with Mrs. D'Alleva opposing.

- Utilities: Water Budget Increase

Mr. Miller made a motion to increase the utilities: water budget by an additional 12.2% or \$3,346. Mr. Bourque seconded. The motion carried 5-0-0.

C. FY15 Default Budget

Mr. Markiewicz provided an updated FY15 default budget to the Board. He noted that increases in utilities are included in the default budget as are certain salary adjustments.

Mr. Miller commented with regard to the self-funded programs increase. He noted we cannot include new programs.

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Mr. Barka indicated that the Board would like legal counsel to review the default budget.

Mrs. D'Alleva was concerned with the increase in utilities. Mr. Barka indicated that it is part of the operation of the school and that we are responsible to provide.

Mr. Markiewicz indicated that PSNH is coming to review the Smart Start agreement, but he was unsure if that would occur prior to January 9, 2014.

D. Revenue Projections

Mr. Markiewicz provided revised revenue projections to the Board. He indicated that the local revenue is close to what was presented in the preliminary draft. He noted major changes in state sources: school building aid is the same number as this year as the DOE noted that building aid lags behind one year. Mr. Markiewicz commented that even though the bond is reducing, because building aid is one year behind we receive the same amount because the bond was not reduced that year. Mr. Markiewicz indicated that Catastrophic Aid has been projected at approximately 70%. There was a change in federal programs and grants although those grants do not send out notification until April or May as to what will be funded. Medicaid increased as well.

E. 2014 NHSBA Resolutions – Board Voting

Board members were asked to provide direction to the NHSBA Delegate regarding voting on resolutions at the Delegate's Assembly.

Mr. York suggested that we are discontinuing our association with them next year so it is not necessary to vote on the resolutions.

Dr. Cochrane commented that the NHSBA provides value, but it is difficult to get consensus.

Mr. York made a motion that the School Board continue to accept the stance of the NHSBA with regard to resolutions. The motion failed for lack of a second.

Mr. Miller suggested addressing the resolutions on January 8, 2014 and members can have input at that time.

IV. NEW BUSINESS

A. Acceptance of Donation for CHS: Exxon/Mobil Alliance Energy

The Board was asked to accept a grant for CHS from the Exxon/Mobil Alliance Energy organization. The grant will be split between science and math.

Mr. Miller made a motion to accept a \$500 grant from the Exxon/Mobil Alliance Energy organization for Science and Math at CHS. Mr. York seconded. The motion carried 5-0-0.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Jason Guerrette, 11 Perry Court, commented that nowhere in the statute for the calculation of the default budget does it mention same level of service. He noted that it states the same level of appropriations. He indicated that if an item does not fit the criteria it does not count. Regarding the argument that Ed. 306 says the district has to provide safe schools, he noted that the district will do just that. Mr. Guerrette asked the Board to exclude the increases in utilities costs in the default budget.

Mr. Guerrette commented that the impact fee request legal opinion should be released to the public. Mr. Guerrette indicated that the boiler issue at GMS is caused from improper chemistry maintenance.

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Mr. Guerrette commented that finding extra dollars is limited and if tough decisions are never made, it is difficult to find the money.

Mr. Barka responded to Mr. Guerrette's statement about making difficult decisions. He noted that Mr. York said it well that we do not want to reduce \$100,000 so that students cannot be transported. He indicated that is our decision as School Board.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered into non-public session at 8:29 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller the Board returned to public session at 8:54 p.m. Mr. York seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. Miller made a motion to adjourn at 8:55 p.m. Mr. York seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

One Highlander Court

Litchfield, NH 03052

Phone: (603) 578-3570

Fax: (603) 578-1267

Equal Opportunity Employer

Derek Barka, Chair

Patricia D'Alleva, Vice Chair

Dennis Miller

John York

Brian Bourque

December 18, 2013

Attachment to the December 18, 2013 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the December 18, 2013 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

From: "chrispas@comcast.net" <chrispas@comcast.net>

Date: Friday, December 13, 2013 at 10:09 PM

To: Derek Barka <dbarka@litchfieldsd.org>, Brian Bourque <bbourque@litchfieldsd.org>, Patricia D'Alleva <pdalleva@litchfieldsd.org>, Dennis Miller <dmiller@litchfieldsd.org>, John York <jyork@litchfieldsd.org>

Cc: Brian Cochrane <BCochrane@litchfieldsd.org>

Subject: from Chris Pascucci

Good evening,

First, this e-mail is from Chris Pascucci, a resident and taxpayer of Litchfield. I am not requesting you read this letter during a school board meeting, unless you choose to do so.

If you remember a couple years ago, the school board made a very serious mistake in their creation of the default budget. A mistake that fortunately was caught in enough time to correct, as the penalties could have been very serious. So much so, the default budget did not even get the necessary amount of signatures from the school board members. At that time Dr Cutler made the pledge to the community to include both the schools attorney and the budget committees "set of eyes" to look over the default budget....just for safety sake.

Many times we hear the phrase; "Their are several interpretations regarding the creation of the default budget". The opposing opinion is; "there is a very simple, straight and mathematical formula created so as to accurately and properly create a default budget".

I am politely and respectfully asking you to seek legal advice before signing your name to the default budget. Ask your attorney to review it and one simple question should be asked of your attorney. And that question is; "Are you so confident with this default budget that you are prepared to defend it and win should it be challenged in a court of law"?

I am very pleased to see the progress this community is making between the elected leaders and the people they are elected to serve. Honest, accurate and transparent default budgets are a big part of that rebuilding of trust.

Thank you for all you do!
Chris Pascucci

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LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27

Litchfield, New Hampshire 03052

Approved Minutes for January 8, 2014

(approved as written 1-22-14)

In Attendance:

Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member (*excused from 1st Non-Public*)
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Tracy Micali, Director of Human Resources
Dr. Julie Heon, Director of Curriculum and Instruction
Mr. Scott Thompson, Principal, GMS
Mr. Tom Lecklider, Principal, LMS
Mrs. Laura Rothhaus, Principal, CHS
Mr. Michael Perez, Asst. Principal, CHS (*1st Non-Public*)
Ryan Perigny, Student Representative
Leah Stagnone, Student Representative
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. NON-PUBLIC SESSION: RSA 91-A:3II (a, c)

5:30 p.m.

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. York, the School Board entered into non-public session at 5:40 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mrs. D'Alleva seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. York, yes; Mr. Bourque, yes.

II. RETURN TO PUBLIC SESSION

Upon a motion by Mr. York, the Board returned to public session at 7:05 p.m. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. York, yes; Mr. Bourque, yes.

I. PUBLIC SESSION

6:30 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 7:17 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

Revisions to the agenda included moving the LEA Contract to Superintendent's Comments.

D. Summary of Non-Public Actions from the December 18, 2013 non-public session:

Mr. Miller made a motion to approve the non-public minutes of December 11, 2013 as written. Mrs. D'Alleva seconded. The motion carried 5-0-0.

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E. Presentations & Recognitions

There were no presentations or recognitions.

F. Correspondence

The Board received correspondence from Jason Guerrette, 11 Perry Court, regarding Common Core State Standards.

G. Approval of Draft Minutes:

- Public Session December 18, 2013

Mr. York made a motion to approve the public minutes of December 18, 2013 as written. Mrs. D'Alleva seconded. The motion carried 4-0-0.

H. Community Forum

Kathleen Follis, 8 Mike Lane, asked members of the School Board to review the teachers' contract as a School Board member and not as a resident. She asked the School Board to support the contract so voters can have a choice.

Charles Mower, 14 Post Street, Merrimack, district employee, asked to comment with regard to the LEA vote on the teachers' tentative agreement. Mr. Barka informed Mr. Mower that his comments were inappropriate at the School Board level.

Jason Guerrette, 11 Perry Court, commented with regard to Common Core. He believes that it is not the best option. He indicated that we should consider the issues the professionals have discovered in the process and supplement them. Referring to the default budget, Mr. Guerrette claims that there are items included in the default budget that are questionable. He commented that the self-funded increase and utilities increases do not fit the criteria, and paving is a one-time expenditure. He suggested that the items be investigated.

I. Superintendent's Comments

1) LEA Contract

Mr. Barka announced the LEA has ratified the 2014-2017 tentative agreement. In summary, Mr. Barka highlighted some of the changes:

- Three year agreement
- First year teachers get steps plus the salary schedule drops the bottom step and added a modified step to the top of the schedule
- Health Care savings offset \$200,000 of the cost in the first year
-
- Second year includes a step increase for step 1-14 and those at the top step receive ½ modified step plus \$300
- Third year includes a modified step for all people on the schedule, except those at the top step who get ½ modified step plus an additional \$300
- Employee contributions to health care increase over the three years
- Cost of the contract over three years is \$595,041.

Dr. Cochrane indicated that there were changes in language as well:

- Existing teachers sick days to 12 starting in 2016-17
- New hires to receive 10 sick days cumulative to 110 beginning in 2016-17
- Change to the Reduction in Force (RIF) language which allow the district to keep the best teachers regardless of whether or not they have achieved continuing contract status

Mr. York acknowledged that all parties worked hard on the agreement. He does not believe the agreement is best for education or for the taxpayers and is not moving in the right direction. He commented that he will support the contract so the voters can have a choice.

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Mr. Barka believes it is a good contract that will help keep our good teachers in front of our students. He commented that Litchfield teacher salaries have fallen below other districts over the last few years. He indicated that this agreement gets teachers back in the average salary ranges. Mr. Barka noted that the savings realized with the new health care plan may pay for the cost of the contract.

Mrs. D'Alleva commented that the language is similar to the proposed agreement from last year. She indicated that the contract failed last year and was less costly. She noted that the Board should support teachers, but we need to strike a balance with the voters.

Mr. Miller made a motion to approve the 2014-2017 contract between the Litchfield School Board and the Litchfield Education Association as presented. Mr. Barka seconded. The motion carried 4-1-0, with Mrs. D'Alleva opposing.

Carolyn Leite, President of the LEA and LMS Music teacher, thanked the Board on behalf of negotiations team for moving the contract to the voters. She commented that we look forward to working with the Board and Budget Committee to explain it to the public. She offered to assist in explanation when the agreement is presented to the Budget Committee.

III. REPORTS

A. School Board Comments

There were no School Board comments.

B. Committee Reports

- Budget Committee

Mr. York and Mr. Bourque reported that the Budget Committee met on December 19, 2013 to discuss school and town budgets. Mr. York reported that the Budget Committee anticipates the approval of warrant articles by the School Board. He noted the Budget Committee has not yet voted on the FY15 Budget bottom line.

Mr. Markiewicz indicated that a bottom line for the FY15 Budget will be available for the Budget Committee. He noted that the Budget Committee accepted an increase to transportation, albeit not the same as the School Board's recommendation, and they accepted the School Board recommendation on the water rate increase.

- Building and Planning Committee

Mrs. D'Alleva reported that the Committee reviewed different security items to propose on a warrant article. She indicated the Committee decided to move access controls and panic buttons for all three schools forward to the voters. She noted it was not an easy decision as the items were costly.

C. Principals' Reports

- GMS

Mr. Thompson presented the principal's report for GMS. He reported the following:

- December 11: held an in-service day to continue to work on quality performance assessments and disability awareness;
- NWEA and AIMSweb assessments will be administered in January;
- Second quarter report cards are scheduled to be mailed home January 31;
- GMS was not selected to participate in the Smarter Balance Field test, but will do the practice test;
- Kindergarten registration begins;
- PTO Father/Daughter dance moved to the spring; PTO Monarchs Night is scheduled for February 23; PTO Bingo Nigh March 14;
- The Holiday Concert was held December 10;
- A Lockdown drill was performed December 18;
- Initiated communication with a Principal's Message via BlackBoard email;
- GMS ran out of oil on December 16 – many thanks to the maintenance staff for bleeding the lines and restarting the boiler.

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- LMS

Mr. Lecklider presented the principal's report for LMS. He reported the following:

- December 11: held an in service day to work on quality performance assessments;
- Next training day: February 6;
- Assessments ramp up in January with AIMSweb assessments in Reading and Math;
- NECAP scores should be received in late January;
- RTI team training cohort is scheduled for Thursday;
- Staff meeting was held today focusing on a book study;
- John Halligan to present to student body at end of January at assemblies on bullying prevention;
- LMS was selected to participate in the Smarter Balance Field Test;
- Drama Club presented "Dorothy in Wonderland";
- The Band and Chorus performed the Winter Concert in December;
- Ladies Volleyball team won the Tri-County Championship;
- Math Counts team to compete in regional tournament;
- A Lockdown drill was performed today;
- A Geography Bee took place;
- Washington DC trip is upcoming.

- CHS

Mrs. Rothhaus presented her principal's report for CHS. She reported the following:

- December 11: held in service day focused on 504's and IEP's;
- Teachers are implementing aspects of writing into their curriculum;
- Math Department working on an 8th grade assessment;
- Mrs. Ange is co-teaching Freshman Seminar;
- Curriculum facilitators working with their departments to implement new standards for career and college readiness;
- CHS was not selected to participate in the Smarter Balance Field Test;
- Leah Stagnone won the Youth and Government U.S. Senate competition.

Ms. Callinan presented the Guidance report to the Board. She reported that PSAT scores will be distributed to students on January 6 and 8; Sophomore David Allen was chosen to represent CHS at the (HOBY) Hugh O'Brian Youth Leadership conference to be held in July 2014; NH Scholar students were invited to listen to career speaker, Dr. Mark Stagnone, on December 19; Freshmen will be invited to attend an adaption of "Making High School Count" on January 10, during which speakers talk to students about being interactive with their grade point averages; Program of Studies is being formatted; CHS administration/guidance along with Litchfield and Hudson police departments will be presenting information to all over age 30 regarding social media and the different sites students are using.

Mrs. Rothhaus reported there is a CHS who will be graduating from Londonderry night school in January.

Ms. Callinan reported that a Financial Aid filing night will be held on January 28 to assist families in filling out the FAFSA.

Regarding grade point averages, Mrs. Rothhaus reported that the ELO course would only count of 1/100 of a point. She decided that things would remain as they are regarding current grade point averages.

Mr. Barka asked for a demonstration of Naviance.

- Mark Harvey Track Donation

Mrs. Rothhaus presented a donation from Mark Harvey for track equipment.

Mr. York made a motion to accept the donation from Mark Harvey of track equipment for CHS with a value of \$708.15. Mr. Miller seconded. The motion carried 5-0-0.

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D. Curriculum Report

Dr. Heon presented the January 2014 Curriculum Report.

- K-12 Math Curriculum Framework

Mr. York believes that the curriculum framework is not as rigorous as is required by Common Core Standards. He commented that this is a commitment to math curriculum that we will not be able to fully address for at least five years.

Dr. Cochrane indicated that the Common Core addresses the trajectory of the curriculum for the Algebra I to Algebra II sequence. Many students then take additional and more rigorous classes after that. Dr. Cochrane commented that when considering student growth, rigor may be something at the grade level. He noted that this framework should address students at that level and the appropriate trajectory.

Dr. Heon clarified that this is a curriculum framework and not a full curriculum. She indicated that the framework provides a more comprehensive list of what we teach students.

A lengthy discussion followed regarding the framework, writing the math curriculum and implementation of the curriculum. Dr. Cochrane commented that it will take much in terms of resources. He commented that we need to work on areas most important to improve.

Mr. York commented he would rather hear how the curriculum process is working to improve education.

Dr. Cochrane commented that last year we developed those end of year targets and this year we should be measuring them. He noted that we tend to try to implement too much at once and not fund it appropriately.

Mr. York indicated that those are the conversations the Board need to have with the three principals.

Dr. Heon commented that it is necessary to create the tools to help all of us assess and evaluate whether it is working. She indicated that we can charge the administration and teachers if we have the tools. She noted that teachers need time for analysis and we are talking about evolutions that require more time than we have with our teachers in professional development workshops.

Mr. York asked about the next step if the framework is approved. He indicated that the Board needs to know the cost of implementation.

Dr. Heon indicated that implementation of the framework has no cost. She clarified that these skills should be able to be accomplished by the students in those grade levels. She noted that much effort, thought and analysis was put into developing this framework.

Dr. Cochrane commented that the framework was well done.

Mr. Miller commented that when comparing regular math frameworks with the honors math frameworks there is virtually no differentiation.

Dr. Heon agreed that there are some areas that can be improved in the document.

Mr. Miller was concerned about the inconsistency at the high school level.

Dr. Cochrane shared the concern and noted that the Grades 9-12 framework could be approved as a 1.0 version with a task list for improvements.

Mr. York made a motion to approve K-8 math curriculum framework as presented. Mrs. D'Alleva seconded. The motion carried 5-0-0.

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Mr. York made a motion to approve the 9-12 math curriculum framework as version 1.0, with revisions to be revisited. Mr. Miller seconded. The motion carried 5-0-0.

- Grade 4 Novel Recommendation: *Out of My Mind*

Dr. Heon presented a text recommendation for grade four from PERC to the Board.

Board members had questions regarding rigor and text complexity. Dr. Heon noted that in this case, the concept of rigor is about students analyzing with techniques. She commented that in terms of text complexity, the text complexity chart is basically evaluating that the text is well suited for the students in that grade.

Mrs. D'Alleva made a motion to approve the book "Out of My Mind" as a grade four curriculum resource. Mr. Barka seconded. The motion carried 5-0-0.

- Health Video Recommendation: *We're Just Talking!*

Dr. Heon presented a video recommendation for grade six from PERC to the Board. She explained that the health video is used for instruction enhancement.

Mr. York made a motion to approve the video "We're Just Talking!" as a grade six curriculum resource. Mr. Bourque seconded. The motion carried 4-0-1, with Mrs. D'Alleva abstaining.

- AP Spanish Workbook Recommendation: *Triangulo Aprobado*

Dr. Heon presented a text recommendation for high school, AP Spanish, from PERC to the Board. She indicated that this is one of the texts that is listed in the College Board's mission for the AP Program.

Mr. York made a motion to approve the text "Triangulo Aprobado" as an AP Spanish course curriculum resource. Mr. Miller seconded. The motion carried 5-0-0.

E. Student Representatives Report

Mr. Perigny and Ms. Stagnone presented the Student Representatives Report to the Board.

Mr. Perigny presented Mrs. Rothhaus with the trophy for winning the Make a Difference food drive competition. Regarding the presentation "Making High School Count", he explained that it is a great opportunity to show all freshmen that freshman year counts. He commented that freshmen will be told that it is all right to change their minds about their career goals. Mr. Perigny reported that a breakfast at CHS was held prior to vacation, where the Student Council prepared food for the teachers. He thanked the kitchen staff for use of the kitchen for the breakfast. He reported that some CHS alumni will be coming to the school to talk about life after high school.

Ms. Stagnone reported that tree lighting day started off with a breakfast for the teachers, the CHS chorus and band performed, Mr. Perez read "Twas the Night Before Christmas". She noted that money raised from the tree lighting goes to a scholarship fund. She reported that NH Scholars provided a presenter who spoke about his career and the study of science in college.

IV. OLD OR UNFINISHED BUSINESS

A. FY15 Default Budget

Mr. Markiewicz presented the third draft of the FY15 Default budget calculation to the Board. He indicated that the Default budget will be forwarded to legal counsel for review.

B. FY15 Revenue Projections Revised

Mr. Markiewicz presented a revised projection for FY15 Revenues to the Board.

C. FY15 Warrant Articles

Mr. Markiewicz presented the final draft of the FY15 Warrant Articles to the Board. He noted that draft language is subject to DRA review. He indicated that Article 5 was added, which is for the purchase of access controls and

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panic buttons for all three schools. He explained that with access controls, part of the building can be accessed while locking out the remaining areas of the building.

D. Utilities Update

Mr. Markiewicz updated the Board regarding the oil situation. He reported that in December, GMS ran out of oil. He informed the oil company and they stated GMS was scheduled for delivery the next day. He noted there was also a problem with the boiler. Mr. Markiewicz reported that on Christmas Eve, LMS ran out of oil. He indicated that the district has been involved with this vendor for many years. The schools normally receive automatic deliveries. Mr. Markiewicz reported that in light of the current situation with this vendor, we made a decision to work with our energy consortium and negotiated with a company in Quincy, MA. He indicated that the district notified the contracted vendor about what was occurring and to request a discussion. Mr. Markiewicz thanked the custodial staff and those in Massachusetts for all their assistance. He noted that both tanks are almost full with oil.

Dr. Cochrane commented that some district have decided to move away from the vendor. He noted we are trying to hold them accountable, but keep them as a contractual vendor.

Mr. Markiewicz updated the Board regarding food service software research. He reported a temporary repair has been applied to the existing software. He indicated we will be providing a recommendation for a new software for Food Service.

E. 2014 NHSBA Resolutions

Board members were asked for a decision regarding the 2014 NHSBA Resolutions. The School Board directed the NHSBA Delegate to abstain from voting.

V. NEW BUSINESS

A. Acceptance of Grant

A \$5,000 grant from Schneider Electric for the CHS Robotics team was presented to the Board.

Mr. York made a motion to accept a grant in the amount of \$5,000 from Schneider Electric for the CHS Robotics team. Mrs. D'Alleva seconded. The motion carried 5-0-0.

VI. MANIFEST

The manifest was circulated and signed by the Board.

VII. PUBLIC INPUT

A. Community Forum

Jason Guerrette, 11 Perry Court, commended the district for its handling of the oil situation. With regard to the Default budget, Mr. Guerrette believes that it was incorrectly calculated in the prior year. He noted there were still items in the proposed default budget that should not be included. Mr. Guerrette expressed dissatisfaction with the direction of the Math program in the district. He noted there are a large number of districts moving away from Common Core. He commented we should research more about the Smarter Balance Assessment, which has been implemented in other states for two years. He was not supportive of the assessment. Mr. Guerrette commented on utilities indicating that regardless of the total line for utilities in the default budget, the district will still pay for utilities.

Referring to the previous public input, Mr. Guerrette commented that staff members should be allowed to speak. He noted when the Board passed their revised public participation policy, we agreed that staff is community. He believes that the staff was shut down this evening.

VIII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. York, the Board entered into non-public session at 10:08 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2)

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requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

IX. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller the Board returned to public session at 10:48 p.m. Mr. York seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. York, yes; Mr. Bourque, yes.

X. ADJOURN

Mr. Miller made a motion to adjourn at 10:50 p.m. Mr. Bourque seconded. The motion carried 5-0-0.

Respectfully submitted

Michele E. Flynn
Administrative Assistant to the School Board



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

One Highlander Court

Litchfield, NH 03052

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Equal Opportunity Employer

Derek Barka, Chair

Patricia D'Alleva, Vice Chair

Dennis Miller

John York

Brian Bourque

January 8, 2014

Attachment to the January 8, 2014 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the January 8, 2014 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

From: Jason Guerrette [sts3717@gmail.com]

Sent: Monday, January 06, 2014 3:38 PM

To: Derek Barka; Patricia D'Alleva; John York; Brian Bourque; Julie Heon; Brian Cochrane

Subject: Mr Yorks suggestion

Good afternoon,

Mr. York suggested that I provide a solution to my "dislike" of CCSS.

Let me be clear. While I will not ever believe that education can be bettered through federal intervention, we are, where we are. My so called dislike is based more on the facts as stated by doing my own research and understanding what the two subject matter experts from the CCSS validation committee have been saying over and over. As I have been saying to Dr. Cochrane and Ms. Heon, They best foot forward is to understand CCSS' shortcomings as outlined by Prof. Milgram and Prof. Stotsky and to mitigate those issues.

I believe the attached is a genuine way forward.

IMHO, This is the way I believe a Board member should be researching ways forward, along with obviously taking the very good professional input from your professional staff.

Respectfully,

Jason Guerrette

Jan 8, 2014
minutes

Michele E. Flynn

From: Jason Guerrette <sts3717@gmail.com>
Sent: Monday, December 30, 2013 3:49 PM
To: John York
Cc: Derek Barka; Patricia D'Alleva; Brian Bourque; Dennis Miller; Michele E. Flynn
Subject: Re: An Engineer Looks at the Common Core Mathematics Standards | Education News

Mr. York and other members of the Litchfield School Board,

I do hope that rather than ask parents of this community to cease writing to your about our concerns with the direction OUR schools are going, you as a group would at the very minimum understand that we wish that you would in the very least take the time to review what you receive and spend five minute or so to read what is sent to you. After all, isnt' that why you ran to be a member of the Board? To represent parents in this district? Please explain how you are to do this if you do not even care to hear from them? I have, over a numbers of years provided what I thought to be very viable alternatives to CCSS. Have you read those Mr. York? Have you read the article in this instance? It provides for alternatives to CCSS. Had you read it, you would have seen that I did just as you have requested. Provided alternatives for the mediocre math that comes with CCSS.

If Mr York would listen at all to my so called "dislike" for CCSS, he would understand that it isn't a "dis-like", it is in fact I do not wish to expend resources towards a program or system that I feel is inferior. My preference is to implement a system that is superior. One that already exists. One that is PROVEN to have worked and has educated children where they place in the top levels of the world, not only the US.

I advocate for choosing a system like the one that was in place in Massachusetts before they choose to disassemble the education system in favor of political gain and the financial bribery that goes along with adopting Federal desires.

Finally, NO Mr. York. You can certainly choose to delete my emails or create a filter to not ever see them in your inbox, but as an elected School Board member, you will INDEED get correspondence from constituents even though you would prefer to keep your head in the sand and pretend I do not exist.

Jason Guerrette

Please add to the minutes and read aloud at your next meeting.

If you choose to not read aloud, please do let me know so I can be present to read it aloud personally.

Include the response from Mr. York.

On Mon, Dec 30, 2013 at 3:15 PM, John York <jyork@litchfieldsd.org> wrote:

I understand you do like the common core. Please stop sending these emails to me about your dis-like for common core. Please feel free to send me emails of programs you think are better than common core and will improve the learning process here in Litchfield. Your time would be better spent on this process (than crying wolf all the time).

Thanks

John York
jyork@litchfieldsd.org

From: Jason Guerrette [sts3717@gmail.com]

Sent: Monday, December 30, 2013 9:42 AM

To: Derek Barka; Patricia D'Alleva; Brian Bourque; John York; Julie Heon; Brian Cochrane

Subject: An Engineer Looks at the Common Core Mathematics Standards | Education News

<http://www.educationviews.org/engineer-common-core-mathematics-standards>

Good morning

As time passes and evidence mounts,
I cannot understand why we would continue down the road of mediocrity.

If we are going to apply the time and resources to correcting our deficiencies, why pick something that is showing itself to not work? One would think that we should be after what has proven to work. Please do take a moment to review the link I have provided.

The nation's top high school located in Wisconsin chose this past week to not approve CCSS and to move forward using their own....more stringent standards

Jason

Core Knowledge Sequence

Content and Skill Guidelines for Grades K–8



Core Knowledge[®]



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Third printing of Core Knowledge Preschool Sequence

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A Letter from
the Founder

A Letter from the Founder of the Core Knowledge Foundation, E. D. Hirsch, Jr.

March, 2010

Dear Friend of Core Knowledge,

The Board of Trustees of the Core Knowledge Foundation has long desired to make the *Core Knowledge Sequence* freely available for all non-commercial use. Frankly, what has held us back is simple economics. Even nonprofits need to pay bills, and the *Sequence*, our guide to the specific knowledge that forms the foundation of a sound, well-rounded education, has long been our biggest seller. Income from its sale allows us to break even so we can continue to advocate for a solid elementary curriculum and support a growing network of Core Knowledge schools.

While Core Knowledge is still worried about breaking even, times have changed. Today, more people recognize that a core curriculum is critical to significant educational improvement. Growing acceptance of our fundamental proposition is now being evidenced in the promising decision of several states to get behind a common core of K–12 standards in language arts and math. It would be contrary to our basic mission if we did not try to help this promising new effort prosper and succeed.

From its founding in 1986, Core Knowledge has worked to help teachers and parents understand that all of our most important goals in education—reading comprehension, language competence, and critical thinking—depend on broad knowledge, and cannot be successfully attained through language-arts instruction alone. To their credit, the authors of our emerging common core state standards understand this concept. However, standards alone are not sufficient to guarantee success. The effectiveness of the new language-arts standards will depend on the implementation of coherent, cumulative, and content-specific grade-by-grade curricula infused into language arts *and* the other subjects.

So the question has become not how can we give away our most valuable publication and foundational piece of intellectual property, but *how can we not?*

In the old sailing days you had to wait for the flood tide before setting forth, so you didn't miss the tide. That, according to Shakespeare, was true for more than sea voyages:

*There is a tide in the affairs of men,
Which, taken at the flood, leads on to fortune;
Omitted, all the voyage of their life
Is bound in shallows and in miseries.*

Or as Will Rogers put it: "Even though you are on the right track, you will get run over if you just sit there."

For those of you who are old hands on this voyage, thank you for your support throughout the years. If you are new to Core Knowledge, welcome aboard. I have never been more optimistic about the prospect for deep, meaningful, and lasting change in our schools.

Sincerely,



E. D. Hirsch, Jr.

Preface to the 2010 Edition of the *Core Knowledge Sequence*

With the prospect that many states will soon embrace a common core of K–12 standards in language arts and math, the future of the American public education system has never looked brighter than right now.

We at the Core Knowledge Foundation fervently believe that our experience over the past twenty years in championing the use of a coherent, cumulative, content-specific curriculum in schools throughout the United States can be of significant value to states and school districts nationwide looking to take the next step forward at this historic moment. The integration of common core standards in language arts and math with a coherent, cumulative, and content rich curriculum holds enormous promise. The Core Knowledge Foundation stands ready to assist states, school districts, and individual schools in taking this step and it is for that very reason that we have decided to disseminate the *Core Knowledge Sequence* as widely as possible at no cost.

We offer then this updated, 2010 online version of the *Core Knowledge Sequence*. Our original mission—Excellence and Equity for All Children—and the simple, yet powerful underlying premise of Core Knowledge, that knowledge builds on knowledge, remain unchanged. Nearly all of our most important goals for education—greater reading comprehension, the ability to think critically and solve problems, even higher test scores—are a function of the depth and breadth of our knowledge. Although current events and technology are constantly changing, there is a body of lasting knowledge and skills that form the core of a strong Preschool through Grade 8 curriculum. Explicit identification of what children should learn at each grade level ensures a coherent approach to building knowledge across all grade levels, making efficient and effective use of instructional time. Every child should learn the fundamentals of science, basic principles of government, important events in history, essential elements of mathematics, widely acknowledged masterpieces of art and music from around the world, and stories and poems passed down from generation to generation.

Over the past 20 years, we have been able to refine and fine tune the implementation of Core Knowledge, thanks to the effort and feedback of thousands of teachers and schools who have put the *Core Knowledge Sequence* into practice *in real classrooms with real students*. We have attempted to reflect our increased wisdom with regard to effective implementation in this 2010 edition of the *Sequence*.

What's New in the 2010 Edition?

We call your attention specifically to the following revisions.

- **Preschool and K–8 Guidelines in a Single Document**

The *Core Knowledge Sequence* for grades 1–5 was first released in 1988. The addition of kindergarten and the middle school grades soon followed, resulting in a single document known as the *Core Knowledge Sequence for K–8*, which is now in its ninth printing. In 1997, the Foundation published the *Core Knowledge Preschool Sequence* as a separate document that offered a coherent approach to teaching 3- to 5-year olds the specific content and skills that lay the foundation for future learning. The Core Knowledge Preschool program has flourished in its own right since that time.

By combining the *Preschool Sequence* with the K–8 guidelines, the Foundation is reasserting its firm commitment to a fully coherent approach to education that we believe is most effective when started at the earliest possible age.

The two-page spread “Core Knowledge at a Glance” in this document graphically displays an overview of this coherence across the grade levels.

- **Explicit Integration of Content and Skills**

In the early years, in order to distinguish ourselves from other education reform efforts and approaches that focused on process over subject-specific content, we identified the *Core Knowledge Sequence* as a “set of content guidelines.” Core Knowledge and the Core Knowledge Foundation became synonymous with content among knowledgeable educators. However, as sometimes happens, some began to portray Core Knowledge as an “either/or” proposition, i.e., if you were using Core Knowledge, you were focused only on content, not skills. Of course, nothing could be further from the truth. As successful Core Knowledge schools have always known, Core Knowledge is more accurately described as a “both/and” proposition: effective Core Knowledge teachers know that both content and skills are essential; they embed the teaching of critical skills within the content they share with their students. The skill objectives are most effectively targeted when they are anchored to the content in the context of a domain of knowledge. To that end, you will notice that we are now explicitly referring to the *Core Knowledge Sequence* as “Content and Skill Guidelines” for preschool–grade 8.

- **Increased Elaboration of the K–2 Language Arts Section of the *Sequence***

After many years of hoping that commercial textbook publishers would heed the cognitive science findings and insights about the link between reading comprehension and background knowledge and create new instructional materials for the teaching of reading, the Core Knowledge Foundation made the decision five years ago to raise the funds necessary to develop its own set of language arts materials. To date, we have created and field-tested comprehensive materials for grades K–2 that represent a revolutionary new approach to language arts instruction.

While these materials, the *Core Knowledge Language Arts (CKLA)* program, are not yet available for widespread sale, we have included the *CKLA* goals and objectives for kindergarten–grade 2 in this 2010 edition of the *Core Knowledge Sequence* (see Appendix C, “Domains and Core Content Objectives for the *Core Knowledge Language Arts* Program, K–2”). These goals and objectives represent our best insights into what effective language arts instruction should encompass—a broader view of “language” within the language arts block, the coherent integration of rich content, i.e., nonfiction, within the language arts block, and explicit, systematic instruction in phonics. Each of these points is further elaborated below and on the following page because we believe they are critical to realizing the full potential of the Core Knowledge program.

See the *Core Knowledge Language Arts* Program on our website for more complete information.

- **A Broader View of Language—Listening, Speaking, Reading, and Writing**

Shortly after a baby is born, an amazingly complex, interactive communication process begins between the infant and others in the child’s environment. Listening and speaking are the primary means of communication during the early years of a child’s development. It is important to understand that future reading and writing competencies are predicated on competencies in listening and speaking. Traditional language arts instruction has typically paid little attention to listening and speaking. This failure to focus on the development of oral language in language arts instruction is a serious oversight. The ability to read and write written language is highly correlated with students’ oral language proficiency and the ability to understand a text read aloud is a prerequisite for making sense of the same text in printed form. By listening to written text read aloud, children can experience the complexities of written language without expending cognitive energy on decoding. By then participating in rich, structured conversations with an adult following the read aloud, children are able to orally practice comparing, analyzing, and synthesizing ideas in written text in much the same way as they will be expected to do as independent readers in later grades. The decided advantage of this approach is that children are building these competencies in the

very early grades, instead of waiting for their own reading skills to evolve. This is especially true for those children who start school, for whatever reasons, with less experience with printed text. (See *Hart & Risley, The Early Catastrophe: The 30 Million Word Gap by Age 3* on our website.)

We are long past due the need to recognize that early language disadvantage persists and manifests itself as illiteracy when educational practices in elementary education fail to recognize the importance of oral language. It is essential that children build listening and speaking competency while also developing reading and writing skills.

See Appendix A, “Why Listening and Learning are Critical to Reading Comprehension,” for a further elaboration of why oral language is important and how the language arts block can be reconceptualized to develop listening and learning skills.

- **Coherent Integration of Content Within the Language Arts Block**

While various reading approaches are increasingly including nonfiction selections within the language arts block and textbook publishers are paying greater attention to reading in the content areas, they have typically failed to grasp the importance of developing a coherent approach to building knowledge within grades and across grade levels. Children hear and/or read about dinosaurs one day, the five senses the next time a nonfiction selection is presented, and Native Americans in the next unit. The selected texts have nothing in common except that they are nonfiction. This random approach to content area reading fails to recognize how domain knowledge builds either within a grade or cumulatively across grade levels. Incorporating nonfiction into language arts in this way is a missed opportunity and a waste of precious instructional time.

Nonfiction selections that are integrated into the language arts block must be presented in a coherent, nonfragmented way. In developing the *CKLA* materials, we have used the grade specific topics in history, science, music, and the arts from the *Core Knowledge Sequence* as the basis of our selections, thereby maintaining the content coherence that has been an integral part of Core Knowledge for the past 20 years. It has also been our experience in field testing *CKLA*, that nonfiction selections should focus on a single topic or domain over a sustained period of time—about two weeks—rather than intermingle selections on unrelated topics.

See Appendix A, “Why Listening and Learning are Critical to Reading Comprehension,” Appendix B, “Using Trade Books to Achieve College and Career Readiness: The Principles of Democracy,” and Appendix C, “Domains and Core Content Objectives for the *Core Knowledge Language Arts* Program, K–2,” for a detailed explanation of how to effectively and coherently incorporate content in the language arts block.

- **Explicit and Systematic Phonics Instruction**

The Core Knowledge Foundation has long advocated the importance of explicitly and systematically teaching young children the phonemic awareness and phonics skills necessary to decipher the written code. It is important that as teachers work to more intentionally include content within the language arts block, they not lose sight of the importance of teaching specific decoding skills, especially in the early grades. The *CKLA* materials use a synthetic phonics approach that has proven to be very effective in early field testing. The 2010 edition of the *Sequence* includes the grade specific decoding skills that are the focus of the *CKLA* materials for K–2. We plan to start development of *CKLA* materials for grades 3–5 in the near future and will post revised language arts goals for these grades as part of the online *Sequence* as soon as they are available.

The specific sequence of consonant and vowel sounds and spellings included in the *Sequence* at each grade level, K–2, represents what is taught in *CKLA* and is unique to

the *CKLA* materials. Until such time as these materials are available for sale, it may be difficult for schools to reproduce the teaching of this exact sequence of phonics skills at the designated grade levels. In the interim, we urge schools to use other materials that explicitly and systematically teach the same consonant and vowel sounds and spellings over the course of K–2, although when certain sounds and spellings are introduced may differ. See “Reading Program Recommendations” on our website for our suggestions as to which existing, commercially available materials do use a systematic and explicit approach to teaching phonics; despite the claims to include phonics, many, many basal reading programs do not do so in a systematic way.

What Support is Available for Implementation of Core Knowledge?

The Core Knowledge Foundation is ready and able to assist states, districts, and individual schools who want to join the ranks of those who are successfully implementing Core Knowledge. The newly revised Core Knowledge website (www.coreknowledge.org) offers a wealth of information on how to get started, support materials and professional development (also, see Appendix D, “Core Knowledge Grade-by-Grade Resource Recommendations” in this document) as well as many free online resources. Be sure to check out the new [online search engine](#) that will allow you to search for lesson plans on Core Knowledge topics!

Please do not hesitate to also contact us directly by phone (434-977-7550) or by e-mail: (coreknow@coreknowledge.org).

Introduction

WHAT IS THE *CORE KNOWLEDGE SEQUENCE*?

The *Core Knowledge Sequence* is a detailed outline of specific content and skills to be taught in language arts, history, geography, mathematics, science, and the fine arts. As the core of a school's curriculum, it is intended to provide a coherent, content specific foundation of learning, while allowing flexibility to meet local needs.

The *Sequence* represents an effort to describe and state the *specific* core of shared knowledge that all children should learn in U.S. schools, and that speakers and writers assume their audience knows. It should be emphasized that the *Core Knowledge Sequence* is not a list of facts to be memorized. Rather, it is a guide to *coherent content* from grade to grade, designed to encourage *cumulative* academic progress as children build their *knowledge and skills* from one year to the next.

The *Core Knowledge Sequence* is distinguished by its specificity. While other standards provide general guidelines concerning what students should be able to do, they typically offer little help to teachers in detailing specific content or skills. The *Sequence* provides a solid foundation on which to build instruction. Moreover, because the *Sequence* offers a coherent plan that builds year by year, it helps prevent the many repetitions and gaps in instruction that often result from vague curricular guidelines.

TEACHING THE *CORE KNOWLEDGE SEQUENCE*

“Students will comprehend, evaluate, and respond to works of literature and other kinds of writing which reflect their own cultures and developing viewpoints as well as those of others, using prior knowledge to extend reading ability and comprehension.”

This language arts standard is fairly typical of many performance standards. It is broad enough that disagreement is difficult—students *should* be able to comprehend, evaluate and respond to works of literature—but offers little help to teachers in planning units and lessons.

Standards typically describe what students should be able to do, but not what students should know. The content-rich, thoughtfully designed *Core Knowledge Sequence* complements state standards by offering a concrete curriculum to guide teaching and learning. Instead of spending hours researching and planning what to teach, teachers are freed to think more creatively about how to teach. They know what children have learned in previous grades and what they will need in succeeding grades. They can avoid useless repetition. They are less likely to be confronted by big gaps in what students have learned.

THE *SEQUENCE* AS THE CORE OF THE CURRICULUM

The *Core Knowledge Sequence* is not meant to outline the whole of a school's curriculum, but rather to provide a coherently organized plan for content and skills instruction, while remaining flexible enough to not exclude locally determined or other required content and skills.

Effective Core Knowledge teachers recognize that topics from the *Sequence* must not be eliminated or changed from one grade level to another. The topics in the *Sequence* have been carefully chosen to ensure educational equity. We want all students, advantaged and disadvantaged alike, to share in the common knowledge that can lead to success. “Picking and choosing” elements of the *Sequence*

or taking out topics can lead to the very inequities we wish to avoid. Core Knowledge is an integrated and sequenced curriculum that builds over time. Leaving out some of the building blocks will inevitably weaken the foundation for future learning. The Core Knowledge *Day-by-Day Planner* was designed to assist teachers in pacing and planning all topics on a given grade level, while providing a format in which you can add locally determined or other required content and skills. See Appendix D, “Core Knowledge Grade-by-Grade Resource Recommendations.”

THE CONSENSUS BEHIND THE *CORE KNOWLEDGE SEQUENCE*

The *Core Knowledge Sequence* is the result of a lengthy and rigorous process of research and consensus-building undertaken by the Core Knowledge Foundation, an independent, nonpartisan, nonprofit organization dedicated to excellence and fairness in early education.

To achieve a consensus on the topics to be included in the *Core Knowledge Sequence*, in 1986, the Foundation first analyzed the many reports issued by state departments of education and by professional organizations, such as the National Council of Teachers of Mathematics and the American Association for the Advancement of Science, which recommend general outcomes for elementary and secondary education. We also examined the knowledge and skills specified in the successful educational systems of several other countries, including France, Japan, Sweden, and Germany.

In addition, we formed an advisory board on multiculturalism that proposed the inclusion of diverse cultural traditions that American children should all share as part of their school-based common culture. We sent the resulting materials to three independent groups of teachers, scholars, and scientists around the country, asking them to create a master list of the core knowledge children should have learned by the end of the grade 6. About 150 teachers, including college professors, scientists, and administrators, were involved in this initial step.

These items were combined into a draft *Sequence*, and additional groups of teachers and specialists were asked to agree on a grade-by-grade sequence of the items. That draft sequence was then sent to some 100 educators and specialists who participated in a national conference that was called to hammer out a working agreement on core knowledge for the first six grades; kindergarten, grades 7 and 8, and preschool were subsequently added to the *Sequence*.

This important meeting took place in March 1990. The conferees were elementary school teachers, curriculum specialists, scientists, science writers, officers of national organizations, representatives of ethnic groups, district superintendents, and school principals from across the country. A total of 24 working groups decided on revisions to the draft sequence. The resulting provisional *Core Knowledge Sequence* was fine-tuned during a year of implementation at a pioneering school, Three Oaks Elementary in Lee County, Florida. Also, the Visual Arts and Music sections of the *Sequence* were further developed based on the research of the Core Knowledge Foundation, with the assistance of advisors and teachers.

Because the *Sequence* is intended to be a living document that provides a foundation of knowledge that speakers and writers assume their audiences know, it has been—and will continue to be periodically updated and revised. In general, however, there is more stability than change in the *Sequence*. (See E. D. Hirsch Jr.’s *Cultural Literacy* for a discussion of the inherent stability of the content of literate culture.)

EQUAL ACCESS TO KNOWLEDGE PROMOTES EXCELLENCE AND FAIRNESS

Only by specifying the knowledge that all children should share can we guarantee equal access to that knowledge. In our current system, disadvantaged children especially suffer from low expectations that translate into watered-down curricula. In schools teaching the *Core Knowledge Sequence*, however, disadvantaged children, like all children, are exposed to a coherent core of challenging, interesting knowledge. This provides a foundation for later learning, but also makes up the common ground for communication in our diverse society.

All the most successful educational systems in the world teach a core of knowledge in the early grades. As both research and common sense demonstrate, we learn new knowledge by building on what we already know. It is important to begin building foundations of knowledge in the early grades because that is when children are most receptive, and because academic deficiencies in the first eight grades can permanently impair the quality of later schooling.

MULTICULTURALISM IN THE SEQUENCE

Respect for the diversity in our population is fostered by the subjects specified in the *Core Knowledge Sequence*, which has been reviewed by distinguished scholars in the field of multicultural studies. Some people have urged the Foundation to make a separate listing of multicultural entries in this *Sequence*, but to do so would contradict our embrace of an inclusive, rather than divisive, multiculturalism. As Professor James Comer of Yale University has written in a review of E. D. Hirsch's *Cultural Literacy*,

... respect for cultural diversity is important but is best achieved when young people have adequate background knowledge of mainstream culture. In order for a truly democratic and economically sound society to be maintained, young people must have access to the best knowledge available so that they can understand the issues, express their viewpoints, and act accordingly.

The *Core Knowledge Sequence* is designed to provide “access to the best knowledge available,” including significant knowledge of diverse peoples and cultures. For a more detailed discussion of these issues, see E. D. Hirsch's essay, “Toward a Centrist Curriculum: Two Kinds of Multiculturalism in Elementary School” on our website.

THE ARTS IN THE CURRICULUM

The Core Knowledge Foundation sees the arts not as a peripheral part of the curriculum, but as an essential part of the knowledge all children should learn in the early grades.

Early instruction in the arts should be noncompetitive, and provide many opportunities to sing, dance, listen to music, play act, read and write poetry, draw, paint, and make objects. Equally important, children should be exposed to fine paintings, great music, and other inspiring examples of art. As children progress in their knowledge and competencies, they can begin to learn more about the methods and terminology of the different arts, and become familiar with an ever wider range of great artists and acknowledged masterworks.

Through attaining a basic knowledge of the arts, children are not only better prepared to understand and appreciate works of art, but also to communicate their ideas, feelings, and judgments to others. A good understanding of the arts grows out of at least three modes of knowledge—creative (i.e., directly making artworks), historical, and analytical. Early study of the arts should embrace all three modes with special emphasis on creativity and active participation.

The arts guidelines in the *Core Knowledge Sequence* are organized into two main sections: the Visual Arts and Music. While the *Sequence* does not present other arts such as dance or drama as separate disciplines, we acknowledge their importance and have incorporated them in other disciplines (for example, dance is in Music; drama, in Language Arts).

CORE KNOWLEDGE SCHOOLS

The Core Knowledge Foundation serves as the hub of a nationwide network of hundreds of Core Knowledge schools. Presentations and workshops are available to introduce Core Knowledge and to assist schools in the implementation of the *Core Knowledge Sequence*. Core Knowledge schools are dedicated to teaching solid academic content and skills to all children. To implement Core Knowledge, many people involved with the school's operations, including both staff and parents, need to engage in a great deal of thoughtful discussion and cooperative planning. Teachers make a commitment to teach all the topics in the *Sequence* at the assigned grade levels. This commitment ensures consistency, and helps avoid serious gaps in knowledge, and repetitions in instruction, as students progress through the grades.

The *Sequence* serves as the planning document in each classroom. Its high level of specificity proves useful not only when planning but also when communicating among staff members and with parents. Core Knowledge schools develop a school-wide plan to teach all of the topics in the *Sequence*. Typically this plan is developed over a period of two to three years, either by phasing in topics and subjects, or by adding additional grade levels each year. The Foundation holds national conferences to provide opportunities for networking with other Core Knowledge schools and obtaining new ideas for teaching the topics in the *Sequence*.

For more information on adopting or implementing the *Core Knowledge Sequence*, including recommended professional development, contact the Core Knowledge Foundation at 434-977-7550 or at coreknow@coreknowledge.org.

RESOURCES FOR TEACHING THE CORE KNOWLEDGE SEQUENCE

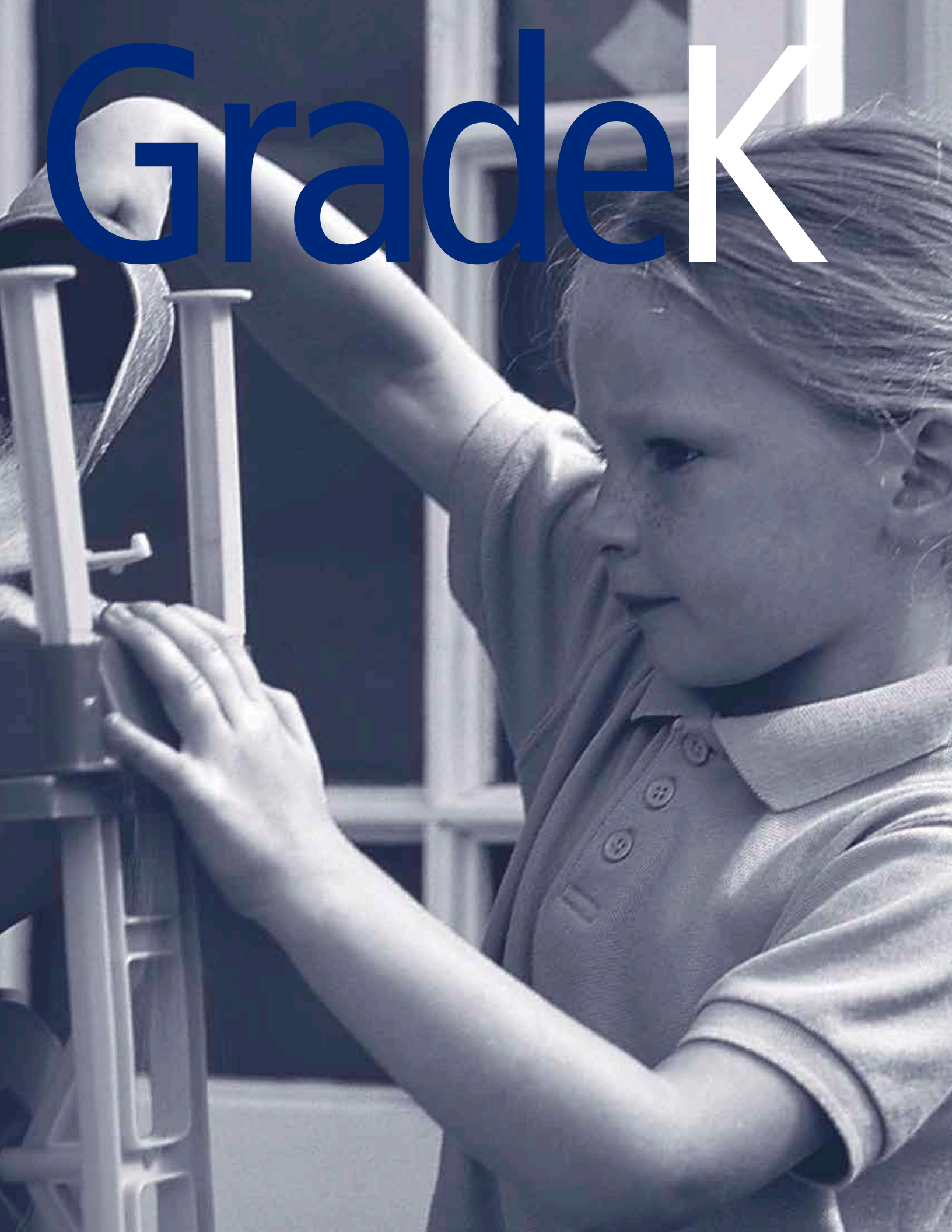
As an initial introduction to Core Knowledge, teachers and parents may wish to consult the books in the Core Knowledge series, titled *What Your Preschooler–Sixth Grader Needs to Know*, edited by E. D. Hirsch, Jr. The books are available at bookstores nationwide, or they may be ordered from the Core Knowledge Foundation by calling 1-800-238-3233.

Once a decision has been made to implement Core Knowledge, we strongly recommend the purchase of the grade specific *Core Knowledge Teacher Handbook* and the *Day-by-Day Planner*. A grade-by-grade listing of recommended resources for both teachers and students is included in Appendix D.

For a list of current resources and prices, visit the Core Knowledge website at www.coreknowledge.org or contact us directly at:

Core Knowledge Foundation
801 East High Street
Charlottesville, VA 22902
telephone: (434) 977-7550
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home page: www.coreknowledge.org



Grade K

Overview of Topics

Kindergarten

Language Arts

- I. Listening and Speaking
 - A. Classroom Discussion
 - B. Presentation of Ideas and Information
 - C. Comprehension and Discussion of Read-Alouds—All Texts
 - D. Comprehension and Discussion of Read-Alouds—Fiction, Drama, and Poetry
 - E. Comprehension and Discussion of Read-Alouds—Nonfiction and Informational Text
- II. Reading
 - A. Print Awareness
 - B. Phonological and Phonemic Awareness
 - C. Phonics: Decoding and Encoding
 - D. Oral Reading and Fluency
 - E. Reading Comprehension—All Texts
- III. Writing
- IV. Language Conventions
 - A. Handwriting and Spelling
 - B. Parts of Speech and Sentence Structure
 - C. Capitalization and Punctuation
- V. Poetry
 - A. Mother Goose and Other Traditional Poems
 - B. Other Poems, Old and New
- VI. Fiction
 - A. Stories
 - B. Aesop's Fables
 - C. American Folk Heroes and Tall Tales
 - D. Literary Terms
- VII. Sayings and Phrases

History and Geography

World:

- I. Geography: Spatial Sense
- II. An Overview of the Seven Continents

American:

- I. Geography
- II. Native American Peoples, Past and Present

- III. Early Exploration and Settlement
 - A. The Voyage of Columbus in 1492
 - B. The Pilgrims
 - C. July 4, "Independence Day"
- IV. Presidents, Past and Present
- V. Symbols and Figures

Visual Arts

- I. Elements of Art
 - A. Color
 - B. Line
- II. Sculpture
- III. Looking at and Talking about Works of Art

Music

- I. Elements of Music
- II. Listening and Understanding
- III. Songs

Mathematics

- I. Patterns and Classification
- II. Numbers and Number Sense
- III. Money
- IV. Computation
- V. Measurement
- VI. Geometry

Science

- I. Plants and Plant Growth
- II. Animals and Their Needs
- III. The Human Body
- IV. Introduction to Magnetism
- V. Seasons and Weather
- VI. Taking Care of the Earth
- VII. Science Biographies

Language Arts: Kindergarten

The *Common Core State Standards for English Language Arts* emphasize the critical importance of building nonfiction background knowledge in a coherent and sequenced way within and across grades. This can be accomplished most effectively, at each grade level, by integrating the topics from history, geography, science, and the arts in the *Core Knowledge Sequence* into the language arts block. Note that in the *Sequence*, there are many cross-curricular connections to history and science topics within Language Arts (e.g., poems, stories, and sayings), as well as to visual arts and music, which can and should be integrated into the applicable domain of study.

For Kindergarten, domains include: An Overview of the Seven Continents; Native American Peoples, Past and Present; Early Exploration and Settlement; Presidents, Past and Present; Plants and Plant Growth; Animals and Their Needs; The Human Body; Introduction to Magnetism; Seasons and Weather; Taking Care of the Earth.

NOTE: The objectives listed in sections I–IV of Language Arts below are consistent with the *Core Knowledge Language Arts* program and embed all of the skills and concepts within the *Common Core State Standards for English Language Arts*.

I. Listening and Speaking

Teachers: Shortly after a baby is born, an amazingly complex, interactive communication process begins between the infant and others in his/her environment. While it may seem like an obvious statement, it is nonetheless worth making the point that listening and speaking are the primary means of communication throughout the early years of a young child's development. It should be equally obvious that reading and writing competencies are predicated on competencies in listening and speaking. When a child enters kindergarten, however, traditional language arts instruction has typically accorded little, if any, attention to the ongoing development of children's listening and speaking ability. We have acted as if listening and speaking competencies are fully and firmly established and can be left behind, as reading and writing instruction begins. Nothing could be further from the truth. This omission in language arts instruction has been a serious oversight. We must remedy this oversight, deliberately elaborating and extending listening and speaking skills, while we simultaneously begin to introduce reading, and then writing. Children who are fortunate enough to participate in language arts instruction that recognizes the importance of continuing to build listening and speaking competency while also beginning reading and writing instruction will, in the end, be far more literate adults.

A. CLASSROOM DISCUSSION

- Participate in age appropriate activities involving listening and speaking.
- Speak clearly with volume appropriate to the setting.
- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say "excuse me" or "please," etc.
- Ask questions to clarify conversations, directions, exercises, and/or classroom routines.
- Carry on and participate in a conversation over four to five turns, staying on topic, initiating comments or responding to a partner's comments, with either an adult or another child of the same age.
- Identify and express physical sensations, mental states, and emotions of self and others.
- Understand and use language to express spatial and temporal relationships (*up, down, first, last, before, after, etc.*).
- Understand and use narrative language to describe people, places, things, locations, events, actions.
- Understand and use common sayings and phrases such as "Better safe than sorry" and "Look before you leap" (see page 11).

B. PRESENTATION OF IDEAS AND INFORMATION

- Follow multi-step, oral directions.
- Give simple directions.
- Provide simple explanations.
- Recite a nursery rhyme, poem or song independently.

C. COMPREHENSION AND DISCUSSION OF READ-ALOUDS—ALL TEXTS

Teachers: Written text makes use of richer vocabulary and more complex syntax than conversational language. It is important that young children be exposed not only to the language of everyday conversation but also to the richer and more formal language of books. This can be done through frequent reading aloud. Helping young children develop the ability to listen to and understand written texts read aloud must be an integral part of any initiative designed to build literacy.

At the kindergarten level, a child's ability to understand what he hears far outpaces his ability to independently read and understand written text. By listening to stories or nonfiction selections read aloud, children can experience the complexities of written language without expending cognitive energy on decoding; they can likewise access deeper and more complex content knowledge than they are presently able to read independently.

Careful consideration should be given to the selection of books read aloud to ensure that the vocabulary and syntax presented is rich and complex. Leveled texts will not provide the rich language experience desired during read-alouds and should only be used as a starting point with students for whom English is a second language.

Grade appropriate read-aloud selections for poetry and fiction are included on pages 9–11. Nonfiction read-alouds should be selected on the basis of the history, science, music and visual art topics identified for kindergartners in the *Core Knowledge Sequence*, with emphasis on history and science read-alouds. It is strongly recommended that daily read-alouds focus on a single topic over a sustained period of time—about two weeks—rather than intermingling read-alouds on a variety of subjects. Careful consideration should be given to the order in which nonfiction read-alouds are presented to ensure that knowledge about a topic builds in a progressive and coherent way.

Following any read-aloud, children should participate in rich, structured conversations with an adult in response to the written text that has been read aloud. In this way, they can begin to orally practice comparing, analyzing, and synthesizing ideas in written text in much the same way as they will be expected to do as independent readers in the later grades.

- Listen to and understand a variety of texts read aloud, including fictional stories, fairy tales, fables, historical narratives, drama, informational text, and poems.

Grasping Specific Details and Key Ideas

- Describe illustrations.
- Sequence four to six pictures illustrating events in a read-aloud.
- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc.
- Retell key details.
- Ask questions to clarify information in a read-aloud.
- Use narrative language to describe people, places, things, locations, events, actions, a scene or facts in a read-aloud.

Observing Craft and Structure

- Understand and use words and phrases heard in read-alouds.
- Compare and contrast similarities and differences within a single read-aloud or between two or more read-alouds.
- Make personal connections to events or experiences in a read-aloud and/or make connections among several read-alouds.

Integrating Information and Evaluating Evidence

- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud.
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud.
- Make predictions prior to and during a read-aloud, based on the title, pictures, and/or text heard thus far and then compare the actual outcomes to predictions.
- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships.
- Identify who is telling a story or providing information in a text.

D. COMPREHENSION AND DISCUSSION OF READ-ALOUDS—FICTION, DRAMA, AND POETRY

- Retell or dramatize a story, using narrative language to describe characters, setting(s), and a beginning, a middle and an end to events of the story in proper sequence.
- Change some story events and provide a different story ending.
- Create and tell an original story, using narrative language to describe characters, setting(s), and a beginning, a middle and an end to events of the story in proper sequence.
- Distinguish fantasy from realistic text in a story.
- Demonstrate understanding of literary language (e.g., author, illustrator, characters, setting, plot, dialogue, personification, simile, and metaphor) and use some of these terms in retelling stories or creating their own stories.

E. COMPREHENSION AND DISCUSSION OF READ-ALOUDS—NONFICTION AND INFORMATIONAL TEXT

Teachers: Select nonfiction read-aloud topics from the kindergarten history, science, music, and visual arts topics listed on pages 12–21, with emphasis on history and science.

- Retell important facts and information from a nonfiction read-aloud.
- With assistance, categorize and organize facts and information within a given topic.
- With assistance, create and interpret timelines and lifelines related to read-alouds.
- Distinguish read-alouds that describe events that happened long ago from those that describe contemporary or current events.

II. Reading

A. PRINT AWARENESS

- Demonstrate understanding that what is said can be written and that the writing system is a way of writing down sounds.
- Demonstrate understanding of directionality (left to right, return sweep, top to bottom, front to back).
- Identify the parts of books and function of each part (front cover, back cover, title page, table of contents).
- Demonstrate correct book orientation by holding book correctly and turning pages.
- Recognize that sentences in print are made up of separate words.
- Understand that words are separated by spaces.
- Distinguish letters, words, sentences, and stories.
- Demonstrate understanding of basic print conventions by tracking and following print word for word when listening to text read aloud.
- Demonstrate understanding that the sequence of letters in a written word represents the sequence of sounds in the spoken word.
- Recognize and name the 26 letters of the alphabet in both their upper-case and lower-case forms.

- Say the letters of the alphabet in order, either in song or recitation.

B. PHONOLOGICAL AND PHONEMIC AWARENESS

- Identify environmental sounds, e.g., keys jingling, scissors cutting, clapping.
- Identify whether pairs of environmental sounds are the same or different.
- Count the number of environmental sounds heard, e.g., clapping, rhythm band instruments.
- Orally segment sentences into discrete words.
- Demonstrate understanding that words are made up of sequences of sounds.
- Demonstrate understanding that vowel sounds are produced with the mouth open and airflow unobstructed, whereas consonant sounds involve closing parts of the mouth and blocking the air flow.
- Given a pair of spoken words, select the one that is longer (i.e., contains more phonemes).
- In riddle games, supply words that begin with a target phoneme.
- Indicate whether a target phoneme is or is not present in the initial/medial/final position of a spoken word, e.g., hear /m/ at the beginning of *mat* and /g/ at the end of *bag*.
- Listen to one-syllable words and tell the beginning or ending sounds, e.g., given *dog*, identify initial /d/ or final /g/.
- Recognize the same phoneme in different spoken words, e.g., /b/ in *ball*, *bug*, and *big*.
- Identify whether pairs of phonemes are the same or different, including pairs that differ only in voicing, e.g., /b/ and /p/.
- Orally blend two to three sounds to form a word, e.g., given the sounds /k/.../a/... /t/, blend to make *cat*.
- Segment a spoken word into phonemes, e.g., given *bat*, produce the segments/b//a//t/.
- Given a spoken word, produce another word that rhymes, e.g., given *hit*, supply *bit* or *mitt*.
- Identify the number of syllables in a spoken word.

C. PHONICS: DECODING AND ENCODING

Teachers: Learning to read requires understanding and mastering the written English code through explicit and systematic phonics instruction. Research suggests that phonics instruction is most effective when specific letter-sound relationships are taught and reinforced by having children both read and write the letter-sound correspondence being studied. Reading and writing—decoding and encoding—are complementary processes that ensure mastery of the written code.

- Demonstrate understanding that a systematic, predictable relationship exists between written letters (graphemes) and spoken sounds (phonemes).
- Blend individual phonemes to pronounce printed words.
- Understand that sometimes two or more printed letters stand for a single sound.
- Read and write any CVC word, e.g., *sit* or *cat*.
- Read and write one-syllable words containing common initial consonant clusters such as tr-, fl-, dr- and sp- and consonant digraphs such as ch-, sh-, th-, etc.
- Read and write words containing separated vowel graphemes, such as, *late*, *bite*, *note*, *cute*.
- Read tricky spellings that can be sounded two ways, e.g., the letter ‘s’ sounded /s/ as in *cats* and /z/ as in *dogs*.
- Read and write chains of one-syllable words in which one sound is added, substituted, or omitted, e.g., read at > cat > bat > bad > bid.
- Read at least 15 words generally identified as very high frequency words.

CONSONANT SOUNDS AND SPELLINGS TAUGHT IN KINDERGARTEN

/b/ spelled 'b' as in *boy*, 'bb' as in *tubby*
 /d/ spelled 'd' as in *dog*, 'dd' as in *madder*
 /f/ spelled 'f' as in *fun*, 'ff' as in *stuff*
 /g/ spelled 'g' as in *get*, 'gg' as in *egg*
 /h/ spelled 'h' as in *him*
 /j/ spelled 'j' as in *jump*
 /k/ spelled 'c' as in *cat*, 'k' as in *kitten*, 'ck' as in *sick*, 'cc' as in *moccasin*
 /l/ spelled 'l' as in *lip*, 'll' as in *sell*
 /m/ spelled 'm' as in *mad*, 'mm' as in *hammer*
 /n/ spelled 'n' as in *net*, 'nn' as in *funny*
 /p/ spelled 'p' as in *pet*, 'pp' as in *happy*
 /r/ spelled 'r' as in *red*, 'rr' as in *earring*
 /s/ spelled 's' as in *sit*, 'ss' as in *dress*
 /t/ spelled 't' as in *top*, 'tt' as in *butter*
 /v/ spelled 'v' as in *vet*
 /w/ spelled 'w' as in *wet*
 /x/ spelled 'x' as in *tax*
 /y/ spelled 'y' as in *yes*
 /z/ spelled 'z' as in *zip*, 'zz' as in *buzz*, 's' as in *dogs*
 /ch/ spelled 'ch' as in *chop*
 /sh/ spelled 'sh' as in *ship*
 /th/ spelled 'th' as in *thin*
 /th/ spelled 'th' as in *then*
 /qu/ spelled 'qu' as in *quick*
 /ng/ spelled 'ng' as in *sing*, 'n' as in *pink*

VOWEL SOUNDS AND SPELLINGS TAUGHT IN KINDERGARTEN

/a/ spelled 'a' as in *cat*
 /e/ spelled 'e' as in *get*
 /i/ spelled 'i' as in *hit*
 /o/ spelled 'o' as in *hot*
 /u/ spelled 'u' as in *but*
 /ae/ spelled 'a_e' as in *cake*
 /ee/ spelled 'ee' as in *bee*
 /ie/ spelled 'i_e' as in *bike*
 /oe/ spelled 'o_e' as in *note*
 /ue/ spelled 'u_e' as in *cute*
 /er/ spelled 'er' as in *her*
 /ar/ spelled 'ar' as in *car*
 /or/ spelled 'or' as in *for*

D. ORAL READING AND FLUENCY

- Read decodable stories that incorporate the specific code knowledge that has been taught.
- Use phonics skills in conjunction with context to confirm or self-correct word recognition and understanding, rereading as necessary.
- Demonstrate understanding of and use commas and end punctuation while reading orally.
- Read aloud, alone, or with a partner at least 15 minutes each day.

E. READING COMPREHENSION—ALL TEXTS

Teachers: It is important to recognize that kindergartners are taught only some of the many letter-sound correspondences a reader needs to know to read a wide range of printed material. As a result, many kindergartners will be able to read independently only the simplest written text. At this grade level, mental energy will be primarily directed to the act of reading, i.e., decoding. A focus on the mechanics of decoding is appropriate and desirable at this early stage in the reading process. In kindergarten, attention to reading comprehension should be directed to ensuring a fundamental understanding of what has been read. At this grade level, it will generally be more effective and efficient to devote time to higher level thinking and comprehension skills at the listening and speaking level in response to written texts that are read aloud.

- Demonstrate understanding of simple decodable text after reading independently.

Grasping Specific Details and Key Ideas

- Answer questions requiring literal recall and understanding of the details and/or facts (i.e., who, what, where, when, etc.) about a text that has been read independently.
- Retell or dramatize a story, using narrative language to describe characters, setting(s), and a beginning, a middle and an end to events of the story in proper sequence.
- Use narrative language to describe people, places, things, locations, events, actions, a scene or facts from a text that has been read independently.

Observing Craft and Structure

- Understand and use words and phrases from a text that has been read independently.

Integrating Information and Evaluating Evidence

- Prior to reading, identify what they know and have learned that may be related to the specific story or topic to be read.
- Use pictures accompanying the written text to check and support understanding.
- Make predictions prior to and while reading, based on the title, pictures, and/or text read thus far and then compare the actual outcomes to predictions.
- Identify who is telling a story or providing information in a text.

III. Writing

Teachers: It is important to recognize that of all the communication skills—listening, speaking, reading, and writing—writing is the most demanding and challenging, especially for kindergartners who are just learning not only the code, but the fine motor skills and letter strokes necessary to put something down on paper. Kindergartners can, however, express themselves in writing by drawing pictures and, as they begin to learn some of the code, copying or writing words, phrases, and sentences.

In addition, students can also participate in shared writing exercises modeled and scaffolded by an adult. The focus in shared writing should be on encouraging the students to verbally express themselves coherently and in complete sentences, as the teacher serves as a scribe.

Writing to Reflect Audience, Purpose and Task

- Draw pictures to represent a text that has been heard or read independently.
- Draw pictures to represent a preference or opinion.
- Write narratives, informative and explanatory texts, and offer an opinion through shared writing exercises.
- With assistance, add details to writing.
- Create a title or caption to accompany a picture and/or shared writing.

IV. Language Conventions

- Form letters, words, phrases and sentences to communicate thoughts and ideas.
- Apply basic spelling conventions.
- Use basic capitalization and punctuation in sentences to convey meaning.

A. HANDWRITING AND SPELLING

- Hold a pencil with a pincer grasp and make marks on paper.
- Trace, copy, and print from memory the 26 letters of the alphabet accurately in both their upper-case and lower-case forms.
- Write own name.
- Write from left to right, leaving spaces between words, and top to bottom using return sweep.
- Begin to write phonemically plausible spellings for words that cannot be spelled correctly with current code knowledge, e.g., write *bote* for *boat*, *sum* for *some*, *hunee* for *honey*.
- Write words, phrases, and sentences from dictation, applying phonics knowledge.

B. PARTS OF SPEECH AND SENTENCE STRUCTURE

- Use and understand question words, i.e., what, where, when, who, how.
- Form regular plural nouns by adding 's' or 'es', i.e., dog, dogs, wish, wishes.
- Demonstrate understanding of frequently occurring prepositions, i.e., *to/from*, *in/out*, *on/off*.
- Produce and expand complete sentences orally and in shared writing exercises.

C. CAPITALIZATION, AND PUNCTUATION

- Capitalize the first word in a sentence, the pronoun *I*.
- Identify and use end punctuation, including periods, question marks, and exclamation points.

V. Poetry

Teachers: Children should be introduced to a varied selection of poetry with strong rhyme and rhythm. Children should hear these rhymes read aloud, and should say some of them aloud. Some rhymes may also be sung to familiar melodies. The poems listed here represent some of the most popular and widely anthologized titles; children may certainly be introduced to more Mother Goose rhymes beyond the selection below. Although children are not expected to memorize the following rhymes, they will delight in knowing their favorites by heart, and will experience a sense of achievement and satisfaction in being able to recite some of the rhymes.

A. MOTHER GOOSE AND OTHER TRADITIONAL POEMS

A Diller, A Dollar
 Baa, Baa, Black Sheep
 Diddle, Diddle, Dumpling
 Early to Bed
 Georgie Porgie
 Hey Diddle Diddle
 Hickory, Dickory, Dock
 Hot Cross Buns
 Humpty Dumpty
 It's Raining, It's Pouring
 Jack and Jill
 Jack Be Nimble
 Jack Sprat
 Ladybug, Ladybug
 Little Bo Peep
 Little Boy Blue

Note Regarding

PRESCHOOL Content:

Some of the poems and stories specified here are appropriate for preschoolers. Indeed, one would hope that most preschoolers would come to kindergarten having heard, for example, some Mother Goose rhymes or the story of "Goldilocks and the Three Bears." However, as not all children attend preschool, and as home preparation varies, the *Core Knowledge Sequence* offers a core of familiar rhymes and stories for all kindergarten children. See also the *Core Knowledge Preschool Sequence*, available from the Core Knowledge Foundation.

Little Jack Horner
 Little Miss Muffet
 London Bridge Is Falling Down
 Mary, Mary, Quite Contrary
 Old King Cole
 Old Mother Hubbard
 One, Two, Buckle My Shoe
 Pat-a-Cake
 Rain, Rain, Go Away
 Ride a Cock-Horse
 Ring Around the Rosey
 Rock-a-bye, Baby
 Roses Are Red
 See-Saw, Margery Daw
 Simple Simon
 Sing a Song of Sixpence
 Star Light, Star Bright
 There Was a Little Girl
 There Was an Old Woman Who Lived in a Shoe
 This Little Pig Went to Market
 Three Blind Mice

Note: The poems listed here constitute a selected core of poetry for this grade. You are encouraged to expose children to more poetry, old and new. To bring children into the spirit of poetry, read it aloud and encourage them to speak it aloud so they can experience the music in the words.

B . OTHER POEMS, OLD AND NEW

April Rain Song (Langston Hughes)
 Happy Thought (Robert Louis Stevenson)
 I Do Not Mind You, Winter Wind (Jack Prelutsky)
 Mary Had a Little Lamb (Sara Josepha Hale)
 The More It Snows (A. A. Milne)
 My Nose (Dorothy Aldis)
 Rain (Robert Louis Stevenson)
 Three Little Kittens (Eliza Lee Follen)
 Time to Rise (Robert Louis Stevenson)
 Tommy (Gwendolyn Brooks)
 Twinkle Twinkle Little Star (Jane Taylor)

VI. Fiction

Teachers: While the following works make up a strong core of literature, the content of language arts includes not only stories, fables, and poems, but also the well-practiced, operational knowledge of how written symbols represent sounds, and how those sounds and symbols convey meaning. Thus, the stories specified below are meant to complement, not to replace, materials designed to help children practice decoding and encoding skills (see above, II. Reading and III. Writing).

The following works constitute a core of stories for this grade. In kindergarten, these stories are meant to be read-aloud selections. Expose children to many more stories, including classic picture books and read-aloud books. (In schools, teachers across grade levels should communicate their choices in order to avoid undue repetition.) Children should also be exposed to nonfiction prose: biographies, books on science and history, books on art and music, etc. And, children should be given opportunities to tell and write their own stories.

A. STORIES

The Bremen Town Musicians (Brothers Grimm)
 Chicken Little (also known as “Henny-Penny”)
 Cinderella (Charles Perrault)
 Goldilocks and the Three Bears
 How Many Spots Does a Leopard Have? (African folktale)

King Midas and the Golden Touch
 The Legend of Jumping Mouse (Native American: Northern Plains legend)
 The Little Red Hen
 Little Red Riding Hood
 Momotaro: Peach Boy (Japanese folktale)
 Snow White and the Seven Dwarfs
 The Three Billy Goats Gruff
 The Three Little Pigs
 A Tug of War (African folktale)
 The Ugly Duckling (Hans Christian Andersen)
The Velveteen Rabbit (Margery Williams)
 selections from *Winnie-the-Pooh* (A. A. Milne)
 The Wolf and the Kids (Brothers Grimm)

B. AESOP'S FABLES

The Lion and the Mouse
 The Grasshopper and the Ants
 The Dog and His Shadow
 The Hare and the Tortoise

C. AMERICAN FOLK HEROES AND TALL TALES

Johnny Appleseed
 Casey Jones

D. LITERARY TERMS

Teachers: As children become familiar with stories, discuss the following:

author
 illustrator

Note: Children will read more American folk heroes and tall tales in grade 2.

VII. Sayings and Phrases

Teachers: Every culture has phrases and proverbs that make no sense when carried over literally into another culture. For many children, this section may not be needed; they will have picked up these sayings by hearing them at home and among friends. But the sayings have been one of the categories most appreciated by teachers who work with children from home cultures that differ from the standard culture of literate American English.

A dog is man's best friend.
 April showers bring May flowers.
 Better safe than sorry.
 Do unto others as you would have them do unto you.
 The early bird gets the worm.
 Great oaks from little acorns grow.
 Look before you leap.
 A place for everything and everything in its place.
 Practice makes perfect.
 [It's] raining cats and dogs.
 Where there's a will there's a way.

History and Geography: Kindergarten

Teachers: In kindergarten, children often study aspects of the world around them: the family, the school, the community, etc. The following guidelines are meant to broaden and complement that focus. The goal of studying selected topics in World History in Kindergarten is to foster curiosity and the beginnings of understanding about the larger world outside the child's locality, and about varied civilizations and ways of life. This can be done through a variety of means: story, drama, art, music, discussion, and more.

The study of geography embraces many topics throughout the *Core Knowledge Sequence*, including topics in history and science. Geographic knowledge includes a spatial sense of the world, an awareness of the physical processes that shape life, a sense of the interactions between humans and their environment, an understanding of the relations between place and culture, and an awareness of the characteristics of specific regions and cultures.

WORLD HISTORY AND GEOGRAPHY

I. Geography: Spatial Sense (working with maps, globes, and other geographic tools)

Teachers: Foster children's geographical awareness through regular work with maps and globes. Have students regularly locate themselves on maps and globes in relation to places they are studying. Children should make and use a simple map of a locality (such as classroom, home, school grounds, "treasure hunt").

- Maps and globes: what they represent, how we use them
- Rivers, lakes, and mountains: what they are and how they are represented on maps and globes
- Locate the Atlantic and Pacific Oceans.
- Locate the North and South Poles.

II. An Overview of the Seven Continents

Teachers: Help children gain a beginning geographic vocabulary and a basic sense of how we organize and talk about the world by giving names to some of the biggest pieces of land. Introduce children to the seven continents through a variety of methods and media (tracing, coloring, relief maps, etc.), and associate the continents with familiar wildlife, landmarks, etc. (for example, penguins in Antarctica; the Eiffel Tower in Europe). Throughout the school year, reinforce names and locations of continents when potential connections arise in other disciplines (for example, connect Grimm's fairy tales to Europe; voyage of Pilgrims to Europe and North America; story of "Momotaro—Peach Boy" to Asia [Japan]; study of Native Americans to North America).

- Identify and locate the seven continents on a map and globe:
 - Asia
 - Europe
 - Africa
 - North America
 - South America
 - Antarctica
 - Australia

Note: In later grades, children will continue to learn about all the continents as well as specific countries and peoples.

AMERICAN HISTORY AND GEOGRAPHY

Teachers: The study of American history begins in grades K-2 with a brief overview of major events and figures, from the earliest days to recent times. A more in-depth, chronological study of American history begins again in grade 3 and continues onward. The term “American” here generally, but not always, refers to the lands that became the United States. Other topics regarding North, Central, and South America may be found in the World History and Geography sections of this Sequence.

I. Geography

- Name and locate the town, city, or community, as well as the state where you live.
- Locate North America, the continental United States, Alaska, and Hawaii.

II. Native American Peoples, Past and Present

Teachers: As children progress through the grades of the *Core Knowledge Sequence*, they will learn about many different Native American peoples in many different regions (such as **Pacific Northwest:** Kwakiutl, Chinook; **Plateau:** Nez Perce; **Great Basin:** Shoshone, Ute; **Southwest:** Dine [Navajo], Hopi, Apache, Zuni; **Plains:** Blackfoot, Comanche, Crow, Kiowa, Dakota, Lakota [Sioux], Cheyenne, Arapaho; **Eastern Woodlands:** Huron, Iroquois, Mohican, Delaware [Lenni Lenape], Susquehanna, Massachusetts, Wampanoag, Powhatan; **Southeast:** Cherokee, Seminole). In kindergarten, study at least **one** specific group of Native Americans. You might explore a local or regional tribe or nation, and compare it with one far away.

- Become familiar with the people and ways of life of at least one Native American tribe or nation, including:
 - how they lived
 - what they wore and ate
 - the homes they lived in
 - their beliefs and stories
 - the current status of the tribe or nation

III. Early Exploration and Settlement

A. THE VOYAGE OF COLUMBUS IN 1492

- Queen Isabella and King Ferdinand of Spain
- The Niña, Pinta, and Santa Maria
- Columbus’s mistaken identification of “Indies” and “Indians”
- The idea of what was, for Europeans, a “New World”

B. THE PILGRIMS

- The Mayflower
- Plymouth Rock
- Thanksgiving Day celebration

C. JULY 4, “INDEPENDENCE DAY”

- The “birthday” of our nation
- Democracy (rule of the people): Americans wanted to rule themselves instead of being ruled by a faraway king.
- Some people were not free: slavery in early America



IV. Presidents, Past and Present

Teachers: Introduce children to famous presidents, and discuss with them such questions as: *What is the president? How does a person become president? Who are some of our most famous presidents, and what did they do that made them famous?*

- George Washington
The “Father of Our Country”
Legend of George Washington and the cherry tree
- Thomas Jefferson, author of Declaration of Independence
- Abraham Lincoln
Humble origins
“Honest Abe”
- Theodore Roosevelt
- Current United States president

See below, Symbols and
Figures: Mount Rushmore;
the White House.

V. Symbols and Figures

- Recognize and become familiar with the significance of
American flag
Statue of Liberty
Mount Rushmore
The White House

Visual Arts: Kindergarten

SEE INTRODUCTION, “The Arts in the Curriculum.”

Teachers: In schools, lessons on the visual arts should illustrate important elements of making and appreciating art, and emphasize important artists, works of art, and artistic concepts. When appropriate, topics in the visual arts may be linked to topics in other disciplines. While the following guidelines specify a variety of artworks in different media and from various cultures, they are not intended to be comprehensive. Teachers are encouraged to build upon the core content and expose children to a wide range of art and artists.

I. Elements of Art

Teachers: The generally recognized elements of art include line, shape, form, space, light, texture, and color. In kindergarten, introduce children to line and color. Engage students in recognizing and using different kinds of lines and colors, and point out lines and colors in nature. (You may also wish to observe shapes in art and nature—see Math: Geometry.)

A. COLOR

- Observe how colors can create different feelings and how certain colors can seem “warm” (red, orange, yellow) or “cool” (blue, green, purple)
- Observe the use of color in
Pieter Bruegel, *The Hunters in the Snow*
Helen Frankenthaler, *Blue Atmosphere*
Paul Gauguin, *Tahitian Landscape*
Pablo Picasso, *Le Gourmet*

B. LINE

- Identify and use different lines: straight, zigzag, curved, wavy, thick, thin
- Observe different kinds of lines in
Katsushika Hokusai, *Tuning the Samisen*
Henri Matisse, *Purple Robe and Anemones*
Joan Miró, *People and Dog in the Sun*

II. Sculpture

- Recognize and discuss the following as sculptures:
Northwest American Indian totem pole
Statue of Liberty
- Mobiles: Alexander Calder’s *Lobster Trap and Fish Tail*

III. Looking at and Talking about Works of Art

Teachers: After children have been introduced to some elements of art and a range of artworks and artists, engage them in looking at pictures and talking about them. Ask the children about their first impressions—what they notice first, and what the picture makes them think of or feel. Go on to discuss the lines and colors, details not obvious at first, why they think the artist chose to depict things in a certain way, etc.

- Observe and talk about
Pieter Bruegel, *Children’s Games*
Mary Cassatt, *The Bath*
Winslow Homer, *Snap the Whip*
Diego Rivera, *Mother’s Helper*
Henry O. Tanner, *The Banjo Lesson*

See also American History K:
Native Americans, *re* totem
pole.

Music: Kindergarten

SEE INTRODUCTION, “The Arts in the Curriculum.”

Teachers: In schools, lessons on music should feature activities and works that illustrate important musical concepts and terms, and should introduce important composers and works. When appropriate, topics in music may be linked to topics in other disciplines.

The following guidelines focus on content, not performance skills, though many concepts are best learned through active practice (singing, clapping rhythms, playing instruments, etc.).

I. Elements of Music

- Through participation, become familiar with some basic elements of music (rhythm, melody, harmony, form, timbre, etc.).
 - Recognize a steady beat; begin to play a steady beat.
 - Recognize that some beats have accents (stress).
 - Move responsively to music (marching, walking, hopping, swaying, etc.).
 - Recognize short and long sounds.
 - Discriminate between fast and slow.
 - Discriminate between obvious differences in pitch: high and low.
 - Discriminate between loud and soft.
 - Recognize that some phrases are the same, some different.
 - Sing unaccompanied, accompanied, and in unison.

II. Listening and Understanding

Teachers: To encourage listening skills and the beginnings of understanding, play various kinds of music often and repeatedly. In the kindergarten classroom, music can be played for enjoyment, to accompany activities, to inspire creative movement, etc. Expose children to a wide range of music, including children’s music, popular instrumental music, and music from various cultures.

- Recognize the following instruments by sight and sound: guitar, piano, trumpet, flute, violin, drum.
- Become familiar with the following works:
 - Edvard Grieg, “Morning” and “In the Hall of the Mountain King” from *Peer Gynt*
 - Victor Herbert, “March of the Toys” from *Babes in Toyland*
 - Richard Rodgers, “March of the Siamese Children” from *The King and I*
 - Camille Saint-Saëns, *Carnival of the Animals*

III. Songs

Teachers: See also Language Arts, Mother Goose poems. A number of the poems may be sung to familiar melodies.

The Bear Went Over the Mountain
 Bingo
 The Farmer in the Dell
 Go In and Out the Window
 Go Tell Aunt Rhody
 Here We Go Round the Mulberry Bush
 The Hokey Pokey
 Hush Little Baby
 If You’re Happy and You Know It
 Jingle Bells



Note: Grieg’s “In the Hall of the Mountain King” is a good work to illustrate dynamics (loud and quiet), as well as tempo (slow and fast).

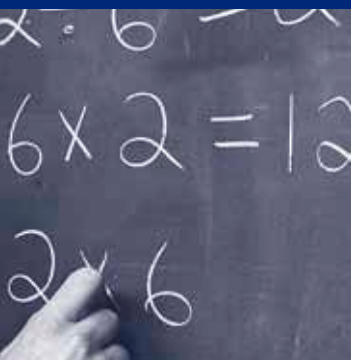
John Jacob Jingleheimer Schmidt
Kumbaya (also Kum Ba Ya)
London Bridge
Old MacDonald Had a Farm
Row, Row, Row Your Boat
This Old Man
Twinkle Twinkle Little Star
The Wheels on the Bus

Teachers: You may wish to supplement the songs listed above with songs from the *Core Knowledge Preschool Sequence*, as follows:

A Tisket, A Tasket
Are You Sleeping?
Blue-Tail Fly (Jimmie Crack Corn)
Do Your Ears Hang Low?
Did You Ever See a Lassie?
Eensy, Weensy Spider
Five Little Ducks That I Once Knew
Five Little Monkeys Jumping On the Bed
Happy Birthday to You
Head and Shoulders, Knees and Toes
Here is the Beehive
I Know an Old Lady
I'm a Little Teapot
Kookaburra
Lazy Mary
Looby Loo
Oats, Peas, Beans and Barley Grow
Oh, Do You Know the Muffin Man?
Oh Where, Oh Where, Has My Little Dog Gone?
One Potato, Two Potato
Open, Shut Them
Pop Goes the Weasel
Teddy Bear, Teddy Bear, Turn Around
Teddy Bears Picnic
Where is Thumbkin?
Who Stole the Cookie from the Cookie Jar?
You Are My Sunshine

Mathematics: Kindergarten

Teachers: Mathematics has its own vocabulary and patterns of thinking. It is a discipline with its own language and conventions. Thus, while some lessons may offer occasional opportunities for linking mathematics to other disciplines, it is critically important to attend to math as math. From the earliest years, mathematics requires incremental review and steady practice: not only the diligent effort required to master basic facts and operations, but also thoughtful and varied practice that approaches problems from a variety of angles, and gives children a variety of opportunities to apply the same concept or operation in different types of situations. While it is important to work toward the development of “higher-order problem-solving skills,” it is equally important—indeed, it is prerequisite to achieving “higher order” skills—to have a sound grasp of basic facts, and an automatic fluency with fundamental operations.



I. Patterns and Classification

- Establish concepts of likeness and difference by sorting and classifying objects according to various attributes: size, shape, color, amount, function, etc.
- Define a set by the common property of its elements.
- In a collection of objects that includes a given set and an item that does not belong, indicate which item does not belong.
- Moving from concrete objects to pictorial representations, recognize patterns and predict the extension of a pattern.
- Extend a sequence of ordered concrete objects.

II. Numbers and Number Sense

- Using concrete objects and pictorial representations, compare sets:
 - same as (equal to)
 - more than
 - less than
 - most
 - least
- Count
 - forward from 1 to 31, first beginning with 1, and later from any given number
 - backward from 10
 - from 1 to 10 by twos
 - by fives and tens to 50
- Write numbers 1 to 31 (with special attention to the difference between certain written symbols, such as 6 and 9; 2 and 5; 1 and 7; 12 and 21, etc.).
- Count and write the number of objects in a set.
- Given a number, identify one more, one less.
- Identify ordinal position, first (1st) through sixth (6th).
- Identify pairs.
- Interpret simple pictorial graphs.
- Identify $\frac{1}{2}$ as one of two equal parts of a region or object; find $\frac{1}{2}$ of a set of concrete objects.

III. Money

- Identify pennies, nickels, dimes, and quarters.
- Identify the one-dollar bill.
- Identify the dollar sign (\$) and cents sign (¢).
- Write money amounts using the cents sign (¢).

IV. Computation

- Add and subtract to ten, using concrete objects.
- Recognize the meaning of the plus sign (+).
- Subtraction: the concept of “taking away”; recognize the meaning of the minus sign (-).

V. Measurement

- Identify familiar instruments of measurement, such as ruler, scale, thermometer.
- Compare objects according to:
 - Linear measure
 - long and short; longer than, shorter than
 - measure length using non-standard units
 - begin to measure length in inches
 - height: taller than, shorter than
 - Weight
 - heavy, light
 - heavier than, lighter than
 - Capacity (volume)
 - full and empty
 - less full than, as full as, fuller than
 - Temperature: hotter and colder
- Time
 - Sequence events: before and after; first, next, last.
 - Compare duration of events: which takes more or less time.
 - Read a clock face and tell time to the hour.
 - Know the days of the week and the months of the year.
 - Orientation in time: today, yesterday, tomorrow; morning, afternoon; this morning vs. yesterday morning, etc.

VI. Geometry

- Identify left and right hand.
- Identify top, bottom, middle.
- Know and use terms of orientation and relative position, such as:
 - closed, open
 - on, under, over
 - in front, in back (behind)
 - between, in the middle of
 - next to, beside
 - inside, outside
 - around
 - far from, near
 - above, below
 - to the right of, to the left of
 - here, there
- Identify and sort basic plane figures: square, rectangle, triangle, circle.
- Identify basic shapes in a variety of common objects and artifacts (windows, pictures, books, buildings, cars, etc.).
- Recognize shapes as the same or different.
- Make congruent shapes and designs.
- Compare size of basic plane figures (larger, smaller).

Science: Kindergarten

Teachers: Effective instruction in science requires hands-on experience and observation. In the words of the 1993 report from the American Association for the Advancement of Science, *Benchmarks for Science Literacy*, "From their very first day in school, students should be actively engaged in learning to view the world scientifically. That means encouraging them to ask questions about nature and to seek answers, collect things, count and measure things, make qualitative observations, organize collections and observations, discuss findings, etc."

While experience counts for much, book learning is also important, for it helps bring coherence and order to a child's scientific knowledge. Only when topics are presented systematically and clearly can children make steady and secure progress in their scientific learning. The child's development of scientific knowledge and understanding is in some ways a very disorderly and complex process, different for each child. But a systematic approach to the exploration of science, one that combines experience with book learning, can help provide essential building blocks for deeper understanding at a later time.



I. Plants and Plant Growth

Teachers: Through reading aloud, observation, and activities such as growing plants from seeds in varying conditions, explore the following with children:

- What plants need to grow: sufficient warmth, light, and water
- Basic parts of plants: seed, root, stem, branch, leaf
- Plants make their own food.
- Flowers and seeds: seeds as food for plants and animals (for example, rice, nuts, wheat, corn)
- Two kinds of plants: deciduous and evergreen
- Farming
 - How some food comes from farms as crops
 - How farmers must take special care to protect their crops from weeds and pests
 - How crops are harvested, kept fresh, packaged, and transported for people to buy and consume

II. Animals and Their Needs

Teachers: Through reading aloud, observation, and activities, explore with children the common characteristics and needs of animals, including:

- Animals, like plants, need food, water, and space to live and grow.
- Plants make their own food, but animals get food from eating plants or other living things.
- Offspring are very much (but not exactly) like their parents.
- Most animal babies need to be fed and cared for by their parents; human babies are especially in need of care when young.
- Pets have special needs and must be cared for by their owners.

III. The Human Body

- The five senses and associated body parts:
 - Sight: eyes
 - Hearing: ears
 - Smell: nose
 - Taste: tongue
 - Touch: skin
- Taking care of your body: exercise, cleanliness, healthy foods, rest

IV. Introduction to Magnetism

Teachers: Through reading aloud, observation, and experiments with magnets, introduce children to the idea that there are forces we cannot see that act upon objects. Children should:

- Identify familiar everyday uses of magnets (for example, in toys, in cabinet locks, in “refrigerator magnets,” etc.).
- Classify materials according to whether they are or are not attracted by a magnet.

V. Seasons and Weather

Teachers: The emphasis in kindergarten should be on observation and description; technical explanations of meteorological phenomena should be taken up in later grades; see grades 2 and 4 for more detailed study of Meteorology.

- The four seasons
- Characteristic local weather patterns during the different seasons
- The sun: source of light and warmth
- Daily weather changes
 - Temperature: thermometers are used to measure temperature
 - Clouds
 - Rainfall: how the condition of the ground varies with rainfall; rainbows
 - Thunderstorms: lightning and thunder, hail, safety during thunderstorms
 - Snow and snowflakes, blizzard

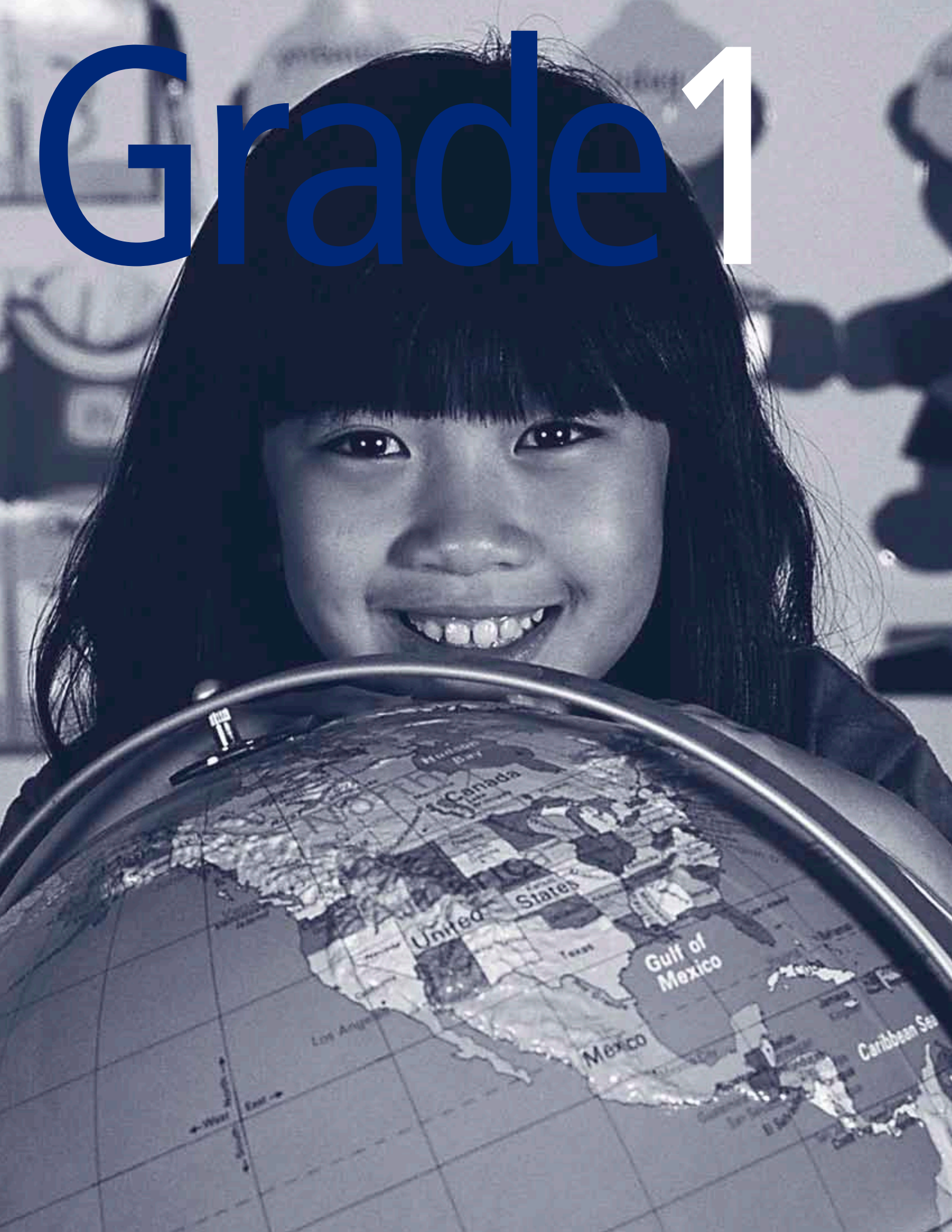
VI. Taking Care of the Earth

- Conservation: Some natural resources are limited, so people must be careful not to use too much of them (example: logging and reforestation).
- Practical measures for conserving energy and resources (for example, turning off unnecessary lights, tightly turning off faucets, etc.)
- Some materials can be recycled (for example, aluminum, glass, paper).
- Pollution (for example, littering, smog, water pollution) can be harmful, but if people are careful they can help reduce pollution.

VII. Science Biographies

George Washington Carver (botanist/discovered ways to keep soil rich)
 Jane Goodall (studied chimpanzees)
 Wilbur and Orville Wright (made first airplane)

Grade 1



Overview of Topics

Grade 1

Language Arts

- I. Listening and Speaking
 - A. Classroom Discussion
 - B. Presentation of Ideas and Information
 - C. Comprehension and Discussion of Read-Alouds—All Texts
 - D. Comprehension and Discussion of Read-Alouds—Fiction, Drama, and Poetry
 - E. Comprehension and Discussion of Read-Alouds—Nonfiction and Informational Text
- II. Reading
 - A. Print Awareness
 - B. Phonemic Awareness
 - C. Phonics: Decoding and Encoding
 - D. Oral Reading and Fluency
 - E. Reading Comprehension—All Texts
 - F. Reading Comprehension—Fiction, Drama, and Poetry
 - G. Reading Comprehension—Nonfiction and Informational Text
- III. Writing
 - A. Narrative Writing
 - B. Informative/Explanatory Writing
 - C. Persuasive Writing (Opinion)
- IV. Language Conventions
 - A. Handwriting and Spelling
 - B. Parts of Speech and Sentence Structure
 - C. Capitalization and Punctuation
- V. Poetry
- VI. Fiction
 - A. Stories
 - B. Aesop’s Fables
 - C. Different Lands, Similar Stories
 - D. Literary Terms
- VII. Sayings and Phrases

History and Geography

World:

- I. Geography
 - A. Spatial Sense
 - B. Geographical Terms and Features
- II. Early World Civilizations
 - A. Mesopotamia: The “Cradle of Civilization”
 - B. Ancient Egypt
 - C. History of World Religions
- III. Modern Civilization and Culture: Mexico
 - A. Geography
 - B. Culture

American:

- I. Early People and Civilizations
 - A. The Earliest People: Hunters and Nomads
 - B. Early American Civilizations

- II. Early Exploration and Settlement
 - A. Columbus
 - B. The Conquistadors
 - C. English Settlers
- III. From Colonies to Independence: The American Revolution
- IV. Early Exploration of the American West
- V. Symbols and Figures

Visual Arts

- I. Art from Long Ago
- II. Elements of Art
 - A. Color
 - B. Line
 - C. Shape
 - D. Texture
- III. Kinds of Pictures: Portrait and Still Life

Music

- I. Elements of Music
- II. Listening and Understanding
 - A. Musical Terms and Concepts
 - B. Music Can Tell a Story
 - C. American Musical Traditions (Jazz)
- III. Songs

Mathematics

- I. Patterns and Classification
- II. Numbers and Number Sense
- III. Money
- IV. Computation
 - A. Addition
 - B. Subtraction
 - C. Solving Problems and Equations
- V. Measurement
- VI. Geometry

Science

- I. Living Things and Their Environments
 - A. Habitats
 - B. Oceans and Undersea Life
 - C. Environmental Change and Habitat Destruction
 - D. Special Classifications of Animals
- II. The Human Body
 - A. Body Systems
 - B. Germs, Diseases, and Preventing Illness
- III. Matter
- IV. Properties of Matter: Measurement
- V. Introduction to Electricity
- VI. Astronomy
- VII. The Earth
 - A. Geographical Features of the Earth’s Surface
 - B. What’s Inside the Earth
- VIII. Science Biographies

Language Arts: Grade 1



The *Common Core State Standards for English Language Arts* emphasize the critical importance of building nonfiction background knowledge in a coherent and sequenced way within and across grades. This can be accomplished most effectively, at each grade level, by integrating the topics from history, geography, science, and the arts in the *Core Knowledge Sequence* into the language arts block. Note that in the *Sequence*, there are many cross-curricular connections to history and science topics within Language Arts (e.g., poems, stories, and sayings), as well as to visual arts and music, which can and should be integrated into the applicable domain of study.

For Grade 1, domains include: Early World Civilizations; Modern Civilization and Culture: Mexico; Early American Civilizations; Early Exploration and Settlement; From Colonies to Independence: The American Revolution; Early Exploration of the American West; Living Things and Their Environments; The Human Body; Matter; Introduction to Electricity; Astronomy: Introduction to the Solar System; The Earth.

NOTE: The objectives listed in sections I–IV of Language Arts below are consistent with the *Core Knowledge Language Arts* program and embed all of the skills and concepts within the *Common Core State Standards for English Language Arts*.

I. Listening and Speaking

Teachers: Traditional language arts instruction has typically accorded little, if any, attention to the ongoing development of children’s listening and speaking ability. This failure to focus on the development of oral language in language arts instruction has been a serious oversight. Literacy, the ability to read and write written language, is highly correlated with students’ oral language proficiency, and the ability to understand a text read aloud is a prerequisite for making sense of the same text in printed form. It is therefore essential that children build listening and speaking competency while also developing reading and writing skills.

A. CLASSROOM DISCUSSION

- Participate in age appropriate activities involving listening and speaking.
- Speak clearly with volume appropriate to the setting.
- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc.
- Ask questions to clarify conversations, directions, exercises, and/or classroom routines.
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age.
- Identify and express physical sensations, mental states, and emotions of self and others.
- Understand and use language to express spatial and temporal relationships (*up, down, first, last, before, after*, etc.).
- Understand and use narrative language to describe people, places, things, locations, events, actions.
- Understand and use common sayings and phrases such as “Hit the nail on the head” and “Let the cat out of the bag” (see page 34).

B. PRESENTATION OF IDEAS AND INFORMATION

- Follow multi-step, oral directions.
- Give simple directions.
- Provide simple explanations.
- Recite a nursery rhyme, poem or song independently, using appropriate eye contact, volume and clear enunciation.
- Give oral presentations about personal experiences, topics of interest, and/or stories, using appropriate eye contact, volume and clear enunciation.

C. COMPREHENSION AND DISCUSSION OF READ-ALOUDS—ALL TEXTS

Teachers: Written text makes use of richer vocabulary and more complex syntax than conversational language. It is important that young children be exposed not only to the language of everyday conversation but also to the richer and more formal language of books. This can be done through frequent reading aloud. Helping young children develop the ability to listen to and understand written texts read aloud must be an integral part of any initiative designed to build literacy.

At the first grade level, a child's ability to understand what he hears far outpaces his ability to independently read and understand written text. By listening to stories or nonfiction selections read aloud, children can experience the complexities of written language without expending cognitive energy on decoding; they can likewise access deeper and more complex content knowledge than they are presently able to read independently.

Careful consideration should be given to the selection of books read aloud to ensure that the vocabulary and syntax presented is rich and complex. Leveled texts will not provide the rich language experience desired during read-alouds and should only be used as a starting point with students for whom English is a second language.

Grade appropriate read-aloud selections for poetry and fiction are included on pages 32–34. Nonfiction read-alouds should be selected on the basis of the history, science, music and visual art topics identified for Grade 1 students in the *Core Knowledge Sequence*, with emphasis on history and science read-alouds. It is strongly recommended that daily read-alouds focus on a single topic over a sustained period of time—about two weeks—rather than intermingling read-alouds on a variety of subjects. Careful consideration should be given to the order in which nonfiction read-alouds are presented to ensure that knowledge about a topic builds in a progressive and coherent way.

Following any read-aloud, children should participate in rich, structured conversations with an adult in response to the written text that has been read aloud. In this way, they can begin to orally practice comparing, analyzing, and synthesizing ideas in written text in much the same way as they will be expected to do as independent readers in the later grades.

- Listen to and understand a variety of texts read aloud, including fictional stories, fairy tales, fables, historical narratives, drama, informational text, and poems.
- Distinguish the following genres of literature: fiction, nonfiction and drama.

Grasping Specific Details and Key Ideas

- Describe illustrations.
- Sequence four to six pictures illustrating events in a read-aloud.
- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc.
- Retell key details.
- Ask questions to clarify information in a read-aloud.
- Use narrative language to describe people, places, things, locations, events, actions, a scene or facts in a read-aloud.

Observing Craft and Structure

- Understand and use words and phrases heard in read-alouds.
- Compare and contrast similarities and differences within a single read-aloud or between two or more read-alouds.
- Make personal connections to events or experiences in a read-aloud and/or make connections among several read-alouds.

Integrating Information and Evaluating Evidence

- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud.
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud.

- Make predictions prior to and during a read-aloud, based on the title, pictures, and/or text heard thus far and then compare the actual outcomes to predictions.
- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships.
- Interpret information that is presented orally and then ask additional questions to clarify information or the topic in the read-aloud.
- Identify who is telling a story or providing information in a text.

D. COMPREHENSION AND DISCUSSION OF READ-ALOUDS—FICTION, DRAMA, AND POETRY

- Retell or dramatize a story, using narrative language to describe characters, setting(s), and a beginning, a middle and an end to events of the story in proper sequence.
- Compare and contrast characters from different stories.
- Change some story events and provide a different story ending.
- Create and tell an original story, using narrative language to describe characters, setting(s), and a beginning, a middle and an end to events of the story in proper sequence.
- Distinguish fantasy from realistic text in a story.
- Identify the moral or lesson of a fable, folktale, or myth.
- Demonstrate understanding of literary language (e.g., author, illustrator, characters, setting, plot, dialogue, personification, simile, and metaphor) and use some of these terms in retelling stories or creating their own stories.
- Identify sensory language and how it is used to describe people, objects, places and events.

E. COMPREHENSION AND DISCUSSION OF READ-ALOUDS—NONFICTION AND INFORMATIONAL TEXT

Teachers: Select nonfiction read-aloud topics from the first grade history, science, music, and visual arts topics listed on pages 35–47, with emphasis on history and science.

- Generate questions and seek information from multiple sources to answer questions.
- Answer questions about the details of a nonfiction text, indicating which part of the text provided the information needed to answer specific questions.
- With assistance, categorize and organize facts and information within a given topic.
- With assistance, create and interpret timelines and lifelines related to read-alouds.
- Distinguish read-alouds that describe events that happened long ago from those that describe contemporary or current events.

II Reading

A. PRINT AWARENESS

- Demonstrate understanding that what is said can be written and that the writing system is a way of writing down sounds.
- Demonstrate understanding of directionality (left to right, return sweep, top to bottom, front to back).
- Identify the parts of books and function of each part (front cover, back cover, title page, table of contents).
- Demonstrate correct book orientation by holding book correctly and turning pages.
- Recognize that sentences in print are made up of separate words.
- Understand that words are separated by spaces.
- Distinguish letters, words, sentences, and stories.
- Demonstrate understanding of basic print conventions by tracking and following print word for word when listening to text read aloud.

- Demonstrate understanding that the sequence of letters in a written word represents the sequence of sounds in the spoken word.
- Recognize and name the 26 letters of the alphabet in both their upper-case and lower-case forms.
- Say the letters of the alphabet in order, either in song or recitation.

B. PHONEMIC AWARENESS

- Demonstrate understanding that words are made up of sequences of sounds.
- Demonstrate understanding that vowel sounds are produced with the mouth open and airflow unobstructed, whereas consonant sounds involve closing parts of the mouth and blocking the air flow.
- Given a pair of spoken words, select the one that is longer (i.e., contains more phonemes).
- In riddle games, supply words that begin with a target phoneme.
- Indicate whether a target phoneme is or is not present in the initial/medial/final position of a spoken word, e.g., hear /m/ at the beginning of *mat* and /g/ at the end of *bag*.
- Listen to one-syllable words and tell the beginning or ending sounds, e.g., given *dog*, identify initial /d/ or final /g/.
- Recognize the same phoneme in different spoken words, e.g., /b/ in *ball*, *bug*, and *big*.
- Identify whether pairs of phonemes are the same or different, including pairs that differ only in voicing, e.g., /b/ and /p/.
- Orally blend two to three sounds to form a word, e.g., given the sounds /k/... /a/.../t/, blend to make *cat*.
- Segment a spoken word into phonemes, e.g., given *bat*, produce the segments/b//a//t/.
- Given a spoken word, produce another word that rhymes, e.g., given *hit*, supply *bit* or *mitt*.
- Identify the number of syllables in a spoken word.

C. PHONICS: DECODING AND ENCODING

Teachers: Learning to read requires understanding and mastering the written English code through explicit and systematic phonics instruction. Research suggests that phonics instruction is most effective when specific letter-sound relationships are taught and reinforced by having children both read and write the letter-sound correspondence being studied. Reading and writing—decoding and encoding—are complementary processes that ensure mastery of the written code.

- Demonstrate understanding that a systematic, predictable relationship exists between written letters (graphemes) and spoken sounds (phonemes).
- Blend individual phonemes to pronounce printed words.
- Understand that sometimes two or more printed letters stand for a single sound.
- Read one to two syllable words containing any of the grapheme-phoneme correspondences listed below.
- Read and write words with inflectional endings, i.e., -s, -ed, -ing, -er, -est.
- Read, understand, and write contractions, i.e., *isn't*, *I'm*, *can't*, etc.
- Sort and classify words according to the spelling used to represent a specific phoneme.
- Read tricky spellings that can be sounded two ways, e.g., the letter 's' sounded /s/ as in *cats* and /z/ as in *dogs*.
- Read and spell chains of one-syllable words in which one sound is added, substituted, or omitted, i.e., read at > cat > bat > bad > bid.
- Read at least 30 words generally identified as high frequency words.

CONSONANT SOUNDS AND SPELLINGS TAUGHT IN FIRST GRADE

/b/ spelled 'b' as in *boy*, 'bb' as in *tubby*

/d/ spelled 'd' as in *dog*, 'dd' as in *madder*, 'ed' as in *filled*

/f/ spelled 'f' as in *fun*, 'ff' as in *stuff*

/g/ spelled 'g' as in *get*, 'gg' as in *egg*

/h/ spelled 'h' as in *him*
 /j/ spelled 'j' as in *jump*, 'g' as in *gem*, 'ge' as in *fringe*
 /k/ spelled 'c' as in *cat*, 'k' as in *kitten*, 'ck' as in *sick*, 'cc' as in *moccasin*
 /l/ spelled 'l' as in *lip*, 'll' as in *sell*
 /m/ spelled 'm' as in *mad*, 'mm' as in *hammer*
 /n/ spelled 'n' as in *net*, 'nn' as in *funny*, 'kn' as in *knock*
 /p/ spelled 'p' as in *pet*, 'pp' as in *happy*
 /r/ spelled 'r' as in *red*, 'rr' as in *earring*, 'wr' as in *wrist*
 /s/ spelled 's' as in *sit*, 'ss' as in *dress*, 'c' as in *cent*, 'ce' as in *prince*, 'se' as in *rinse*
 /t/ spelled 't' as in *top*, 'tt' as in *butter*, 'ed' as in *asked*
 /v/ spelled 'v' as in *vet*, 've' as in *twelve*
 /w/ spelled 'w' as in *wet*, 'wh' as in *when*
 /x/ spelled 'x' as in *tax*
 /y/ spelled 'y' as in *yes*
 /z/ spelled 'z' as in *zip*, 'zz' as in *buzz*, 's' as in *dogs*
 /ch/ spelled 'ch' as in *chop*, 'tch' as in *itch*
 /sh/ spelled 'sh' as in *ship*
 /th/ spelled 'th' as in *thin*
 /th/ spelled 'th' as in *then*
 /qu/ spelled 'qu' as in *quick*
 /ng/ spelled 'ng' as in *sing*, 'n' as in *pink*

VOWEL SOUNDS AND SPELLINGS TAUGHT IN FIRST GRADE

/a/ spelled 'a' as in *cat*
 /e/ spelled 'e' as in *get*
 /i/ spelled 'i' as in *hit*
 /o/ spelled 'o' as in *hot*
 /u/ spelled 'u' as in *but*
 /ae/ spelled 'a_e' as in *cake*, 'ai' as in *wait*, 'ay' as in *day*, 'a' as in *paper*
 /ee/ spelled 'ee' as in *bee*, 'e' as in *me*, 'y' as in *funny*, 'ea' as in *beach*, 'e_e' as in *Pete*,
 'ie' as in *cookie*
 /ie/ spelled 'i_e' as in *bike*, 'i' as in *biting*, 'y' as in *try*, 'ie' as in *tie*, 'igh' as in *night*
 /oe/ spelled 'o_e' as in *note*, 'oa' as in *boat*, 'oe' as in *toe*, 'o' as in *open*, 'ow' as in *snow*
 /ue/ spelled 'u_e' as in *cute*
 /aw/ spelled 'aw' as in *paw*
 /oo/ spelled 'oo' as in *look*,
 /oo/ spelled 'oo' as in *soon*
 /ou/ spelled 'ou' as in *shout*
 /oi/ spelled 'oi' as in *oil*
 /er/ spelled 'er' as in *her*
 /ar/ spelled 'ar' as in *car*
 /or/ spelled 'or' as in *for*

D. ORAL READING AND FLUENCY

- Read decodable stories that incorporate the specific code knowledge that has been taught.
- Demonstrate increased accuracy, fluency, and expression on successive reading of a decodable text (50 wpm by the end of the year).
- Use phonics skills in conjunction with context to confirm or self-correct word recognition and understanding, rereading as necessary.
- Demonstrate understanding of and use commas and end punctuation while reading orally.
- Read aloud, alone, or with a partner at least 15 minutes each day.

E. READING COMPREHENSION—ALL TEXTS

Teachers: During the beginning of first grade, most students will still need to devote considerable energy when reading to deciphering the written text. Over the course of this year, they

will learn even more elements of the code, meaning that the decodable texts that they can read independently will increasingly resemble “real stories” and trade books. With practice and repeated readings of the same text, students will develop increasing automaticity, allowing them to focus more intently on the meaning of what they are reading. Both of these factors, i.e., the student’s increasing fluency and the use of more authentic text—which is now decodable because of the student’s increasing code knowledge—mean that attention to reading comprehension can move to a higher level than just the rudimentary understanding of text expected at the kindergarten level. This expectation is reflected in the increased number of objectives below that have been added to the kindergarten level objectives. However, it is important to remember that listening comprehension still far exceeds reading comprehension and that children’s ability to talk about what they have heard and/or read will exceed their ability to demonstrate that understanding in writing.

- Demonstrate understanding of completely decodable text after reading independently.

Grasping Specific Details and Key Ideas

- Sequence four to six pictures illustrating events from a text that has been read independently.
- Answer questions requiring literal recall and understanding of the details and/or facts (i.e., who, what, where, when, etc.) about a text that has been read independently.
- Retell key details from a text that has been read independently.
- Ask questions to clarify information about a text that has been read independently.
- Use narrative language to describe people, places, things, locations, events, actions, a scene or facts from a text that has been read independently.

Observing Craft and Structure

- Identify basic text features and what they mean, including title, table of contents, and chapters.
- Understand and use words and phrases from a text that has been read independently.
- Compare and contrast similarities and differences within a single text or between multiple texts read independently.
- Make personal connections to events or experiences in a text that has been read independently and/or make connections among several texts that have been read independently.

Integrating Information and Evaluating Evidence

- Prior to reading, identify what they know and have learned that may be related to the specific story or topic to be read.
- Use pictures accompanying the written text to check and support understanding.
- Make predictions prior to and while reading, based on the title, pictures, and/or text read thus far and then compare the actual outcomes to predictions.
- Answer questions that require making interpretations, judgments, or giving opinions about what is read independently, including answering “why” questions that require recognizing cause/effect relationships.
- Identify who is telling a story or providing information in a text.
- Identify temporal words that link and sequence events, i.e., *first, next, then, etc.*
- Identify words that link ideas, i.e., *for example, also, in addition.*

F. READING COMPREHENSION—FICTION, DRAMA, AND POETRY

- Retell or dramatize a story, using narrative language to describe characters, setting(s), and a beginning, a middle and an end to events of the story in proper sequence.
- Compare and contrast characters from different stories.
- Change some story events and provide a different story ending.
- Distinguish fantasy from realistic text in a story.
- Identify the moral or lesson of a fable, folktale, or myth.

- Demonstrate understanding of literary language (e.g., author, illustrator, characters, setting, plot, dialogue, personification, simile, and metaphor) and use some of these terms in retelling stories or creating their own stories.
- Identify sensory language and how it is used to describe people, objects, places and events.

G. READING COMPREHENSION—NONFICTION AND INFORMATIONAL TEXT

Teachers: Select nonfiction topics from the first grade history, science, music and visual arts topics listed on pages 35–47, with emphasis on history and science.

- With assistance, create and interpret timelines and lifelines related to text read independently.
- Distinguish text that describes events that happened long ago from text that describes contemporary or current events.

III. Writing

Teachers: It is important to recognize that of all the communication skills—listening, speaking, reading, and writing—writing is the most demanding and challenging. During the beginning of first grade, children still need to devote much of their focus and cognitive energy to the code itself, as well as the fine motor act of writing. During this period, teachers should continue to support written expression through shared writing experiences that are modeled and scaffolded by an adult.

At some point during the first grade year, however, most children will feel comfortable enough with the basic skills to begin making a transition to writing more independently. Young children’s desire to express themselves in writing should be heartily encouraged. To this end, it is important that teachers have age appropriate expectations about what first grade student writing should resemble. Students have not been taught all of the spellings they will need to achieve dictionary-correct spelling. It is therefore premature to expect that words in their independent writing will be spelled correctly. It is reasonable to expect students to use the letter-sound correspondences they have learned to set down plausible spellings for the sounds in the word. For example, a student who writes *bote* for *boat*, *dun* for *done*, or *hed* for *head* has set down a plausible spelling for each sound in the word, using the code knowledge taught in this grade. This should be seen as good spelling for this stage of literacy acquisition. Dictionary-correct spelling will be a realistic goal when students have learned more spellings and learned how to use a dictionary to check spelling.

Furthermore, while teachers can begin to model and scaffold the use of a writing process, such as “Plan-Draft-Edit,” it is equally important not to dampen student enthusiasm by rigidly insisting that *all* student writing be edited over and over again to bring the text to the “publication” stage. A sensible balance that encourages children to use their current skill knowledge when writing—without stifling creative expression—is optimal at the first grade level.

Writing to Reflect Audience, Purpose and Task

- Add details to writing.
- Begin to use tools, including technology, to plan, draft, and edit writing.

Conducting Research

- Gather information from experiences or provided text sources.

A. NARRATIVE WRITING

- Write or retell a story that includes characters, setting(s), and a beginning, a middle and an end to events of the story in proper sequence.
- Write a descriptive paragraph using sensory language.
- Create a title and an ending that are relevant to the narrative.

B. INFORMATIVE/EXPLANATORY WRITING

- Write about a topic, including a beginning and ending sentence, facts and examples relevant to the topic, and specific steps (if writing explanatory text).

C. PERSUASIVE WRITING (OPINION)

- Express an opinion or point of view in writing, providing reasons and supporting details for preference or opinion using the linking word *because*.
- Create a title that is relevant to the topic or subject of the text.
- If writing about a specific book or read-aloud, refer to the content of the text.

IV. Language Conventions

- Form letters, words, phrases and sentences to communicate thoughts and ideas.
- Apply basic spelling conventions.
- Use basic capitalization and punctuation in sentences to convey meaning.

A. HANDWRITING AND SPELLING

- Print from memory the 26 letters of the alphabet accurately in both their upper-case and lower-case forms.
- Write on primary lined paper from left to right, staying within the lines and leaving spaces between words, and from top to bottom, using return sweep.
- Write phonemically plausible spellings for words that cannot be spelled correctly with current code knowledge, e.g., write *ate* for *eight*, *boi* for *boy*, *fone* for *phone*.
- Write words, phrases, and sentences from dictation, applying phonics knowledge.
- Identify and use synonyms and antonyms.

B. PARTS OF SPEECH AND SENTENCE STRUCTURE

- Recognize, identify and use subject, object, and possessive pronouns, i.e., *I, me, my, they, them*, orally, in written text and in own writing.
- Recognize, identify and use common and proper nouns, orally, in written text, and in own writing.
- Recognize, identify and use regular verbs to convey a sense of past, present, and future tense orally, in written text, and in own writing.
- Recognize, identify, and use adjectives orally, in written text, and in own writing.
- Recognize, identify and use subjects and predicates, orally, in written text, and in own writing.
- Recognize, identify, and use statements, questions, and exclamations orally, in written text, and in own writing.
- Produce and expand complete sentences orally and in shared writing exercises.

C. CAPITALIZATION, AND PUNCTUATION

- Capitalize the first word in a sentence, the pronoun *I*, and proper nouns (names and places,) months, days of the week.
- Identify and use end punctuation, including periods, question marks, and exclamation points.
- Use commas appropriately in greetings and closings of letters, dates, and items in a series.
- Write a simple friendly letter.
- Use apostrophes to create contractions and indicate possession, i.e., *cat's meow*.
- Use quotation marks appropriately to designate direct speech.

Note: The poems listed here constitute a selected core of poetry for this grade. You are encouraged to expose children to more poetry, old and new, and to have children write their own poems. To bring children into the spirit of poetry, read it aloud and encourage them to speak it aloud so they can experience the music in the words. Although children are not expected to memorize the following rhymes, they will delight in knowing their favorites by heart, and will experience a sense of achievement and satisfaction in being able to recite some of the rhymes.

V. Poetry

Hope (Langston Hughes)
 I Know All the Sounds the Animals Make (Jack Prelutsky)
 My Shadow (Robert Louis Stevenson)
 The Owl and the Pussycat (Edward Lear)
 The Pasture (Robert Frost)
 The Purple Cow (Gelett Burgess)
 Rope Rhyme (Eloise Greenfield)
 Sing a Song of People (Lois Lenski)
 Solomon Grundy (traditional)
 The Swing (Robert Louis Stevenson)
 Table Manners [also known as “The Goops”] (Gelett Burgess)
 Thanksgiving Day [“Over the river and through the wood”] (Lydia Maria Child)
 Washington (Nancy Byrd Turner)
 Wynken, Blynken, and Nod (Eugene Field)

VI. Fiction

Teachers: While the following works make up a strong core of literature, the “content” of language arts includes not only stories, fables, and poems, but also the well-practiced, operational knowledge of how written symbols represent sounds, and how those sounds and symbols convey meaning. Thus, the stories specified below are meant to complement, not to replace, materials designed to help children practice decoding and encoding skills (see above, II. Reading and III. Writing).

The titles here constitute a core of stories for this grade. They are available in a variety of editions, some designed for novice readers, and others best for reading aloud to children. In first grade, most of the following titles should be read-aloud selections. It is recommended that you provide a mixture of texts, including some beginning readers, with their necessarily limited vocabulary and syntax, for these can give children the important sense of accomplishment that comes from being able to “read it all by myself.”

Expose children to many more stories, including classic picture books and read-aloud books. (In schools, teachers across grade levels should communicate their choices in order to avoid undue repetition.) Children should also be exposed to nonfiction prose—biographies, books on science and history, books on art and music—and they should be given opportunities to tell and write their own stories.

A. STORIES

The Boy at the Dike (folktale from Holland)
 The Frog Prince
 Hansel and Gretel
 selections from *The House at Pooh Corner* (A. A. Milne)
 How Anansi Got Stories from the Sky God (folktale from West Africa)
 It Could Always Be Worse (Yiddish folktale)
 Jack and the Beanstalk
 The Knee-High Man (African-American folktale)
 Medio Pollito (Hispanic folktale)
 The Pied Piper of Hamelin
 Pinocchio
 The Princess and the Pea
 Puss-in-Boots
 Rapunzel
 Rumpelstiltskin
 Sleeping Beauty
The Tale of Peter Rabbit (Beatrix Potter)

Tales of Br'er Rabbit (recommended tales: Br'er Rabbit Gets Br'er Fox's Dinner; Br'er Rabbit Tricks Br'er Bear; Br'er Rabbit and the Tar Baby)
Why the Owl Has Big Eyes (Native American legend)

B. AESOP'S FABLES

The Boy Who Cried Wolf
The Dog in the Manger
The Wolf in Sheep's Clothing
The Maid and the Milk Pail
The Fox and the Grapes
The Goose and the Golden Eggs

C. DIFFERENT LANDS, SIMILAR STORIES

Teachers: To give students a sense that people all around the world tell certain stories that, while they differ in details, have much in common, introduce students to similar folktales from different lands, such as the following:

Lon Po Po (China) and Little Red Riding Hood
Issun Boshi, or One-Inch Boy (Japan); Tom Thumb (England); Thumbelina (by the Danish writer Hans Christian Andersen); Little Finger of the Watermelon Patch (Vietnam)
Some of the many variations on the Cinderella story (from Europe, Africa, China, Vietnam, Egypt, Korea, etc.)

D. LITERARY TERMS

Characters, heroes, and heroines
Drama
actors and actresses
costumes, scenery and props
theater, stage, audience

Note: Children should learn terms relating to drama as part of their participation in a play appropriate for first graders—possibly a dramatized version of one of the stories listed above.

VII. Sayings and Phrases

Teachers: Every culture has phrases and proverbs that make no sense when carried over literally into another culture. For many children, this section may not be needed; they will have picked up these sayings by hearing them at home and among friends. But the sayings have been one of the categories most appreciated by teachers who work with children from home cultures that differ from the standard culture of literate American English.

A.M. and P.M.
An apple a day keeps the doctor away.
Do unto others as you would have them do unto you. [also in Kindergarten]
Fish out of water
Hit the nail on the head.
If at first you don't succeed, try, try again.
Land of Nod
Let the cat out of the bag.
The more the merrier.
Never leave till tomorrow what you can do today.
Practice makes perfect. [also in Kindergarten]
Sour grapes
There's no place like home.
Wolf in sheep's clothing

History and Geography: Grade 1

Teachers: In first grade, children often study aspects of the world around them: the family, the school, the community, etc. The following guidelines are meant to broaden and complement that focus. The goal of studying selected topics in World History in first grade is to foster curiosity and the beginnings of understanding about the larger world outside the child's locality, and about varied civilizations and ways of life. This can be done through a variety of means: story, drama, art, music, discussion, and more.

The study of geography embraces many topics throughout the *Core Knowledge Sequence*, including topics in history and science. Geographic knowledge embraces a spatial sense of the world, an awareness of the physical processes that shape life, a sense of the interactions between humans and their environment, an understanding of the relations between place and culture, and an awareness of the characteristics of specific regions and cultures.

WORLD HISTORY AND GEOGRAPHY

I. Geography

A. SPATIAL SENSE (Working with Maps, Globes, and Other Geographic Tools)

Teachers: Foster children's geographical awareness through regular work with maps and globes. Have students regularly locate themselves on maps and globes in relation to places they are studying.

- Name your continent, country, state, and community.
- Understand that maps have keys or legends with symbols and their uses.
- Find directions on a map: east, west, north, south.
- Identify major oceans: Pacific, Atlantic, Indian, Arctic.
- Review the seven continents: Asia, Europe, Africa, North America, South America, Antarctica, Australia.
- Locate: Canada, United States, Mexico, Central America.
- Locate: the Equator, Northern Hemisphere, Southern Hemisphere, North and South Poles.

B. GEOGRAPHICAL TERMS AND FEATURES

- peninsula, harbor, bay, island

II. Early World Civilizations

Teachers: As you introduce children to early civilizations, keep in mind the question, *What is civilization?* Help children see recurring features such as settling down, agriculture, building towns and cities, and learning how to write.

A. MESOPOTAMIA: THE "CRADLE OF CIVILIZATION"

- Importance of Tigris and Euphrates Rivers
- Development of writing, why writing is important to the development of civilization
- Code of Hammurabi (early code of laws), why rules and laws are important to the development of civilization

B. ANCIENT EGYPT

- Geography
 - Africa
 - Sahara Desert
- Importance of Nile River, floods and farming
- Pharaohs
 - Tutankhamen
 - Hatshepsut, woman pharaoh
- Pyramids and mummies, animal gods, Sphinx
- Writing: hieroglyphics

See also Visual Arts 1:
Art from Long Ago: Art of
Ancient Egypt.

Note: Students will be introduced to Hinduism and Buddhism in grade 2, and examine Islam in more detail in grade 4. They also examine lasting ideas from Judaism and Christianity in grade 6.

Note: In older sources you may find these formerly used spellings: Mohammed, Mecca, Koran.

C. HISTORY OF WORLD RELIGIONS

Teachers: Since religion is a shaping force in the story of civilization, the *Core Knowledge Sequence* introduces children in the early grades to major world religions, beginning with a focus on geography and major symbols and figures. The purpose is not to explore matters of theology but to provide a basic vocabulary for understanding many events and ideas in history. The goal is to familiarize, not proselytize; to be descriptive, not prescriptive. The tone should be one of respect and balance: no religion should be disparaged by implying that it is a thing of the past. To the question, "Which one is true?" an appropriate response is: "People of different faiths believe different things to be true. The best people to guide you on this right now are your parents or someone at home."

- Judaism
 - Belief in one God
 - Story of the Exodus: Moses leads the Hebrews out of Egypt
 - Israel, Chanukah, Star of David, Torah, synagogue
- Christianity
 - Christianity grew out of Judaism
 - Jesus, meaning of "messiah"
 - Christmas and Easter, symbol of the cross
- Islam
 - Originated in Arabia, since spread worldwide
 - Followers are called Muslims
 - Allah, Muhammad, Makkah, Qur'an, mosque
 - Symbol of crescent and star (found on the flags of many mainly Islamic nations)

III. Modern Civilization and Culture: Mexico

A. GEOGRAPHY

- North American continent, locate Mexico relative to Canada and the United States
- Central America, Yucatan Peninsula
- Pacific Ocean, Gulf of Mexico, Rio Grande
- Mexico City

B. CULTURE

- Indian and Spanish heritage
- Traditions: fiesta, piñata
- National holiday: September 16, Independence Day

Note: For historical connections, see American History 1: Maya and Aztec civilizations; Conquistadors, Cortes, Moctezuma. See also Music 1: "La Cucaracha"; Language Arts 1: "Medio Pollito," and Visual Arts 1: Diego Rivera, *Piñata* and, *The History of Medicine in Mexico* (mural).

American History & Geography

AMERICAN HISTORY AND GEOGRAPHY

Teachers: The study of American history begins in grades K–2 with a brief overview of major events and figures, from the earliest days to recent times. A more in-depth, chronological study of American history begins again in grade 3 and continues onward. The term “American” here generally, but not always, refers to the lands that became the United States. Other topics regarding North, Central, and South America may be found in the World History and Geography sections of this Sequence.

I. Early People and Civilizations

A. THE EARLIEST PEOPLE: HUNTERS AND NOMADS

- Crossing from Asia to North America (the land bridge as one possibility)
From hunting to farming
Gradual development of early towns and cities

B. EARLY AMERICAN CIVILIZATIONS

Teachers: Children will study the Maya, Inca, and Aztec civilizations in detail in grade 5. First grade teachers should examine the fifth grade guidelines to see how these topics build in the later grade.

Here, introduce children to these civilizations. Though it is historically accurate to note the warlike nature of the Maya and Aztecs, it is recommended that mention of the practice of human sacrifice be left to the fifth grade.

- Maya in Mexico and Central America
- Aztecs in Mexico
Moctezuma (also called Montezuma)
Tenochtitlan (Mexico City)
- Inca in South America (Peru, Chile)
Cities in the Andes, Machu Picchu

II. Early Exploration and Settlement

A. COLUMBUS

Teachers: Review from kindergarten the story of Columbus’s voyage in 1492.

B. THE CONQUISTADORS

- The search for gold and silver
- Hernán Cortés and the Aztecs
- Francisco Pizarro and the Inca
- Diseases devastate Native American population

C. ENGLISH SETTLERS

- The story of the Lost Colony
Sir Walter Raleigh
Virginia Dare
- Virginia
Jamestown
Captain John Smith
Pocahontas and Powhatan
- Slavery, plantations in Southern colonies
- Massachusetts
Pilgrims, Mayflower, Thanksgiving Day
Massachusetts Bay Colony, the Puritans

Note: Early exploration and the colonial years will be studied in greater depth and detail in grade 3. First grade teachers should examine the third grade guidelines to see how these topics build in the later grade.

Note: The now-familiar name “Powhatan” was used by English settlers for the leader whose name was Wahunsonacock.



See below, Symbols and
Figures: Liberty Bell.

See also Music 1: "Yankee
Doodle."

III. From Colonies to Independence: The American Revolution

Teachers: The American Revolution will be studied in greater depth and detail in grade 4. First grade teachers should examine the fourth grade guidelines to see how these topics build in the later grade. It is recommended that first grade teachers focus on the topics specified here, and leave for fourth grade the more detailed study of the Revolution. In first grade, emphasize the *story* of the birth of our nation.

- Locate the original thirteen colonies.
- The Boston Tea Party
- Paul Revere's ride, "One if by land, two if by sea"
- Minutemen and Redcoats, the "shot heard round the world"
- Thomas Jefferson and the Declaration of Independence, "We hold these truths to be self-evident, that all men are created equal. . . ."
- Fourth of July
- Benjamin Franklin: patriot, inventor, writer
- George Washington: from military commander to our first president
Martha Washington
Our national capital city named Washington
- Legend of Betsy Ross and the flag

IV. Early Exploration of the American West

Teachers: America's westward growth will be studied in grade 2 and in greater depth and detail in grade 5. First grade teachers should examine the second and fifth grade guidelines to see how these topics build in later grades.

- Daniel Boone and the Wilderness Road
- The Louisiana Purchase
Explorations of Lewis and Clark
Sacagawea
- Geography: Locate the Appalachian Mountains, the Rocky Mountains, and the Mississippi River.

V. Symbols and Figures

- Recognize and become familiar with the significance of
Liberty Bell
Current United States president
American flag
Bald eagle

Visual Arts: Grade 1

SEE INTRODUCTION, “The Arts in the Curriculum.”

Teachers: In schools, lessons on the visual arts should illustrate important elements of making and appreciating art, and emphasize important artists, works of art, and artistic concepts. When appropriate, topics in the visual arts may be linked to topics in other disciplines. While the following guidelines specify a variety of artworks in different media and from various cultures, they are not intended to be comprehensive. Teachers are encouraged to build upon the core content and expose children to a wide range of art and artists.

I. Art from Long Ago

Teachers: Help children see how art has been an important human activity since early times.

- Look at and discuss
 - Cave paintings
 - Art of Ancient Egypt
 - Great Sphinx
 - Mummy cases: Tutankhamen’s coffin
 - Bust of Queen Nefertiti

See also World History 1:
Ancient Egypt.

II. Elements of Art

Teachers: The generally recognized elements of art include line, shape, form, space, light, texture, and color. In first grade, focus on the following:

A. COLOR

Teachers: Review from Kindergarten the idea of “warm” and “cool” colors.

- Know that red, yellow, and blue are commonly referred to as the “primary colors,” and that
 - blue + yellow = green
 - blue + red = purple
 - red + yellow = orange
- Observe the use of color in
 - Claude Monet, *Tulips in Holland*
 - James A. McNeill Whistler, *Arrangement in Black and Gray* (also known as *Whistler’s Mother*)
 - Diego Rivera, *Piñata*

See also World History 1:
Mexico, *re piñata*.

B. LINE

- Identify and use different lines: straight, zigzag, curved, wavy, spiral, thick, thin
- Observe how different lines are used in
 - Jacob Lawrence, *Parade*
 - Henri Matisse, *The Swan*
 - Georgia O’ Keeffe, one of her *Shell* paintings

C. SHAPE

- Recognize basic geometric shapes—square, rectangle, triangle, circle, oval—in nature, man-made objects, and artworks, including
 - Jacob Lawrence, *Parade*
 - Grant Wood, *Stone City, Iowa*

D. TEXTURE

Teachers: Provide opportunities for children to experience both tactile and visual texture (these terms are for your reference only) by having them describe qualities of texture in natural objects (tactile texture) and in works of art (visual texture).

- Describe qualities of texture (as, for example, rough, smooth, bumpy, scratchy, slippery, etc.) in
 - Native American baskets (such as a pomo basket)
 - Edgar Degas, *Little Fourteen-Year-Old Dancer* (also known as *Dressed Ballet Dancer*)
 - Albrecht Dürer, *Young Hare*

III. Kinds of Pictures: Portrait and Still Life

Teachers: Introduce children to the terms we use to describe different kinds of paintings, discuss examples, and provide opportunities for children to create their own works in different genres. When you look at the specified works, ask the children about their first impressions—what they notice first, and what the picture makes them think of or feel. Go on to discuss lines, shapes, colors, and textures; details not obvious at first; why they think the artist chose to depict things in a certain way, etc.

- Recognize as a portrait or self-portrait:
 - Leonardo da Vinci, *Mona Lisa*
 - Francisco Goya, *Don Manuel Osorio Manrique de Zuñiga*
 - Vincent van Gogh, *Self-Portrait* [1889]
- Recognize as a still life:
 - Vincent van Gogh, *Iris*
 - Paul Cézanne, studies with fruit, such as *Apples and Oranges*
- Recognize as a mural (a painting on a wall):
 - Diego Rivera, *The History of Medicine in Mexico*

See also World History 1: Mexico, re murals of Diego Rivera.

Music: Grade 1

SEE INTRODUCTION, "The Arts in the Curriculum."

Teachers: In schools, lessons on music should feature activities and works that illustrate important musical concepts and terms, and should introduce important composers and works. When appropriate, topics in music may be linked to topics in other disciplines.

The following guidelines focus on content, not performance skills, though many concepts are best learned through active practice (singing, clapping rhythms, playing instruments, etc.).

I. Elements of Music

- Through participation become familiar with basic elements of music (rhythm, melody, harmony, form, timbre, etc.).
 - Recognize a steady beat; moving to a beat; play a steady beat; recognize accents.
 - Move responsively to music (marching, walking, hopping, swaying, etc.).
 - Recognize short and long sounds.
 - Discriminate between fast and slow.
 - Discriminate between obvious differences in pitch: high and low.
 - Discriminate between loud and soft.
 - Understand that melody can move up and down.
 - Hum the melody while listening to music.
 - Echo short rhythms and melodic patterns.
 - Play simple rhythms and melodies.
 - Recognize like and unlike phrases.
 - Recognize that music has timbre or tone color.
 - Sing unaccompanied, accompanied, and in unison.
- Understand that music is written down in a special way and become familiar with the following notation:
 - whole note ♩ half note ♪ quarter note

II. Listening and Understanding

Teachers: Expose children to a wide range of music, including children's music, popular instrumental music, and music from various cultures.

A. MUSICAL TERMS AND CONCEPTS

- Composers
 - Know that a composer is someone who writes music.
 - Become familiar with Wolfgang Amadeus Mozart as a composer who wrote what is known as classical music, and listen to the Allegro (first movement) from *A Little Night Music (Eine kleine Nachtmusik)*.
- Orchestra
 - Become familiar with the families of instruments in the orchestra: strings, brass, woodwinds, percussion.
 - Know that the leader of the orchestra is called the conductor.
 - Listen to Sergei Prokofiev, *Peter and the Wolf*.

Note: Children will review families of instruments and specific instruments in later grades.



Note: If resources are available, read aloud to students the story behind Tchaikovsky's *Nutcracker*, and either attend a performance or show scenes from the ballet, which is available on videotape. You may also wish to introduce children to the Suite from Tchaikovsky's *Sleeping Beauty*, in relation to the story in Language Arts 1, "Sleeping Beauty."

B. MUSIC CAN TELL A STORY

- Opera
Understand that opera combines music, singing, and acting.
Listen to selections from Humperdinck's *Hansel and Gretel*: "Brother, Come Dance with Me," "I Am the Little Sandman," "Children's Prayer."
- Instrumental Music
Listen to Paul Dukas, *The Sorcerer's Apprentice*.
- Ballet
Understand that ballet combines music and movement, often to tell a story.
Listen to Tchaikovsky's *Nutcracker Suite*.

Teachers: Familiarize children with other types of dance, such as square dancing and tap dancing.

C. AMERICAN MUSICAL TRADITIONS

- Jazz
Understand that jazz is a kind of music that developed in America, with African and African American roots, and that jazz musicians improvise.
Recognize Louis Armstrong as a great early jazz musician.

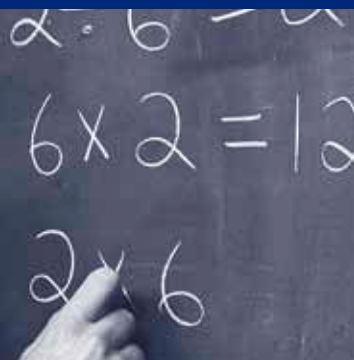
III. Songs

Teachers: You may also wish to teach children the song "Brother, Come Dance with Me" in connection with their introduction to the opera *Hansel and Gretel*. And you may wish to teach the poem "Thanksgiving Day" ("Over the river and through the wood") as a song (see Language Arts 1: Poetry).

America the Beautiful
Billy Boy
Dry Bones
For He's a Jolly Good Fellow
Frère Jacques
La Cucaracha
Make New Friends
Michael, Row the Boat Ashore
Oh, Dear, What Can the Matter Be?
Oh, John the Rabbit
Oh! Susanna
On Top of Old Smokey
She'll Be Comin' 'Round the Mountain
Skip to My Lou
Take Me Out to the Ball Game
There's a Hole in the Bucket
When the Saints Go Marching In
Yankee Doodle

Mathematics: Grade 1

Teachers: Mathematics has its own vocabulary and patterns of thinking. It is a discipline with its own language and conventions. Thus, while some lessons may offer occasional opportunities for linking mathematics to other disciplines, it is critically important to attend to math as math. From the earliest years, mathematics requires incremental review and steady practice: not only the diligent effort required to master basic facts and operations, but also thoughtful and varied practice that approaches problems from a variety of angles, and gives children a variety of opportunities to apply the same concept or operation in different types of situations. While it is important to work toward the development of “higher-order problem-solving skills,” it is equally important—indeed, it is prerequisite to achieving “higher order” skills—to have a sound grasp of basic facts, and an automatic fluency with fundamental operations.



I. Patterns and Classification

- Establish concepts of likeness and difference by sorting and classifying objects according to various attributes: size, shape, color, amount, function, etc.
- Define a set by the common property of its elements.
- In a collection of objects that includes a given set and an item that does not belong, indicate which item does not belong.
- Recognize patterns and predict the extension of a pattern.

II. Numbers and Number Sense

Teachers: Review and build on topics from kindergarten.

- Write numbers 0 - 100.
- Count from 0 - 100 by ones; twos; fives; tens.
- Count by tens from a given single-digit number.
- Count forward and backwards.
- Use tallies.
- Identify ordinal position, 1st to 10th.
- Identify dozen; half-dozen; pair.
- Recognize place value: ones, tens, hundreds.
- Identify more and less; counting how many more or less.
- Given a number, identify one more and one less; ten more and ten less.
- Compare quantities using the signs $<$, $>$, and $=$.
- Recognize fractions as part of a whole: $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$
- Create and interpret simple pictorial graphs and bar graphs.

III. Money

- Identify and recognize relative value of penny, nickel, dime, quarter.
- Recognize and use dollar (\$) and cents (¢) signs.
- Show how different combinations of coins equal the same amounts of money.

IV. Computation

A. ADDITION (using concrete objects, and paper and pencil)

- Know the meaning of the plus (+) sign.
- Know what a “sum” is.
- Know addition facts to $10 + 10$ (untimed mastery).
- Add in any order.
- Know what happens when you add zero.
- Know how to write addition problems horizontally and vertically.
- Know that when you add 3 numbers, you get the same sum regardless of grouping of addends.
- Solve two-digit addition problems with and without regrouping.



B. SUBTRACTION (using concrete objects, and paper and pencil)

- Understand subtraction as “taking away.”
- Know the meaning of the minus sign (-).
- Know what a “difference” is.
- Know subtraction facts corresponding to addition facts (untimed mastery).
- Know how to write subtraction problems horizontally and vertically.
- Solve two-digit subtraction problems with and without regrouping.
- Mentally subtract 10 from a two-digit number.

C. SOLVING PROBLEMS AND EQUATIONS

- Write an addition or subtraction equation to solve basic one-step story and picture problems.
- Solve simple equations in the form of $__ - 2 = 7$; $5 + __ = 7$.

V. Measurement

- Identify familiar instruments of measurement, such as ruler, scale, thermometer.
- Compare objects according to:
 - Linear measure
 - Measure length using non-standard units.
 - Measure length in inches and feet, and in centimeters.
 - Measure and draw line segments in inches and centimeters.
 - Weight
 - Compare weights of objects using a balance scale.
 - Measure weight in non-standard units and in pounds.
 - Capacity (volume)
 - Estimate and measure capacity in cups.
 - Identify quart, gallon.
 - Temperature: associate temperature in degrees Fahrenheit with weather.
- Time
 - Sequence events: before and after; first, next, last.
 - Compare duration of events: which takes more or less time.
 - Read a clock face and tell time to the half-hour.
 - Know the days of the week and the months of the year, both in order and out of sequence.
 - Orientation in time: today, yesterday, tomorrow; morning, afternoon, evening, night; this morning vs. yesterday morning, etc.

VI. Geometry

- Identify left and right hand.
- Identify top, bottom, middle.
- Know and use terms of orientation and relative position, such as:

closed, open	around
on, under, over	far from, near
in front, in back (behind)	above, below
between, in the middle of	to the right of, to the left of
next to, beside	here, there
inside, outside	
- Identify and draw basic plane figures: square, rectangle, triangle, circle.
- Describe square, rectangle, triangle according to number of sides.
- Identify basic solid figures: sphere, cube, cone.
- Identify basic shapes in a variety of common objects and artifacts (balls, cans, windows, pictures, books, buildings, cars, etc.).
- Make congruent shapes and designs.

Teachers: Effective instruction in science requires hands-on experience and observation. In the words of the 1993 report from the American Association for the Advancement of Science, *Benchmarks for Science Literacy*, "From their very first day in school, students should be actively engaged in learning to view the world scientifically. That means encouraging them to ask questions about nature and to seek answers, collect things, count and measure things, make qualitative observations, organize collections and observations, discuss findings, etc."

While experience counts for much, book learning is also important, for it helps bring coherence and order to a child's scientific knowledge. Only when topics are presented systematically and clearly can children make steady and secure progress in their scientific learning. The child's development of scientific knowledge and understanding is in some ways a very disorderly and complex process, different for each child. But a systematic approach to the exploration of science, one that combines experience with book learning, can help provide essential building blocks for deeper understanding at a later time.

I. Living Things and Their Environments

Teachers: Introduce the idea of interdependence between living things and their environment.

A. HABITATS

- Living things live in environments to which they are particularly suited.
- Specific habitats and what lives there, for example:
 - Forest [oak trees, squirrels, raccoons, snails, mice]
 - Meadow and prairie [wildflowers, grasses, prairie dogs]
 - Underground [fungi, moles, worms]
 - Desert [cactus, lizard, scorpion]
 - Water [fish, oysters, starfish]
- The food chain or food web: a way of picturing the relationships between living things
 - Animals: big animals eat little ones, big animals die and are eaten by little ones.
 - Plants: nutrients, water, soil, air, sunlight

B. OCEANS AND UNDERSEA LIFE

- Most of the earth is covered with water.
- Locate oceans: Pacific, Atlantic, Indian, Arctic.
- Oceans are salt water (unlike fresh water rivers and lakes).
- Coast, shore, waves, tides (high and low)
- Currents, the Gulf Stream
- Landscape of the ocean floor: mountain peaks and deep valleys (trenches)
- Diversity of ocean life: from organisms too small for the eye to see (plankton), to giant whales
- Dangers to ocean life (for example, overfishing, pollution, oil spills)

C. ENVIRONMENTAL CHANGE AND HABITAT DESTRUCTION

- Environments are constantly changing, and this can sometimes pose dangers to specific habitats, for example:
 - Effects of population and development
 - Rainforest clearing, pollution, litter

D. SPECIAL CLASSIFICATIONS OF ANIMALS

- Herbivores: plant-eaters (for example, elephants, cows, deer)
- Carnivores: flesh-eaters (for example, lions, tigers)
- Omnivores: plant and animal-eaters (for example, bears)
- Extinct animals (for example, dinosaurs)

Note: The food chain will be studied again in grade 3.





Note: Major body systems will be studied in greater detail in grades 2–6.

II. The Human Body

A. BODY SYSTEMS

Teachers: Introduce the idea of body systems, and have children identify basic parts of the following body systems:

- Skeletal system: skeleton, bones, skull
- Muscular system: muscles
- Digestive system: mouth, stomach
- Circulatory system: heart and blood
- Nervous system: brain, nerves

B. GERMS, DISEASES, AND PREVENTING ILLNESS

- Taking care of your body: exercise, cleanliness, healthy foods, rest
- Vaccinations

III. Matter

Note: Children are likely to have a notion of atoms that, in absolute scientific terms, is inaccurate. The goal in this grade is to introduce concepts and terms that, over time, will be more precisely defined. Use the Teacher Handbook to define what you and your students should know and learn in Grade 1.

Teachers: Introduce children to the idea that everything is made of matter, and that all matter is made up of parts too small to see.

- Basic concept of atoms
- Names and common examples of three states of matter:
 - solid (for example, wood, rocks)
 - liquid (for example, water)
 - gas (for example, air, steam)
- Water as an example of changing states of matter of a single substance

IV. Properties of Matter: Measurement

Teachers: Have children describe and classify objects according to what they are made of, and according to their physical properties (color, shape, size, weight, texture, etc.).

- Units of measurement:
 - Length: centimeter, inch, foot
 - Volume: gallon, quart
- Temperature: degrees Fahrenheit

V. Introduction to Electricity

Teachers: Through reading aloud, observation and experiment, explore with children basic principles of electricity and electrical safety rules.

Note: Electricity will be studied in more detail in grade 4.

- Static electricity
- Basic parts of simple electric circuits (for example, batteries, wire, bulb or buzzer, switch)
- Conductive and nonconductive materials
- Safety rules for electricity (for example, never put your finger, or anything metallic, in an electrical outlet; never touch a switch or electrical appliance when your hands are wet or when you're in the bathtub; never put your finger in a lamp socket; etc.)

VI. Astronomy: Introduction to the Solar System

- Sun: source of energy, light, heat
- Moon: phases of the moon (full, half, crescent, new)
- The eight planets (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune)
(Note: In 2006, Pluto was classified as a dwarf planet.)
- Stars
 - Constellations, Big Dipper
 - The sun is a star.
- Earth and its place in the solar system
 - The earth moves around the sun; the sun does not move.
 - The earth revolves (spins); one rotation takes one day (24 hours).
 - Sunrise and sunset
 - When it is day where you are, it is night for people on the opposite side of the earth.

VII. The Earth

See also World History and Geography: Spatial Sense.

A. GEOGRAPHICAL FEATURES OF THE EARTH'S SURFACE

- The shape of the earth, the horizon
- Oceans and continents
- North Pole and South Pole, Equator

B. WHAT'S INSIDE THE EARTH

- Inside the earth
 - Layers: crust, mantle, core
 - High temperatures
- Volcanoes and geysers
- Rocks and minerals
 - Formation and characteristics of different kinds of rocks: metamorphic, igneous, sedimentary
 - Important minerals in the earth (such as quartz, gold, sulfur, coal, diamond, iron ore)

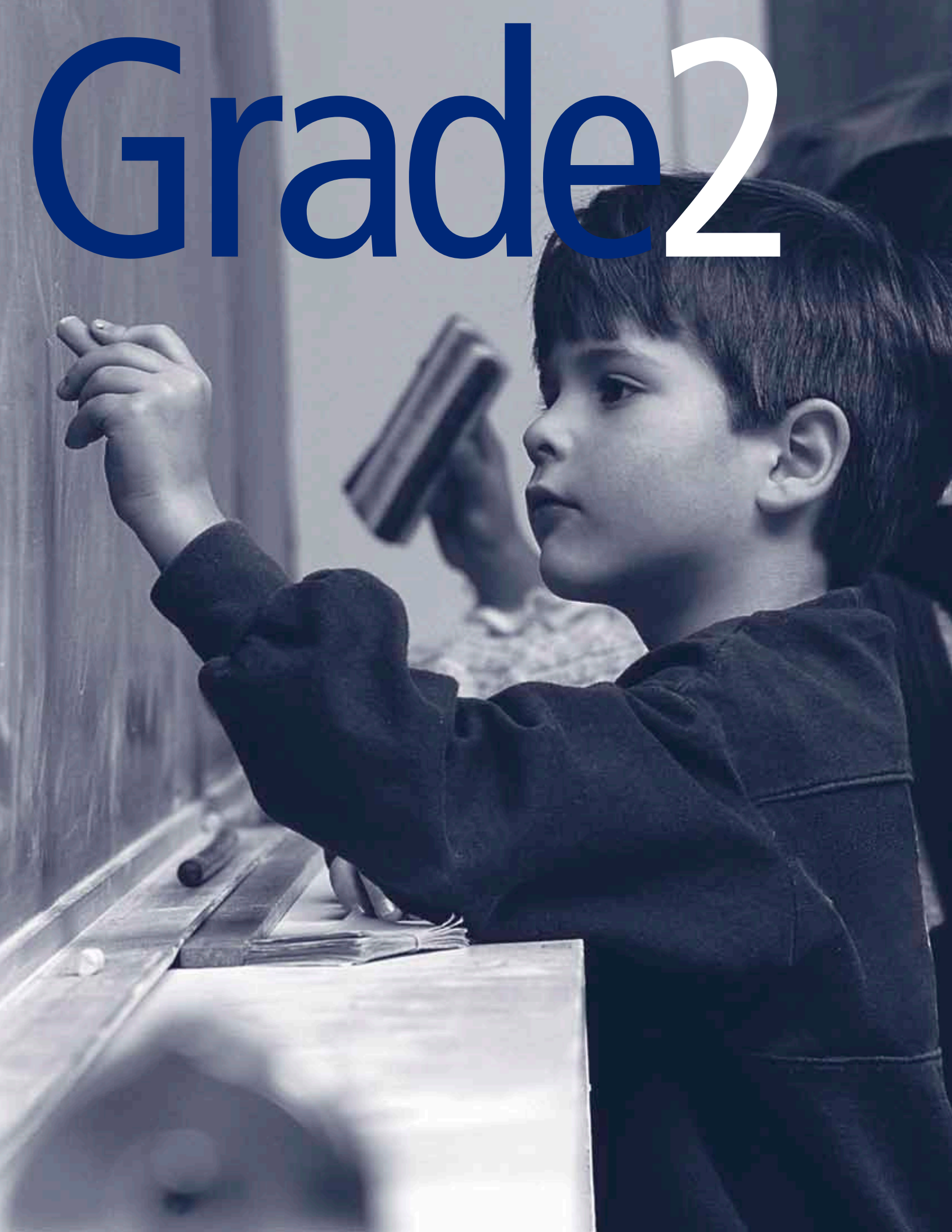
Note: Topics in geology will be studied in more detail in grade 4.

VIII. Science Biographies

Rachel Carson (got people to stop using DDT)
 Thomas Edison (invented an electric light bulb)
 Edward Jenner (found a way to stop smallpox)
 Louis Pasteur (made milk safe to drink)

See above, Environmental Change and Habitat Destruction, *re* Rachel Carson; Electricity, *re* Thomas Edison; Human Body: Vaccinations, *re* Edward Jenner; Human Body: Germs, Diseases, *re* Louis Pasteur.

Grade 2



Overview of Topics

Grade 2

Language Arts

- I. Listening and Speaking
 - A. Classroom Discussion
 - B. Presentation of Ideas and Information
 - C. Comprehension and Discussion of Read-Alouds—All Texts
 - D. Comprehension and Discussion of Read-Alouds—Fiction, Drama, and Poetry
 - E. Comprehension and Discussion of Read-Alouds—Nonfiction and Informational Text
- II. Reading
 - A. Phonics: Decoding and Encoding
 - B. Oral Reading and Fluency
 - C. Reading Comprehension—All Texts
 - D. Reading Comprehension—Fiction, Drama, and Poetry
 - E. Reading Comprehension—Nonfiction and Informational Text
- III. Writing
 - A. Narrative Writing
 - B. Informative/Explanatory Writing
 - C. Persuasive Writing (Opinion)
- IV. Language Conventions
 - A. Spelling
 - B. Parts of Speech and Sentence Structure
 - C. Capitalization and Punctuation
- V. Poetry
- VI. Fiction
 - A. Stories
 - B. Mythology of Ancient Greece
 - C. American Folk Heroes and Tall Tales
 - D. Literary Terms
- VII. Sayings and Phrases

History and Geography

World:

- I. Geography
 - A. Spatial Sense
 - B. Geographical Terms and Features
- II. Early Asian Civilizations
 - A. Geography of Asia
 - B. India
 - C. China
- III. Modern Japanese Civilization
 - A. Geography
 - B. Culture
- IV. The Ancient Greek Civilization

American:

- I. American Government: The Constitution
- II. The War of 1812

- III. Westward Expansion
 - A. Pioneers Head West
 - B. Native Americans
- IV. The Civil War
- V. Immigration and Citizenship
- VI. Fighting for a Cause
- VII. Geography of the Americas
 - A. North America
 - B. South America
- VIII. Symbols and Figures

Visual Arts

- I. Elements of Art
- II. Sculpture
- III. Kinds of Pictures: Landscapes
- IV. Abstract Art
- V. Architecture

Music

- I. Elements of Music
- II. Listening and Understanding
 - A. The Orchestra
 - B. Keyboard Instruments
 - C. Composers and Their Music
- III. Songs

Mathematics

- I. Numbers and Number Sense
- II. Fractions
- III. Money
- IV. Computation
 - A. Addition
 - B. Subtraction
 - C. Introduction to Multiplication
 - D. Solving Problems and Equations
- V. Measurement
 - A. Linear Measure
 - B. Weight
 - C. Capacity (Volume)
 - D. Temperature
 - E. Time
- VI. Geometry

Science

- I. Cycles in Nature
 - A. Seasonal Cycles
 - B. Life Cycles
 - C. The Water Cycle
- II. Insects
- III. The Human Body
 - A. Cells
 - B. Digestive and Excretory Systems
 - C. Taking Care of Your Body: A Healthy Diet
- IV. Magnetism
- V. Simple Machines
- VI. Science Biographies

Language Arts: Grade 2

The *Common Core State Standards for English Language Arts* emphasize the critical importance of building nonfiction background knowledge in a coherent and sequenced way within and across grades. This can be accomplished most effectively, at each grade level, by integrating the topics from history, geography, science, and the arts in the *Core Knowledge Sequence* into the language arts block. Note that in the *Sequence*, there are many cross-curricular connections to history and science topics within Language Arts (e.g., poems, stories, and sayings), as well as to visual arts and music, which can and should be integrated into the applicable domain of study.

For Grade 2, domains include: Early Asian Civilizations; Modern Japanese Civilization; The Ancient Greek Civilization; American Government: The Constitution; The War of 1812; Westward Expansion; The Civil War; Immigration and Citizenship; Fighting for a Cause; Cycles in Nature; Insects; The Human Body; Magnetism; Simple Machines.

NOTE: The objectives listed in sections I–IV of Language Arts below are consistent with the *Core Knowledge Language Arts* program and embed all of the skills and concepts within the *Common Core State Standards for English Language Arts*.

I. Listening and Speaking

Teachers: Traditional language arts instruction has typically accorded little, if any, attention to the ongoing development of children’s listening and speaking ability. This failure to focus on the development of oral language in language arts instruction has been a serious oversight. Literacy, the ability to read and write written language, is highly correlated with students’ oral language proficiency, and the ability to understand a text read aloud is a prerequisite for making sense of the same text in printed form. It is therefore essential that children build listening and speaking competency while also developing reading and writing skills.

A. CLASSROOM DISCUSSION

- Maintain attention and actively participate in discussions about a variety of topics, ideas, and texts in both small and large group settings.
- Speak clearly with volume appropriate to the setting.
- Use agreed-upon rules for group discussions, i.e., look at and listen to the speaker, raise hand to speak, take turns, say “excuse me” or “please,” etc.
- Ask questions to clarify conversations, directions, exercises, and/or classroom routines.
- Carry on and participate in a conversation over at least six turns, staying on topic, initiating comments or responding to a partner’s comments, with either an adult or another child of the same age.
- Participate in a conversation or group discussion by making reference to, or building upon, a comment made by another person.
- Identify and express physical sensations, mental states, and emotions of self and others.
- Understand and use language to express spatial and temporal relationships (*up, down, first, last, before, after, etc.*).
- Understand and use narrative language to describe people, places, things, locations, events, actions.
- Understand and use common sayings and phrases such as “Don’t judge a book by its cover” and “Better late than never” (see page 60).

B. PRESENTATION OF IDEAS AND INFORMATION

- Follow multi-step, oral directions.
- Give simple directions.
- Provide simple explanations.

- Recite a nursery rhyme, poem or song independently, using appropriate eye contact, volume and clear enunciation.
- Give oral presentations about personal experiences, topics of interest, stories, and summaries of factual information that have been presented orally, visually or through multimedia, using appropriate eye contact, volume and clear enunciation.

C. COMPREHENSION AND DISCUSSION OF READ-ALOUDS—ALL TEXTS

Teachers: Written text makes use of richer vocabulary and more complex syntax than conversational language. It is important that young children be exposed not only to the language of everyday conversation but also to the richer and more formal language of books. This can be done through frequent reading aloud. Helping young children develop the ability to listen to and understand written texts read aloud must be an integral part of any initiative designed to build literacy.

At the second grade level, students are becoming increasingly skilled as independent readers. Nevertheless, research indicates that reading comprehension ability does not catch up to listening comprehension until the middle school grades. It is therefore still important to provide second graders with extensive read aloud experiences of both fiction and nonfiction texts.

Careful consideration should be given to the selection of books read aloud to ensure that the vocabulary and syntax presented is rich and complex. Leveled texts will not provide the rich language experience desired during read-alouds and should only be used as a starting point with students for whom English is a second language.

Grade appropriate read-aloud selections for poetry and fiction are included on pages 58–60. Nonfiction read-alouds should be selected on the basis of the history, science, music and visual art topics identified for Grade 2 students in the *Core Knowledge Sequence*, with emphasis on history and science read-alouds. It is strongly recommended that daily read-alouds focus on a single topic over a sustained period of time—about two weeks—rather than intermingling read-alouds on a variety of subjects. Careful consideration should be given to the order in which nonfiction read-alouds are presented to ensure that knowledge about a topic builds in a progressive and coherent way.

Following any read-aloud, children should participate in rich, structured conversations with an adult in response to the written text that has been read aloud. In this way, they can begin to orally practice comparing, analyzing, and synthesizing ideas in written text in much the same way as they will be expected to do as independent readers in the later grades.

- Listen to and understand a variety of texts read aloud, including fictional stories, fairy tales, fables, historical narratives, drama, informational text, and poems.
- Distinguish the following genres of literature: fiction, nonfiction and drama.

Grasping Specific Details and Key Ideas

- Describe illustrations.
- Sequence four to six pictures illustrating events in a read aloud.
- Answer questions requiring literal recall and understanding of the details and/or facts of a read-aloud, i.e., who, what, where, when, etc.
- Retell key details.
- Summarize in one's own words selected parts of a read-aloud.
- Ask questions to clarify information in a read-aloud.
- Use narrative language to describe people, places, things, locations, events, actions, a scene or facts in a read-aloud.

Observing Craft and Structure

- Understand and use words and phrases heard in read-alouds.
- Compare and contrast similarities and differences within a single read-aloud or between two or more read-alouds.
- Make personal connections to events or experiences in a read-aloud and/or make connections among several read-alouds.

Integrating Information and Evaluating Evidence

- Prior to listening to a read-aloud, identify what they know and have learned that may be related to the specific story or topic to be read aloud.
- Use pictures accompanying the read-aloud to check and support understanding of the read-aloud.
- Make predictions prior to and during a read-aloud, based on the title, pictures, and/or text heard thus far and then compare the actual outcomes to predictions.
- Answer questions that require making interpretations, judgments, or giving opinions about what is heard in a read-aloud, including answering “why” questions that require recognizing cause/effect relationships.
- Interpret information that is presented orally and then ask additional questions to clarify information or the topic in the read-aloud.
- Identify who is telling a story or providing information in a text.

D. COMPREHENSION AND DISCUSSION OF READ-ALOUDS—FICTION, DRAMA, AND POETRY

- Retell a story, using narrative language to describe characters, setting(s), and the plot of the story in proper sequence.
- Compare and contrast characters from different stories.
- Describe characters in increasing depth by referring to dialogue and/or their actions in the story.
- Change some story events and provide a different story ending.
- Create and tell an original story, using narrative language to describe characters, setting(s), and the plot of the story in proper sequence.
- Distinguish fantasy from realistic text in a story.
- Identify the moral or lesson of a fable, folktale, or myth.
- Demonstrate understanding of literary language (e.g., author, illustrator, characters, setting, plot, dialogue, personification, simile, and metaphor) and use some of these terms in retelling stories or creating their own stories.
- Identify repetitions in phrases, refrains, or sounds in poems or songs.
- Identify sensory language and how it is used to describe people, objects, places and events.
- Describe the use of rhyme, rhythm and sensory images used in poetry.

E. COMPREHENSION AND DISCUSSION OF READ-ALOUDS—NONFICTION AND INFORMATIONAL TEXT

Teachers: Select nonfiction read-aloud topics from the second grade history, science, music, and visual arts topics listed on pages 61–75, with emphasis on history and science.

- Generate questions and seek information from multiple sources to answer questions.
- Answer questions about the details of a nonfiction text, indicating which part of the text provided the information needed to answer specific questions.
- With assistance, categorize and organize facts and information within a given topic.
- With assistance, create and interpret timelines and lifelines related to read-alouds.
- Interpret information presented in diagrams, charts, graphs, etc.
- Distinguish read-alouds that describe events that happened long ago from those that describe contemporary or current events.

II Reading

A. PHONICS: DECODING AND ENCODING

Teachers: Learning to read requires understanding and mastering the written English code through explicit and systematic phonics instruction. Research suggests that phonics instruction is most effective when specific letter-sound relationships are taught and reinforced by having children both read and write the letter-sound correspondence being studied. Reading

and writing—decoding and encoding—are complementary processes that ensure mastery of the written code.

- Demonstrate understanding that a systematic, predictable relationship exists between written letters (graphemes) and spoken sounds (phonemes).
- Blend individual phonemes to pronounce printed words.
- Understand that sometimes two or more printed letters stand for a single sound.
- Read multi-syllable words containing any of the grapheme-phoneme correspondences listed below.
- Read and write words with inflectional endings, i.e., -s, -ed, -ing, -er, -est.
- Read, understand, and write contractions, i.e., *isn't*, *I'm*, *can't*, etc.
- Sort and classify words according to the spelling used to represent a specific phoneme.
- Read tricky spellings that can be sounded two ways, e.g., the letter 's' sounded /s/ as in *cats* and /z/ as in *dogs*.
- Read and spell chains of one-syllable words in which one sound is added, substituted, or omitted, i.e., read at > cat > bat > bad > bid.
- Read at least 100 words generally identified as high frequency words.

CONSONANT SOUNDS AND SPELLINGS TAUGHT IN SECOND GRADE

/b/ spelled 'b' as in *boy*, 'bb' as in *tubby*
 /d/ spelled 'd' as in *dog*, 'dd' as in *madder*, 'ed' as in *filled*
 /f/ spelled 'f' as in *fun*, 'ff' as in *stuff*
 /g/ spelled 'g' as in *get*, 'gg' as in *egg*
 /h/ spelled 'h' as in *him*
 /j/ spelled 'j' as in *jump*, 'g' as in *gem*, 'ge' as in *fringe*
 /k/ spelled 'c' as in *cat*, 'k' as in *kitten*, 'ck' as in *sick*, 'cc' as in *moccasin*
 /l/ spelled 'l' as in *lip*, 'll' as in *sell*
 /m/ spelled 'm' as in *mad*, 'mm' as in *hammer*
 /n/ spelled 'n' as in *net*, 'nn' as in *funny*, 'kn' as in *knock*
 /p/ spelled 'p' as in *pet*, 'pp' as in *happy*
 /r/ spelled 'r' as in *red*, 'rr' as in *earring*, 'wr' as in *wrist*
 /s/ spelled 's' as in *sit*, 'ss' as in *dress*, 'c' as in *cent*, 'ce' as in *prince*, 'se' as in *rinse*
 /t/ spelled 't' as in *top*, 'tt' as in *butter*, 'ed' as in *asked*
 /v/ spelled 'v' as in *vet*, 've' as in *twelve*
 /w/ spelled 'w' as in *wet*, 'wh' as in *when*
 /x/ spelled 'x' as in *tax*
 /y/ spelled 'y' as in *yes*
 /z/ spelled 'z' as in *zip*, 'zz' as in *buzz*, 's' as in *dogs*
 /ch/ spelled 'ch' as in *chop*, 'tch' as in *itch*
 /sh/ spelled 'sh' as in *ship*
 /th/ spelled 'th' as in *thin*
 /th/ spelled 'th' as in *then*
 /qu/ spelled 'qu' as in *quick*
 /ng/ spelled 'ng' as in *sing*, 'n' as in *pink*

VOWEL SOUNDS AND SPELLINGS TAUGHT IN SECOND GRADE

/a/ spelled 'a' as in *cat*
 /e/ spelled 'e' as in *get*, 'ea' as in *head*
 /i/ spelled 'i' as in *hit*, 'y' as in *myth*
 /o/ spelled 'o' as in *hot*, 'a' as in *wall*
 /u/ spelled 'u' as in *but*, 'o' as in *son*
 /ae/ spelled 'a_e' as in *cake*, 'ai' as in *wait*, 'ay' as in *day*, 'a' as in *paper*, 'ey' as in *hey*,
 'ei' as in *weight*, 'ea' as in *great*
 /ee/ spelled 'ee' as in *bee*, 'e' as in *me*, 'y' as in *funny*, 'ea' as in *beach*, 'e_e' as in *Pete*,
 'ie' as in *cookie*, 'i' as in *ski*, 'ey' as in *key*

/ie/ spelled 'i_e' as in *bike*, 'i' as in *biting*, 'y' as in *try*, 'ie' as in *tie*, 'igh' as in *night*
 /oe/ spelled 'o_e' as in *note*, 'oa' as in *boat*, 'oe' as in *toe*, 'o' as in *open*, 'ow' as in *snow*
 /ue/ spelled 'u_e' as in *cute*, 'u' as in *unit*, 'ue' as in *cue*
 /aw/ spelled 'aw' as in *paw*, 'au' as in *Paul*, 'augh' as in *caught*, 'ough' as in *bought*
 /oo/ spelled 'oo' as in *look*, 'u' as in *student*, 'ue' as in *blue*, 'ui' as in *fruit*, 'ew' as in *new*, 'u_e' as in *tune*
 /oo/ spelled 'oo' as in *soon*
 /ou/ spelled 'ou' as in *shout*, 'ow' as in *now*
 /oi/ spelled 'oi' as in *oil*, 'oy' as in *toy*
 /er/ spelled 'er' as in *her*, 'ur' as in *hurt*, 'ir' as in *bird*, 'ar' as in *dollar*
 /ar/ spelled 'ar' as in *car*
 /or/ spelled 'or' as in *for*, 'ore' as in *more*, 'our' as in *four*, 'oor' as in *door*
 Schwa spelled 'a' as in *about*
 /shun/ spelled 'tion' as in *mention*

B. ORAL READING AND FLUENCY

- Read decodable stories that incorporate the specific code knowledge that has been taught.
- Demonstrate increased accuracy, fluency, and expression on successive reading of a decodable text (90 wpm by the end of the year).
- Use phonics skills in conjunction with context to confirm or self-correct word recognition and understanding, rereading as necessary.
- Demonstrate understanding of and use commas and end punctuation while reading orally.
- Read aloud, alone, or with a partner at least 20 minutes each day.

C. READING COMPREHENSION—ALL TEXTS

Teachers: At the second grade level, students should be demonstrating ever-increasing code knowledge and fluency in their independent reading, allowing them to focus more intently on the meaning of what they are reading. This increased focus on reading comprehension is reflected in the number and complexity of the objectives below, as compared to earlier grades. However, it is important to remember that listening comprehension still far exceeds reading comprehension and that children's ability to talk about what they have heard and/or read will exceed their ability to demonstrate that understanding in writing.

- Demonstrate understanding of text—the majority of which is decodable—after independent reading.

Grasping Specific Details and Key Ideas

- Sequence four to six pictures illustrating events from a text that has been read independently.
- Answer questions requiring literal recall and understanding of the details and/or facts (i.e., who, what, where, when, etc.) about a text that has been read independently.
- Retell key details from a text that has been read independently.
- Summarize in one's own words selected parts of a text.
- Ask questions to clarify information about a text that has been read independently.
- Use narrative language to describe people, places, things, locations, events, actions, a scene or facts from a text that has been read independently.

Observing Craft and Structure

- Identify basic text features and what they mean, including title, table of contents, chapter headings and captions.
- Understand and use words and phrases from a text that has been read independently.
- Compare and contrast similarities and differences within a single text or between multiple texts read independently.
- Make personal connections to events or experiences in a text that has been read independently and/or make connections among several texts that have been read independently.

Integrating Information and Evaluating Evidence

- Prior to reading, identify what they know and have learned that may be related to the specific story or topic to be read.
- Use pictures accompanying the written text to check and support understanding.
- Make predictions prior to and while reading, based on the title, pictures, and/or text read thus far and then compare the actual outcomes to predictions.
- Answer questions that require making interpretations, judgments, or giving opinions about what is read independently, including answering “why” questions that require recognizing cause/effect relationships.
- Interpret information that is read independently and then ask questions to clarify this information.
- Identify who is telling a story or providing information in a text.
- Identify temporal words that link and sequence events, i.e., *first, next, then*, etc.
- Identify words that link ideas, i.e., *for example, also, in addition*.

D. READING COMPREHENSION—FICTION, DRAMA, AND POETRY

- Retell a story, using narrative language to describe characters, setting(s), and the plot of the story in proper sequence.
- Compare and contrast characters from different stories.
- Describe characters in increasing depth by referring to dialogue and/or their actions in the story.
- Change some story events and provide a different story ending.
- Distinguish fantasy from realistic text in a story.
- Identify the moral or lesson of a fable, folktale, or myth.
- Demonstrate understanding of literary language (e.g., author, illustrator, characters, setting, plot, dialogue, personification, simile, and metaphor) and use some of these terms in retelling stories or creating their own stories.
- Identify sensory language and how it is used to describe people, objects, places, and events.
- Identify repetitions in phrases, refrains, or sounds in poems or songs.
- Describe the use of rhyme, rhythm and sensory images used in poetry.

E. READING COMPREHENSION—NONFICTION AND INFORMATIONAL TEXT

Teachers: Select nonfiction topics from the second grade history, science, music and visual arts topics listed on pages 61–75 with emphasis on history and science.

- Generate questions and seek information from multiple sources to answer questions.
- Answer questions about the details of a nonfiction text, indicating which part of the text provided the information needed to answer specific questions.
- Interpret information presented in diagrams, charts, graphs, etc.
- With assistance, categorize and organize facts and information for a given topic.
- With assistance, create and interpret timelines and lifelines related to text read independently.
- Distinguish text that describes events that happened long ago from text that describes contemporary or current events.

III. Writing

Teachers: Students develop ever increasing code knowledge and fluency in reading during second grade and, as a result, most will also become increasingly comfortable and competent in expressing their thoughts and ideas in writing.

Teachers should, however, have age appropriate expectations about what second grade student writing should resemble. Students’ spelling skills will often lag behind the code knowledge they demonstrate in reading. It is reasonable to expect that the students will use the letter-sound correspondences they have learned thus far to set down plausible spellings for the sounds in the word.

For example, a student who writes *doller* for *dollar*, *wate* for *wait* or *weight* has set down a plausible spelling for each sound in the word, using the code knowledge taught in this grade. This should be seen as acceptable spelling for this stage of literacy acquisition. With continued writing practice, students should begin to include more dictionary correct spellings for words that they read and write frequently. Dictionary-correct spelling as the rule will be a realistic goal when students have learned more spellings, had repeated writing practice opportunities and have learned how to use a dictionary to check spelling.

At the second grade level, teachers should model and scaffold use of a writing process, such as “Plan-Draft-Edit,” as students learn to write in various genres. It is important, though, not to dampen student enthusiasm for writing by rigidly insisting that *all* student writing be edited over and over again to bring the text to the “publication” stage. A sensible balance that encourages children to use their current skill knowledge when writing, as well as a simple editing rubric for review—without stifling creative expression—is optimal at the second grade level.

Writing to Reflect Audience, Purpose and Task

- Add details to writing.
- Begin to use tools, including technology, to plan, draft, and edit writing.

Conducting Research

- Gather information from experiences or provided text sources.

A. NARRATIVE WRITING

- Write a familiar story that includes setting(s), character(s), dialogue, and if appropriate, several events, using temporal words and phrases to indicate the chronology of events.
- Write a personal narrative.
- Create a title and an ending that are relevant to the narrative.

B. INFORMATIVE/EXPLANATORY WRITING

- Write about a topic, including a beginning and ending sentence, facts and examples relevant to the topic, and specific steps (if writing explanatory text).
- Group similar information into paragraphs.
- Use linking words such as *also*, *another*, *and*, etc. to connect ideas within a paragraph.

C. PERSUASIVE WRITING (OPINION)

- Express an opinion or point of view in writing, providing reasons and supporting details for preference or opinion.
- Use words to link opinions with reasons or supporting details, such as *because*, *also*, *another*.
- Create a title that is relevant to the topic or subject of the text.
- If writing about a specific book or read-aloud, refer to the content of the text.

IV. Language Conventions

- Form sentences and paragraphs to communicate thoughts and ideas.
- Apply basic spelling conventions.
- Use basic capitalization and punctuation in sentences to convey meaning.

A. SPELLING

- Write phonemically plausible spellings for words using current code knowledge, e.g., write *doller* for *dollar*, *wate* for *wait* or *weight*.
- Write words, phrases, and sentences from dictation, applying phonics knowledge.
- Alphabetize words to the second letter.
- Use a children’s dictionary, with assistance, to check spelling and verify the meaning of words.
- Identify and use synonyms, antonyms, homophones, and compound words.

B. PARTS OF SPEECH AND SENTENCE STRUCTURE

- Recognize, identify and use subject, object, and possessive pronouns, i.e., *I, me, my, they, them*, orally, in written text and in own writing.
- Recognize, identify and use correct noun-pronoun agreement orally, in written text and in own writing.
- Recognize, identify and use common and proper nouns, orally, in written text, and in own writing.
- Recognize, identify, and use the articles *a* and *an* appropriately orally, in written text and in own writing.
- Recognize, identify and use selected regular and irregular plural nouns orally, in written text and in own writing.
- Recognize, identify and use selected regular and irregular past, present, and future tense verbs orally, in written text, and in own writing.
- Recognize, identify, and use adjectives orally, in written text, and in own writing.
- Recognize, identify, and use adverbs orally, in written text, and in own writing.
- Recognize, identify and use subjects and predicates, orally, in written text, and in own writing.
- Recognize, identify, and use statements, questions, and exclamations orally, in written text, and in own writing.
- Recognize, identify, and use complete simple and compound sentences.

C. CAPITALIZATION, AND PUNCTUATION

- Capitalize the first word in a sentence, the pronoun *I*, and proper nouns (names and places,) months, days of the week, titles of people, and addresses.
- Recognize, identify and use abbreviations with correct punctuation for the months, days of the week, titles of people, and addresses.
- Identify and use end punctuation, including periods, question marks, and exclamation points.
- Use commas appropriately in greetings and closings of letters, dates, items in a series, and addresses.
- Write a simple friendly letter.
- Use apostrophes to create contractions and indicate possession, i.e., *cat's meow*.
- Use quotation marks appropriately to designate direct speech.

V. Poetry

Note: The poems listed here constitute a selected core of poetry for this grade. You are encouraged to expose children to more poetry, old and new, and to have children write their own poems. To bring children into the spirit of poetry, read it aloud and encourage them to read it aloud so they can experience the music in the words.

Bed in Summer (Robert Louis Stevenson)
 Bee! I'm expecting you (Emily Dickinson)
 Buffalo Dusk (Carl Sandburg)
 Caterpillars (Aileen Fisher)
 Discovery (Harry Behn)
 Harriet Tubman (Eloise Greenfield)
 Hurt No Living Thing (Christina Rossetti)
 Lincoln (Nancy Byrd Turner)
 The Night Before Christmas (Clement Clarke Moore)
 Rudolph Is Tired of the City (Gwendolyn Brooks)
 Seashell (Federico Garcia Lorca)
 Smart (Shel Silverstein)
 Something Told the Wild Geese (Rachel Field)
 There Was an Old Man with a Beard (Edward Lear)
 Who Has Seen the Wind? (Christina Rossetti)
 Windy Nights (Robert Louis Stevenson)

See below, Literary Terms—
 limerick, *re* Edward Lear.

VI. Fiction

Note: Review Drama from first grade, and engage children in dramatic activities, possibly with one of the stories below in the form of a play.

Teachers: The titles listed below are available in a variety of editions, including both adaptations for novice readers and others that lend themselves to reading aloud to children—for example, *Charlotte’s Web* or “How the Camel Got His Hump.” It is recommended that you provide a mixture of texts. Editions designed for beginning readers can help children practice decoding skills. Read-aloud texts, which the children may not be capable of reading on their own, can be understood when the words are read aloud and talked about with a helpful adult. Such active listening to vocabulary and syntax that go beyond the limits of grade-level readability formulas is an important part of developing an increasingly sophisticated verbal sense.

The titles below constitute a core of stories for this grade. Expose children to many more stories, including classic picture books, read-aloud books, etc. (In schools, teachers across grade levels should communicate their choices in order to avoid undue repetition.) Children should also be exposed to nonfiction prose—biographies, books on science and history, books on art and music—and they should be given opportunities to tell and write their own stories.

A. STORIES

- Beauty and the Beast
- The Blind Men and the Elephant (a fable from India)
- A Christmas Carol* (Charles Dickens)
- Charlotte’s Web* (E. B. White)
- The Emperor’s New Clothes (Hans Christian Andersen)
- The Fisherman and His Wife (Brothers Grimm)
- How the Camel Got His Hump (a “Just-So” story by Rudyard Kipling)
- Iktomi stories (legends of the Plains Indian trickster figure, such as Iktomi Lost His Eyes; Iktomi and the Berries; Iktomi and the Boulder)
- The Magic Paintbrush (a Chinese folktale)
- El Pajaro Cu (a Hispanic folktale)
- selections from *Peter Pan* (James M. Barrie)
- Talk (a West African folktale)
- The Tiger, the Brahman, and the Jackal (a folktale from India)
- The Tongue-Cut Sparrow (a folktale from Japan)

B. MYTHOLOGY OF ANCIENT GREECE

Teachers: See *World History and Geography 2: The Ancient Greek Civilization*.

- Gods of Ancient Greece (and Rome)
 - Zeus (Jupiter)
 - Hera (Juno)
 - Apollo (Apollo)
 - Artemis (Diana)
 - Poseidon (Neptune)
 - Aphrodite (Venus)
 - Demeter (Ceres)
 - Ares (Mars)
 - Hermes (Mercury)
 - Athena (Minerva)
 - Hephaestus (Vulcan)
 - Dionysus (Bacchus)
 - Eros (Cupid)
 - Hades (Pluto)
- Mount Olympus: home of the gods
- Mythological creatures and characters
 - Atlas (holding the world on his shoulders)
 - centaurs
 - Cerberus
 - Pegasus
 - Pan
- Greek Myths
 - Prometheus (how he brought fire from the gods to men)
 - Pandora’s Box
 - Oedipus and the Sphinx
 - Theseus and the Minotaur
 - Daedelus and Icarus

Note: “The Magic Paintbrush” is also known as “Tye May and the Magic Brush” and “Liang [or Ma Liang] and the Magic Brush.”

See also *World History 2: India*, re “The Blind Men and the Elephant” and “The Tiger, the Brahman, and the Jackal.”

Note: Roman names are listed in parentheses because, although children do not study ancient Rome until third grade in the *Core Knowledge Sequence*, you are likely to encounter both Greek and Roman names in various books of myths you may use.

Note: Students will read more myths in third grade; see *Language Arts 3*.

Arachne the Weaver
Swift-footed Atalanta
Demeter and Persephone
Hercules (Heracles) and the Labors of Hercules

C. AMERICAN FOLK HEROES AND TALL TALES

Teachers: Johnny Appleseed and Casey Jones were introduced in kindergarten.

See also Music 2: III. Songs,
"John Henry."

Paul Bunyan
Johnny Appleseed
John Henry
Pecos Bill
Casey Jones

D. LITERARY TERMS

Teachers: In the course of their studies, children should learn the following terms:

myth
tall tale
limerick

VII. Sayings and Phrases

Teachers: Every culture has phrases and proverbs that make no sense when carried over literally into another culture. For many children, this section may not be needed; they will have picked up these sayings by hearing them at home and among friends. But the sayings have been one of the categories most appreciated by teachers who work with children from home cultures that differ from the standard culture of literate American English.

Back to the drawing board
Better late than never
Cold feet
Don't cry over spilled milk.
Don't judge a book by its cover.
Easier said than done
Eaten out of house and home
Get a taste of your own medicine
Get up on the wrong side of the bed
In hot water
Keep your fingers crossed.
Practice what you preach.
The real McCoy
Two heads are better than one.
Turn over a new leaf
Where there's a will there's a way.
You can't teach an old dog new tricks.

History and Geography: Grade 2

Teachers: In second grade, children often study aspects of the world around them: the family, the school, the community, etc. The following guidelines are meant to broaden and complement that focus. The goal of studying selected topics in World History in second grade is to foster curiosity and the beginnings of understanding about the larger world outside the child's locality, and about varied civilizations and ways of life. This can be done through a variety of means: story, drama, art, music, discussion, and more.

The study of geography embraces many topics throughout the *Core Knowledge Sequence*, including topics in history and science. Geographic knowledge includes a spatial sense of the world, an awareness of the physical processes that shape life, a sense of the interactions between humans and their environment, an understanding of the relations between place and culture, and an awareness of the characteristics of specific regions and cultures.

WORLD HISTORY AND GEOGRAPHY

I. Geography

A. SPATIAL SENSE (Working with Maps, Globes, and Other Geographic Tools)

Teachers: Review and reinforce topics from grade 1, including:

- Name your continent, country, state, and community.
- Understand that maps have keys or legends with symbols and their uses.
- Find directions on a map: east, west, north, south.
- Identify major oceans: Pacific, Atlantic, Indian, Arctic.
- The seven continents: Asia, Europe, Africa, North America, South America, Antarctica, Australia.
- Locate: Canada, United States, Mexico, Central America.
- Locate: the Equator, Northern Hemisphere and Southern Hemisphere, North and South Poles.

B. GEOGRAPHICAL TERMS AND FEATURES

Teachers: Review terms from grade 1 (peninsula, harbor, bay, island), and add:

- coast, valley, prairie, desert, oasis

II. Early Asian Civilizations

Teachers: Since religion is a shaping force in the story of civilization, the *Core Knowledge Sequence* introduces children in the early grades to major world religions, beginning with a focus on geography and major symbols and figures. The purpose is not to explore matters of theology but to provide a basic vocabulary for understanding many events and ideas in history. The goal is to familiarize, not proselytize; to be descriptive, not prescriptive. The tone should be one of respect and balance: no religion should be disparaged by implying that it is a thing of the past. To the question, "Which one is true?" an appropriate response is: "People of different faiths believe different things to be true. The best people to guide you on this right now are your parents or someone at home."

A. GEOGRAPHY OF ASIA

- The largest continent, with the most populous countries in the world
- Locate: China, India, Japan

B. INDIA

- Indus River and Ganges River
- Hinduism
Brahma, Vishnu, Shiva

See also below, American History and Geography: Geography of the Americas.

See also Language Arts 2: "The Tiger, the Brahman, and the Jackal," and "The Blind Men and the Elephant," re India.

See also Visual Arts 2:
Architecture: Great Stupa,
re Buddhism.

See also Language Arts 2:
"The Magic Paintbrush."

Note: Students will study
feudal Japan in grade 5.
See also Language Arts 2:
"The Tongue-Cut Sparrow";
Visual Arts 2: Elements of
Art: Hokusai, *The Great
Wave*; and, Architecture:
Himeji Castle.

See also Language Arts 2:
Greek Myths; Visual Arts 2:
Sculpture, Discus Thrower;
Architecture, The Parthenon.

Note: Suggested topics
for learning about
Alexander include his
tutoring by Aristotle, his
horse Bucephalus, and the
legend of the Gordian knot.

- Many holy books, including the Rig Veda
- Buddhism
Prince Siddhartha becomes Buddha, "the Enlightened One"
Buddhism begins as an outgrowth of Hinduism in India, and then spreads through
many countries in Asia.
King Asoka (also spelled Ashoka)

C. CHINA

Teachers: Students will study China again in grade 4. Second grade teachers should examine the fourth grade guidelines to see how these topics build in the later grade.

- Yellow (Huang He) and Yangtze (Chang Jiang) Rivers
- Teachings of Confucius (for example, honor your ancestors)
- Great Wall of China
- Invention of paper
- Importance of silk
- Chinese New Year

III. Modern Japanese Civilization

A. GEOGRAPHY

- Locate relative to continental Asia: "land of the rising sun"
- A country made up of islands; four major islands
- Pacific Ocean, Sea of Japan
- Mt. Fuji
- Tokyo

B. CULTURE

- Japanese flag
- Big modern cities, centers of industry and business
- Traditional craft: origami
- Traditional costume: kimono

IV. The Ancient Greek Civilization

Teachers: Students will study Greece again in grade 6, with a focus on the legacy of ideas from ancient Greece and Rome.

- Geography: Mediterranean Sea and Aegean Sea, Crete
- Sparta
- Athens as a city-state: the beginnings of democracy
- Persian Wars: Marathon and Thermopylae
- Olympic games
- Worship of gods and goddesses
- Great thinkers: Socrates, Plato, and Aristotle
- Alexander the Great

American History and Geography

AMERICAN HISTORY AND GEOGRAPHY

Teachers: The study of American history begins in grades K-2 with a brief overview of major events and figures, from the earliest days to recent times. A more in-depth, chronological study of American history begins again in grade 3 and continues onward. The term “American” here generally, but not always, refers to the lands that became the United States. Other topics regarding North, Central, and South America may be found in the World History and Geography sections of this Sequence.

I. American Government: The Constitution

Teachers: Through analogies to familiar settings—the family, the school, the community—discuss some basic questions regarding American government, such as: “What is government?” “What are some basic functions of American government?” (Making and enforcing laws; settling disputes; protecting rights and liberties, etc.) Only basic questions need to be addressed at this grade level. In fourth grade students will examine in more detail specific issues and institutions of American government, including, for example, the separation of powers, and the relation between state and federal government.

- American government is based on the Constitution, the highest law of our land.
- James Madison, the “Father of the Constitution”
- Government by the consent of the governed: “We the people”

II. The War of 1812

- President James Madison and Dolley Madison
- British impressment of American sailors
- Old Ironsides
- British burn the White House
- Fort McHenry, Francis Scott Key, and “The Star-Spangled Banner”
- Battle of New Orleans, Andrew Jackson

III. Westward Expansion

Teachers: Students will study Westward Expansion in greater depth and detail in grade 5. Second grade teachers should examine the fifth grade guidelines to see how these topics build in the later grade. It is recommended that second grade teachers keep their focus on the people and events specified here, and leave for fifth grade the figures and ideas specified for that grade.

A. PIONEERS HEAD WEST

- New means of travel
 - Robert Fulton, invention of the steamboat
 - Erie Canal
 - Railroads: the Transcontinental Railroad
- Routes west: wagon trains on the Oregon Trail
- The Pony Express

B. NATIVE AMERICANS

- Sequoyah and the Cherokee alphabet
- Forced removal to reservations: the “Trail of Tears”
- Some Native Americans displaced from their homes and ways of life by railroads (the “iron horse”)
- Effect of near extermination of buffalo on Plains Indians

See also Language Arts 2:
Iktomi stories.

IV. The Civil War

Teachers: Students will study the Civil War in greater depth and detail in grade 5. Second grade teachers should examine the fifth grade guidelines to see how these topics build in the later grade.

- Controversy over slavery
- Harriet Tubman, the “underground railroad”
- Northern v. Southern states: Yankees and Rebels
- Ulysses S. Grant and Robert E. Lee
- Clara Barton, “Angel of the Battlefield,” founder of American Red Cross
- President Abraham Lincoln: keeping the Union together
- Emancipation Proclamation and the end of slavery

V. Immigration and Citizenship

Teachers: Students will study Immigration and Urbanization in greater depth and detail in grade 6. Second grade teachers should examine the sixth grade American History guidelines to see how these topics build in the later grade. In second grade, it is recommended that teachers use narrative, biography, and other accessible means to introduce children to the idea that many people have come to America (and continue to come here) from all around the world, for many reasons: to find freedom, to seek a better life, to leave behind bad conditions in their native lands, etc. Discuss with children: What is an immigrant? Why do people leave their home countries to make a new home in America? What is it like to be a newcomer in America? What hardships have immigrants faced? What opportunities have they found?

- America perceived as a “land of opportunity”
- The meaning of “e pluribus unum” (a national motto you can see on the back of coins)
- Ellis Island and the significance of the Statue of Liberty
- Millions of newcomers to America
 - Large populations of immigrants settle in major cities (such as New York, Chicago, Philadelphia, Detroit, Cleveland, Boston, San Francisco)
- The idea of citizenship
 - What it means to be a citizen of a nation
 - American citizens have certain rights and responsibilities (for example, voting, eligible to hold public office, paying taxes)
 - Becoming an American citizen (by birth, naturalization)

VI. Fighting for a Cause

Teachers: Through narrative, biography, and other accessible means, introduce students to the idea that while America is a country founded upon “the proposition that all men are created equal,” equality has not always been granted to all Americans. Many people, however, have dedicated themselves to the struggle to extend equal rights to all Americans. Specific figures and issues to study include:

- Susan B. Anthony and the right to vote
- Eleanor Roosevelt and civil rights and human rights
- Mary McLeod Bethune and educational opportunity
- Jackie Robinson and the integration of major league baseball
- Rosa Parks and the bus boycott in Montgomery, Alabama
- Martin Luther King, Jr. and the dream of equal rights for all
- Cesar Chavez and the rights of migrant workers

Note: In grade 4, students will study, in the historical context of antebellum reform, early pioneers in the women’s movement in America, including Elizabeth Cady Stanton, Lucretia Mott, Margaret Fuller, and Sojourner Truth.

Note: Students will study the modern American civil rights movement in more depth and detail in grade 8.

Note: In fifth grade, the American Geography requirements include “fifty states and capitals.” Teachers in grades two through four may want to introduce these incrementally to prepare for the fifth grade requirement.

VII. Geography of the Americas

A. NORTH AMERICA

- North America: Canada, United States, Mexico
- The United States
 - Fifty states: 48 contiguous states, plus Alaska and Hawaii
 - Current territories (American Samoa, Guam, Puerto Rico, and U.S. Virgin Islands)
 - Mississippi River
 - Appalachian and Rocky Mountains
 - Great Lakes
- Atlantic and Pacific Oceans, Gulf of Mexico, Caribbean Sea, West Indies
- Central America

B. SOUTH AMERICA

- Brazil: largest country in South America, Amazon River, rain forests
- Peru and Chile: Andes Mountains
- Locate: Venezuela, Colombia, Ecuador
- Bolivia: named after Simon Bolivar, “The Liberator”
- Argentina: the Pampas
- Main languages: Spanish and (in Brazil) Portuguese

VIII. Symbols and Figures

- Recognize and become familiar with the significance of
 - U. S. flag: current and earlier versions
 - Statue of Liberty
 - Lincoln Memorial

Visual Arts: Grade 2

SEE INTRODUCTION, “The Arts in the Curriculum.”

Teachers: In schools, lessons on the visual arts should illustrate important elements of making and appreciating art, and emphasize important artists, works of art, and artistic concepts. When appropriate, topics in the visual arts may be linked to topics in other disciplines. While the following guidelines specify a variety of artworks in different media and from various cultures, they are not intended to be comprehensive. Teachers are encouraged to build upon the core content and expose children to a wide range of art and artists.

I. Elements of Art

Teachers: The generally recognized elements of art include line, shape, form, space, light, texture, and color. In second grade, continue when appropriate to discuss qualities of line, shape, color, and texture that children learned about in kindergarten and first grade.

- Recognize lines as horizontal, vertical, or diagonal.
- Observe the use of line in
 - Pablo Picasso, *Mother and Child*
 - Katsushika Hokusai, *The Great Wave at Kanagawa Nami-Ura* from *Thirty-six Views of Mt. Fuji*

See also World History 2: Japan, re Hokusai.

II. Sculpture

- Observe shape, mass, and line in sculptures, including
 - The Discus Thrower*
 - Flying Horse* (from Wu-Wei, China)
 - Auguste Rodin, *The Thinker*

See also World History 2: The Ancient Greek Civilization, re *The Discus Thrower*; and China, re *Flying Horse*.

III. Kinds of Pictures: Landscapes

Teachers: Briefly review from grade 1: portrait, self-portrait, and still life. In discussing the following works, ask the children about their first impressions—what they notice first, and what the picture makes them think of or feel. Go on to discuss lines, shapes, colors, and textures; details not obvious at first; why they think the artist chose to depict things in a certain way, etc.

- Recognize as landscapes and discuss
 - Thomas Cole, *The Oxbow* (also known as *View from Mount Holyoke, Northampton, Massachusetts, after a Thunderstorm*)
 - El Greco, *View of Toledo* (also known as *Toledo in a Storm*)
 - Henri Rousseau, *Virgin Forest*
 - Vincent van Gogh, *The Starry Night*

Note: You may wish to recall from kindergarten, Joan Miró, *People and Dog in the Sun*.

IV. Abstract Art

- Compare lifelike and abstract animals, including
 - Paintings of birds by John James Audubon
 - Albrecht Dürer, *Young Hare*
 - Paul Klee, *Cat and Bird*
 - Pablo Picasso, *Bull's Head* (made from bicycle seat and handlebars)
 - Henri Matisse, *The Snail* (also known as *Chromatic Composition*)
- Observe and discuss examples of abstract painting and sculpture, including
 - Marc Chagall, *I and the Village*
 - Constantin Brancusi, *Bird in Space*

V. Architecture

See also World History 2:
The Ancient Greek
Civilization, *re* the
Parthenon; India, *re* the
Great Stupa; Japan, *re*
Himeji Castle.

- Understand architecture as the art of designing buildings.
- Understand symmetry and a line of symmetry, and observe symmetry in the design of some buildings (such as the Parthenon).
- Noting line, shape, and special features (such as columns and domes), look at
The Parthenon
Great Stupa (Buddhist temple in Sanchi, India)
Himeji Castle (also known as “White Heron Castle,” Japan)
The Guggenheim Museum (New York City)




Music: Grade 2

SEE INTRODUCTION, “The Arts in the Curriculum.”

Teachers: In schools, lessons on music should feature activities and works that illustrate important musical concepts and terms, and should introduce important composers and works. When appropriate, topics in music may be linked to topics in other disciplines.

The following guidelines focus on content, not performance skills, though many concepts are best learned through active practice (singing, clapping rhythms, playing instruments, etc.).

I. Elements of Music

- Through participation, become familiar with basic elements of music (rhythm, melody, harmony, form, timbre, etc.).
 - Recognize a steady beat, accents, and the downbeat; play a steady beat.
 - Move responsively to music (marching, walking, hopping, swaying, etc.).
 - Recognize short and long sounds.
 - Discriminate between fast and slow; gradually slowing down and getting faster.
 - Discriminate between differences in pitch: high and low.
 - Discriminate between loud and soft; gradually increasing and decreasing volume.
 - Understand that melody can move up and down.
 - Hum the melody while listening to music.
 - Echo short rhythms and melodic patterns.
 - Play simple rhythms and melodies.
 - Recognize like and unlike phrases.
 - Recognize timbre (tone color).
 - Sing unaccompanied, accompanied, and in unison.
 - Recognize verse and refrain.
 - Recognize that musical notes have names.
 - Recognize a scale as a series of notes.
 - Sing the C major scale using “do re mi” etc.
- Understand the following notation:
 - ≡ staff,  treble clef, names of lines and spaces in the treble clef
 - whole note  half note  quarter note
 - whole rest, half rest, quarter rest

II. Listening and Understanding

Teachers: Expose children to a wide range of music, including children’s music, popular instrumental music, and music from various cultures.

A. THE ORCHESTRA

- Review families of instruments: strings, brass, woodwinds, percussion.
- Become familiar with instruments in the string family—violin, viola, cello, double bass—and listen to
 - Camille Saint-Saëns, from *Carnival of the Animals*: “The Swan” (cello) and “Elephants” (double bass)
 - Antonio Vivaldi, *The Four Seasons* (see below, Composers and Their Music)
- Become familiar with instruments in the percussion family—for example, drums (timpani, snare), xylophone, wood block, maracas, cymbals, triangle, tambourine—and listen to
 - Carlos Chavez, *Toccata for Percussion*, third movement.

Note: In third grade, students will take a closer look at the brass and woodwind families.

Note: If you have recordings or other resources, also introduce African drumming and Latin American music with percussion.

See also below, Composers and Their Music, Bach, *Toccata and Fugue in D minor* (organ).

B. KEYBOARD INSTRUMENTS

- Recognize that the piano and organ are keyboard instruments, and listen to a variety of keyboard music, including:
 - Wolfgang Amadeus Mozart, *Rondo Alla turca* from *Piano Sonata K. 331*
 - Ludwig van Beethoven, *Für Elise*
 - Felix Mendelssohn, from *Songs without Words*, “Spring Song”

C. COMPOSERS AND THEIR MUSIC

Teachers: Provide brief, child-friendly biographical profiles of the following composers, and listen to representative works:

- Antonio Vivaldi, *The Four Seasons*
- Johann Sebastian Bach, *Minuet in G major* (collected by Bach in the *Anna Magdalena Notebook*); *Jesu, Joy of Man’s Desiring*; *Toccata and Fugue in D minor*
- Ludwig van Beethoven, *Symphony No. 6 (“Pastoral”)*: first movement and from final movement, “Thunderstorm” to end of symphony

See also Language Arts 2: American tall tales, re “Casey Jones,” and “John Henry.”

See also American History 2: Civil War, re “Dixie,” “Follow the Drinking Gourd,” and “When Johnny Comes Marching Home.”

See also American History 2: War of 1812, re “The Star-Spangled Banner.”

III. Songs

Buffalo Gals
 Casey Jones (chorus only)
 Clementine
 Dixie
 Do-Re-Mi
 The Erie Canal
 Follow the Drinking Gourd
 Good Bye Old Paint
 Home on the Range
 I’ve Been Working on the Railroad
 John Henry
 Old Dan Tucker
 The Star-Spangled Banner
 Swing Low, Sweet Chariot
 This Land Is Your Land
 When Johnny Comes Marching Home

Mathematics: Grade 2

Teachers: Mathematics has its own vocabulary and patterns of thinking. It is a discipline with its own language and conventions. Thus, while some lessons may offer occasional opportunities for linking mathematics to other disciplines, it is critically important to attend to math as math. From the earliest years, mathematics requires incremental review and steady practice: not only the diligent effort required to master basic facts and operations, but also thoughtful and varied practice that approaches problems from a variety of angles, and gives children a variety of opportunities to apply the same concept or operation in different types of situations. While it is important to work toward the development of “higher-order problem-solving skills,” it is equally important—indeed, it is prerequisite to achieving higher order skills—to have a sound grasp of basic facts, and an automatic fluency with fundamental operations.



I. Numbers and Number Sense

- Write numbers to 1,000.
- Read and write words for numbers from one to one-hundred.
- Order and compare numbers to 1,000, using the signs $<$, $>$, and $=$.
- Count
 - by twos, threes, fives, and tens
 - by tens from any given number
 - by hundreds to 1,000; by fifties to 1,000
 - forward and backward
- Use a number line.
- Use tallies.
- Identify ordinal position, 1st to 20th, and write words for ordinal numbers, first to twentieth.
- Identify even and odd numbers.
- Identify dozen; half-dozen; pair.
- Recognize place value: ones, tens, hundreds, thousands.
- Write numbers up to hundreds in expanded form (for example $64 = 60 + 4$; $367 = 300 + 60 + 7$).
- Given a number, identify one more and one less; ten more and ten less.
- Round to the nearest ten.
- Create and interpret simple bar graphs.
- Identify and extend numerical and symbolic patterns.
- Record numeric data systematically and find the lowest and highest values in a data set.

II. Fractions

- Recognize these fractions as part of a whole set or region and write the corresponding numerical symbols: $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$, $\frac{1}{8}$, $\frac{1}{10}$.
- Recognize fractions that are equal to 1.

III. Money

- Recognize relative values of a penny, nickel, dime, quarter, and dollar.
- Write amounts of money using \$ and ¢ signs, and the decimal point.
- Show how different combinations of coins equal the same amounts of money.
- Add and subtract amounts of money.

IV. Computation

A. ADDITION

- Achieve timed mastery of addition facts (2 seconds).
- Recognize what an addend is.
- Know how to write addition problems horizontally and vertically.
- Know how to add in any order and check a sum by changing the order of the addends.
- Estimate the sum.
- Solve two-digit and three-digit addition problems with and without regrouping.
- Find the sum (up to 999) of any two whole numbers.
- Add three two-digit numbers.
- Practice doubling (adding a number to itself).

B. SUBTRACTION

- Understand the inverse relation between addition and subtraction; use addition to check subtraction.
- Know addition and subtraction “fact families.”
- Achieve mastery of subtraction facts.
- Estimate the difference.
- Know how to write subtraction problems horizontally and vertically.
- Solve two-digit and three-digit subtraction problems with and without regrouping.
- Given two whole numbers of 999 or less, find the difference.

C. INTRODUCTION TO MULTIPLICATION

- Recognize the “times” sign (\times).
- Know what “factor” and “product” mean.
- Understand that you can multiply numbers in any order.
- Multiplication facts: know the product of any single-digit number \times 1, 2, 3, 4, 5.
- Know what happens when you multiply by 1, by 0, and by 10.
- Practice simple word problems involving multiplication.

D. SOLVING PROBLEMS AND EQUATIONS

- Solve basic word problems.
- Write and solve simple equations in the form of $__ - 9 = 7$; $7 + __ = 16$; $4 \times __ = 8$.

V. Measurement

A. LINEAR MEASURE

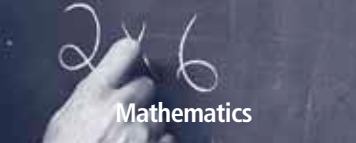
- Make linear measurements in feet and inches, and in centimeters.
- Know that one foot = 12 inches.
- Know abbreviations: ft., in.
- Measure and draw line segments in inches to $\frac{1}{2}$ inch, and in centimeters.
- Estimate linear measurements, then measure to check estimates.

B. WEIGHT

- Compare weights of objects using a balance scale.
- Estimate and measure weight in pounds, and know abbreviation: lb.

C. CAPACITY (VOLUME)

- Estimate and measure capacity in cups.
- Measure liquid volumes: cups, pints, quarts, gallons.
- Compare U.S. and metric liquid volumes: quart and liter (one liter is a little more than one quart).



D. TEMPERATURE

- Measure and record temperature in degrees Fahrenheit to the nearest 2 degrees.
- Know the degree sign: °

E. TIME

- Read a clock face and tell time to five-minute intervals.
- Know how to distinguish time as A.M. or P.M.
- Understand noon and midnight.
- Solve problems on elapsed time (how much time has passed?).
- Using a calendar, identify the date, day of the week, month, and year.
- Write the date using words and numbers.

VI. Geometry

Teachers: Review and reinforce topics from grade 1 as necessary (left and right, orientation and position, etc.)

- Identify and draw basic plane figures: square, rectangle, triangle, circle.
- Describe square, rectangle, triangle according to number of sides; distinguish between square and rectangle as regards length of sides (a square has sides of equal length).
- Measure perimeter in inches of squares and rectangles.
- Identify solid figures—sphere, cube, pyramid, cone, cylinder—and associate solid figures with planar shapes: sphere (circle), cube (square), pyramid (triangle).
- Make congruent shapes and designs.
- Identify lines as horizontal; vertical; perpendicular; parallel.
- Name lines and line segments (for example, line AB; segment CD).
- Identify a line of symmetry, and create simple symmetric figures.

Teachers: Effective instruction in science requires hands-on experience and observation. In the words of the 1993 report from the American Association for the Advancement of Science, *Benchmarks for Science Literacy*, "From their very first day in school, students should be actively engaged in learning to view the world scientifically. That means encouraging them to ask questions about nature and to seek answers, collect things, count and measure things, make qualitative observations, organize collections and observations, discuss findings, etc."

While experience counts for much, book learning is also important, for it helps bring coherence and order to a child's scientific knowledge. Only when topics are presented systematically and clearly can children make steady and secure progress in their scientific learning. The child's development of scientific knowledge and understanding is in some ways a very disorderly and complex process, different for each child. But a systematic approach to the exploration of science, one that combines experience with book learning, can help provide essential building blocks for deeper understanding at a later time.



I. Cycles in Nature

A. SEASONAL CYCLES

- The four seasons and earth's orbit around the sun (one year)
- Seasons and life processes
 - Spring: sprouting, sap flow in plants, mating and hatching
 - Summer: growth
 - Fall: ripening, migration
 - Winter: plant dormancy, animal hibernation

B. LIFE CYCLES

- The life cycle: birth, growth, reproduction, death
- Reproduction in plants and animals
 - From seed to seed with a plant
 - From egg to egg with a chicken
 - From frog to frog
 - From butterfly to butterfly: metamorphosis (see below: Insects)

C. THE WATER CYCLE

- Most of the earth's surface is covered by water.
- The water cycle
 - Evaporation and condensation
 - Water vapor in the air, humidity
 - Clouds: cirrus, cumulus, stratus
 - Precipitation, groundwater

Note: In fourth grade, students will review the water cycle and study other topics in meteorology.

II. Insects

- Insects can be helpful and harmful to people.
 - Helpful: pollination; products like honey, beeswax, and silk; eat harmful insects
 - Harmful: destroy crops, trees, wooden buildings, clothes; carry disease; bite or sting
- Distinguishing characteristics
 - Exoskeleton, chitin
 - Six legs and three body parts: head, thorax and abdomen
 - Most but not all insects have wings.
- Life cycles: metamorphosis
 - Some insects look like miniature adults when born from eggs, and they molt to grow (examples: grasshopper, cricket).
 - Some insects go through distinct stages of egg, larva, pupa, adult (examples: butterflies, ants).



- Social insects
 - Most insects live solitary lives, but some are social (such as ants, honeybees, termites, wasps).
 - Ants: colonies
 - Honeybees: workers, drones, queen

III. The Human Body

A. CELLS

- All living things are made up of cells, too small to be seen without a microscope.
 - Cells make up tissues.
 - Tissues make up organs.
 - Organs work in systems.

B. THE DIGESTIVE AND EXCRETORY SYSTEMS

Teachers: Explore with children what happens to the food we eat by studying body parts and functions involved in taking in food and getting rid of waste. Children should become familiar with the following:

- Salivary glands, taste buds
- Teeth: incisors, bicuspid, molars
- Esophagus, stomach, liver, small intestine, large intestine
- Kidneys, urine, bladder, urethra, anus, appendix

C. TAKING CARE OF YOUR BODY: A HEALTHY DIET

- The “food pyramid” or “MyPlate”
- Vitamins and minerals

IV. Magnetism

Teachers: Magnetism was introduced in kindergarten. Review and introduce new topics in second grade, with greater emphasis on experimentation.

- Magnetism demonstrates that there are forces we cannot see that act upon objects.
- Most magnets contain iron.
- Lodestones: naturally occurring magnets
- Magnetic poles: north-seeking and south-seeking poles
- Magnetic field (strongest at the poles)
- Law of magnetic attraction: unlike poles attract, like poles repel
- The earth behaves as if it were a huge magnet: north and south magnetic poles (near, but not the same as, geographic North Pole and South Pole)
- Orienteering: use of a magnetized needle in a compass, which will always point to the north

V. Simple Machines

Teachers: Examine with children how specific tools are made to perform specific jobs—for example, hammers, screwdrivers, pliers, etc. Through observation and experimentation, examine with children how simple machines help make work easier, and how they are applied and combined in familiar tools and machines.

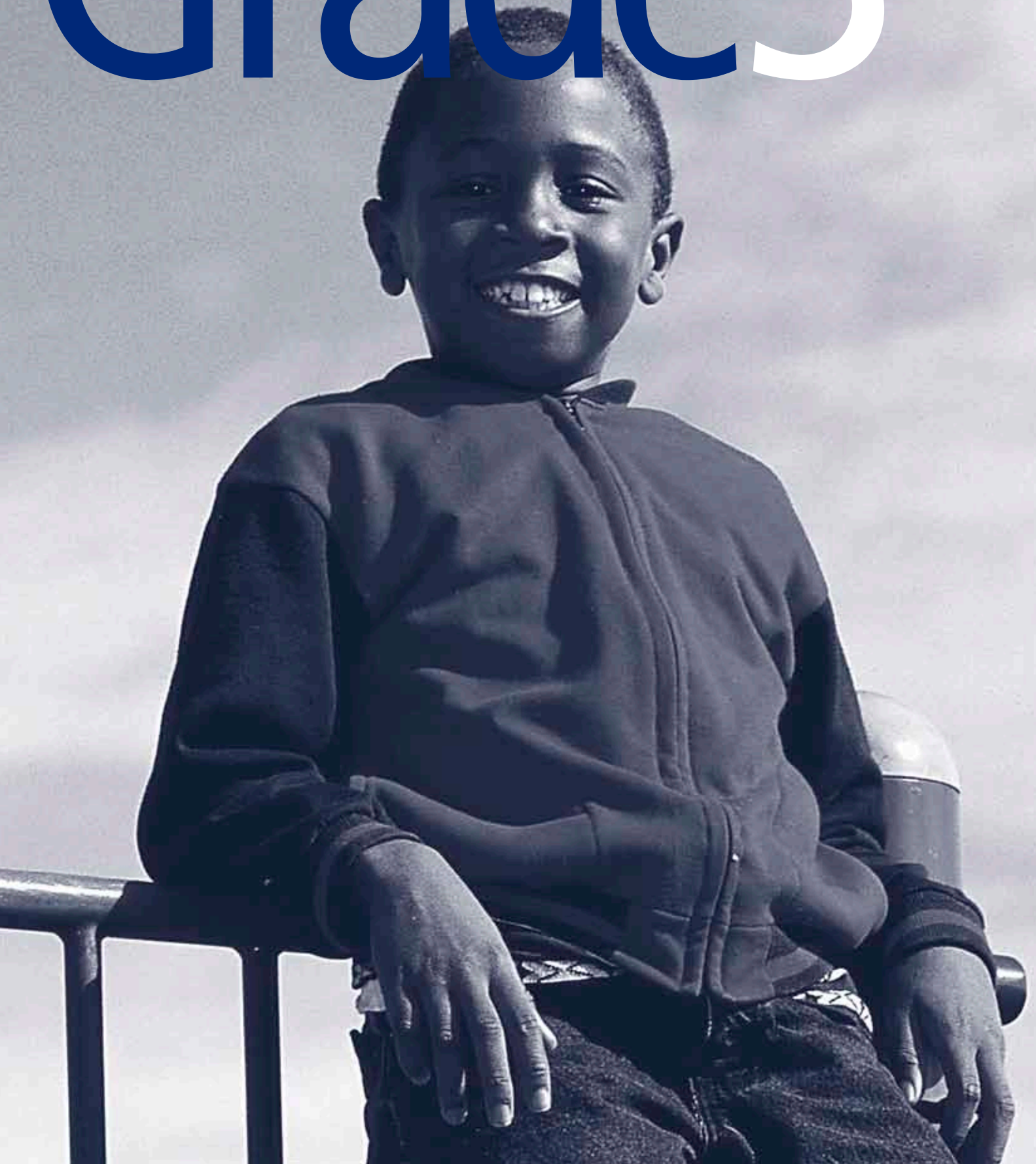
- Simple machines
 - lever
 - pulley
 - wheel-and-axle
 - gears: wheels with teeth and notches
 - how gears work, and familiar uses (for example, in bicycles)
 - inclined plane
 - wedge
 - screw
- Friction, and ways to reduce friction (lubricants, rollers, etc.)

VI. Science Biographies

See above, Human Body:
Cells re Anton van
Leeuwenhoek; Simple
Machines: Friction, re Elijah
McCoy.

Anton van Leeuwenhoek (invented the microscope)
Elijah McCoy (invented the automatic lubricator/the real McCoy)
Florence Nightingale (helped the wounded in the Crimean War/made hospitals more
sanitary)
Daniel Hale Williams (performed the first open-chest surgery)

Grade 3



Overview of Topics

Grade 3

Language Arts

- I. Reading and Writing
 - A. Reading Comprehension and Response
 - B. Writing
 - C. Spelling, Grammar, and Usage
 - D. Vocabulary
- II. Poetry
- III. Fiction
 - A. Stories
 - B. Myths and Mythical Characters
 - C. Literary Terms
- IV. Sayings and Phrases

History and Geography

World:

- I. World Geography
 - A. Spatial Sense
 - B. Geographical Terms and Features
 - C. Canada
 - D. Important Rivers of the World
- II. The Ancient Roman Civilization
 - A. Geography of the Mediterranean Region
 - B. Background
 - C. The Empire
 - D. The "Decline and Fall" of Rome
 - E. The Eastern Roman Empire: Byzantine Civilization
- III. The Vikings

American:

- I. The Earliest Americans
 - A. Crossing from Asia to North America
 - B. Native Americans
- II. Early Exploration of North America
 - A. Early Spanish Exploration and Settlement
 - B. Exploration and Settlement of the American Southwest
 - C. The Search for the Northwest Passage
- III. The Thirteen Colonies: Life and Times Before the Revolution
 - A. Geography
 - B. Southern Colonies
 - C. New England Colonies
 - D. Middle Atlantic Colonies

Visual Arts

- I. Elements of Art
 - A. Light
 - B. Space in Artworks
 - C. Design: How the Elements of Art Work Together
- II. American Indian Art
- III. Art of Ancient Rome and Byzantine Civilization

Music

- I. Elements of Music
- II. Listening and Understanding
 - A. The Orchestra
 - B. Composers and Their Music
 - C. Musical Connections
- III. Songs

Mathematics

- I. Numbers and Number Sense
- II. Fractions and Decimals
- III. Money
- IV. Computation
 - A. Addition
 - B. Subtraction
 - C. Multiplication
 - D. Division
 - E. Solving Problems and Equations
- V. Measurement
 - A. Linear Measure
 - B. Weight
 - C. Capacity (Volume)
 - D. Temperature
 - E. Time
- VI. Geometry

Science

- I. Introduction to Classification of Animals
- II. The Human Body
 - A. The Muscular System
 - B. The Skeletal System
 - C. The Nervous System
 - D. Vision: How the Eye Works
 - E. Hearing: How the Ear Works
- III. Light and Optics
- IV. Sound
- V. Ecology
- VI. Astronomy
- VII. Science Biographies

Language Arts: Grade 3

The *Common Core State Standards for English Language Arts* emphasize the critical importance of building nonfiction background knowledge in a coherent and sequenced way within and across grades. This can be accomplished most effectively, at each grade level, by integrating the topics from history, geography, science, and the arts in the *Core Knowledge Sequence* into the language arts block. Note that in the *Sequence*, there are many cross-curricular connections to history and science topics within Language Arts (e.g., poems, stories, and sayings), as well as to visual arts and music, which can and should be integrated into the applicable domain of study.

For Grade 3, domains include: The Ancient Roman Civilization; The Vikings; The Earliest Americans; Early Exploration of North America; The Thirteen Colonies: Life and Times Before the Revolution; Introduction to Classification of Animals; The Human Body; Light and Optics; Sound; Ecology; Astronomy.

NOTE: The objectives listed in **I. Reading and Writing** are currently under revision, as part of the *Core Knowledge Language Arts* program development for Grades 3–5. The revised Grade 3 goals and objectives will be conceptually consistent with the K–2 language arts sections of the 2010 edition of the *Sequence* and will be posted at www.coreknowledge.org as part of the online *Sequence* as soon as they are available.

I. Reading and Writing

Teachers: Many of the following sub-goals are designed to help children achieve the overall goal for reading in third grade: to be able to read (both aloud and silently), with fluency, accuracy, and comprehension any story or other text appropriately written for third grade. Such texts include Beverly Cleary's *Ramona* books, Laura Ingalls Wilder's *Little House in the Big Woods*, and third-grade-level volumes in such nonfiction series as *Let's Read and Find Out* and *New True Books*.

In third grade, children should be competent decoders of most one- and two-syllable words, and they should become increasingly able to use their knowledge of phonemes, syllable boundaries, and prefixes and suffixes to decode multisyllable words. Systematic attention to decoding skills should be provided as needed for children who have not achieved the goals specified for grades 1 and 2.

A. READING COMPREHENSION AND RESPONSE

- Independently read and comprehend longer works of fiction (“chapter books”) and nonfiction appropriately written for third grade or beyond.
- Point to specific words or passages that are causing difficulties in comprehension.
- Orally summarize main points from fiction and nonfiction readings.
- Ask and pose plausible answers to how, why, and what-if questions in interpreting texts, both fiction and nonfiction.
- Use a dictionary to answer questions regarding meaning and usage of words with which he or she is unfamiliar.
- Know how to use a table of contents and index to locate information.

B. WRITING

Teachers: Children should be given many opportunities for writing, both imaginative and expository, with teacher guidance that strikes a balance between encouraging creativity and requiring correct use of conventions. The following guidelines build on the second grade guidelines: please refer to them and provide review and reinforcement as necessary to ensure mastery.

Note: Children should read outside of school at least 20 minutes daily.

- Produce a variety of types of writing—such as stories, reports, poems, letters, descriptions—and make reasonable judgments about what to include in his or her own written works based on the purpose and type of composition.
- Know how to gather information from basic print sources (such as a children’s encyclopedia), and write a short report presenting the information in his or her own words.
- Know how to use established conventions when writing a friendly letter: heading, salutation (greeting), closing, signature.
- Produce written work with a beginning, middle, and end.
- Organize material in paragraphs and understand
 - how to use a topic sentence
 - how to develop a paragraph with examples and details
 - that each new paragraph is indented
- In some writings, proceed with guidance through a process of gathering information, organizing thoughts, composing a draft, revising to clarify and refine his or her meaning, and proofreading with attention to spelling, mechanics, and presentation of a final draft.

Note: Review from grade 2: capital letters for the first word of a sentence; proper nouns; the pronoun “I”; holidays and months and days of the week; names of countries, cities, states; main words in titles; initials.

Note: Review and reinforce from grade 2: singular and plural nouns; making words plural with /s/ or /es/; irregular plurals; correct usage of irregular verbs (*be*, *have*, *do*, *go*, *come*, etc.); regular past tense with *-ed* and past tense of irregular verbs.

Note: Children should know that a *possessive* noun shows ownership.

Note: Teach only words that can be clearly analyzed into prefix and base word; for example, do not teach “discover” or “display” as prefixed words.

C. SPELLING, GRAMMAR, AND USAGE

- Spell most words correctly or with a highly probable spelling, and use a dictionary to check and correct spellings about which he or she is uncertain.
- Use capital letters correctly.
- Understand what a complete sentence is, and
 - identify subject and predicate in single-clause sentences
 - distinguish complete sentences from fragments
- Identify and use different sentence types:
 - declarative (makes a statement)
 - interrogative (asks a question)
 - imperative (gives a command)
 - exclamatory (for example, “What a hit!”)
- Know the following parts of speech and how they are used:
 - nouns (for concrete nouns)
 - pronouns (singular and plural)
 - verbs: action verbs and auxiliary (helping) verbs
 - adjectives (including articles: *a* before a consonant, *an* before a vowel, and *the*)
 - adverbs
- Know how to use the following punctuation:
 - end punctuation: period, question mark, or exclamation point
 - comma: between day and year when writing a date; between city and state in an address; in a series; after *yes* and *no*
 - apostrophe: in contractions; in singular and plural possessive nouns
- Recognize and avoid the double negative.

D. VOCABULARY

- Know what prefixes and suffixes are and how the following affect word meaning:
 - Prefixes:
 - re* meaning “again” (as in reuse, refill)
 - un* meaning “not” (as in unfriendly, unpleasant)
 - dis* meaning “not” (as in dishonest, disobey)
 - un* meaning “opposite of” or “reversing an action” (as in untie, unlock)
 - dis* meaning “opposite of” or “reversing an action” (as in disappear, dismount)
 - Suffixes:
 - er* and *or* (as in singer, painter, actor)
 - less* (as in careless, hopeless)
 - ly* (as in quickly, calmly)

Note: Review synonyms and antonyms.

- Know what homophones are (for example, by, buy; hole, whole) and correct usage of homophones that commonly cause problems:
 their, there, they're
 your, you're
 its, it's
 here, hear
 to, too, two
- Recognize common abbreviations (for example, St., Rd., Mr., Mrs., Ms., Dr., U.S.A., ft., in., lb.).

II. Poetry

Teachers: The poems listed here constitute a selected core of poetry for this grade. You are encouraged to expose children to more poetry, old and new, and to have children write their own poems. To bring children into the spirit of poetry, read it aloud and encourage them to read it aloud so they can experience the music in the words. At this grade, poetry should be a source of delight; technical analysis should be delayed until later grades.

Adventures of Isabel (Ogden Nash)
 The Bee (Isaac Watts; see also below, "The Crocodile")
 By Myself (Eloise Greenfield)
 Catch a Little Rhyme (Eve Merriam)
 The Crocodile (Lewis Carroll)
 Dream Variations (Langston Hughes)
 Eletelephony (Laura Richards)
 Father William (Lewis Carroll)
 First Thanksgiving of All (Nancy Byrd Turner)
 For want of a nail, the shoe was lost . . . (traditional)
 Jimmy Jet and His TV Set (Shel Silverstein)
 Knoxville, Tennessee (Nikki Giovanni)
 Trees (Sergeant Joyce Kilmer)

III. Fiction

Teachers: The titles here constitute a selected core of stories for this grade. Expose children to many more stories, and encourage children to write their own stories. Children should also be exposed to nonfiction prose: biographies, books about science and history, books on art and music, etc. Also, engage children in dramatic activities, possibly with one of the stories below in the form of a play. Some of the following works, such as *Alice in Wonderland* and *The Wind in the Willows*, lend themselves to reading aloud to children.

A. STORIES

Alice in Wonderland (Lewis Carroll)
 from *The Arabian Nights*:
 Aladdin and the Wonderful Lamp
 Ali Baba and the Forty Thieves
 The Hunting of the Great Bear (an Iroquois legend about the origin of the Big Dipper)
 The Husband Who Was to Mind the House (a Norse/English folktale, also known as "Gone is Gone")
 The Little Match Girl (Hans Christian Andersen)
 The People Could Fly (an African American folktale)
 Three Words of Wisdom (a folktale from Mexico)
 William Tell
 selections from *The Wind in the Willows*: "The River Bank" and
 "The Open Road" (Kenneth Grahame)

See also American History 3:
 Slavery in the Colonies, re
 "The People Who Could Fly."

See also World History 3:
Vikings.

See also World History 3,
Ancient Rome.

B. MYTHS AND MYTHICAL CHARACTERS

- Norse Mythology
 - Asgard (home of the gods)
 - Valhalla
 - Hel (underworld)
 - Odin
 - Thor
 - trolls
 - Norse gods and English names for days of the week: Tyr, Odin [Wodin], Thor, Frigg [Freya]
- More Myths and Legends of Ancient Greece and Rome
 - Jason and the Golden Fleece
 - Perseus and Medusa
 - Cupid and Psyche
 - The Sword of Damocles
 - Damon and Pythias
 - Androcles and the Lion
 - Horatius at the Bridge

C. LITERARY TERMS

biography and autobiography
fiction and nonfiction

IV. Sayings and Phrases

Teachers: Every culture has phrases and proverbs that make no sense when carried over literally into another culture. For many children, this section may not be needed; they will have picked up these sayings by hearing them at home and among friends. But the sayings have been one of the categories most appreciated by teachers who work with children from home cultures that differ from the standard culture of literate American English.

Actions speak louder than words.
His bark is worse than his bite.
Beat around the bush
Beggars can't be choosers.
Clean bill of health
Cold shoulder
A feather in your cap
Last straw
Let bygones be bygones.
One rotten apple spoils the whole barrel.
On its last legs
Rule the roost
The show must go on.
Touch and go
When in Rome do as the Romans do.
Rome wasn't built in a day.

History and Geography: Grade 3

WORLD HISTORY AND GEOGRAPHY

I. World Geography

Teachers: The study of geography embraces many topics throughout the *Core Knowledge Sequence*, including topics in history and science. Geographic knowledge includes a spatial sense of the world, an awareness of the physical processes that shape life, a sense of the interactions between humans and their environment, an understanding of the relations between place and culture, and an awareness of the characteristics of specific regions and cultures.

A. SPATIAL SENSE (Working with Maps, Globes, and Other Geographic Tools)

Teachers: Review and reinforce earlier topics, and add new topics as follows:

- Name your continent, country, state, and community.
- Understand that maps have keys or legends with symbols and their uses.
- Find directions on a map: east, west, north, south.
- Identify major oceans: Pacific, Atlantic, Indian, Arctic.
- The seven continents: Asia, Europe, Africa, North America, South America, Antarctica, Australia
- Locate: Canada, United States, Mexico, Central America.
- Locate: the Equator, Northern Hemisphere and Southern Hemisphere, North and South Poles.
- Measure straight-line distances using a bar scale.
- Use an atlas and, if available, on-line sources to find geographic information.

B. GEOGRAPHICAL TERMS AND FEATURES

Teachers: Review terms from grade 1 (peninsula, harbor, bay, island) and grade 2 (coast, valley, desert, oasis, prairie), and add:

- boundary, channel, delta, isthmus, plateau, reservoir, strait

C. CANADA

- Locate in relation to United States
- French and British heritage, French-speaking Quebec
- Rocky Mountains
- Hudson Bay, St. Lawrence River, Yukon River
- Divided into provinces
- Major cities, including Montreal, Quebec, Toronto, Vancouver

D. IMPORTANT RIVERS OF THE WORLD

- Terms: source, mouth, tributary, drainage basin
- Asia: Ob, Yellow (Huang He), Yangtze (Chang Jiang), Ganges, Indus, Tigris, Euphrates
- Africa: Nile, Niger, Congo
- South America: Amazon, Parana, Orinoco
- North America: Mississippi and major tributaries, Mackenzie, Yukon
- Australia: Murray-Darling
- Europe: Volga, Danube, Rhine

See also below,
American History and
Geography II.C: Search for
the Northwest Passage.

II. The Ancient Roman Civilization

Teachers: Students will study Rome again in grade 6, with a focus on the legacy of ideas from ancient Greece and Rome.

A. GEOGRAPHY OF THE MEDITERRANEAN REGION

- Mediterranean Sea, Aegean Sea, Adriatic Sea
- Greece, Italy (peninsula), France, Spain
- Strait of Gibraltar, Atlantic Ocean
- North Africa, Asia Minor (peninsula), Turkey
- Bosphorus (strait), Black Sea, Istanbul (Constantinople)
- Red Sea, Persian Gulf, Indian Ocean

B. BACKGROUND

- Define B.C. / A.D. and B.C.E. / C.E.
- The legend of Romulus and Remus
- Latin as the language of Rome
- Worship of gods and goddesses, largely based on Greek religion
- The Republic: Senate, Patricians, Plebeians
- Punic Wars: Carthage, Hannibal

C. THE EMPIRE

- Julius Caesar
 - Defeats Pompey in civil war, becomes dictator
 - “Veni, vidi, vici” (“I came, I saw, I conquered”)
 - Cleopatra of Egypt
 - Caesar assassinated in the Senate, Brutus
- Augustus Caesar
- Life in the Roman Empire
 - The Forum: temples, marketplaces, etc.
 - The Colosseum: circuses, gladiator combat, chariot races
 - Roads, bridges, and aqueducts
- Eruption of Mt. Vesuvius, destruction of Pompeii
- Persecution of Christians

D. THE “DECLINE AND FALL” OF ROME

- Weak and corrupt emperors, legend of Nero fiddling as Rome burns
- Civil wars
- City of Rome sacked
- Social and moral decay

E. THE EASTERN ROMAN EMPIRE: BYZANTINE CIVILIZATION

- The rise of the Eastern Roman Empire, known as the Byzantine Empire
- Constantine, emperor who made Christianity the official religion of Rome
- Constantinople (now called Istanbul) merges diverse influences and cultures.
- Justinian, Justinian’s Code

See also Language Arts 3:
More Myths and Legends of
Ancient Greece and Rome.

See also Visual Arts 3:
Art of Ancient Rome and
Byzantine Civilization.

III. The Vikings

- From area now called Scandinavia (Sweden, Denmark, Norway)
- Also called Norsemen, they were skilled sailors and shipbuilders.
- Traders, and sometimes raiders of the European coast
- Eric the Red and Leif Ericson (Leif “the Lucky”)
- Earliest Europeans (long before Columbus) we know of to come to North America
 - Locate: Greenland, Canada, Newfoundland

See also Language Arts 3:
Norse Myths.

American History and Geography



See also Language Arts 3:
"The Hunting of the Great
Bear" (an Iroquois legend).

AMERICAN HISTORY AND GEOGRAPHY

Teachers: In third grade, students begin a more detailed and in-depth chronological investigation of topics, some of which have been introduced in grades K–2. Specific topics include: the early exploration of North America; ways of life of specific Native American peoples; life in colonial America before the Revolution. Use of timelines is encouraged. The following guidelines are meant to complement any locally required studies of the family, community, or region. Note that in fifth grade the American Geography requirements include "fifty states and capitals"; teachers in grades two through four may want to introduce these incrementally to prepare for the fifth grade requirement.

I. The Earliest Americans

A. CROSSING FROM ASIA TO NORTH AMERICA

- During the Ice Age, nomadic hunters cross from Asia to North America (now the Bering Strait). (Crossing a land bridge is just one of many theories.) Different peoples, with different languages and ways of life, eventually spread out over the North and South American continents. These early peoples include:
 - Inuits (Eskimos)
 - Anasazi, pueblo builders and cliff dwellers
 - Mound builders

B. NATIVE AMERICANS

- In the Southwest
 - Pueblos (Hopi, Zuni)
 - Dine (Navajo)
 - Apaches
- Eastern "Woodland" Indians
 - Woodland culture: wigwams, longhouses, farming, peace pipe, Shaman and Sachem
 - Major tribes and nations (such as Powhatan, Delaware, Susquehanna, Mohican, Massachusetts, Iroquois Confederacy)
- In the Southeast
 - Cherokee
 - Seminole

II. Early Exploration of North America

Teachers: In fifth grade, students will examine European exploration in a more global context. Third grade teachers should look ahead to the fifth grade World History guidelines (under "European Exploration, Trade, and the Clash of Cultures") to see how the topics introduced here will be developed and extended later. It is recommended that third grade teachers keep their focus on the explorers and events specified here, and leave for fifth grade the figures and ideas specified for that grade.

A. EARLY SPANISH EXPLORATION AND SETTLEMENT

- Settlement of Florida
- Ponce de Leon, legend of the Fountain of Youth
- Hernando de Soto
- Founding of St. Augustine (oldest continuous European settlement in what is now the U.S.)
- Geography: Caribbean Sea, West Indies, Puerto Rico, Cuba, Gulf of Mexico, Mississippi River

B. EXPLORATION AND SETTLEMENT OF THE AMERICAN SOUTHWEST

- Early Spanish explorers in the lands that are now the states of Texas, New Mexico, Arizona, and California; missionary settlements (missions), especially in Texas and California
- Coronado and the legend of the “Seven Cities of Cibola” (of Gold)
- Geography: Grand Canyon and Rio Grande
- Conflicts between the Spanish and the Pueblos (1680 revolt led by Popé)

C. THE SEARCH FOR THE NORTHWEST PASSAGE

- Many explorers undertook the perilous, sometimes fatal, voyage to find a short cut across North America to Asia, including:
 - John Cabot: Newfoundland
 - Champlain: “New France” and Quebec
 - Henry Hudson: the Hudson River
- Geography
 - “New France” and Quebec
 - Canada, St. Lawrence River
 - The Great Lakes: Superior, Michigan, Huron, Erie, Ontario

Note: Students may also be interested to learn about Amerigo Vespucci, the unlikely source of our country’s name.

III. The Thirteen Colonies: Life and Times Before the Revolution

Teachers: Discuss with children the definition of “colony” and why countries establish colonies. Help children see that the thirteen English colonies were not alike. Different groups of people came to America with different motivations (hoping to get rich, looking for religious freedom, etc.), and the thirteen colonies developed in different ways.

A. GEOGRAPHY

- The thirteen colonies by region: New England, Middle Atlantic, Southern
- Differences in climate from north to south: corresponding differences in agriculture (subsistence farming in New England, gradual development of large plantations in the South)
- Important cities in the development of trade and government: Philadelphia, Boston, New York, Charleston

B. SOUTHERN COLONIES

- Southern colonies: Virginia, Maryland, North Carolina, South Carolina, Georgia
- Virginia
 - Chesapeake Bay, James River
 - 1607: three ships of the London Company (later called the Virginia Company) arrive in Virginia, seeking gold and other riches
 - Establishment of Jamestown, first continuous English colony in the New World
 - Trade with Powhatan Indians (see also Eastern Woodland Indians, above)
 - John Smith
 - Pocahontas, marriage to John Rolfe
 - Diseases kill many people, both colonists and Indians
 - The Starving Time
 - Clashes between American Indians and English colonists
 - Development of tobacco as a cash crop, development of plantations
 - 1619: first African laborers brought to Virginia
- Maryland
 - A colony established mainly as a refuge for Catholics
 - Lord Baltimore
- South Carolina
 - Charleston
 - Plantations (rice, indigo) and slave labor

Note: The question of fact vs. legend regarding the rescue of John Smith by Pocahontas presents a good opportunity to explore what historians know and how they seek to learn about the past.

See also Language Arts 3:
“The People Who Could Fly”
re slavery in the colonies.

- Georgia
 - James Oglethorpe’s plan to establish a colony for English debtors
- Slavery in the Southern colonies
 - Economic reasons that the Southern colonies came to rely on slavery (for example, slave labor on large plantations)
 - The difference between indentured servants and slaves: slaves as property
 - The Middle Passage

C. NEW ENGLAND COLONIES

- New England colonies: Massachusetts, New Hampshire, Connecticut, Rhode Island
- Gradual development of maritime economy: fishing and shipbuilding
- Massachusetts
 - Colonists seeking religious freedom: in England, an official “established” church (the Church of England), which did not allow people to worship as they chose
 - The Pilgrims
 - From England to Holland to Massachusetts
 - 1620: Voyage of the Mayflower
 - Significance of the Mayflower Compact
 - Plymouth, William Bradford
 - Helped by Wampanoag Indians: Massasoit, Tisquantum (Squanto)
 - The Puritans
 - Massachusetts Bay Colony, Governor John Winthrop: “We shall be as a city upon a hill.”
 - Emphasis on reading and education, the *New England Primer*
- Rhode Island
 - Roger Williams: belief in religious toleration
 - Anne Hutchinson

Note: In fifth grade, students will explore the social changes that led to the Protestant Reformation.

D. MIDDLE ATLANTIC COLONIES

- Middle Atlantic colonies: New York, New Jersey, Delaware, Pennsylvania
- New York
 - Dutch settlements and trading posts in “New Netherland”
 - Dutch West India Company acquires Manhattan Island and Long Island through a (probably misunderstood) purchase from the Indians; Dutch establish New Amsterdam (today, New York City)
 - English take over from the Dutch, and rename the colony New York
- Pennsylvania
 - William Penn
 - Society of Friends, “Quakers”
 - Philadelphia

Visual Arts: Grade 3

SEE INTRODUCTION, “The Arts in the Curriculum.”

Teachers: In schools, lessons on the visual arts should illustrate important elements of making and appreciating art, and emphasize important artists, works of art, and artistic concepts. When appropriate, topics in the visual arts may be linked to topics in other disciplines. While the following guidelines specify a variety of artworks in different media and from various cultures, they are not intended to be comprehensive. Teachers are encouraged to build upon the core content and expose children to a wide range of art and artists.

I. Elements of Art

Teachers: The generally recognized elements of art include line, shape, form, space, light, texture, and color. In third grade, build on what the children have learned in earlier grades as you introduce concepts of light, space, and design.

A. LIGHT

- Observe how artists use light and shadow (to focus our attention, affect our emotions, etc.) in
James Chapin, *Ruby Green Singing*
Jan Vermeer, *Milkmaid*

B. SPACE IN ARTWORKS

- Understand the following terms: two-dimensional (height, width) and three-dimensional (height, width, depth)
- Observe relationship between two-dimensional and three-dimensional shapes: square to cube, triangle to pyramid, circle to sphere and cylinder
- Observe how artists can make two-dimensional look three-dimensional by creating an illusion of depth, and examine the foreground, middle ground, and background in paintings, including
Jean Millet, *The Gleaners*
Pieter Bruegel, *Peasant Wedding*

C. DESIGN: HOW THE ELEMENTS OF ART WORK TOGETHER

- Become familiar with how these terms are used in discussing works of art:
Figure and ground
Pattern
Balance and symmetry
- Examine design—how the elements of art work together—in
Rosa Bonheur, *The Horse Fair*
Mary Cassatt, *The Bath*
Early American quilts
Edward Hicks, *The Peaceable Kingdom*
Henri Matisse, cut-outs: *Icarus*
Edvard Munch, *The Scream*
Horace Pippin, *Victorian Interior*
Faith Ringgold, *Tar Beach*

Note: Students will take a more detailed look at perspective in grade 5.

See also American History 3: Colonial America, re Early American quilts and *The Peaceable Kingdom*.

II. American Indian Art

Teachers: The works of art specified below are associated with the Southwest and Eastern Woodland Indians studied in third grade, thus other works of art, such as totem poles, are not listed here because they would be more appropriately examined when students are introduced to the Pacific Northwest Indians. Students should be made aware of the spiritual purposes and significance of many American Indian works of art.

- Become familiar with American Indian works, including
 - Kachina dolls (Hopi, Zuni)
 - Navajo (Dine) blankets and rugs, sand paintings
 - Jewelry

III. Art of Ancient Rome and Byzantine Civilization

Teachers: The works of art listed here may be introduced as part of your study of ancient Roman civilization; see *World History Grade 3*.

- Become familiar with artworks of ancient Roman and Byzantine civilization, including
 - Le Pont du Gard
 - The Pantheon
 - Byzantine mosaics
 - Hagia Sophia

Music: Grade 3







SEE INTRODUCTION, “The Arts in the Curriculum.”

Teachers: In schools, lessons on music should feature activities and works that illustrate important musical concepts and terms, and should introduce important composers and works. When appropriate, topics in music may be linked to topics in other disciplines.

The following guidelines focus on content, not performance skills, though many concepts are best learned through active practice (singing, clapping rhythms, playing instruments, etc.).



I. Elements of Music

- Through participation, become familiar with basic elements of music (rhythm, melody, harmony, form, timbre, etc.).
 - Recognize a steady beat, accents, and the downbeat; play a steady beat.
 - Move responsively to music.
 - Recognize short and long sounds.
 - Discriminate between fast and slow; gradually slowing down and getting faster.
 - Discriminate between differences in pitch: high and low.
 - Discriminate between loud and soft; gradually increasing and decreasing volume.
 - Understand that melody can move up and down.
 - Hum the melody while listening to music.
 - Echo short rhythms and melodic patterns.
 - Play simple rhythms and melodies.
 - Sing unaccompanied, accompanied, and in unison.
 - Recognize harmony; sing rounds.
 - Recognize verse and refrain.
 - Continue work with timbre and phrasing.
 - Review names of musical notes; scale as a series of notes; singing the C major scale using “do re mi” etc.
- Understand the following notation
 - names of lines and spaces in the treble clef
 -  treble clef,  staff, bar line, double bar line, measure, repeat signs
 -  whole note  half note  quarter note  eighth note
 - whole rest, half rest, quarter rest
 - meter signature: $\frac{4}{4}$ $\frac{2}{4}$ $\frac{3}{4}$
 - soft *p* *pp* loud *f* *ff*

II. Listening and Understanding

Teachers: Expose children to a wide range of music, including children’s music, popular instrumental music, and music from various cultures.

A. THE ORCHESTRA

- Review families of instruments: strings, brass, woodwinds, percussion.
- Become familiar with brass instruments—trumpet, French horn, trombone, tuba—and listen to
 - Gioacchino Rossini, *William Tell Overture*, finale (trumpet)
 - Wolfgang Amadeus Mozart, selections from the *Horn Concertos* (French horn)

See also below, re brass instruments, Composers and Their Music: Aaron Copland’s *Fanfare for the Common Man*, and John Philip Sousa, *Stars and Stripes Forever*. See also Language Arts 3: William Tell.

Note: When you explore woodwinds with children, you may also want to recall Prokofiev’s *Peter and the Wolf*: the duck’s theme (oboe), cat’s theme (clarinet), bird’s theme (flute), and Grandfather’s theme (bassoon).

See below, Songs, “Simple Gifts.”

See also Language Arts 3: Tales from “The Arabian Nights” re *Scheherazade*. Also, re Norse mythology, you may want to introduce Wagner’s “The Ride of the Valkyries.”

Note: Review from earlier grades “America the Beautiful” and “The Star-Spangled Banner.”

- Become familiar with woodwind instruments—flute and piccolo (no reeds); clarinet, oboe, bassoon (with reeds)—and listen to
 Claude Debussy, *Prelude to the Afternoon of a Faun* (flute)
 Opening of George Gershwin’s *Rhapsody in Blue* (clarinet)

B. COMPOSERS AND THEIR MUSIC

Teachers: Provide brief, child-friendly biographical profiles of the following composers, and listen to representative works:

- Peter Ilich Tchaikovsky, *Suite from Swan Lake*
- John Philip Sousa, *Stars and Stripes Forever*
- Aaron Copland, *Fanfare for the Common Man*; “Hoedown” from *Rodeo*, “Simple Gifts” from *Appalachian Spring*

C. MUSICAL CONNECTIONS

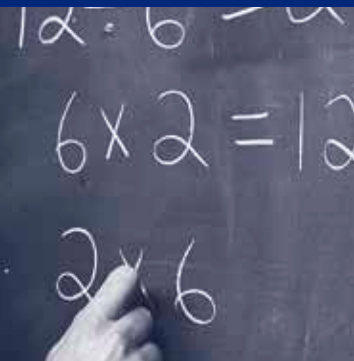
Teachers: Introduce children to the following in connection with topics in other disciplines:

- Nikolai Rimsky-Korsakov, *Scheherazade*, part one: “The Sea and Sinbad’s Ship”

III. Songs

- Alouette
- America (“My country, ’tis of thee”)
- A Bicycle Built for Two (chorus only)
- Down in the Valley
- He’s Got the Whole World in His Hands
- Hey, Ho, Nobody Home (round)
- In the Good Old Summertime (chorus only)
- Li’l Liza Jane
- My Bonnie Lies Over the Ocean
- Polly Wolly Doodle
- The Man on the Flying Trapeze (chorus only)
- The Sidewalks of New York (chorus only)
- Simple Gifts (“Tis a gift to be simple”)
- This Little Light of Mine
- You’re a Grand Old Flag

Teachers: Mathematics has its own vocabulary and patterns of thinking. It is a discipline with its own language and conventions. Thus, while some lessons may offer occasional opportunities for linking mathematics to other disciplines, it is critically important to attend to math as math. From the earliest years, mathematics requires incremental review and steady practice: not only the diligent effort required to master basic facts and operations, but also thoughtful and varied practice that approaches problems from a variety of angles, and gives children a variety of opportunities to apply the same concept or operation in different types of situations. While it is important to work toward the development of “higher-order problem-solving skills,” it is equally important—indeed, it is prerequisite to achieving “higher order” skills—to have a sound grasp of basic facts, and an automatic fluency with fundamental operations.



I. Numbers and Number Sense

- Read and write numbers (in digits and words) up to six digits.
- Recognize place value up to hundred thousands.
- Order and compare numbers to 999,999, using the signs $<$, $>$, and $=$.
- Count by twos, threes, fives, and tens; count by tens from any given number.
- Write numbers in expanded form.
- Use a number line.
- Identify ordinal position, 1st to 100th.
- Review: even and odd numbers; dozen; half-dozen; pair.
- Round to the nearest ten; to the nearest hundred.
- Identify perfect squares (and square roots) to 100, and recognize the square root sign: $\sqrt{\quad}$
- Identify Roman numerals from 1 to 20 (I - XX).
- Understand what negative numbers are in relation to familiar uses (such as temperatures below zero).
- Locate positive and negative whole numbers on a number line.
- Create and interpret bar graphs and line graphs.
- Record outcomes for a simple event (for example, tossing a die) and display the results graphically.

II. Fractions and Decimals

- Recognize fractions to $\frac{1}{10}$ and fractions whose denominator is 100.
- Identify numerator and denominator.
- Write mixed numbers.
- Recognize equivalent fractions (for example, $\frac{1}{2} = \frac{3}{6}$).
- Compare fractions with like denominators, using the signs $<$, $>$, and $=$.
- Know and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.
- Read and write decimals to the hundredths.

III. Money

- Write amounts of money using \$ and ¢ signs, and the decimal point.
- Make change, using as few coins as possible.
- Add and subtract amounts of money.
- Multiply and divide amounts of money by small whole numbers.

IV. Computation

Teachers: Children should know their basic addition and subtraction facts; review and reinforce as necessary to ensure mastery.

A. ADDITION

- Review and practice basic addition facts.
- Mentally estimate a sum.
- Use mental computation strategies.
- Addition with and without regrouping: find the sum (up to 10,000) of any two whole numbers.

B. SUBTRACTION

- Understand addition and subtraction as inverse operations; use addition to check subtraction.
- Review and practice basic subtraction facts.
- Mentally estimate the difference.
- Use mental computation strategies.
- Subtraction with and without regrouping: given two whole numbers of 10,000 or less, find the difference.

C. MULTIPLICATION

- Master basic multiplication facts to 10×10 .
- Mentally multiply, by 10, 100, and 1,000.
- Multiply two whole numbers, with and without regrouping, in which one factor is 9 or less and the other is a multi-digit number up to three digits.
- Write numbers in expanded form using multiplication, for example: $9,278 = (9 \times 1,000) + (2 \times 100) + (7 \times 10) + 8$.
- Estimate a product.
- Solve word problems involving multiplication.

D. DIVISION

- Understand multiplication and division as inverse operations.
- Know the meaning of dividend, divisor, and quotient.
- Know basic division facts to $100 \div 10$.
- Know that you cannot divide by 0.
- Know that any number divided by 1 = that number.
- Divide two- and three-digit dividends by one-digit divisors.
- Solve division problems with remainders.
- Check division by multiplying (and adding remainder).

E. SOLVING PROBLEMS AND EQUATIONS

- Solve two-step word problems.
- Solve equations in the form of $__ \times 9 = 63$; $81 \div __ = 9$.
- Solve problems with more than one operation, as in $(43 - 32) \times (5 + 3) = __$.
- Read and write expressions that use parentheses to indicate order of multiple operations.

V. Measurement

A. LINEAR MEASURE

- Make linear measurements in yards, feet, and inches; and, in centimeters and meters.
- Know that one foot = 12 inches; one yard = 36 inches; 3 feet = 1 yard; 1 meter = 100 centimeters; 1 meter is a little more than one yard.
- Measure and draw line segments in inches (to $\frac{1}{4}$ inch), and in centimeters.
- Estimate linear measurements, then measure to check estimates.



B. WEIGHT

- Compare weights of objects using a balance scale.
- Estimate and measure weight in pounds and ounces; grams and kilograms.
- Know abbreviations: lb., oz., g, kg

C. CAPACITY (VOLUME)

- Estimate and measure liquid capacity in cups, pints, quarts, gallons, and liters.
- Know that 1 quart = 2 pints; 1 gallon = 4 quarts.
- Compare U.S. and metric liquid volumes: quart and liter (one liter is a little more than one quart).

D. TEMPERATURE

- Measure and record temperature in degrees Fahrenheit and Celsius.
- Know the degree sign: °
- Identify freezing point of water as $32^{\circ}\text{ F} = 0^{\circ}\text{ C}$.

E. TIME

- Read a clock face and tell time to the minute as either A.M. or P.M.; tell time in terms of both “minutes before” and “minutes after” the hour.
- Solve problems on elapsed time (how much time has passed?).
- Using a calendar, identify the date, day of the week, month, and year.
- Write the date using words (for name of month) and numbers, and only numbers.

VI. Geometry

- Identify lines as horizontal, vertical, perpendicular, or parallel.
- Name lines and line segments (for example, line AB; segment CD).
- Polygons: recognize vertex (plural: vertices); identify sides as line segments (for example, side CD); identify pentagon, hexagon, and octagon (regular).
- Identify angles by letter names (for example, \angle ABC); identify a right angle; know that there are four right angles in a square or rectangle.
- Compute area in square inches (in^2) and square centimeters (cm^2).
- Recognize and draw congruent figures; identify a line of symmetry, and create symmetric figures.
- Identify solid figures: sphere, cube, rectangular solid, pyramid, cone, cylinder.

Science: Grade 3

Teachers: Effective instruction in science requires hands-on experience and observation. In the words of the 1993 report from the American Association for the Advancement of Science, *Benchmarks for Science Literacy*, "From their very first day in school, students should be actively engaged in learning to view the world scientifically. That means encouraging them to ask questions about nature and to seek answers, collect things, count and measure things, make qualitative observations, organize collections and observations, discuss findings, etc."

While experience counts for much, book learning is also important, for it helps bring coherence and order to a child's scientific knowledge. Only when topics are presented systematically and clearly can children make steady and secure progress in their scientific learning. The child's development of scientific knowledge and understanding is in some ways a very disorderly and complex process, different for each child. But a systematic approach to the exploration of science, one that combines experience with book learning, can help provide essential building blocks for deeper understanding at a later time.



I. Introduction to Classification of Animals

- Scientists classify animals according to the characteristics they share, for example:
 - Cold-blooded or warm-blooded
 - Vertebrates (have backbones and internal skeletons) or invertebrates (do not have backbones or internal skeletons)
- Different classes of vertebrates

Teachers: Children should become familiar with examples of animals in each class and some basic characteristics of each class, such as:

Fish: aquatic animals, breathe through gills, cold-blooded, most have scales, most develop from eggs that the female lays outside her body

Amphibians: live part of their lives in water and part on land, have gills when young, later develop lungs, cold-blooded, usually have moist skin

Reptiles: hatch from eggs, cold-blooded, have dry, thick, scaly skin

Birds: warm-blooded, most can fly, have feathers and wings, most build nests, hatch from eggs, most baby birds must be fed by parents and cared for until they can survive on their own (though some, like baby chickens and quail, can search for food a few hours after hatching)

Mammals: warm-blooded, have hair on their bodies, parents care for the young, females produce milk for their babies, breathe through lungs, most are terrestrial (live on land) though some are aquatic

II. The Human Body

A. THE MUSCULAR SYSTEM

- Muscles
 - Involuntary and voluntary muscles

B. THE SKELETAL SYSTEM

- Skeleton, bones, marrow
- Musculo-skeletal connections
 - Ligaments
 - Tendons, Achilles tendon
 - Cartilage
- Skull, cranium
- Spinal column, vertebrae
- Joints
- Ribs, rib cage, sternum
- Scapula (shoulder blades), pelvis, tibia, fibula
- Broken bones, x-rays



C. THE NERVOUS SYSTEM

- Brain: medulla, cerebellum, cerebrum, cerebral cortex
- Spinal cord
- Nerves
- Reflexes

D. VISION: HOW THE EYE WORKS

- Parts of the eye: cornea, iris and pupil, lens, retina
- Optic nerve
- Farsighted and nearsighted

E. HEARING: HOW THE EAR WORKS

- Sound as vibration
- Outer ear, ear canal
- Eardrum
- Three tiny bones (hammer, anvil, and stirrup) pass vibrations to the cochlea
- Auditory nerve

III. Light and Optics

Teachers: Through experimentation and observation, introduce children to some of the basic physical phenomena of light, with associated vocabulary.

Note: Students will study light in more detail in grade 8.

- The speed of light: light travels at an amazingly high speed.
- Light travels in straight lines (as can be demonstrated by forming shadows).
- Transparent and opaque objects
- Reflection
 - Mirrors: plane, concave, convex
 - Uses of mirrors in telescopes and some microscopes
- The spectrum: use a prism to demonstrate that white light is made up of a spectrum of colors.
- Lenses can be used for magnifying and bending light (as in magnifying glass, microscope, camera, telescope, binoculars).

IV. Sound

Teachers: Through experimentation and observation, introduce children to some of the basic physical phenomena of sound, with associated vocabulary.

Note: Students will study sound in more detail in grade 8.

- Sound is caused by an object vibrating rapidly.
- Sounds travel through solids, liquids, and gases.
- Sound waves are much slower than light waves.
- Qualities of sound
 - Pitch: high or low, faster vibrations = higher pitch, slower vibrations = lower pitch
 - Intensity: loudness and quietness
- Human voice
 - Larynx (voice box)
 - Vibrating vocal cords: longer, thicker vocal cords create lower, deeper voices
- Sound and how the human ear works
- Protecting your hearing

See above, II.E: Hearing.

V. Ecology

Teachers: Some topics here, such as habitats, were introduced in first grade. In this grade, develop in more detail, and explore new topics.

- Habitats, interdependence of organisms and their environment
- The concept of a “balance of nature” (constantly changing, not a static condition)
- The food chain or food web: producers, consumers, decomposers (Although the tendency is to recognize the limits of these models as well. See also Grade 1.)
- Ecosystems: how they can be affected by changes in environment (for example, rainfall, food supply, etc.), and by man-made changes
- Man-made threats to the environment
 - Air pollution: emissions, smog
 - Water pollution: industrial waste, run-off from farming
- Measures we can take to protect the environment (for example, conservation, recycling)

VI. Astronomy

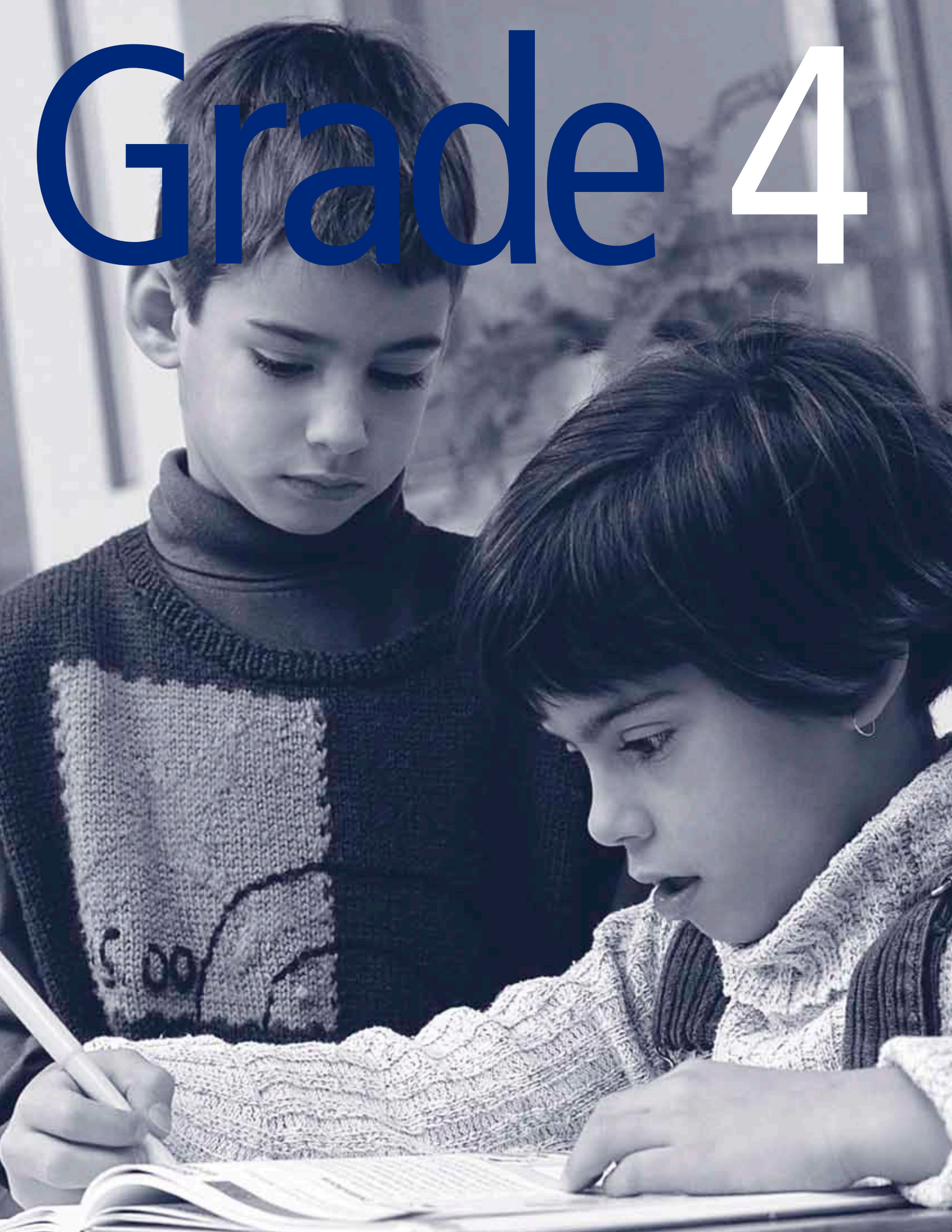
- The “Big Bang” as one theory
- The universe: an extent almost beyond imagining
- Galaxies: Milky Way and Andromeda
- Our solar system
 - Sun: source of energy (heat and light)
 - The eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune
- Planetary motion: orbit and rotation
 - How day and night on earth are caused by the earth’s rotation
 - Sunrise in the east and sunset in the west
 - How the seasons are caused by the earth’s orbit around the sun, tilt of the earth’s axis
- Gravity, gravitational pull
 - Gravitational pull of the moon (and to a lesser degree, the sun) causes ocean tides on earth
 - Gravitational pull of “black holes” prevents even light from escaping
- Asteroids, meteors (“shooting stars”), comets, Halley’s Comet
- How an eclipse happens
- Stars and constellations
- Orienteering (finding your way) by using North Star, Big Dipper
- Exploration of space
 - Observation through telescopes
 - Rockets and satellites: from unmanned to manned flights
 - Apollo 11, first landing on the moon: “One small step for a man, one giant leap for mankind.”
 - Space shuttle

VII. Science Biographies

See above, Sound, *re*
Alexander Graham Bell;
Astronomy, *re* Copernicus;
Exploration of Space, *re*
Mae Jemison; Ecology, *re*
John Muir.

Alexander Graham Bell (invented the telephone)
Copernicus (had new sun-centered idea about the solar system)
Mae Jemison (astronaut and medical pioneer)
John Muir (conservationist who helped create many national parks)

Grade 4



Overview of Topics

Grade 4

Language Arts

- I. Writing, Grammar, and Usage
 - A. Writing and Research
 - B. Grammar and Usage
- II. Poetry
 - A. Poems
 - B. Terms
- III. Fiction
 - A. Stories
 - B. Myths and Mythical Characters
 - C. Literary Terms
- IV. Speeches
- V. Sayings and Phrases

History and Geography

World:

- I. World Geography
 - A. Spatial Sense
 - B. Mountains and Mountain Ranges
- II. Europe in the Middle Ages
 - A. Geography Related to the Development of Western Europe
 - B. Background
 - C. Developments in History of the Christian Church
 - D. Feudalism
 - E. The Norman Conquest
 - F. Growth of Towns
 - G. England in the Middle Ages
- III. The Spread of Islam and the "Holy Wars"
 - A. Islam
 - B. Development of Islamic Civilization
 - C. Wars Between Muslims and Christians
- IV. Early and Medieval African Kingdoms
 - A. Geography of Africa
 - B. Early African Kingdoms
 - C. Medieval Kingdoms of the Sudan
- V. China: Dynasties and Conquerors

American:

- I. The American Revolution
 - A. Background: The French and Indian War
 - B. Causes and Provocations
 - C. The Revolution
- II. Making a Constitutional Government
 - A. Main Ideas Behind the Declaration of Independence
 - B. Making a New Government: From the Declaration to the Constitution
 - C. The Constitution of the United States
 - D. Levels and Functions of Government (National, State, Local)
- III. Early Presidents and Politics
- IV. Reformers
- V. Symbols and Figures

Visual Arts

- I. Art of the Middle Ages in Europe
- II. Islamic Art and Architecture
- III. The Art of Africa
- IV. The Art of China
- V. The Art of a New Nation: The United States

Music

- I. Elements of Music
- II. Listening and Understanding
 - A. The Orchestra
 - B. Vocal Ranges
 - C. Composers and Their Music
 - D. Musical Connections
- III. Songs

Mathematics

- I. Numbers and Number Sense
- II. Fractions and Decimals
 - A. Fractions
 - B. Decimals
- III. Money
- IV. Computation
 - A. Multiplication
 - B. Division
 - C. Solving Problems and Equations
- V. Measurement
- VI. Geometry

Science

- I. The Human Body
 - A. The Circulatory System
 - B. The Respiratory System
- II. Chemistry: Basic Terms and Concepts
 - A. Atoms
 - B. Properties of Matter
 - C. Elements
 - D. Solutions
- III. Electricity
- IV. Geology: The Earth and Its Changes
 - A. The Earth's Layers
 - B. How Mountains Are Formed
 - C. Rocks
 - D. Weathering and Erosion
- V. Meteorology
- VI. Science Biographies

Language Arts: Grade 4

The *Common Core State Standards for English Language Arts* emphasize the critical importance of building nonfiction background knowledge in a coherent and sequenced way within and across grades. This can be accomplished most effectively, at each grade level, by integrating the topics from history, geography, science, and the arts in the *Core Knowledge Sequence* into the language arts block. Note that in the *Sequence*, there are many cross-curricular connections to history and science topics within Language Arts (e.g., poems, stories, and sayings), as well as to visual arts and music, which can and should be integrated into the applicable domain of study.

For Grade 4, domains include: Europe in the Middle Ages; The Spread of Islam and the “Holy Wars”; Early and Medieval African Kingdoms; China: Dynasties and Conquerors; The American Revolution; Making a Constitutional Government; Early Presidents and Politics; Reformers; The Human Body; Chemistry: Basic Terms and Concepts; Electricity; Geology: The Earth and Its Changes; Meteorology.

NOTE: The objectives listed in **I. Writing, Grammar, and Usage** are currently under revision, as part of the *Core Knowledge Language Arts* program development for Grades 3–5. The revised Grade 4 goals and objectives will be conceptually consistent with the K–2 language arts sections of the 2010 edition of the *Sequence* and will be posted at www.coreknowledge.org as part of the online *Sequence* as soon as they are available.

I. Writing, Grammar, and Usage

Teachers: Children should be given many opportunities for writing, both imaginative and expository, but place a stronger emphasis than in previous grades on expository writing, including, for example, summaries, book reports, and descriptive essays. Provide guidance that strikes a balance between encouraging creativity and requiring correct use of conventions. Children should be given more responsibility for (and guidance in) editing for organization and development of ideas, and proofreading to correct errors in spelling, usage, and mechanics. In fourth grade, children should be able to spell most words or provide a highly probable spelling, and know how to use a dictionary to check and correct words that present difficulty. They should receive regular practice in vocabulary enrichment.

Note: Introduce fourth graders to the purpose of a bibliography, and have them prepare one that identifies basic publication information about the sources used, such as author, title, and date of publication.

A. WRITING AND RESEARCH

- Produce a variety of types of writing—including stories, reports, summaries, descriptions, poems, letters—with a coherent structure or story line.
- Know how to gather information from different sources (such as an encyclopedia, magazines, interviews, observations, atlas, on-line), and write short reports presenting the information in his or her own words, with attention to the following:
 - understanding the purpose and audience of the writing
 - defining a main idea and sticking to it
 - providing an introduction and conclusion
 - organizing material in coherent paragraphs
 - documenting sources in a rudimentary bibliography
- Organize material in paragraphs and understand
 - how to use a topic sentence
 - how to develop a paragraph with examples and details
 - that each new paragraph is indented

B. GRAMMAR AND USAGE

- Understand what a complete sentence is, and identify subject and predicate in single-clause sentences
distinguish complete sentences from fragments
identify and correct run-on sentences
- Identify subject and verb in a sentence and understand that they must agree.
- Identify and use different sentence types: declarative, interrogative, imperative, exclamatory.
- Know the following parts of speech and how they are used: nouns, pronouns, verbs (action verbs and auxiliary verbs), adjectives (including articles), adverbs, conjunctions (*and, but, or*), interjections.
- Know how to use the following punctuation:
 - end punctuation: period, question mark, or exclamation point
 - comma: between day and year when writing a date, between city and state in an address, in a series, after *yes* and *no*, before conjunctions that combine sentences, inside quotation marks in dialogue
 - apostrophe: in contractions, in singular and plural possessive nouns
 - quotation marks: in dialogue, for titles of poems, songs, short stories, magazine articles
- Understand what synonyms and antonyms are, and provide synonyms or antonyms for given words.
- Use underlining or italics for titles of books.
- Know how the following prefixes and suffixes affect word meaning:
 - Prefixes:
 - im, in* (as in impossible, incorrect)
 - non* (as in nonfiction, nonviolent)
 - mis* (as in misbehave, misspell)
 - en* (as in enable, endanger)
 - pre* (as in prehistoric, pregame)
 - Suffixes:
 - ily, y* (as in easily, speedily, tricky)
 - ful* (as in thoughtful, wonderful)
 - able, ible* (as in washable, flexible)
 - ment* (as in agreement, amazement)
- Review correct usage of problematic homophones:
 - their, there, they're
 - your, you're
 - its, it's
 - here, hear
 - to, too, two

Note: A brief review of prefixes and suffixes introduced in third grade is recommended. Prefixes: *re, un, dis*. Suffixes: *er* and *or, less, ly*.

II. Poetry

Teachers: The poems listed here constitute a selected core of poetry for this grade. You are encouraged to expose children to more poetry, old and new, and to have children write their own poems. To bring children into the spirit of poetry, read it aloud and encourage them to read it aloud so they can experience the music in the words. At this grade, poetry should be a source of delight; technical analysis should be delayed until later grades.

A. POEMS

Afternoon on a Hill (Edna St. Vincent Millay)
 Clarence (Shel Silverstein)
 Clouds (Christina Rossetti)
 Concord Hymn (Ralph Waldo Emerson)
 Dreams (Langston Hughes)
 the drum (Nikki Giovanni)

- Fog (Carl Sandburg)
- George Washington (Rosemary and Stephen Vincent Benet)
- Humanity (Elma Stuckey)
- Life Doesn't Frighten Me (Maya Angelou)
- Monday's Child Is Fair of Face (traditional)
- Paul Revere's Ride (Henry Wadsworth Longfellow)
- The Pobble Who Has No Toes (Edward Lear)
- The Rhinoceros (Ogden Nash)
- Things (Eloise Greenfield)
- A Tragic Story (William Makepeace Thackeray)

B. TERMS

stanza and line

III. Fiction

Teachers: In fourth grade, children should be fluent, competent readers of appropriate materials. Decoding skills should be automatic, allowing the children to focus on meaning. Regular practice in reading aloud and independent silent reading should continue. Children should read outside of school at least 20 minutes daily.

The titles below constitute a selected core of stories for this grade. Teachers and parents are encouraged to expose children to many more stories, and to encourage children to write their own stories. Children should also be exposed to nonfiction prose: biographies, books about science and history, books on art and music, etc. Also, engage children in dramatic activities, possibly with one of the stories below in the form of a play. Some of the stories below—such as *Gulliver's Travels*, *Robinson Crusoe*, and the stories by Washington Irving—are available in editions adapted for young readers.

A. STORIES

- The Fire on the Mountain (an Ethiopian folktale)
- from *Gulliver's Travels*: Gulliver in Lilliput and Brobdingnag (Jonathan Swift)
- The Legend of Sleepy Hollow* and *Rip Van Winkle* (Washington Irving)
- The Magic Brocade (a Chinese folktale)
- Pollyanna* (Eleanor Porter)
- Robinson Crusoe* (Daniel Defoe)
- Robin Hood
- St. George and the Dragon
- Treasure Island* (Robert Louis Stevenson)

B. MYTHS AND MYTHICAL CHARACTERS

- Legends of King Arthur and the Knights of the Round Table
 - How Arthur Became King
 - The Sword in the Stone
 - The Sword Excalibur
 - Guinevere
 - Merlin and the Lady of the Lake
 - Sir Lancelot

C. LITERARY TERMS

novel
plot
setting

See also American History 4: American Revolution, re stories by Washington Irving.

Note: "The Magic Brocade" is also known as "The Chuang Brocade," "The Enchanted Tapestry," "The Magic Tapestry," and "The Weaving of a Dream."

See also World History 4: The Middle Ages, re "Robin Hood" and "St. George and the Dragon."

See also World History 4: The Middle Ages, feudalism and chivalry, re Legends of King Arthur.

IV. Speeches

Teachers: Famous passages from the following speeches should be taught in connection with topics in American History 4.

Patrick Henry: "Give me liberty or give me death"

Sojourner Truth: "Ain't I a woman?"

V. Sayings and Phrases

Teachers: Every culture has phrases and proverbs that make no sense when carried over literally into another culture. For many children, this section may not be needed; they will have picked up these sayings by hearing them at home and among friends. But the sayings have been one of the categories most appreciated by teachers who work with children from home cultures that differ from the standard culture of literate American English.

An ounce of prevention is worth a pound of cure.

As the crow flies

Beauty is only skin deep.

The bigger they are, the harder they fall.

Birds of a feather flock together.

Blow hot and cold

Break the ice

Bull in a china shop

Bury the hatchet

Can't hold a candle to

Don't count your chickens before they hatch.

Don't put all your eggs in one basket.

Etc.

Go to pot

Half a loaf is better than none.

Haste makes waste.

Laugh and the world laughs with you.

Lightning never strikes twice in the same place.

Live and let live.

Make ends meet.

Make hay while the sun shines.

Money burning a hole in your pocket

Once in a blue moon

One picture is worth a thousand words.

On the warpath

RSVP

Run-of-the-mill

Seeing is believing.

Shipshape

Through thick and thin

Timbuktu

Two wrongs don't make a right.

When it rains, it pours.

You can lead a horse to water, but you can't make it drink.

History and Geography: Grade 4

WORLD HISTORY AND GEOGRAPHY

I. World Geography

Teachers: The study of geography embraces many topics throughout the *Core Knowledge Sequence*, including topics in history and science. Geographic knowledge includes a spatial sense of the world, an awareness of the physical processes that shape life, a sense of the interactions between humans and their environment, an understanding of the relations between place and culture, and an awareness of the characteristics of specific regions and cultures. Many geographic topics are listed below in connection with historical topics.

A. SPATIAL SENSE (Working with Maps, Globes, and Other Geographic Tools)

Teachers: Review as necessary map-reading skills and concepts, as well as geographic terms, from previous grades (see Geography guidelines for grade 3).

- Measure distances using map scales.
- Read maps and globes using longitude and latitude, coordinates, degrees.
- Prime Meridian (0 degrees); Greenwich, England; 180° Line (International Date Line)
- Relief maps: elevations and depressions

B. MOUNTAINS AND MOUNTAIN RANGES

- Major mountain ranges
 - South America: Andes
 - North America: Rockies and Appalachians
 - Asia: Himalayas and Urals
 - Africa: Atlas Mountains
 - Europe: Alps
- High mountains of the world
 - Asia: Everest
 - North America: McKinley
 - South America: Aconcagua
 - Europe: Mont Blanc
 - Africa: Kilimanjaro

II. Europe in the Middle Ages

A. GEOGRAPHY RELATED TO THE DEVELOPMENT OF WESTERN EUROPE

- Rivers: Danube, Rhine, Rhone, and Oder
- Mountains: Alps, Pyrenees
- Iberian Peninsula: Spain and Portugal, proximity to North Africa
- France: the region known as Normandy
- Mediterranean Sea, North Sea, Baltic Sea
- British Isles: England, Ireland, Scotland, Wales; the English Channel

B. BACKGROUND

- Beginning about A.D. 200, nomadic, warlike tribes began moving into western Europe, attacking the western Roman Empire; city of Rome sacked by Visigoths in A.D. 410
 - The Huns: Attila the Hun
- Peoples settling in old Roman Empire included Vandals (cf. English word “vandalism”), Franks in Gaul (now France), Angles (in England: cf. “Angle-land”) and Saxons.
- The “Middle Ages” are generally dated from about A.D. 450 to 1400. Approximately the first three centuries after the fall of Rome (A.D. 476) are sometimes called the “Dark Ages.”

See also Science 4: How Mountains Are Formed.

See also Visual Arts 4: Art of the Middle Ages in Europe: Medieval Madonnas and Gothic architecture. And see Music 4, Gregorian chant.

See also Language Arts 4: Legends of King Arthur.

C. DEVELOPMENTS IN HISTORY OF THE CHRISTIAN CHURCH

- Growing power of the pope (Bishop of Rome)
- Arguments among Christians: split into Roman Catholic Church and Eastern Orthodox Church
- Conversion of many Germanic peoples to Christianity
- Rise of monasteries, preservation of classical learning
- Charlemagne
 - Temporarily unites the western Roman Empire
 - Crowned Emperor by the pope in A.D. 800, the idea of a united “Holy Roman Empire”
 - Charlemagne’s love and encouragement of learning

D. FEUDALISM

- Life on a manor, castles
- Lords, vassals, knights, freedmen, serfs
- Code of chivalry
- Knight, squire, page

E. THE NORMAN CONQUEST

- Locate the region called Normandy.
- William the Conqueror: Battle of Hastings, 1066

F. GROWTH OF TOWNS

- Towns as centers of commerce, guilds and apprentices
- Weakening of feudal ties

G. ENGLAND IN THE MIDDLE AGES

- Henry II
 - Beginnings of trial by jury
 - Murder of Thomas Becket in Canterbury Cathedral
 - Eleanor of Aquitaine
- Significance of the Magna Carta, King John, 1215
- Parliament: beginnings of representative government
- The Hundred Years’ War
 - Joan of Arc
- The Black Death sweeps across Europe

III. The Spread of Islam and the “Holy Wars”

Teachers: Since religion is a shaping force in the story of civilization, the *Core Knowledge Sequence* introduces children in the early grades to major world religions, beginning with a focus on geography and major symbols and figures. In the fourth grade the focus is on history, geography, and the development of a civilization. The purpose is not to explore matters of theology but to understand the place of religion and religious ideas in history. The goal is to familiarize, not proselytize; to be descriptive, not prescriptive. The tone should be one of respect and balance: no religion should be disparaged by implying that it is a thing of the past.

A review of major religions introduced in earlier grades in the *Core Knowledge Sequence* is recommended: Judaism/Christianity/Islam (Grade 1) and Hinduism/Buddhism (grade 2).

A. ISLAM

- Muhammad: the last prophet
- Allah, Qur’an, *jihad*
- Sacred city of Makkah, mosques

Note: In older sources you may find these formerly used spellings: Mohammed, Mecca, Koran.

- “Five pillars” of Islam:
 - Declaration of faith
 - Prayer (five times daily), facing toward Makkah
 - Fasting during Ramadan
 - Help the needy
 - Pilgrimage to Makkah
- Arab peoples unite to spread Islam in northern Africa, through the eastern Roman empire, and as far west as Spain.
- Islamic Turks conquer region around the Mediterranean; in 1453, Constantinople becomes Istanbul.
- The first Muslims were Arabs, but today diverse people around the world are Muslims.

B. DEVELOPMENT OF ISLAMIC CIVILIZATION

- Contributions to science and mathematics: Avicenna (Ibn Sina), Arabic numerals
- Muslim scholars translate and preserve writings of Greeks and Romans
- Thriving cities as centers of Islamic art and learning, such as Cordoba (Spain)

C. WARS BETWEEN MUSLIMS AND CHRISTIANS

- The Holy Land, Jerusalem
- The Crusades
- Saladin and Richard the Lion-Hearted
- Growing trade and cultural exchange between east and west

See also Visual Arts 4: Islamic Art and Architecture.

IV. Early and Medieval African Kingdoms

A. GEOGRAPHY OF AFRICA

- Mediterranean Sea and Red Sea, Atlantic and Indian Oceans
- Cape of Good Hope
- Madagascar
- Major rivers: Nile, Niger, Congo
- Atlas Mountains, Mt. Kilimanjaro
- Contrasting climate in different regions:
 - Deserts: Sahara, Kalahari
 - Tropical rain forests (along lower West African coast and Congo River)
 - Savanna (grasslands)
 - The Sahel (the fertile region below the Sahara)

B. EARLY AFRICAN KINGDOMS

- Kush (in a region also called Nubia): once ruled by Egypt, then became rulers of Egypt
- Aksum (also spelled Axum): a trading kingdom in what is now Ethiopia

See also Language Arts 4: “The Fire on the Mountain.”

C. MEDIEVAL KINGDOMS OF THE SUDAN

- Trans-Saharan trade led to a succession of flourishing kingdoms: Ghana, Mali, and Songhai
 - Camel caravans
 - Trade in gold, iron, salt, ivory, and slaves
 - The city of Timbuktu: center of trade and learning
 - Spread of Islam into West Africa through merchants and travelers
 - Ibn Batuta (also spelled Battutah, Batuta), world traveler and geographer
- Mali: Sundiata Keita, Mansa Musa
- Songhai: Askia Muhammad

See also Visual Arts 4: The Art of Africa.

Note: In older sources you are likely to find Chinggis Khan spelled as Genghis Khan, and Khubilai Khan spelled as Kublai Khan.

See also Visual Arts 4: The Art of China; and Language Arts 4: "The Magic Brocade."

V. China: Dynasties and Conquerors

- Qin Shihuangdi, first emperor, begins construction of Great Wall
- Han dynasty: trade in silk and spices, the Silk Road, invention of paper
- Tang and Song dynasties: highly developed civilization, extensive trade, important inventions (including compass, gunpowder, paper money)
- Mongol invasions and rule
 - Chinggis Khan and the "Golden Horde"
 - Khubilai Khan: establishes capital at what is now Beijing
 - Marco Polo
- Ming dynasty
 - The "Forbidden City"
 - Explorations of Zheng He

American History and Geography



AMERICAN HISTORY AND GEOGRAPHY

Teachers: The following guidelines are meant to complement any locally required studies of the family, community, state, or region. Note that in fifth grade the American Geography requirements include “fifty states and capitals”; teachers in grades two through four may want to introduce these incrementally to prepare for the fifth grade requirement.

I. The American Revolution

Teachers: In fourth grade students should undertake a detailed study of the causes, major figures, and consequences of the American Revolution, with a focus on main events and figures, as well as these questions: What caused the colonists to break away and become an independent nation? What significant ideas and values are at the heart of the American Revolution?

A. BACKGROUND: THE FRENCH AND INDIAN WAR

- Also known as the Seven Years’ War, part of an ongoing struggle between Britain and France for control of colonies in various regions around the world (in this case, in North America)
- Alliances with Native Americans
- The Battle of Quebec
- British victory gains territory but leaves Britain financially weakened.

B. CAUSES AND PROVOCATIONS

- British taxes, “No taxation without representation”
- Boston Massacre, Crispus Attucks
- Boston Tea Party
- The Intolerable Acts close the port of Boston and require Americans to provide quarters for British troops
- First Continental Congress protests to King George III
- Thomas Paine’s *Common Sense*

C. THE REVOLUTION

- Paul Revere’s ride, “One if by land, two if by sea”
- Lexington and Concord
The “shot heard ’round the world”
Redcoats and Minute Men
- Bunker Hill
- Second Continental Congress: George Washington appointed commander in chief of Continental Army
- Declaration of Independence
Primarily written by Thomas Jefferson
Adopted July 4, 1776
“We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness.”
- Women in the Revolution: Elizabeth Freeman, Deborah Sampson, Phillis Wheatley, Molly Pitcher
- Loyalists (Tories)
- Victory at Saratoga, alliance with France
- European helpers (Lafayette, the French fleet, Bernardo de Galvez, Kosciusko, von Steuben)
- Valley Forge
- Benedict Arnold

See also Language Arts 4:
stories by Washington Irving,
and speech by Patrick Henry,
“Give me liberty. . .”

- John Paul Jones: “I have not yet begun to fight.”
- Nathan Hale: “I only regret that I have but one life to lose for my country.”
- Cornwallis: surrender at Yorktown

II. Making a Constitutional Government

Teachers: Examine some of the basic values and principles of American democracy, in both theory and practice, as defined in the Declaration of Independence and the U. S. Constitution, both in historical context and in terms of present-day practice. In examining the significance of the U. S. Constitution, introduce students to the unique nature of the American experiment, the difficult task of establishing a democratic government, the compromises the framers of the Constitution were willing to make, and the persistent threats to success. In order to appreciate the boldness and fragility of the American attempt to establish a republican government based on a constitution, students should know that republican governments were rare at this time. Discuss with students basic questions and issues about government, such as: Why do societies need government? Why does a society need laws? Who makes the laws in the United States? What might happen in the absence of government and laws?

A. MAIN IDEAS BEHIND THE DECLARATION OF INDEPENDENCE

- The proposition that “All men are created equal”
- The responsibility of government to protect the “unalienable rights” of the people
- Natural rights: “Life, liberty, and the pursuit of happiness”
- The “right of the people ... to institute new government”

B. MAKING A NEW GOVERNMENT: FROM THE DECLARATION TO THE CONSTITUTION

- Definition of “republican” government: republican = government by elected representatives of the people
- Articles of Confederation: weak central government
- “Founding Fathers”: James Madison as “Father of the Constitution”
- Constitutional Convention
 - Arguments between small and large states
 - The divisive issue of slavery, “three-fifths” compromise

C. THE CONSTITUTION OF THE UNITED STATES

- Preamble to the Constitution: “We the people of the United States, in order to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity, do ordain and establish this Constitution for the United States of America.”
- The separation and sharing of powers in American government: three branches of government
 - Legislative branch: Congress = House of Representatives and Senate, makes laws
 - Executive branch: headed by the president, carries out laws
 - Judicial branch: a court system headed by the Supreme Court (itself headed by the Chief Justice), deals with those who break laws and with disagreements about laws
- Checks and balances, limits on government power, veto
- The Bill of Rights: first ten amendments to the Constitution, including:
 - Freedom of religion, speech, and the press (First Amendment)
 - Protection against “unreasonable searches and seizures”
 - The right to “due process of law”
 - The right to trial by jury
 - Protection against “cruel and unusual punishments”

Note: The National Standards for Civics and Government recommend that students address the issue of power vs. authority: “Where do people in government get the authority to make, apply, and enforce rules and laws and manage disputes about them?” “Identify examples of authority, e.g., the authority of teachers and administrators to make rules for schools, the authority of a crossing guard to direct traffic, the authority of the president to represent the United States in dealing with other nations.” “Identify examples of power without authority, e.g., a neighborhood bully forcing younger children to give up their lunch money, a robber holding up a bank, a gang leader ordering members to injure others.” Available from the Center for Civic Education, 5145 Douglas Fir Road, Calabasas, CA 91302; tel. (818) 591-9321.

D. LEVELS AND FUNCTIONS OF GOVERNMENT (NATIONAL, STATE, LOCAL)

- Identify current government officials, including
President and vice-president of the U.S.
State governor
- State governments: established by state constitutions (which are subordinate to the U.S. Constitution, the highest law in the land), like the national government, each state government has its legislative, executive, and judicial branches
- Local governments: purposes, functions, and officials
- How government services are paid for (taxes on individuals and businesses, fees, tolls, etc.)
- How people can participate in government

III. Early Presidents and Politics

- Define: cabinet and administration
- George Washington as first President, Vice-President John Adams
- John Adams, second president, Abigail Adams
- National capitol established at Washington, D.C.
- Growth of political parties
Arguments between Thomas Jefferson and Alexander Hamilton: two opposed visions of America, as an agricultural or industrial society
Present-day system: two main parties (Democrats and Republicans), and independents
- Thomas Jefferson, third president
Correspondence between Jefferson and Benjamin Banneker
Jefferson as multifaceted leader (architect, inventor, musician, etc.)
The Louisiana Purchase (review from grade 1) doubles the nation's size and gains control of Mississippi River.
- James Madison, fourth president
War of 1812 (briefly review from grade 2)
- James Monroe, fifth president, the Monroe Doctrine
- John Quincy Adams, sixth president
- Andrew Jackson, seventh president
Popular military hero, Battle of New Orleans in War of 1812
Presidency of "the common man"
Indian removal policies

See also Visual Arts 4:
The Art of a New Nation,
Architecture of Monticello;
and Science Biographies 4:
Benjamin Banneker.

IV. Reformers

Teachers: Introduce children to some prominent people and movements in the ferment of social change in America prior to the Civil War:

- Abolitionists
- Dorothea Dix and the treatment of the insane
- Horace Mann and public schools
- Women's rights
Seneca Falls convention
Elizabeth Cady Stanton
Lucretia Mott
Amelia Bloomer
Sojourner Truth

See also Language Arts 4:
Speeches, Sojourner Truth's
"Ain't I a woman?"

V. Symbols and Figures

- Recognize and become familiar with the significance of
Spirit of '76 (painting)
White House and Capitol Building
Great Seal of the United States

Visual Arts: Grade 4

SEE INTRODUCTION, “The Arts in the Curriculum.”

Teachers: In schools, lessons on the visual arts should illustrate important elements of making and appreciating art, and emphasize important artists, works of art, and artistic concepts. When appropriate, topics in the visual arts may be linked to topics in other disciplines. While the following guidelines specify a variety of artworks in different media and from various cultures, they are not intended to be comprehensive. Teachers are encouraged to build upon the core content and expose children to a wide range of art and artists.

In studying the works of art specified below, and in creating their own art, students should review, develop, and apply concepts introduced in previous grades, such as line, shape, form, space, texture, color, light, design, symmetry, etc.

I. Art of the Middle Ages in Europe

Teachers: Study of the following works of art may be integrated with study of related topics in fourth grade World History: Europe in the Middle Ages.

- Note the generally religious nature of European art in the Middle Ages, including
Examples of medieval Madonnas (such as *Madonna and Child on a Curved Throne*—13th century Byzantine)
Illuminated manuscripts (such as *The Book of Kells*)
Tapestries (such as the Unicorn tapestries)
- Become familiar with features of Gothic architecture (spires, pointed arches, flying buttresses, rose windows, gargoyles and statues) and famous cathedrals, including Notre Dame (Paris).

II. Islamic Art and Architecture

Teachers: Study of the following works of art may be integrated with study of related topics in fourth grade World History: The Spread of Islam.

- Become familiar with examples of Islamic art, including illuminated manuscript and illumination of the Qur’an (Koran).
- Note characteristic features of Islamic architecture, such as domes and minarets, in Dome of the Rock (Mosque of Omar), Jerusalem
Alhambra Palace, Spain
Taj Mahal, India

III. The Art of Africa

Teachers: Study of the following works of art may be integrated with study of related topics in fourth grade World History: Early and Medieval African Kingdoms.

- Note the spiritual purposes and significance of many African works of art, such as masks used in ceremonies for planting, harvesting, or hunting.
- Become familiar with examples of art from specific regions and peoples in Africa, such as
Antelope headdresses of Mali
Sculptures by Yoruba artists in the city of Ife
Ivory carvings and bronze sculptures of Benin

IV. The Art of China

Teachers: Study of the following works of art may be integrated with study of related topics in fourth grade World History, China: Dynasties and Conquerors.

- Become familiar with examples of Chinese art, including
 - Silk scrolls
 - Calligraphy (the art of brush writing and painting)
 - Porcelain

V. The Art of a New Nation: The United States

Teachers: Study of the following works of art may be integrated with study of related topics in fourth grade American History.

Note: While *Washington Crossing the Delaware* is not in origin an American work of art—it was painted by Emanuel Leutze, a German, some seventy-five years after the event it depicts—it has become widely recognized and embraced as a symbol of the American Revolution.

- Become familiar with famous portraits and paintings, including
 - John Singleton Copley, *Paul Revere*
 - Gilbert Stuart, *George Washington*
 - Washington Crossing the Delaware*
- Become familiar with the architecture of Thomas Jefferson's Monticello.

Music: Grade 4

SEE INTRODUCTION, “The Arts in the Curriculum.”

Teachers: In schools, lessons on music should feature activities and works that illustrate important musical concepts and terms, and should introduce important composers and works. When appropriate, topics in music may be linked to topics in other disciplines.

The following guidelines focus on content, not performance skills, though many concepts are best learned through active practice (singing, clapping rhythms, playing instruments, etc.).



I. Elements of Music

- Through participation, become familiar with basic elements of music (rhythm, melody, harmony, form, timbre, etc.).
 - Recognize a steady beat, accents, and the downbeat; play a steady beat and a simple rhythm pattern.
 - Discriminate between fast and slow; gradually slowing down and getting faster.
 - Discriminate between differences in pitch: high and low.
 - Discriminate between loud and soft; gradually increasing and decreasing volume.
 - Understand *legato* (smoothly flowing progression of notes) and *staccato* (crisp, distinct notes).
 - Sing unaccompanied, accompanied, and in unison.
 - Recognize harmony; sing simple rounds and canons.
 - Recognize verse and refrain; also, introduction and coda.
 - Continue work with timbre and phrasing.
 - Recognize theme and variations, and listen to Mozart, *Variations on “Ah! vous dirai-je Maman”* (famously known as “Twinkle Twinkle Little Star”).
 - Sing or play simple melodies.
- Understanding the following notation:
 - names of lines and spaces in the treble clef; middle C
 - ♩ treble clef, ≡ staff, | bar line, || double bar line, measure, repeat signs
 - ♩ whole note ♪ half note ♪ quarter note ♪ eighth note
 - whole rest, half rest, quarter rest
 - tied notes and dotted notes
 - ♯ sharps ♭ flats
 - Da capo* [*DC*] *al fine*
 - meter signature $\frac{4}{4}$ $\frac{2}{4}$ $\frac{3}{4}$
 - soft *pp* *p* *mp* loud *mf* *f* *ff*

II. Listening and Understanding

Teachers: Expose children to a wide range of music, including children’s music, popular instrumental music, and music from various cultures.

A. THE ORCHESTRA

- Review the orchestra, including families of instruments and specific instruments, by listening to Benjamin Britten, *The Young Person’s Guide to the Orchestra*.

B. VOCAL RANGES

Teachers: Students should learn to recognize and name the different vocal ranges, and apply their knowledge by beginning part singing.

See below, Composers and Their Music: Mozart, *Magic Flute*.

Recognize vocal ranges of the female voice:

- high = soprano
- middle = mezzo soprano
- low = alto

Recognize vocal ranges of the male voice:

- high = tenor
- middle = baritone
- low = bass

C. COMPOSERS AND THEIR MUSIC

Teachers: Provide brief, child-friendly biographical profiles of the following composers, and listen to representative works.

Note: Children were introduced to Mozart and the first movement of *A Little Night Music* in first grade.

- George Frederick Handel, “Hallelujah Chorus” from *The Messiah*
- Franz Joseph Haydn, *Symphony No. 94* (“*Surprise*”)
- Wolfgang Amadeus Mozart, *The Magic Flute*, selections, including:
 - Overture; Introduction, “Zu Hilfe! Zu Hilfe!” (Tamino, Three Ladies); Aria, “Der Vogelfänger bin ich ja” (Papageno); Recitative and Aria, “O zittre nicht, mein lieber Sohn!” (Queen of the Night); Aria, “Ein Mädchen oder Weibchen” (Papageno); Duet, “Pa-pa-gena! Pa-pa-geno!” (Papageno and Papagena); Finale, Recitative and Chorus, “Die Strahlen der Sonne” (Sarastro and Chorus)

D. MUSICAL CONNECTIONS

Teachers: Introduce children to the following in connection with topics in other disciplines:

See also World History 4: The Middle Ages, re Gregorian chant.

- Gregorian chant

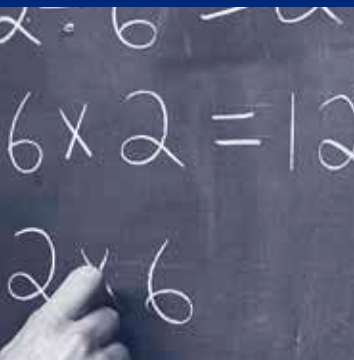
III. Songs

- Auld Lang Syne
- Blow the Man Down
- Cockles and Mussels
- Comin’ Through the Rye
- I Love the Mountains (round) ?
- Loch Lomond
- My Grandfather’s Clock
- Taps
- The Yellow Rose of Texas
- Waltzing Matilda

Songs of the U.S. Armed Forces:

- Air Force Song
- Navy Song (Anchors Aweigh)
- The Army Goes [The Caissons Go] Rolling Along
- The Marine’s Hymn

Teachers: Mathematics has its own vocabulary and patterns of thinking. It is a discipline with its own language and conventions. Thus, while some lessons may offer occasional opportunities for linking mathematics to other disciplines, it is critically important to attend to math as math. From the earliest years, mathematics requires incremental review and steady practice: not only the diligent effort required to master basic facts and operations, but also thoughtful and varied practice that approaches problems from a variety of angles, and gives children a variety of opportunities to apply the same concept or operation in different types of situations. While it is important to work toward the development of “higher-order problem-solving skills,” it is equally important—indeed, it is prerequisite to achieving “higher order” skills—to have a sound grasp of basic facts, and an automatic fluency with fundamental operations.



I. Numbers and Number Sense

- Read and write numbers (in digits and words) up to nine digits.
- Recognize place value up to hundred millions.
- Order and compare numbers to 999,999,999 using the signs $<$, $>$, and $=$.
- Write numbers in expanded form.
- Use a number line; locate positive and negative whole numbers on a number line.
- Round to the nearest ten; to the nearest hundred; to the nearest thousand.
- Identify perfect squares (and square roots) to 144; recognize the square root sign: $\sqrt{\quad}$
- Identify Roman numerals from 1 to 1,000 (I - M), and identify years as written in Roman numerals.
- Create and interpret bar graphs and line graphs.
- Plot points on a coordinate plane (grid), using ordered pairs of positive whole numbers.
- Know the meanings of multiple, factor, prime number, and composite number.

II. Fractions and Decimals

A. FRACTIONS

- Recognize fractions to one-twelfth.
- Identify numerator and denominator.
- Write mixed numbers; change improper fractions to mixed numbers and vice versa.
- Recognize equivalent fractions (for example, $\frac{1}{2} = \frac{3}{6}$).
- Put fractions in lowest terms.
- Rename fractions with unlike denominators to fractions with common denominators.
- Compare fractions with like and unlike denominators, using the signs $<$, $>$, and $=$.
- Solve problems in the form of $\frac{2}{3} = \frac{\quad}{12}$.
- Add and subtract fractions with like denominators.
- Express simple outcomes as fractions (for example, 3 out of 4 as $\frac{3}{4}$).

B. DECIMALS

- Read and write decimals to the nearest thousandth.
- Read and write decimals as fractions (for example, $0.39 = 39/100$).
- Write decimal equivalents for halves, quarters, eighths, and tenths.
- Compare fractions to decimals using the signs $<$, $>$, and $=$.
- Write decimals in expanded form.
- Round decimals to the nearest tenth; to the nearest hundredth.
- Compare decimals, using the signs $<$, $>$, and $=$.
- Read and write decimals on a number line.
- Add and subtract with decimal numbers to two places.

III. Money

- Solve problems involving making change in amounts up to \$100.00.
- Solve multiplication and division problems with money.

IV. Computation

Teachers: By this grade level, children should have mastered all basic whole number operations for addition and subtraction. Review and reinforce topics from previous grades as necessary.

A. MULTIPLICATION

- Review and reinforce basic multiplication facts to 10×10 .
- Mentally multiply by 10, 100, and 1,000.
- Identify multiples of a given number; common multiples of two given numbers.
- Multiply by two-digit and three-digit numbers.
- Write numbers in expanded form using multiplication.
- Estimate a product.
- Use mental computation strategies for multiplication, such as breaking a problem into partial products, for example: $3 \times 27 = (3 \times 20) + (3 \times 7) = 60 + 21 = 81$.
- Check multiplication by changing the order of the factors.
- Multiply three factors in any given order.
- Solve word problems involving multiplication.

B. DIVISION

- Understand multiplication and division as inverse operations.
- Review the meaning of dividend, divisor, and quotient.
- Review and reinforce basic division facts to $100 \div 10$.
- Identify different ways of writing division problems: $28 \div 7$ $7 \overline{)28}$ $28/7$
- Identify factors of a given number; common factors of two given numbers.
- Review: you cannot divide by 0; any number divided by 1 = that number.
- Estimate the quotient.
- Divide dividends up to four-digits by one-digit and two-digit divisors.
- Solve division problems with remainders.
- Check division by multiplying (and adding remainder).

C. SOLVING PROBLEMS AND EQUATIONS

- Solve two-step word problems.
- Solve equations in the form of $__ \times 9 = 63$; $81 \div __ = 9$.
- Solve problems with more than one operation, as in $(72 \div 9) \times (36 \div 4) = __$
- Equality properties
 - Know that equals added to equals are equal.
 - Know that equals multiplied by equals are equal.
- Use letters to stand for any number, as in working with a formula (for example, area of rectangle: $A = L \times W$).



V. Measurement

- Linear measure: estimate and make linear measurements in yards, feet, and inches (to $\frac{1}{8}$ in.); and in meters, centimeters, and millimeters.
- Weight: estimate and measure weight in pounds and ounces; grams and kilograms.
- Capacity (volume): estimate and measure liquid capacity in teaspoons, tablespoons, cups, pints, quarts, gallons; and in milliliters and liters.
- Know the following equivalences among U. S. customary units of measurement, and solve problems involving changing units of measurement:

Linear measure

$$1 \text{ ft.} = 12 \text{ in.}$$

$$1 \text{ yd.} = 3 \text{ ft.} = 36 \text{ in.}$$

$$1 \text{ mi.} = 5,280 \text{ ft.}$$

$$1 \text{ mi.} = 1,760 \text{ yd.}$$

Weight

$$1 \text{ lb.} = 16 \text{ oz.}$$

$$1 \text{ ton} = 2,000 \text{ lb.}$$

Capacity (volume)

$$1 \text{ cup} = 8 \text{ fl. oz. (fluid ounces)}$$

$$1 \text{ pt.} = 2 \text{ c.}$$

$$1 \text{ qt.} = 2 \text{ pt.}$$

$$1 \text{ gal.} = 4 \text{ qt.}$$

- Know the following equivalences among metric units of measurement, and solve problems involving changing units of measurement:

Linear measure

$$1 \text{ cm} = 10 \text{ mm (millimeters)}$$

$$1 \text{ m} = 1,000 \text{ mm}$$

$$1 \text{ m} = 100 \text{ cm}$$

$$1 \text{ km} = 1,000 \text{ m}$$

Mass

$$1 \text{ cg (centigram)} = 10 \text{ mg (milligrams)}$$

$$1 \text{ g} = 1,000 \text{ mg}$$

$$1 \text{ g} = 100 \text{ cg}$$

$$1 \text{ kg} = 1,000 \text{ g}$$

Capacity (volume)

$$1 \text{ cl (centiliter)} = 10 \text{ ml (milliliters)}$$

$$1 \text{ liter} = 1,000 \text{ ml}$$

$$1 \text{ liter} = 100 \text{ cl}$$

- Time: solve problems on elapsed time.

VI. Geometry

- Identify and draw points, segments, rays, lines.
- Identify and draw lines: horizontal; vertical; perpendicular; parallel; intersecting.
- Identify angles; identify angles as right, acute, or obtuse.
- Identify polygons:
 - Triangle, quadrilateral, pentagon, hexagon, and octagon (regular)
 - Parallelogram, trapezoid, rectangle, square
- Identify and draw diagonals of quadrilaterals.
- Circles: Identify radius (plural: radii) and diameter; $\text{radius} = \frac{1}{2} \text{ diameter}$
- Recognize similar and congruent figures.
- Know the formula for the area of a rectangle ($\text{Area} = \text{length} \times \text{width}$) and solve problems involving finding area in a variety of square units (such as mi^2 ; yd^2 ; ft^2 ; in^2 ; km^2 ; m^2 ; cm^2 ; mm^2)
- Compute volume of rectangular prisms in cubic units (cm^3 , in^3).

Science: Grade 4

Teachers: Effective instruction in science requires hands-on experience and observation. In the words of the 1993 report from the American Association for the Advancement of Science, *Benchmarks for Science Literacy*, “From their very first day in school, students should be actively engaged in learning to view the world scientifically. That means encouraging them to ask questions about nature and to seek answers, collect things, count and measure things, make qualitative observations, organize collections and observations, discuss findings, etc.”

While experience counts for much, book learning is also important, for it helps bring coherence and order to a child’s scientific knowledge. Only when topics are presented systematically and clearly can children make steady and secure progress in their scientific learning. The child’s development of scientific knowledge and understanding is in some ways a very disorderly and complex process, different for each child. But a systematic approach to the exploration of science, one that combines experience with book learning, can help provide essential building blocks for deeper understanding at a later time.



Note: The lymphatic system will be studied in grade 6.

See below, Science Biographies, Charles Drew.

I. The Human Body

A. THE CIRCULATORY SYSTEM

- Pioneering work of William Harvey
- Heart: four chambers (atrium/atria or atriums [plural] and ventricle/ventricles), aorta
- Blood
 - Red blood cells (corpuscles), white blood cells (corpuscles), platelets, hemoglobin, plasma, antibodies
 - Blood vessels: arteries, veins, capillaries
 - Blood pressure, pulse
 - Coagulation (clotting)
- Filtering function of liver and spleen
- Fatty deposits can clog blood vessels and cause a heart attack.
- Blood types (four basic types: A, B, AB, O) and transfusions

B. THE RESPIRATORY SYSTEM

- Process of taking in oxygen and getting rid of carbon dioxide
- Nose, throat, voice box, trachea (windpipe)
- Lungs, bronchi, bronchial tubes, diaphragm, ribs, alveoli (air sacs)
- Smoking: damage to lung tissue, lung cancer

II. Chemistry: Basic Terms and Concepts

A. ATOMS

- All matter is made up of particles too small for the eye to see, called atoms.
- Scientists have developed models of atoms; while these models have changed over time as scientists make new discoveries, the models help us imagine what we cannot see.
- Atoms are made up of even tinier particles: protons, neutrons, electrons.
- The concept of electrical charge
 - Positive charge (+): proton
 - Negative charge (-): electron
 - Neutral (neither positive nor negative): neutron
 - “Unlike charges attract, like charges repel” (relate to magnetic attraction and repulsion)

B. PROPERTIES OF MATTER

- Mass: the amount of matter in an object, similar to weight
- Volume: the amount of space a thing fills
- Density: how much matter is packed into the space an object fills
- Vacuum: the absence of matter



C. ELEMENTS

- Elements are the basic kinds of matter, of which there are a little more than one hundred. There are many different kinds of atoms, but an element has only one kind of atom. Familiar elements, such as gold, copper, aluminum, oxygen, iron
Most things are made up of a combination of elements.

D. SOLUTIONS

- A solution is formed when a substance (the solute) is dissolved in another substance (the solvent), such as when sugar or salt is dissolved in water; the dissolved substance is present in the solution even though you cannot see it.
- Concentration and saturation (as demonstrated through simple experiments with crystallization)

III. Electricity

Teachers: Through reading, observation, and experiment, examine the following:

- Electricity as the charge of electrons
- Static electricity
- Electric current
- Electric circuits, and experiments with simple circuits (battery, wire, light bulb, filament, switch, fuse)
Closed circuit, open circuit, short circuit
- Conductors and insulators
- Electromagnets: how they work and common uses
- Using electricity safely

See above, Chemistry, re electrons.

Note: Students will study electricity in more detail in grade 8.

IV. Geology: The Earth and Its Changes

A. THE EARTH'S LAYERS

- Crust, mantle, core (outer core and inner core)
- Movement of crustal plates
- Earthquakes
Faults, San Andreas fault
Measuring intensity: seismograph and Richter scale
Tsunamis
- Volcanoes
Magma
Lava and lava flow
Active, dormant, or extinct
Famous volcanoes: Vesuvius, Krakatoa, Mount St. Helens
- Hot springs and geysers: Old Faithful (in Yellowstone National Park)
- Theories of how the continents and oceans were formed: Pangaea and continental drift

B. HOW MOUNTAINS ARE FORMED

- Volcanic mountains, folded mountains, fault-block mountains, dome-shaped mountains
- Undersea mountain peaks and trenches (Mariana Trench)

C. ROCKS

- Formation and characteristics of metamorphic, igneous, and sedimentary rock

See also Geography 4: Major Mountain Ranges.

D. WEATHERING AND EROSION

- Physical and chemical weathering
- Weathering and erosion by water, wind, and glaciers
- The formation of soil: topsoil, subsoil, bedrock

V. Meteorology

- The water cycle (review from grade 2): evaporation, condensation, precipitation
- Clouds: cirrus, stratus, cumulus (review from grade 2)
- The atmosphere
 - Troposphere, stratosphere, mesosphere, thermosphere, exosphere
 - How the sun and the earth heat the atmosphere
- Air movement: wind direction and speed, prevailing winds, air pressure, low and high pressure, air masses
- Cold and warm fronts: thunderheads, lightning and electric charge, thunder, tornadoes, hurricanes
- Forecasting the weather: barometers (relation between changes in atmospheric pressure and weather), weather maps, weather satellites
- Weather and climate: “weather” refers to daily changes in temperature, rainfall, sunshine, etc., while “climate” refers to weather trends that are longer than the cycle of the seasons.

VI. Science Biographies

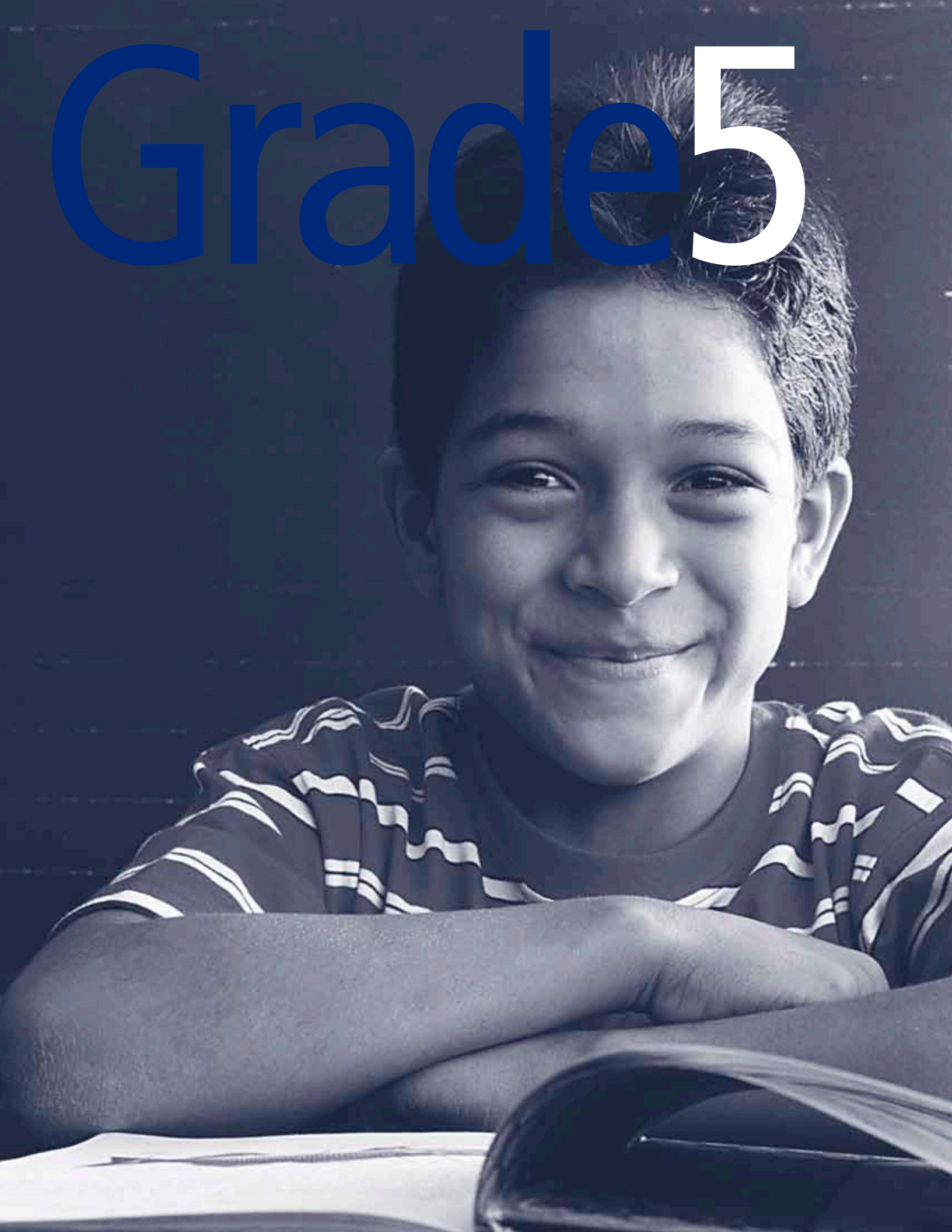
Benjamin Banneker (published almanac; reproduced plans to build Washington, D.C. entirely from memory)

Elizabeth Blackwell (first female to graduate from medical school in the United States)

Charles Drew (pioneered work in blood research, blood transfusions, and the development of blood banks)

Michael Faraday (chemist and physicist whose work led to the development of the electric motor and electric generator)

Grade 5



Overview of Topics

Grade 5

Language Arts

- I. Writing, Grammar, and Usage
 - A. Writing and Research
 - B. Grammar and Usage
 - C. Vocabulary
- II. Poetry
 - A. Poems
 - B. Terms
- III. Fiction and Drama
 - A. Stories
 - B. Drama
 - C. Myths and Legends
 - D. Literary Terms
- IV. Speeches
- V. Sayings and Phrases

History and Geography

World:

- I. World Geography
 - A. Spatial Sense
 - B. Great Lakes of the World
- II. Early American Civilizations
 - A. Geography
 - B. Maya, Aztec and Inca Civilizations
 - C. Spanish Conquerors
- III. European Exploration, Trade, and the Clash of Cultures
 - A. Background
 - B. European Exploration, Trade, and Colonization
 - C. Trade and Slavery
- IV. The Renaissance and the Reformation
 - A. The Renaissance
 - B. The Reformation
- V. England from the Golden Age to the Glorious Revolution
 - A. England in the Golden Age
 - B. From the English Revolution to the Glorious Revolution
- VI. Russia: Early Growth and Expansion
 - A. Geography
 - B. History and Culture
- VII. Feudal Japan
 - A. Geography
 - B. History and Culture

American:

- I. Westward Expansion
 - A. Westward Expansion before the Civil War
 - B. Westward Expansion after the Civil War
- II. The Civil War: Causes, Conflicts, Consequences
 - A. Toward the Civil War
 - B. The Civil War
 - C. Reconstruction

- III. Native Americans: Cultures and Conflicts
 - A. Culture and Life
 - B. American Government Policies
 - C. Conflicts
- IV. U. S. Geography

Visual Arts

- I. Art of the Renaissance
- II. American Art: Nineteenth-Century United States
- III. Art of Japan

Music

- I. Elements of Music
- II. Listening and Understanding
 - A. Composers and Their Music
 - B. Musical Connections
- III. American Musical Traditions (Spirituals)
- IV. Songs

Mathematics

- I. Numbers and Number Sense
- II. Ratio and Percent
 - A. Ratio
 - B. Percent
- III. Fractions and Decimals
 - A. Fractions
 - B. Decimals
- IV. Computation
 - A. Addition
 - B. Multiplication
 - C. Division
 - D. Solving Problems and Equations
- V. Measurement
- VI. Geometry
- VII. Probability and Statistics
- VIII. Pre-Algebra

Science

- I. Classifying Living Things
- II. Cells: Structures and Processes
- III. Plant Structures and Processes
 - A. Structure: Non-Vascular and Vascular Plants
 - B. Photosynthesis
 - C. Reproduction
- IV. Life Cycles and Reproduction
 - A. The Life Cycle and Reproduction
 - B. Sexual Reproduction in Animals
- V. The Human Body
 - A. Changes in Human Adolescence
 - B. The Endocrine System
 - C. The Reproductive System
- VI. Chemistry: Matter and Change
 - A. Atoms, Molecules, and Compounds
 - B. Elements
 - C. Chemical and Physical Change
- VII. Science Biographies

Language Arts: Grade 5



The *Common Core State Standards for English Language Arts* emphasize the critical importance of building nonfiction background knowledge in a coherent and sequenced way within and across grades. This can be accomplished most effectively, at each grade level, by integrating the topics from history, geography, science, and the arts in the *Core Knowledge Sequence* into the language arts block. Note that in the *Sequence*, there are many cross-curricular connections to history and science topics within Language Arts (e.g., poems, stories, and sayings), as well as to visual arts and music, which can and should be integrated into the applicable domain of study.

For Grade 5, domains include: Early American Civilizations; European Exploration, Trade, and the Clash of Cultures; The Renaissance and the Reformation; England from the Golden Age to the Glorious Revolution; Russia: Early Growth and Expansion; Feudal Japan; Westward Expansion; The Civil War: Causes, Conflicts, Consequences; Native Americans: Cultures and Conflicts; Classifying Living Things; Cells: Structures and Processes; Plant Structures and Processes; Life Cycles and Reproduction; The Human Body.

NOTE: The objectives listed in I. Writing, Grammar, and Usage are currently under revision, as part of the *Core Knowledge Language Arts* program development for Grades 3–5. The revised Grade 5 goals and objectives will be conceptually consistent with the K–2 language arts sections of the 2010 edition of the *Sequence* and will be posted at www.coreknowledge.org as part of the online *Sequence* as soon as they are available.

I. Writing, Grammar, and Usage

Teachers: Students should be given many opportunities for writing with teacher guidance that strikes a balance between encouraging creativity and requiring correct use of conventions. Continue imaginative writing but place a stronger emphasis than in previous grades on expository writing, including, for example, summaries, book reports, essays that explain a process, and descriptive essays. In fifth grade, it is appropriate to place a greater emphasis on revision, with the expectation that students will revise and edit to produce (in some cases) a finished product that is thoughtful, well-organized, and reasonably correct in grammar, mechanics, and spelling. In fifth grade, students should be reasonably competent spellers, and in the habit of using a dictionary to check and correct words that present difficulty. They should receive regular practice in vocabulary enrichment.

Note: Review from grade 4: how to use a topic sentence; how to develop a paragraph with examples and details.

A. WRITING AND RESEARCH

- Produce a variety of types of writing—including reports, summaries, letters, descriptions, research essays, essays that explain a process, stories, poems—with a coherent structure or story line.
- Know how to gather information from different sources (such as an encyclopedia, magazines, interviews, observations, atlas, on-line), and write short reports synthesizing information from at least three different sources, presenting the information in his or her own words, with attention to the following:
 - understanding the purpose and audience of the writing
 - defining a main idea and sticking to it
 - providing an introduction and conclusion
 - organizing material in coherent paragraphs
 - illustrating points with relevant examples
 - documenting sources in a rudimentary bibliography

Note: Punctuation studied in earlier grades includes: end punctuation (period, question mark, or exclamation point); comma (between day and year when writing a date, between city and state in an address, in a series, after yes and no, before conjunctions that combine sentences, inside quotation marks in dialogue); apostrophe (in contractions, in singular and plural possessive nouns); and quotation marks (in dialogue, and for titles of poems, songs, short stories, magazine articles).

Note: A brief review of prefixes and suffixes introduced in earlier grades is recommended. Prefixes: *re*, *un*, *dis*, *im* (*in*), *non*, *mis*, *en*, *pre*. Suffixes: *er* and *or*, *less*, *ly*, *ily*, *y*, *ful*, *able*, *ible*, *ment*.

B. GRAMMAR AND USAGE

- Understand what a complete sentence is, and identify subject and predicate
correct fragments and run-ons
- Identify subject and verb in a sentence and understand that they must agree.
- Know the following parts of speech and how they are used: nouns, verbs (action verbs and auxiliary verbs), adjectives (including articles), adverbs, conjunctions, interjections.
- Understand that pronouns must agree with their antecedents in case (nominative, objective, possessive), number, and gender.
- Correctly use punctuation studied in earlier grades, as well as the colon before a list
commas with an appositive
- Use underlining or italics for titles of books.

C. VOCABULARY

- Know how the following prefixes and suffixes affect word meaning:

Prefixes:

anti (as in antisocial, antibacterial)

co (as in coeducation, co-captain)

fore (as in forefather, foresee)

il, *ir* (as in illegal, irregular)

inter (as in interstate)

mid (as in midnight, Midwest)

post (as in postseason, postwar)

semi (as in semicircle, semiprecious)

Suffixes:

ist (as in artist, pianist)

ish (as in stylish, foolish)

ness (as in forgiveness, happiness)

tion, *sion* (as in relation, extension)

II. Poetry

Teachers: The poems listed here constitute a selected core of poetry for this grade. Expose children to more poetry, old and new, and have children write their own poems. To bring children into the spirit of poetry, read it aloud and encourage them to read it aloud so they can experience the music in the words. At this grade, poetry should be primarily a source of delight. This is also an appropriate grade at which to begin looking at poems in more detail, asking questions about the poet's use of language, noting the use of devices such as simile, metaphor, alliteration, etc.

A. POEMS

The Arrow And The Song (Henry Wadsworth Longfellow)

Barbara Frietchie (John Greenleaf Whittier)

Battle Hymn of the Republic (Julia Ward Howe)

A bird came down the walk (Emily Dickinson)

Casey at the Bat (Ernest Lawrence Thayer)

The Eagle (Alfred Lord Tennyson)

I Hear America Singing (Walt Whitman)

I like to see it lap the miles (Emily Dickinson)

I, too, sing America (Langston Hughes)

Jabberwocky (Lewis Carroll)

Narcissa (Gwendolyn Brooks)

O Captain! My Captain! (Walt Whitman)

A Poison Tree (William Blake)

The Road Not Taken (Robert Frost)

The Snowstorm (Ralph Waldo Emerson)

Some Opposites (Richard Wilbur)

The Tiger (William Blake)

A Wise Old Owl (Edward Hersey Richards)

Note: See also below, III. D, Literary Terms: Literal and figurative language.

- B. TERMS**
 onomatopoeia
 alliteration

III. Fiction and Drama

Teachers: In fifth grade, students should be fluent, competent readers of appropriate materials. Regular independent silent reading should continue. Students should read outside of school at least 25 minutes daily.

The titles below constitute a selected core of stories for this grade. Expose children to many more stories, and encourage children to write their own stories. Children should also be exposed to nonfiction prose: biographies, books about science and history, books on art and music, etc.

Some of the works below, such as *Don Quixote*, *Narrative of the Life of Frederick Douglass*, or *A Midsummer Night's Dream* are available in editions adapted for young readers.

A. STORIES

- The Adventures of Tom Sawyer* (Mark Twain)
- episodes from *Don Quixote* (Miguel de Cervantes)
- Little Women* (Part First) (Louisa May Alcott)
- Narrative of the Life of Frederick Douglass* (Frederick Douglass)
- The Secret Garden* (Frances Hodgson Burnett)
- Tales of Sherlock Holmes, including "The Red-Headed League" (Arthur Conan Doyle)

See also World History 5: The Renaissance, re *Don Quixote*.

B. DRAMA

- *A Midsummer Night's Dream* (William Shakespeare)
- Terms:
 - tragedy and comedy
 - act, scene
 - Globe Theater

See also World History 5: The Renaissance, re *A Midsummer Night's Dream*.

C. MYTHS AND LEGENDS

- A Tale of the Oki Islands (a legend from Japan, also known as "The Samurai's Daughter")
- Morning Star and Scarface: the Sun Dance (a Plains Native American legend, also known as "The Legend of Scarface")
- Native American trickster stories (for example, tales of Coyote, Raven, or Grandmother Spider)

See also World History 5: Feudal Japan, re "A Tale of the Oki Islands."

See also American History 5: Native American Cultures, re "Morning Star and Scarface" and Native American trickster stories.

D. LITERARY TERMS

- Pen name (pseudonym)
- Literal and figurative language
 - imagery
 - metaphor and simile
 - symbol
 - personification

IV. Speeches

- Abraham Lincoln: The Gettysburg Address
- Chief Joseph (High'moot Tooyalakekt): "I will fight no more forever"

See also American History 5: Civil War; and, Native Americans: Cultures and Conflicts.

V. Sayings and Phrases

Teachers: Every culture has phrases and proverbs that make no sense when carried over literally into another culture. For many children, this section may not be needed; they will have picked up these sayings by hearing them at home and among friends. But the sayings have been one of the categories most appreciated by teachers who work with children from home cultures that differ from the standard culture of literate American English.

Birthday suit
Bite the hand that feeds you.
Chip on your shoulder
Count your blessings.
Eat crow
Eleventh hour
Eureka!
Every cloud has a silver lining.
Few and far between
Forty winks
The grass is always greener on the
 other side (of the hill).
To kill two birds with one stone
Lock, stock and barrel
Make a mountain out of a molehill

A miss is as good as a mile.
It's never too late to mend.
Out of the frying pan and into the fire.
A penny saved is a penny earned.
Read between the lines.
Sit on the fence
Steal his/her thunder
Take the bull by the horns.
Till the cows come home
Time heals all wounds.
Tom, Dick and Harry
Vice versa
A watched pot never boils.
Well begun is half done.
What will be will be.

History and Geography: Grade 5

WORLD HISTORY AND GEOGRAPHY

I. World Geography

Teachers: The study of geography embraces many topics throughout the *Core Knowledge Sequence*, including topics in history and science. Geographic knowledge includes a spatial sense of the world, an awareness of the physical processes that shape life, a sense of the interactions between humans and their environment, an understanding of the relations between place and culture, and an awareness of the characteristics of specific regions and cultures. Many geographic topics are listed below in connection with historical topics.

A. SPATIAL SENSE (Working with Maps, Globes, and Other Geographic Tools)

Teachers: Review as necessary map-reading skills and concepts, as well as geographic terms, from previous grades.

- Read maps and globes using longitude and latitude, coordinates, degrees.
- Tropic of Cancer and Tropic of Capricorn: relation to seasons and temperature
- Climate zones: Arctic, Tropical, Temperate
- Time zones (review from Grade 4): Prime Meridian (0 degrees); Greenwich, England; 180° Line (International Date Line)
- Arctic Circle (imaginary lines and boundaries) and Antarctic Circle
- From a round globe to a flat map: Mercator projection, conic and plane projections

B. GREAT LAKES OF THE WORLD

- Eurasia: Caspian Sea
- Asia: Aral Sea
- Africa: Victoria, Tanganyika, Chad
- North America: Superior, Huron, Michigan
- South America: Maracaibo, Titicaca

II. Early American Civilizations

Teachers: Discuss with students: How do we know about these ancient civilizations? (Through archaeological findings; ancient artifacts and writings; writings by European missionaries and conquerors, etc.).

A. GEOGRAPHY

- Identify and locate Central America and South America on maps and globes.
Largest countries in South America: Brazil and Argentina
- Amazon River
- Andes Mountains

B. MAYA, AZTEC, AND INCA CIVILIZATIONS

- The Mayas
Ancient Mayas lived in what is now southern Mexico and parts of Central America; their descendants still live there today.
Accomplishments as architects and artisans: pyramids and temples
Development of a system of hieroglyphic writing
Knowledge of astronomy and mathematics; development of a 365-day calendar;
early use of concept of zero

See also below, II.A: Geography of Early American Civilizations; III.C: Trade and Slavery; VI.B: Geography of Russia; VII.B: Geography of Japan.

- The Aztecs
 - A warrior culture, at its height in the 1400s and early 1500s, the Aztec empire covered much of what is now central Mexico.
 - The island city of Tenochtitlan: aqueducts, massive temples, etc.
 - Moctezuma (also spelled Montezuma)
 - Ruler-priests; practice of human sacrifice
 - The Inca
 - Ruled an empire stretching along the Pacific coast of South America
 - Built great cities (Machu Picchu, Cuzco) high in the Andes, connected by a system of roads
- C. SPANISH CONQUERORS**
- Conquistadors: Cortés and Pizzaro
 - Advantage of Spanish weapons (guns, cannons)
 - Diseases devastate native peoples

III. European Exploration, Trade, and the Clash of Cultures

Teachers: It is recommended that you use timelines to place these people and events in the context of the students' previous studies (especially in grade 3) of the early exploration and settlement of North America. Fifth grade teachers should examine the third grade guidelines for American History in order to use the familiar topics as a foundation upon which to build knowledge of the new topics.

Note: Place the great wave of exploration by Europeans in the context of various peoples exploring beyond their own borders, including Islamic traders and (recall from Grade 4) Zheng He of China.

A. BACKGROUND

- Beginning in the 1400s Europeans set forth in a great wave of exploration and trade.
- European motivations
 - Muslims controlled many trade routes.
 - Profit through trade in goods such as gold, silver, silks, sugar, and spices
 - Spread of Christianity: missionaries
- Geography of the spice trade
 - The Moluccas, also called the "Spice Islands": part of present-day Indonesia
 - Locate: the region known as Indochina, the Malay Peninsula, the Philippines
 - Definition of "archipelago"
 - "Ring of Fire": earthquakes and volcanic activity

B. EUROPEAN EXPLORATION, TRADE, AND COLONIZATION

- Portugal
 - Prince Henry the Navigator, exploration of the West African coast
 - Bartolomeu Dias rounds the Cape of Good Hope
 - Vasco da Gama: spice trade with India, exploration of East Africa
 - Portuguese conquer East African Swahili city-states
 - Cabral claims Brazil
- Spain
 - Two worlds meet: Christopher Columbus and the Tainos
 - Bartolomé de las Casas speaks out against enslavement and mistreatment of native peoples
 - Treaty of Tordesillas between Portugal and Spain
 - Balboa reaches the Pacific
 - Magellan crosses the Pacific, one of his ships returns to Spain, making the first round-the-world voyage
- England and France
 - Search for Northwest Passage (review from grade 3)
 - Colonies in North America and West Indies
 - Trading posts in India

Note: Briefly review from American History 3: "Early Spanish Exploration and Settlement." Also, see above, II.C, Spanish Conquerors.

Note: Briefly review from American History 3: search for Northwest Passage. You may also want to introduce other explorers, such as Verrazano and Cartier.

- Holland (The Netherlands)
 - The Dutch take over Portuguese trade routes and colonies in Africa and the East Indies
 - The Dutch in South Africa, Cape Town
 - The Dutch in North America: New Netherland (review from grade 3), later lost to England

C. TRADE AND SLAVERY

- The sugar trade
 - African slaves on Portuguese sugar plantations on islands off West African coast, such as São Tomé
 - Sugar plantations on Caribbean islands
 - West Indies: Cuba, Puerto Rico, Bahamas, Dominican Republic, Haiti, Jamaica
- Transatlantic slave trade: the “triangular trade” from Europe to Africa to colonies in the Caribbean and the Americas
 - The “Slave Coast” in West Africa
 - The Middle Passage

IV. The Renaissance and the Reformation

A. THE RENAISSANCE

- Islamic scholars translate Greek works and so help preserve classical civilization.
- A “rebirth” of ideas from ancient Greece and Rome
- New trade and new wealth
- Italian city states: Venice, Florence, Rome
- Patrons of the arts and learning
 - The Medici Family and Florence
 - The Popes and Rome
- Leonardo da Vinci, Michelangelo
- Renaissance ideals and values as embodied in
 - The Courtier* by Castiglione: the “Renaissance man”
 - The Prince* by Machiavelli: real-world politics

B. THE REFORMATION

- Gutenberg’s printing press: the Bible made widely available
- The Protestant Reformation
 - Martin Luther and the 95 Theses
 - John Calvin
- The Counter-Reformation
- Copernicus and Galileo: Conflicts between science and the church
 - Ptolemaic (earth-centered) vs. sun-centered models of the universe

V. England from the Golden Age to the Glorious Revolution

A. ENGLAND IN THE GOLDEN AGE

- Henry VIII and the Church of England
- Elizabeth I
- British naval dominance
 - Defeat of the Spanish Armada
 - Sir Francis Drake
 - British exploration and North American settlements

See also Visual Arts 5: The Art of the Renaissance; and Language Arts 5: Shakespeare, *A Midsummer Night’s Dream*; Cervantes, *Don Quixote*.

See also Language Arts 5: Shakespeare.

B. FROM THE ENGLISH REVOLUTION TO THE GLORIOUS REVOLUTION

- The English Revolution
 - King Charles I, Puritans and Parliament
 - Civil War: Cavaliers and Roundheads
 - Execution of Charles I
 - Oliver Cromwell and the Puritan regime
 - The Restoration (1660): Charles II restored to the English throne, many Puritans leave England for America
- The “Glorious Revolution” (also called the Bloodless Revolution)
 - King James II replaced by William and Mary
 - Bill of Rights: Parliament limits the power of the monarchy

VI. Russia: Early Growth and Expansion

A. GEOGRAPHY

- Moscow and St. Petersburg
- Ural Mountains, Siberia, steppes
- Volga and Don Rivers
- Black, Caspian, and Baltic Seas
- Search for a warm-water port

B. HISTORY AND CULTURE

- Russia as successor to Byzantine Empire: Moscow as new center of Eastern Orthodox Church and of Byzantine culture (after the fall of Constantinople in 1453)
- Ivan III (the Great), czar (from the Latin “Caesar”)
- Ivan IV (the Terrible)
- Peter the Great: modernizing and “Westernizing” Russia
- Catherine the Great
 - Reforms of Peter and Catherine make life even harder for peasants

VII. Feudal Japan

A. GEOGRAPHY

- Pacific Ocean, Sea of Japan
- Four main islands: Hokkaido, Honshu (largest), Shikoku, Kyushu
- Tokyo
- Typhoons, earthquakes
- The Pacific Rim

B. HISTORY AND CULTURE

- Emperor as nominal leader, but real power in the hands of shoguns
- Samurai, code of Bushido
- Rigid class system in feudal Japanese society
- Japan closed to outsiders
- Religion
 - Buddhism: the four Noble Truths and the Eightfold Path, Nirvana
 - Shintoism: reverence for ancestors, reverence for nature, *kami*

See also Language Arts 5:
“A Tale of the Oki Islands.”

Note: Review from grade 2:
Buddhism’s origins in India,
spread throughout Asia.

American History and Geography

AMERICAN HISTORY AND GEOGRAPHY

I. Westward Expansion

Teachers: Guidelines for the study of Westward Expansion are divided into two parts, with part A focusing on the decades before the Civil War, and part B focusing on the years after the Civil War. You may wish to plan a single unit on Westward Expansion, or divide your studies with a unit on the Civil War (see II below).

A. WESTWARD EXPANSION BEFORE THE CIVIL WAR

- Geography
 - Rivers: James, Hudson, St. Lawrence, Mississippi, Missouri, Ohio, Columbia, Rio Grande
 - Erie Canal connecting the Hudson River and Lake Erie
 - Appalachian and Rocky Mountains
 - Continental Divide and the flow of rivers: east of Rockies to the Arctic or Atlantic Oceans, west of Rockies to the Pacific Ocean
 - Great Plains stretching from Canada to Mexico
- Early exploration of the west
 - Daniel Boone, Cumberland Gap, Wilderness Trail
 - Lewis and Clark, Sacagawea
 - “Mountain men,” fur trade
 - Zebulon Pike, Pike’s Peak
- Pioneers
 - Getting there in wagon trains, flatboats, steamboats
 - Many pioneers set out from St. Louis (where the Missouri and Mississippi Rivers meet).
 - Land routes: Santa Fe Trail and Oregon Trail
 - Mormons (Latter-day Saints) settle in Utah, Brigham Young, Great Salt Lake
 - Gold Rush, ’49ers
- Native American resistance
 - More and more settlers move onto Native American lands, treaties made and broken
 - Tecumseh (Shawnee): attempted to unite tribes in defending their land
 - Battle of Tippecanoe
 - Osceola, Seminole leader
- “Manifest Destiny” and conflict with Mexico
 - The meaning of “manifest destiny”
 - Early settlement of Texas: Stephen Austin
 - General Antonio Lopez de Santa Anna
 - Battle of the Alamo (“Remember the Alamo”), Davy Crockett, Jim Bowie
- The Mexican-American War
 - General Zachary Taylor (“Old Rough and Ready”)
 - Some Americans strongly oppose the war, Henry David Thoreau’s “Civil Disobedience”
 - Mexican lands ceded to the United States (California, Nevada, Utah, parts of Colorado, New Mexico, Arizona)

B. WESTWARD EXPANSION AFTER THE CIVIL WAR

- Homestead Act (1862), many thousands of Americans and immigrants start farms in the West
- “Go west, young man” (Horace Greeley’s advice)
- Railroads, Transcontinental Railroad links east and west, immigrant labor
- Cowboys, cattle drives
- The “wild west,” reality versus legend: Billy the Kid, Jesse James, Annie Oakley, Buffalo Bill
- “Buffalo Soldiers,” African American troops in the West
- U. S. purchases Alaska from Russia, “Seward’s folly”
- 1890: the closing of the American frontier (as acknowledged in the U. S. Census), the symbolic significance of the frontier

Note: Fifth grade students who have been through earlier grades of the *Core Knowledge Sequence* have been introduced to exploration and pioneers in grades 1 and 2.

See also Language Arts 5:
*Narrative of the Life of
Frederick Douglass.*

See also Language Arts /
Music 5: "The Battle Hymn
of the Republic"; and
Language Arts 5: Gettysburg
Address.

Note: Those who wish to
examine other battles may
want to include Vicksburg
(and Lincoln's famous words,
"The Father of Waters again
goes unvexed to the sea")
and the Battle of Mobile
Bay (with Admiral David
Farragut's famous words,
"Damn the torpedoes, full
speed ahead!").

See also Language Arts 5:
Walt Whitman's poem "O
Captain! My Captain!" *re*
the assassination of Lincoln.

See also Language Arts 5:
American Indian trickster
myths; and, Chief Joseph, "I
will fight no more forever."

II. The Civil War: Causes, Conflicts, Consequences

A. TOWARD THE CIVIL WAR

- Abolitionists: William Lloyd Garrison and *The Liberator*, Frederick Douglass
- Slave life and rebellions
- Industrial North versus agricultural South
- Mason-Dixon Line
- Controversy over whether to allow slavery in territories and new states
 - Missouri Compromise of 1820
 - Dred Scott decision allows slavery in the territories
- Importance of Harriet Beecher Stowe's *Uncle Tom's Cabin*
- John Brown, Harper's Ferry
- Lincoln: "A house divided against itself cannot stand."
 - Lincoln-Douglas debates
 - Lincoln elected president, Southern states secede

B. THE CIVIL WAR

- Fort Sumter
- Confederacy, Jefferson Davis
- Yankees and Rebels, Blue and Gray
- First Battle of Bull Run
- Robert E. Lee and Ulysses S. Grant
- General Stonewall Jackson
- Ironclad ships, battle of the USS *Monitor* and the CSS *Virginia* (formerly the USS *Merrimack*)
- Battle of Antietam Creek
- The Emancipation Proclamation
- Gettysburg and the Gettysburg Address
- African-American troops, Massachusetts Regiment led by Colonel Shaw
- Sherman's march to the sea, burning of Atlanta
- Lincoln re-elected, concluding words of the Second Inaugural Address ("With malice toward none, with charity for all. . .")
- Richmond (Confederate capital) falls to Union forces
- Surrender at Appomattox
- Assassination of Lincoln by John Wilkes Booth

C. RECONSTRUCTION

- The South in ruins
- Struggle for control of the South, Radical Republicans vs. Andrew Johnson, impeachment
- Carpetbaggers and scalawags
- Freedmen's Bureau, "40 acres and a mule"
- 13th, 14th, and 15th Amendments to the Constitution
- Black Codes, the Ku Klux Klan and "vigilante justice"
- End of Reconstruction, Compromise of 1877, all federal troops removed from the South

III. Native Americans: Cultures and Conflicts

A. CULTURE AND LIFE

- Great Basin (for example, Nez Perce)
- Plateau (for example, Shoshone and Ute)
- Plains (for example, Arapaho, Cheyenne, Lakota [Sioux], Blackfeet, Crow)
 - Extermination of buffalo (review from grade 2)
- Pacific Northwest (for example, Chinook, Kwakiutl, Yakima)

B. AMERICAN GOVERNMENT POLICIES

- Bureau of Indian Affairs
- Forced removal to reservations
- Attempts to break down tribal life, assimilation policies, Carlisle School

C. CONFLICTS

- Sand Creek Massacre
- Little Big Horn: Crazy Horse, Sitting Bull, Custer's Last Stand
- Wounded Knee
 - Ghost Dance

IV. U. S. Geography

- Locate: Western Hemisphere, North America, Caribbean Sea, Gulf of Mexico
- The Gulf Stream, how it affects climate
- Regions and their characteristics: New England, Mid-Atlantic, South, Midwest, Great Plains, Southwest, West, Pacific Northwest
- Fifty states and capitals

Visual Arts: Grade 5

SEE INTRODUCTION, “The Arts in the Curriculum.”

Teachers: In schools, lessons on the visual arts should illustrate important elements of making and appreciating art, and emphasize important artists, works of art, and artistic concepts. When appropriate, topics in the visual arts may be linked to topics in other disciplines. While the following guidelines specify a variety of artworks in different media and from various cultures, they are not intended to be comprehensive. Teachers are encouraged to build upon the core content and expose children to a wide range of art and artists.

In studying the works of art specified below, and in creating their own art, students should review, develop, and apply concepts introduced in previous grades, such as line, shape, form, space, texture, color, light, design, and symmetry.

I. Art of the Renaissance

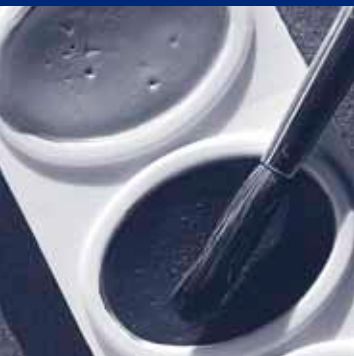
Teachers: Study of the following artists and works of art may be integrated with study of related topics in World History 5: The Renaissance.

- The shift in world view from medieval to Renaissance art, a new emphasis on humanity and the natural world
- The influence of Greek and Roman art on Renaissance artists (classical subject matter, idealization of human form, balance and proportion)
- The development of linear perspective during the Italian Renaissance
 - The vantage point or point-of-view of the viewer
 - Convergence of lines toward a vanishing point, the horizon line
- Observe and discuss works in different genres—such as portrait, fresco, Madonna—by Italian Renaissance artists, including
 - Sandro Botticelli, *The Birth of Venus*
 - Leonardo da Vinci: *The Proportions of Man*, *Mona Lisa*, *The Last Supper*
 - Michelangelo, Ceiling of the Sistine Chapel, especially the detail known as *The Creation of Adam*
 - Raphael: *The Marriage of the Virgin*, examples of his Madonnas (such as *Madonna and Child with the Infant St. John*, *The Alba Madonna*, or *The Small Cowper Madonna*)
- Become familiar with Renaissance sculpture, including
 - Donatello, *Saint George*
 - Michelangelo, *David*
- Become familiar with Renaissance architecture, including
 - The Florence Cathedral, dome designed by Filippo Brunelleschi
 - St. Peter’s in Rome
- Observe and discuss paintings of the Northern Renaissance, including
 - Pieter Bruegel, *Peasant Wedding*
 - Albrecht Dürer, *Self-Portrait* (such as from 1498 or 1500)
 - Jan van Eyck, *Giovanni Arnolfini and His Wife* (also known as *Arnolfini Wedding*)

II. American Art: Nineteenth-Century United States

- Become familiar with the Hudson River School of landscape painting, including
 - Thomas Cole, *The Oxbow (The Connecticut River Near Northampton)* (also known as *View from Mount Holyoke, Northampton, Massachusetts, after a Thunderstorm*)
 - Albert Bierstadt, *Rocky Mountains, Lander’s Peak*
- Become familiar with genre paintings, including
 - George Caleb Bingham, *Fur Traders Descending the Missouri*
 - William Sidney Mount, *Eel Spearing at Setauket*

Note: When you study perspective, review from grade 3 foreground, middle ground, and background; and, for contrast, examine paintings that do not attempt to create an illusion of depth, for example, *Madonna and Child on a Curved Throne* (see Visual Arts 4: Art of the Middle Ages).



See also American History 5: Civil War, *re* photographs by Brady; and African American troops in the Civil War: Shaw and the Massachusetts 54th, *re* Saint-Gaudens's *Shaw Memorial*.

See also World History 5: Feudal Japan.

- Become familiar with art related to the Civil War, including Civil War photography of Mathew Brady and his colleagues
The Shaw Memorial sculpture of Augustus Saint-Gaudens
- Become familiar with popular prints by Currier and Ives.

III. Art of Japan

- Become familiar with
The Great Buddha (also known as the Kamakura Buddha)
Landscape gardens

Music: Grade 5

SEE INTRODUCTION, "The Arts in the Curriculum."

Teachers: In schools, lessons on music should feature activities and works that illustrate important musical concepts and terms, and should introduce important composers and works. When appropriate, topics in music may be linked to topics in other disciplines.



The following guidelines focus on content, not performance skills, though many concepts are best learned through active practice (singing, clapping rhythms, playing instruments, etc.).

I. Elements of Music

- Through participation, become familiar with basic elements of music (rhythm, melody, harmony, form, timbre, etc.).
 Recognize a steady beat, accents, and the downbeat; play a steady beat, a simple rhythm pattern, simultaneous rhythm patterns, and syncopation patterns.
 Discriminate between fast and slow; gradually slowing down and getting faster; *accelerando* and *ritardando*.
 Discriminate between differences in pitch: high and low.
 Discriminate between loud and soft; gradually increasing and decreasing volume; *crescendo* and *decrescendo*.
 Understand *legato* (smoothly flowing progression of notes) and *staccato* (crisp, distinct notes).
 Sing unaccompanied, accompanied, and in unison.
 Recognize harmony; sing rounds and canons; two- and three-part singing.
 Recognize introduction, interlude, and coda in musical selections.
 Recognize verse and refrain.
 Continue work with timbre and phrasing.
 Recognize theme and variations.
 Sing or play simple melodies while reading scores.


- Understand the following notation and terms:

names of lines and spaces in the treble clef; middle C

 treble clef,  staff, bar line, double bar line, measure, repeat signs

 whole note  half note  quarter note  eighth note

whole rest, half rest, quarter rest, eighth rest

 grouped sixteenth notes

tied notes and dotted notes

sharps ♭ flats

Da capo [*dc.*] *al fine*

meter signature $\frac{4}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ or common time $\frac{2}{4}$ $\frac{3}{4}$ $\frac{6}{8}$

soft *pp* *p* *mp* loud *mf* *f* *ff*

II. Listening and Understanding

Teachers: Expose children to a wide range of music, including children’s music, popular instrumental music, and music from various cultures.

Note: Children were introduced to Beethoven in grade 2.

See also below, Songs, “Greensleeves”; and see World History 5: The Renaissance.

See also Language Arts 5: Shakespeare’s *A Midsummer Night’s Dream*.

Note: Spirituals introduced in earlier grades include “Swing Low, Sweet Chariot,” “He’s Got the Whole World in His Hands,” and “This Little Light of Mine.”

See also above, III. American Musical Traditions, Spirituals.

See also American History 5: Civil War, re “Battle Hymn of the Republic.” Also, you may wish to recall songs from grade 2: “Dixie,” “Follow the Drinking Gourd,” and “When Johnny Comes Marching Home.”

A. COMPOSERS AND THEIR MUSIC

Teachers: Provide brief, child-friendly biographical profiles of the following composers, and listen to representative works:

- Ludwig van Beethoven, *Symphony No. 5*
- Modest Mussorgsky, *Pictures at an Exhibition* (as orchestrated by Ravel)

B. MUSICAL CONNECTIONS

Teachers: Introduce children to the following works in connection with topics in other disciplines:

- Music from the Renaissance (such as choral works of Josquin Desprez; lute songs by John Dowland)
- Felix Mendelssohn, Overture, Scherzo, and Wedding March from *A Midsummer Night’s Dream*

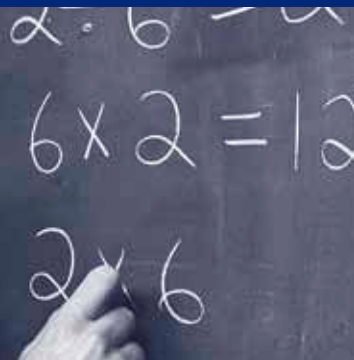
III. American Musical Traditions

- Spirituals
Originated by African-Americans, many spirituals go back to the days of slavery. Familiar spirituals, such as:
Down by the Riverside
Sometimes I Feel Like a Motherless Child
Wayfaring Stranger
We Shall Overcome

IV. Songs

Battle Hymn of the Republic
Danny Boy
Dona Nobis Pacem (round)
Git Along Little Dogies
God Bless America
Greensleeves
The Happy Wanderer
Havah Nagilah
If I Had a Hammer
Red River Valley
Sakura
Shenandoah
Sweet Betsy from Pike

Teachers: Mathematics has its own vocabulary and patterns of thinking. It is a discipline with its own language and conventions. Thus, while some lessons may offer occasional opportunities for linking mathematics to other disciplines, it is critically important to attend to math as math. From the earliest years, mathematics requires incremental review and steady practice: not only the diligent effort required to master basic facts and operations, but also thoughtful and varied practice that approaches problems from a variety of angles, and gives children a variety of opportunities to apply the same concept or operation in different types of situations. While it is important to work toward the development of “higher-order problem-solving skills,” it is equally important—indeed, it is prerequisite to achieving “higher order” skills—to have a sound grasp of basic facts, and an automatic fluency with fundamental operations.



I. Numbers and Number Sense

- Read and write numbers (in digits and words) up to the billions.
- Recognize place value up to billions.
- Order and compare numbers to 999,999,999 using the signs $<$, $>$, and $=$.
- Write numbers in expanded form.
- Integers
 - Locate positive and negative integers on a number line.
 - Compare integers using the symbols $<$, $>$, $=$.
 - Know that the sum of an integer and its opposite is 0.
 - Add and subtract positive and negative integers.
- Using a number line, locate positive and negative whole numbers.
- Round to the nearest ten; to the nearest hundred; to the nearest thousand; to the nearest hundred thousand.
- Exponents
 - Review perfect squares and square roots to 144; recognize the square root sign, $\sqrt{\quad}$.
 - Using the terms *squared* and *cubed* and *to the n th power*, read and evaluate numerical expressions with exponents.
 - Identify the powers of ten up to 10^6 .
- Identify a set and the members of a set, as indicated by $\{ \}$.
- Identify numbers under 100 as prime or composite.
- Identify prime factors of numbers to 100 and write using exponential notation for multiple primes.
- Determine the greatest common factor (GCF) of given numbers.
- Determine the least common multiple (LCM) of given numbers.

II. Ratio and Percent

A. RATIO

- Determine and express simple ratios.
- Use ratio to create a simple scale drawing.
- Ratio and rate: solve problems on speed as a ratio, using the formula $S = D/T$ (or $D = R \times T$).

B. PERCENT

- Recognize the percent sign (%) and understand percent as “per hundred.”
- Express equivalences between fractions, decimals, and percents, and know common equivalences:

$$\begin{aligned} \frac{1}{10} &= 10\% \\ \frac{1}{4} &= 25\% \\ \frac{1}{2} &= 50\% \\ \frac{3}{4} &= 75\% \end{aligned}$$

- Find the given percent of a number.

III. Fractions and Decimals

A. FRACTIONS

- Determine the least common denominator (LCD) of fractions with unlike denominators.
- Recognize equivalent fractions (for example, $\frac{1}{2} = \frac{3}{6}$).
- Put fractions in lowest terms.
- Compare fractions with like and unlike denominators, using the signs $<$, $>$, and $=$.
- Identify the reciprocal of a given fraction; know that the product of a given number and its reciprocal = 1.
- Add and subtract mixed numbers and fractions with like and unlike denominators.
- Multiply and divide fractions.
- Add and subtract fractions with like and unlike denominators.
- Add and subtract mixed numbers and fractions; multiply mixed numbers and fractions.
- Round fractions to the nearest whole number.
- Write fractions as decimals (e.g., $\frac{1}{4} = 0.25$; $\frac{17}{25} = 0.68$; $\frac{1}{3} = 0.3333 \dots$ or 0.33, rounded to the nearest hundredth).

B. DECIMALS

- Read, write, and order decimals to the nearest ten-thousandth.
- Write decimals in expanded form.
- Read and write decimals on a number line.
- Round decimals (and decimal quotients) to the nearest tenth; to the nearest hundredth; to the nearest thousandth.
- Estimate decimal sums, differences, and products by rounding.
- Add and subtract decimals through ten-thousandths.
- Multiply decimals: by 10, 100, and 1,000; by another decimal.
- Divide decimals by whole numbers and decimals.

IV. Computation

A. ADDITION

- Commutative and associative properties: know the names and understand the properties.

B. MULTIPLICATION

- Commutative, associative, and distributive properties: know the names and understand the properties.
- Multiply two factors of up to four digits each.
- Write numbers in expanded form using multiplication.
- Estimate a product.
- Use mental computation strategies for multiplication, such as breaking a problem into partial products, for example: $3 \times 27 = (3 \times 20) + (3 \times 7) = 60 + 21 = 81$.
- Solve word problems involving multiplication.

C. DIVISION

- Understand multiplication and division as inverse operations.
- Know what it means for one number to be “divisible” by another number.
- Know that you cannot divide by 0; that any number divided by 1 = that number.
- Estimate the quotient.
- Know how to move the decimal point when dividing by 10, 100, or 1,000.
- Divide dividends up to four digits by one-digit, two-digit, and three-digit divisors.
- Solve division problems with remainders; round a repeating decimal quotient.
- Check division by multiplying (and adding remainder).

D. SOLVING PROBLEMS AND EQUATIONS

- Solve word problems with multiple steps.
- Solve problems with more than one operation.



V. Measurement

Teachers: Review and reinforce as necessary from grade 4 topics on linear measure, weight, and capacity (volume). Also review various equivalences, which students should be able to recall from memory.

- Convert to common units in problems involving addition and subtraction of different units.
- Time: Solve problems on elapsed time; regroup when multiplying and dividing amounts of time.

VI. Geometry

- Identify and draw points, segments, rays, lines.
- Identify and draw lines: horizontal; vertical; perpendicular; parallel; intersecting.
- Measure the degrees in angles, and know that
right angle = 90° acute angle: less than 90°
obtuse angle: greater than 90° straight angle = 180°
- Identify and construct different kinds of triangles: equilateral, right, and isosceles.
- Know what it means for triangles to be congruent.
- Identify polygons:
triangle, quadrilateral, pentagon, hexagon, and octagon
parallelogram, trapezoid, rhombus, rectangle, square
- Know that regular polygons have sides of equal length and angles of equal measure.
- Identify and draw diagonals of polygons.
- Circles
Identify arc, chord, radius (plural: radii), and diameter (radius = $\frac{1}{2}$ diameter).
Using a compass, draw circles with a given diameter or radius.
Find the circumference of a circle using the formulas $C = \pi d$, and $C = 2 \pi r$,
using 3.14 as the value of π .
- Area
Review the formula for the area of a rectangle (Area = length x width) and solve problems involving finding area in a variety of square units (such as mi^2 ; yd^2 ; ft^2 ; in^2 ; km^2 ; m^2 ; cm^2 ; mm^2).
Find the area of triangles, using the formula $A = \frac{1}{2}(b \times h)$.
Find the area of a parallelogram using the formula $A = b \times h$.
Find the area of an irregular figure (such as a trapezoid) by dividing into regular figures for which you know how to find the area.
Compute volume of rectangular prisms in cubic units (cm^3 , in^3), using the formula $V = l \times w \times h$.
Find the surface area of a rectangular prism.

VII. Probability and Statistics

- Understand probability as a measure of the likelihood that an event will happen; using simple models, express probability of a given event as a fraction, as a percent, and as a decimal between 0 and 1.
- Collect and organize data in graphic form (bar, line, and circle graphs).
- Solve problems requiring interpretation and application of graphically displayed data.
- Find the average (mean) of a given set of numbers.
- Plot points on a coordinate plane, using ordered pairs of positive and negative whole numbers.
- Graph simple functions.

VIII. Pre-Algebra

- Recognize variables and solve basic equations using variables.
- Write and solve equations for word problems.
- Find the value of an expression given the replacement values for the variables, for example: What is $7 - c$ if c is 3.5?

Science: Grade 5

Teachers: Effective instruction in science requires hands-on experience and observation. In the words of the 1993 report from the American Association for the Advancement of Science, *Benchmarks for Science Literacy*, "From their very first day in school, students should be actively engaged in learning to view the world scientifically. That means encouraging them to ask questions about nature and to seek answers, collect things, count and measure things, make qualitative observations, organize collections and observations, discuss findings, etc."

While experience counts for much, book learning is also important, for it helps bring coherence and order to a child's scientific knowledge. Only when topics are presented systematically and clearly can children make steady and secure progress in their scientific learning. The child's development of scientific knowledge and understanding is in some ways a very disorderly and complex process, different for each child. But a systematic approach to the exploration of science, one that combines experience with book learning, can help provide essential building blocks for deeper understanding at a later time.

I. Classifying Living Things

Teachers: As the children study animal classification, discuss: *Why do we classify? How does classification help us understand the natural world?*

- Scientists have divided living things into five large groups called kingdoms, as follows:
 - Plant
 - Animal
 - Fungus (mushrooms, yeast, mold, mildew)
 - Protist (algae, protozoans, amoeba, euglena)
 - Moneran, also called Prokaryote (bacteria, blue-green algae/cyano bacteria)
- Each kingdom is divided into smaller groupings as follows:
 - Kingdom
 - Phylum
 - Class
 - Order
 - Family
 - Genus
 - Species
 - (Variety)
- When classifying living things, scientists use special names made up of Latin words (or words made to sound like Latin words), which help scientists around the world understand each other and ensure that they are using the same names for the same living things.
 - Homo sapiens*: the scientific name for the species to which human beings belong (genus *Homo*, species *sapiens*)
 - Taxonomists: biologists who specialize in classification
- Different classes of vertebrates and major characteristics: fish, amphibians, reptiles, birds, mammals (review from grade 3)

Teachers: Introduce an example of how an animal is classified, in order for students to become familiar with the system of classification, not to memorize specific names. For example, a collie dog is classified as follows:

Kingdom: Animalia
 Phylum: Chordata (Subphylum: Vertebrata)
 Class: Mammalia (mammal)
 Order: Carnivora (eats meat)

Note: A useful mnemonic device is "King Philip Came Over For Good Spaghetti."



Family: Canidae (a group with doglike characteristics)
Genus: *Canis* (a coyote, wolf, or dog)
Species: *familiaris* (a domestic dog)
Variety: Collie

II. Cells: Structures and Processes

Note: Students will study cell division in more detail, including the processes of mitosis and meiosis, in grade 7.

See below, III. B, Photosynthesis re plant cells.

- All living things are made up of cells.
- Structure of cells (both plant and animal)
 - Cell membrane: selectively allows substances in and out
 - Nucleus: surrounded by nuclear membrane, contains genetic material, divides for reproduction
 - Cytoplasm contains organelles, small structures that carry out the chemical activities of the cell, including mitochondria (which produce the cell's energy) and vacuoles (which store food, water, or wastes).
- Plant cells, unlike animal cells, have cell walls and chloroplasts.
- Cells without nuclei: monerans (bacteria)
- Some organisms consist of only a single cell: for example, amoeba, protozoans, some algae.
- Cells are shaped differently in order to perform different functions.
- Organization of cells into tissues, organs, and systems:
 - In complex organisms, groups of cells form tissues (for example, in animals, skin tissue or muscle tissue; in plants, the skin of an onion or the bark of a tree).
 - Tissues with similar functions form organs (for example, in some animals, the heart, stomach, or brain; in some plants, the root or flower).
 - In complex organisms, organs work together in a system (recall, for example, from earlier studies of the human body, the digestive, circulatory, and respiratory systems).

III. Plant Structures and Processes

A. STRUCTURE: NON-VASCULAR AND VASCULAR PLANTS

- Non-vascular plants (for example, algae)
- Vascular plants
 - Vascular plants have tubelike structures that allow water and dissolved nutrients to move through the plant.
 - Parts and functions of vascular plants: roots, stems and buds, leaves

B. PHOTOSYNTHESIS

- Photosynthesis is an important life process that occurs in plant cells, but not animal cells (photo = light; synthesis = putting together). Unlike animals, plants make their own food, through the process of photosynthesis.
- Role in photosynthesis of: energy from sunlight, chlorophyll, carbon dioxide and water, xylem and phloem, stomata, oxygen, sugar (glucose)

C. REPRODUCTION

- Asexual reproduction
 - Example of algae
 - Vegetative reproduction: runners (for example, strawberries) and bulbs (for example, onions), growing plants from eyes, buds, leaves, roots, and stems
- Sexual reproduction by spore-bearing plants (for example, mosses and ferns)
- Sexual reproduction of non-flowering seed plants: conifers (for example, pines), male and female cones, wind pollination
- Sexual reproduction of flowering plants (for example, peas)
 - Functions of sepals and petals, stamen (male), anther, pistil (female), ovary (or ovule)

See below, IV. Life Cycles and Reproduction: asexual and sexual reproduction.

Process of seed and fruit production: pollen, wind, insect and bird pollination, fertilization, growth of ovary, mature fruit

Seed germination and plant growth: seed coat, embryo and endosperm, germination (sprouting of new plant), monocots (for example, corn) and dicots (for example, beans)

IV. Life Cycles and Reproduction

A. THE LIFE CYCLE AND REPRODUCTION

- Life cycle: development of an organism from birth to growth, reproduction, death
Example: Growth stages of a human: embryo, fetus, newborn, infancy, childhood, adolescence, adulthood, old age
- All living things reproduce themselves. Reproduction may be asexual or sexual.
Examples of asexual reproduction: fission (splitting) of bacteria, spores from mildews, molds, and mushrooms, budding of yeast cells, regeneration and cloning
Sexual reproduction requires the joining of special male and female cells, called gametes, to form a fertilized egg.

B. SEXUAL REPRODUCTION IN ANIMALS

- Reproductive organs: testes (sperm) and ovaries (eggs)
- External fertilization: spawning
- Internal fertilization: birds, mammals
- Development of the embryo: egg, zygote, embryo, growth in uterus, fetus, newborn

V. The Human Body

A. CHANGES IN HUMAN ADOLESCENCE

- Puberty
Glands and hormones (see below, Endocrine System), growth spurt, hair growth, breasts, voice change

B. THE ENDOCRINE SYSTEM

- The human body has two types of glands: duct glands (such as the salivary glands), and ductless glands, also known as endocrine glands.
- Endocrine glands secrete (give off) chemicals called hormones. Different hormones control different body processes.
- Pituitary gland: located at the bottom of the brain; secretes hormones that control other glands, and hormones that regulate growth
- Thyroid gland: located below the voice box; secretes a hormone that controls the rate at which the body burns and uses food
- Pancreas: both a duct and ductless gland; secretes a hormone called insulin that regulates how the body uses and stores sugar; when the pancreas does not produce enough insulin, a person has a sickness called diabetes (which can be controlled)
- Adrenal glands: secrete a hormone called adrenaline, especially when a person is frightened or angry, causing rapid heartbeat and breathing

C. THE REPRODUCTIVE SYSTEM

- Females: ovaries, fallopian tubes, uterus, vagina, menstruation
- Males: testes, scrotum, penis, urethra, semen
- Sexual reproduction: intercourse, fertilization, zygote, implantation of zygote in the uterus, pregnancy, embryo, fetus, newborn

Note: There is some flexibility in the grade-level placement of the study of topics relating to human reproduction, as different schools and districts have differing local requirements, typically introducing these topics in either fifth or sixth grade.



VI. Chemistry: Matter and Change

A. ATOMS, MOLECULES, AND COMPOUNDS

- Basics of atomic structure: nucleus, protons (positive charge), neutrons (neutral), electrons (negative charge)
- Atoms are constantly in motion, electrons move around the nucleus in paths called shells (or energy levels).
- Atoms may join together to form molecules and compounds.
- Common compounds and their formulas:
water H_2O
salt NaCl
carbon dioxide CO_2

B. ELEMENTS

- Elements have atoms of only one kind, having the same number of protons. There are a little more than 100 different elements.
- The Periodic Table: organizes elements with common properties
Atomic symbol and atomic number
- Some well-known elements and their symbols:
Hydrogen H
Helium He
Carbon C
Nitrogen N
Oxygen O
Sodium Na
Aluminum Al
Silicon Si
Chlorine Cl
Iron Fe
Copper Cu
Silver Ag
Gold Au
- Two important categories of elements: metals and non-metals
Metals comprise about $\frac{2}{3}$ of the known elements.
Properties of metals: most are shiny, ductile, malleable, conductive

C. CHEMICAL AND PHYSICAL CHANGE

- Chemical change changes what a molecule is made up of and results in a new substance with a new molecular structure. Examples of chemical change: rusting of iron, burning of wood, milk turning sour
- Physical change changes only the properties or appearance of the substance, but does not change what the substance is made up of. Examples of physical change: cutting wood or paper, breaking glass, freezing water

Note: Students will examine the relation between the periodic table and atomic structure in more detail in grade 7.

Note: Qualitative description and investigation of chemical change is sufficient at this grade level.

See also World History 5: The Renaissance, *re* Galileo. See above, Classifying Living Things, *re* Linnaeus; Cells, *re* Ernest Just; Human Body—Endocrine System (Hormones), *re* Percy Lavon Julian.

VII. Science Biographies

Galileo (“Father of modern science” who provided scientific support for Copernicus’s sun-centered universe)

Percy Lavon Julian (biologist and inventor who developed synthetic cortisone to treat arthritis pain)

Ernest Just (biologist and medical pioneer who specialized in studying cells and reproduction in marine animals)

Carl Linnaeus (botanist and “Father of taxonomy” who standardized the classification system)

Grade 6



Overview of Topics

Grade 6

English

- I. Writing, Grammar, and Usage
 - A. Writing and Research
 - B. Speaking and Listening
 - C. Grammar and Usage
 - D. Spelling
 - E. Vocabulary
- II. Poetry
 - A. Poems
 - B. Terms
- III. Fiction and Drama
 - A. Stories
 - B. Drama
 - C. Classical Mythology
 - D. Literary Terms
- IV. Sayings and Phrases

History and Geography

World:

- I. World Geography
 - A. Spatial Sense
 - B. Great Deserts of the World
- II. Lasting Ideas from Ancient Civilizations
 - A. Judaism and Christianity
 - B. Ancient Greece
 - C. Ancient Rome
- III. The Enlightenment
- IV. The French Revolution
- V. Romanticism
- VI. Industrialism, Capitalism, and Socialism
 - A. The Industrial Revolution
 - B. Capitalism
 - C. Socialism
- VII. Latin American Independence Movements
 - A. History
 - B. Geography of Latin America

American:

- I. Immigration, Industrialization, and Urbanization
 - A. Immigration
 - B. Industrialization and Urbanization
- II. Reform

Visual Arts

- I. Art History: Periods and Schools
 - A. Classical Art: The Art of Ancient Greece and Rome
 - B. Gothic Art
 - C. The Renaissance
 - D. Baroque
 - E. Rococo
 - F. Neoclassical
 - G. Romantic
 - H. Realism

Music

- I. Elements of Music
- II. Classical Music: From Baroque to Romantic
 - A. Baroque
 - B. Classical
 - C. Romantic

Mathematics

- I. Numbers and Number Sense
- II. Ratio, Percent, and Proportion
 - A. Ratio and Proportion
 - B. Percent
- III. Computation
 - A. Addition
 - B. Multiplication
 - C. Division
 - D. Solving Problems and Equations
- IV. Measurement
- V. Geometry
- VI. Probability and Statistics
- VII. Pre-Algebra

Science

- I. Plate Tectonics
- II. Oceans
- III. Astronomy: Gravity, Stars, and Galaxies
- IV. Energy, Heat, and Energy Transfer
 - A. Energy
 - B. Heat
 - C. Physical Change: Energy Transfer
- V. The Human Body: Lymphatic and Immune Systems
- VI. Science Biographies



I. Writing, Grammar, and Usage

Teachers: Students should be given many opportunities for writing, both imaginative and expository, with teacher guidance that strikes a balance between encouraging creativity and requiring correct use of conventions. In sixth grade, it is appropriate to emphasize revision, with the expectation that students will revise and edit to produce (in some cases) a finished product that is thoughtful, well-organized, and reasonably correct in grammar, mechanics, and spelling. Continue imaginative writing but place a stronger emphasis than in previous grades on expository writing, including, for example, summaries, book reports, essays that explain a process, and descriptive essays. Note also the requirement below for writing persuasive essays, a research essay, and a standard business letter.

A. WRITING AND RESEARCH

- Learn strategies and conventions for writing a persuasive essay, with attention to
 - defining a thesis (that is, a central proposition, a main idea)
 - supporting the thesis with evidence, examples, and reasoning
 - distinguishing evidence from opinion
 - anticipating and answering counter-arguments
 - maintaining a reasonable tone
- Write a research essay, with attention to
 - asking open-ended questions
 - gathering relevant data through library and field research
 - summarizing, paraphrasing, and quoting accurately when taking notes
 - defining a thesis
 - organizing with an outline
 - integrating quotations from sources
 - acknowledging sources and avoiding plagiarism
 - preparing a bibliography
- Write a standard business letter.

B. SPEAKING AND LISTENING

- Participate civilly and productively in group discussions.
- Give a short speech to the class that is well-organized and well-supported.
- Demonstrate an ability to use standard pronunciation when speaking to large groups and in formal circumstances, such as a job interview.

C. GRAMMAR AND USAGE

- Understand what a complete sentence is, and
 - identify subject and predicate
 - identify independent and dependent clauses
 - correct fragments and run-ons
- Identify different sentence types, and write for variety by using
 - simple sentences
 - compound sentences
 - complex sentences
 - compound-complex sentences
- Correctly use punctuation introduced in earlier grades, and learn how to use a semi-colon or comma with *and*, *but*, or *or* to separate the sentences that form a compound sentence.
- Recognize verbs in active voice and passive voice, and avoid unnecessary use of passive voice.



- Recognize the following troublesome verbs and how to use them correctly:
sit, set
rise, raise
lie, lay
- Correctly use the following:
good / well
between / among
bring / take
accept / except
fewer / less
like / as
affect / effect
who / whom
imply / infer
principle / principal
their / there / they're

D. SPELLING

- Review spelling rules for use of *ie* and *ei*; for adding prefixes and suffixes
- Continue work with spelling, with special attention to commonly misspelled words, including:

Note: More commonly misspelled words are listed in grades 7 and 8.

acquaintance	develop	naturally	separate
amateur	embarrassed	occurrence	similar
analyze	exaggerate	parallel	sophomore
answer	exercise	peasant	substitute
athlete	fulfill	philosopher	success
Britain	gymnasium	possess	suspicion
characteristic	hypocrite	privilege	tragedy
committee	innocence	receipt	woman
conscious	interrupt	recommendation	writing
cooperate	license	repetition	
criticize	marriage	restaurant	
dependent	minimum	rhythm	

E. VOCABULARY

Teachers: Students should know the meaning of these Latin and Greek words that form common word roots and be able to give examples of English words that are based on them.

Note: More Latin and Greek words and roots are listed in grades 7 and 8. In the listings here, L = Latin, G = Greek. No single form of the Latin or Greek words is consistently used here, but rather the form that is most similar to related English words.

<u>Latin/Greek Word</u>	<u>Meaning</u>	<u>Examples</u>
annus [L]	year	annual, anniversary
ante [L]	before	antebellum, antecedent
aqua [L]	water	aquarium
astron [G]	star	astronaut, astronomy
bi [L]	two	bisect, bipartisan
bios [G]	life	biology, biography
centum [L]	hundred	cent, percent
decem [L]	ten	decade, decimal
dico, dictum [L]	say, thing said	dictation, dictionary
duo [G, L]	two	duplicate
ge [G]	earth	geology, geography
hydor [G]	water	hydrant, hydroelectric
magnus [L]	large, great	magnificent, magnify
mega [G]	large, great	megaphone, megalomania
mikros [G]	small	microscope, microfilm
minus [L]	smaller	diminish, minor
monos [G]	single	monologue, monarch, monopoly

omnis [L]	all	omnipotent, omniscient
phileo [G]	to love	philosophy, philanthropist
phone [G]	sound, voice	phonograph, telephone
photo [from G <i>phos</i>]	light	photograph, photocopy
poly [G]	many	polygon
post [L]	after	posthumous, posterity
pre [L]	before	predict, prepare
primus [L]	first	primary, primitive
protos [G]	first	prototype, protozoa
psyche[G]	soul, mind	psychology
quartus [L]	fourth	quadrant, quarter
tele [G]	at a distance	telephone, television, telepathy
thermos [G]	heat	thermometer, thermostat
tri [G, L]	three	trilogy, triangle
unus [L]	one	unanimous, unilateral
video, visum [L]	see, seen	evident, visual
vita [L]	life	vitality, vitamin

II. Poetry

A. POEMS

Teachers: The poems listed here constitute a selected core of poetry for this grade. You are encouraged to expose students to more poetry, old and new, and to have students write their own poems. To bring students into the spirit of poetry, read it aloud and encourage them to read it aloud so they can experience the music in the words. At this grade, poetry should be a source of delight, and, upon occasion, the subject of close attention. Students should examine some poems in detail, discussing what the poems mean as well as asking questions about the poet’s use of language.

- All the world’s a stage [from *As You Like It*] (William Shakespeare)
- Apostrophe to the Ocean [from *Childe Harold’s Pilgrimage*, Canto 4, Nos. 178-184] (George Gordon Byron)
- I Wandered Lonely as a Cloud (William Wordsworth)
- If (Rudyard Kipling)
- Mother to Son (Langston Hughes)
- Lift Ev’ry Voice and Sing (James Weldon Johnson)
- A narrow fellow in the grass (Emily Dickinson)
- A Psalm of Life (Henry Wadsworth Longfellow)
- The Raven (Edgar Allan Poe)
- A Song of Greatness (a Chippewa song, trans. Mary Austin)
- Stopping by Woods on a Snowy Evening (Robert Frost)
- Sympathy (Paul Laurence Dunbar)
- There is no frigate like a book (Emily Dickinson)
- The Walloping Window-blind (Charles E. Carryl)
- Woman Work (Maya Angelou)

B. TERMS

- meter
- iamb
- couplet
- rhyme scheme
- free verse

See also World History 6: Romanticism, re “Apostrophe to the Ocean” and “I Wandered Lonely as a Cloud.”

III. Fiction and Drama

Teachers: *The Iliad*, *The Odyssey*, and *Julius Caesar* are available in editions adapted for young readers.

A. STORIES

The Iliad and *The Odyssey* (Homer)
The Prince and the Pauper (Mark Twain)

B. DRAMA

Julius Caesar (William Shakespeare)

C. CLASSICAL MYTHOLOGY

Apollo and Daphne
Orpheus and Eurydice
Narcissus and Echo
Pygmalion and Galatea

D. LITERARY TERMS

- Epic
- Literal and figurative language (review from grade 5)
 - imagery
 - metaphor and simile
 - symbol
 - personification

See also World History 6:
Ancient Greece, re *The Iliad*
and *The Odyssey*.

See also World History 6:
Ancient Rome, re *Julius*
Caesar.

See also World History 6:
Ancient Greece and Rome.
Students who are not familiar
with classical myths specified
in grades 2 and 3 of the *Core*
Knowledge Sequence should
read those selections as well.

IV. Sayings and Phrases

Teachers: Every culture has phrases and proverbs that make no sense when carried over literally into another culture. For many children, this section may not be needed; they will have picked up these sayings by hearing them at home and among friends. But the sayings have been one of the categories most appreciated by teachers who work with children from home cultures that differ from the standard culture of literate American English.

All for one and one for all.
All's well that ends well.
Bee in your bonnet
The best-laid plans of mice and men oft go awry.
A bird in the hand is worth two in the bush.
Bite the dust
Catch-as-catch-can
Don't cut off your nose to spite your face.
Don't lock the stable door after the horse is stolen.
Don't look a gift horse in the mouth.
Eat humble pie
A fool and his money are soon parted.
A friend in need is a friend indeed.
Give the devil his due.
Good fences make good neighbors.
He who hesitates is lost.
He who laughs last laughs best.
Hitch your wagon to a star.
If wishes were horses, beggars would ride.
The leopard doesn't change his spots.
Little strokes fell great oaks.
Money is the root of all evil.

Necessity is the mother of invention.
It's never over till it's over.
Nose out of joint
Nothing will come of nothing.
Once bitten, twice shy.
On tenterhooks
Pot calling the kettle black
Procrastination is the thief of time.
The proof of the pudding is in the eating.
RIP
The road to hell is paved with good intentions.
Rome wasn't built in a day.
Rule of thumb
A stitch in time saves nine.
Strike while the iron is hot.
Tempest in a teapot
Tenderfoot
There's more than one way to skin a cat.
Touché!
Truth is stranger than fiction.

History and Geography: Grade 6

Teachers: The World History guidelines for sixth grade begin with a study of ancient civilizations introduced in earlier grades in the *Core Knowledge Sequence*. Topics include Judaism, Christianity, and the civilizations of ancient Greece and Rome. The focus in sixth grade should be on the legacy of enduring ideas from these civilizations—ideas about democracy and government, for example, or about right and wrong. After this study of lasting ideas from ancient civilizations, the World History guidelines pick up the chronological thread from earlier grades with a study of the Enlightenment. You are encouraged to use timelines and engage students in a brief review of some major intervening events in order to help students make a smooth transition across the gap in centuries between the ancient civilizations and the Enlightenment.

In sixth grade, the World History guidelines catch up chronologically with the American History guidelines. The World History guidelines take students up to the consequences of industrialization in the mid-nineteenth century, and this is where the American History guidelines begin.

WORLD HISTORY AND GEOGRAPHY

I. World Geography

Teachers: By sixth grade, children should have a good working knowledge of map-reading skills, as well as geographic terms and features introduced in earlier grades. The study of geography embraces many topics throughout the *Core Knowledge Sequence*, including topics in history and science. Geographic knowledge includes a spatial sense of the world, an awareness of the physical processes that shape life, a sense of the interactions between humans and their environment, an understanding of the relations between place and culture, and an awareness of the characteristics of specific regions and cultures. Many geographic topics are listed below in connection with historical topics.

A. SPATIAL SENSE (Working with Maps, Globes, and Other Geographic Tools)

Teachers: As necessary, review and reinforce topics from earlier grades, including:

- Continents and major oceans
- How to read maps and globes using longitude and latitude, coordinates, degrees
- Tropic of Cancer and Tropic of Capricorn: relation to seasons and temperature
- Climate zones: Arctic, Tropic, Temperate
- Time zones (review from Grade 4): Prime Meridian (0 degrees); Greenwich, England; 180° Line (International Date Line)
- Arctic Circle (imaginary lines and boundaries) and Antarctic Circle

B. GREAT DESERTS OF THE WORLD

- What is a desert? Hot and cold deserts
- Major deserts in
 - Africa: Sahara, Kalahari
 - Australia: a mostly desert continent
 - Asia: Gobi; much of Arabian Peninsula
 - North America: Mojave, Chihuahuan, Sonoran
 - South America: Atacama Desert

Note: In earlier grades, children were introduced to major rivers (see Geography 3), mountains (see Geography 4), and lakes (see Geography 5) of the world.

II. Lasting Ideas from Ancient Civilizations

A. JUDAISM AND CHRISTIANITY

Teachers: Since religion is a shaping force in the story of civilization, the *Core Knowledge Sequence* introduces children in the early grades to major world religions, beginning with a focus on geography and major symbols and figures. Here in the sixth grade the focus is on history, geography, and ideas. The purpose is not to explore matters of theology but to understand the place of religion and religious ideas in history. The goal is to familiarize, not proselytize; to be descriptive, not prescriptive. The tone should be one of respect and balance: no religion should be disparaged by implying that it is a thing of the past.

A review of major religions introduced in earlier grades in the *Core Knowledge Sequence* is recommended: Judaism/Christianity/Islam (grade 1), Hinduism/Buddhism (grade 2), Islam (grade 4), and Buddhism/Shintoism (grade 5).

- Basic ideas in common
 - The nature of God and of humanity
 - Hebrew Bible and Old Testament of Christian Bible
- Judaism: central ideas and moral teachings
 - Torah, monotheism
 - The idea of a “covenant” between God and man
 - Concepts of law, justice, and social responsibility: the Ten Commandments
- Christianity: central ideas and moral teachings
 - New Testament
 - The Sermon on the Mount and the two “great commandments” (Matthew 22: 37-40)
- Geography of the Middle East
 - Birthplace of major world religions: Judaism, Christianity, Islam
 - Anatolian Peninsula, Arabian Peninsula
 - Mesopotamia, Tigris and Euphrates Rivers
 - Atlas Mountains, Taurus Mountains
 - Mediterranean Sea, Red Sea, Black Sea, Arabian Sea, Persian Gulf
 - The “silk road”
 - Climate and terrain: vast deserts (Sahara, Arabian)

Note: Students will examine the political and physical geography of the present-day Middle East in grade 8.

See also English 6: Homer, *The Iliad* and *The Odyssey* and Classical Mythology.

B. ANCIENT GREECE

Teachers: Briefly review from grade 2: religion, art, architecture, daily life of ancient Greece.

- The Greek polis (city-state) and patriotism
- Beginnings of democratic government: Modern American democratic government has its roots in Athenian democracy (despite the obvious limitations on democracy in ancient Greece, for example, slavery, vote denied to women)
 - The Assembly
 - Suffrage, majority vote
- The “classical” ideal of human life and works
 - The ideal of the well-rounded individual and worthy citizen
 - Pericles and the “Golden Age”
 - Architecture: the Parthenon
 - Games: The Olympics
- Greek wars: victory and hubris, defeat and shame
 - Persian Wars: Marathon, Thermopylae, Salamis
 - The Peloponnesian War: Sparta defeats Athens
- Socrates and Plato
 - Socrates was Plato’s teacher; we know of him through Plato’s writings.
 - For Socrates, wisdom is knowing that you do not know.
 - The trial of Socrates

See also Visual Arts 6: Raphael’s *School of Athens*. You may also want to examine David’s *Death of Socrates*.

- Plato and Aristotle
Plato was Aristotle's teacher.
They agreed that reason and philosophy should rule our lives, not emotion and rhetoric.
They disagreed about where true "reality" is: Plato says it is beyond physical things in ideas (cf. the "allegory of the cave"); Aristotle says reality is only in physical things.
- Alexander the Great and the spread of Greek ("Hellenistic") culture: the library at Alexandria

C. ANCIENT ROME

Teachers: Briefly review from grade 3: Romulus and Remus, Roman gods, legends, daily life, etc.

- The Roman Republic
Builds upon Greek and classical ideals
Class and status: patricians and plebeians, slaves
Roman government: consuls, tribunes, and senators
- The Punic Wars: Rome vs. Carthage
- Julius Caesar
- Augustus Caesar
Pax Romana
Roman law and the administration of a vast, diverse empire
Virgil, *The Aeneid*: epic on the legendary origins of Rome
- Christianity under the Roman Empire
Jesus's instruction to "Render unto Caesar the things which are Caesar's, and unto God the things that are God's" [Matthew 22:21]
Roman persecution of Christians
Constantine: first Christian Roman emperor
- The "decline and fall" of the Roman Empire
Causes debated by historians for many hundreds of years (outer forces such as shrinking trade, attacks and invasions vs. inner forces such as disease, jobless masses, taxes, corruption and violence, rival religions and ethnic groups, weak emperors)
Rome's "decline and fall" perceived as an "object lesson" for later generations and societies

See also English 6:
Shakespeare's *Julius Caesar*.

III. The Enlightenment

Teachers: You are encouraged to use timelines and engage students in a brief review of some major intervening events in order to help students make a smooth transition across the gap in centuries between the ancient civilizations and the Enlightenment. Place the Enlightenment (17th and 18th centuries) in chronological context, in relation to eras and movements studied in earlier grades (Middle Ages, Age of Exploration & Renaissance, American Revolution, etc.).

- Faith in science and human reason, as exemplified by
Isaac Newton and the laws of nature
Descartes: "cogito ergo sum"
- Two ideas of "human nature": Thomas Hobbes and John Locke
Hobbes: the need for a strong governing authority as a check on "the condition of man . . . [which] is a condition of war of everyone against everyone"
Locke: the idea of man as a "tabula rasa" and the optimistic belief in education;
argues against doctrine of divine right of kings and for government by consent of the governed
- Influence of the Enlightenment on the beginnings of the United States
Thomas Jefferson: the idea of "natural rights" in the Declaration of Independence
Montesquieu and the idea of separation of powers in government

See also Science 6: Science
Biographies: Isaac Newton.

IV. The French Revolution

Teachers: While the focus here is on the French Revolution, make connections with what students already know about the American Revolution, and place the American and French Revolutions in the larger global context of ideas and movements.

- The influence of Enlightenment ideas and of the English Revolution on revolutionary movements in America and France
- The American Revolution: the French alliance and its effect on both sides
- The Old Regime in France (*L'Ancien Régime*)
 - The social classes: the three Estates
 - Louis XIV, the “Sun King”: Versailles
 - Louis XV: “*Après moi, le déluge*”
 - Louis XVI: the end of the Old Regime
 - Marie Antoinette: the famous legend of “Let them eat cake”
- 1789: from the Three Estates to the National Assembly
 - July 14, Bastille Day
 - Declaration of the Rights of Man
 - October 5, Women’s March on Versailles
 - “Liberty, Equality, Fraternity”
- Louis XVI and Marie Antoinette to the guillotine
- Reign of Terror: Robespierre, the Jacobins, and the “Committee of Public Safety”
- Revolutionary arts and the new classicism
- Napoleon Bonaparte and the First French Empire
 - Napoleon as military genius
 - Crowned Emperor Napoleon I: reinventing the Roman Empire
 - The invasion of Russia
 - Exile to Elba
 - Wellington and Waterloo

See also Visual Arts 6: David, *Oath of the Horatii*; Delacroix, *Liberty Leading the People*.

V. Romanticism

- Beginning in early nineteenth century Europe, Romanticism refers to the cultural movement characterized by:
 - The rejection of classicism and classical values
 - An emphasis instead on emotion and imagination (instead of reason)
 - An emphasis on nature and the private self (instead of society and man in society)
- The influence of Jean-Jacques Rousseau’s celebration of man in a state of nature (as opposed to man in society): “Man is born free and everywhere he is in chains”; the idea of the “noble savage”
- Romanticism in literature, the visual arts, and music

See also English 6: Wordsworth, “I Wandered Lonely as a Cloud”; Byron, “Apostrophe to the Ocean” (from *Childe Harold’s Pilgrimage*); Visual Arts 6, Romantic Art; and Music 6, Romantic Music.

VI. Industrialism, Capitalism, and Socialism

A. THE INDUSTRIAL REVOLUTION

- Beginnings in Great Britain
 - Revolution in transportation: canals, railroads, new highways
 - Steam power: James Watt
- Revolution in textiles: Eli Whitney and the cotton gin, factory production
- Iron and steel mills
- The early factory system
 - Families move from farm villages to factory towns
 - Unsafe, oppressive working conditions in mills and mines
 - Women and child laborers
 - Low wages, poverty, slums, disease in factory towns
 - Violent resistance: Luddites

Note: In sixth grade, the World History guidelines catch up chronologically with the American History guidelines. The World History guidelines take students up to the consequences of industrialization in the mid-nineteenth century, and this is where the American History guidelines begin. See American History 6, Industrialization and Urbanization.

B. CAPITALISM

- Adam Smith and the idea of laissez faire vs. government intervention in economic and social matters
- Law of supply and demand
- Growing gaps between social classes: Disraeli's image of "two nations" (the rich and the poor)

C. SOCIALISM

- An idea that took many forms, all of which had in common their attempt to offer an alternative to capitalism
 - For the public ownership of large industries, transport, banks, etc., and the more equal distribution of wealth
- Marxism: the Communist form of Socialism
 - Karl Marx and Friedrich Engels, The Communist Manifesto: "Workers of the world, unite!"
 - Class struggle: bourgeoisie and proletariat
 - Communists, in contrast to Socialists, opposed all forms of private property.

See also American History 6:
Labor, International Workers
of the World; Eugene Debs.

VII. Latin American Independence Movements**A. HISTORY**

- The name "Latin America" comes from the Latin origin of the languages now most widely spoken (Spanish and Portuguese).
- Haitian revolution
 - Toussaint L'Ouverture
 - Abolition of West Indian slavery
- Mexican revolutions
 - Miguel Hidalgo
 - José María Morelos
 - Santa Anna vs. the United States
 - Benito Juárez
 - Pancho Villa, Emiliano Zapata
- Liberators
 - Simon Bolivar
 - José de San Martín
 - Bernardo O'Higgins
- New nations in Central America: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua
- Brazilian independence from Portugal

B. GEOGRAPHY OF LATIN AMERICA

- Mexico: Yucatan Peninsula, Mexico City
- Panama: isthmus, Panama Canal
- Central America and South America: locate major cities and countries including
 - Caracas (Venezuela)
 - Bogota (Colombia)
 - Quito (Ecuador)
 - Lima (Peru)
 - Santiago (Chile)
 - La Paz (Bolivia)
- Andes Mountains
- Brazil: largest country in South America, rain forests, Rio de Janeiro, Amazon River
- Argentina: Rio de la Plata, Buenos Aires, Pampas

Teachers: The sixth grade American History guidelines pick up chronologically with the World History guidelines on mid-nineteenth century industrialism and its consequences.



See below, Reform: Jane Addams, settlement houses; Jacob Riis, ghettos in the modern city.

See also World History 6: Industrial Revolution.

See also World History 6: Capitalism, laissez-faire.

I. Immigration, Industrialization, and Urbanization

A. IMMIGRATION

- Waves of new immigrants from about 1830 onward
 - Great migrations from Ireland (potato famine) and Germany
 - From about 1880 on, many immigrants arrive from southern and eastern Europe.
 - Immigrants from Asian countries, especially China
 - Ellis Island, “The New Colossus” (poem on the Statue of Liberty, written by Emma Lazarus)
 - Large populations of immigrants settle in major cities, including New York, Chicago, Philadelphia, Detroit, Cleveland, Boston, San Francisco
- The tension between ideals and realities
 - The metaphor of America as a “melting pot”
 - America perceived as “land of opportunity” vs. resistance, discrimination, and “nativism”
 - Resistance to Catholics and Jews
 - Chinese Exclusion Act

B. INDUSTRIALIZATION AND URBANIZATION

- The post-Civil War industrial boom
 - The “Gilded Age”
 - The growing gap between social classes
 - Horatio Alger and the “rags to riches” story
 - Growth of industrial cities: Chicago, Cleveland, Pittsburgh
 - Many thousands of African-Americans move north.
 - Urban corruption, “machine” politics: “Boss” Tweed in New York City, Tammany Hall
- The condition of labor
 - Factory conditions: “sweat shops,” long work hours, low wages, women and child laborers
 - Unions: American Federation of Labor, Samuel Gompers
 - Strikes and retaliation: Haymarket Square; Homestead, Pennsylvania
 - Labor Day
- The growing influence of big business: industrialists and capitalists
 - “Captains of industry” and “robber barons”: Andrew Carnegie, J. P. Morgan, Cornelius Vanderbilt
 - John D. Rockefeller and the Standard Oil Company as an example of the growing power of monopolies and trusts
 - Capitalists as philanthropists (funding museums, libraries, universities, etc.)
- “Free enterprise” vs. government regulation of business: Interstate Commerce Act and Sherman Antitrust Act attempt to limit power of monopolies

II. Reform

- Populism
 - Discontent and unrest among farmers
 - The gold standard vs. “free silver”
 - William Jennings Bryan
- The Progressive Era
 - “Muckraking”: Ida Tarbell on the Standard Oil Company; Upton Sinclair, *The Jungle*, on the meat packing industry
 - Jane Addams: settlement houses

See also English 6: Poetry,
Paul Laurence Dunbar,
"Sympathy."

Note: Briefly review people
and ideas studied in grade 4,
American History, Reformers:
Women's Rights.

See also World History 6:
Socialism and Capitalism.

- Jacob Riis, *How the Other Half Lives*: tenements and ghettos in the modern city
- President Theodore (Teddy) Roosevelt: conservation and trust-busting
- Reform for African-Americans
 - Ida B. Wells: campaign against lynching
 - Booker T. Washington: Tuskegee Institute, Atlanta Exposition Address,
"Cast down your bucket where you are"
 - W. E. B. DuBois: founding of NAACP, "The problem of the twentieth century is the
problem of the color line," *The Souls of Black Folk*
- Women's suffrage
 - Susan B. Anthony
 - Nineteenth Amendment (1920)
- The Socialist critique of America: Eugene V. Debs

Visual Arts: Grade 6

SEE INTRODUCTION, “The Arts in the Curriculum.”

Teachers: In schools, lessons on the visual arts should illustrate important elements of making and appreciating art, and emphasize important artists, works of art, and artistic concepts. When appropriate, topics in the visual arts may be linked to topics in other disciplines. While the following guidelines specify a variety of artworks in different media and from various cultures, they are not intended to be comprehensive. Teachers are encouraged to build upon the core content and expose children to a wide range of art and artists.

In studying the works of art specified below, and in creating their own art, students should review, develop, and apply concepts introduced in previous grades, such as line, shape, form, space, texture, color, light, design, and symmetry.

I. Art History: Periods and Schools

Teachers: The focus here is intended to combine art history with analysis of specific illustrative works. Introduce the idea of classifying Western art by periods and schools, with major characteristics of each period and school. Timelines may help students situate the periods and schools. Note that the periods and characteristics are not absolute distinctions but generally helpful categories (to which there are always exceptions) often used in discussions of art. The following topics extend to the mid-nineteenth century. In later grades, students will examine late-nineteenth and twentieth-century art movements.

A. CLASSICAL ART: THE ART OF ANCIENT GREECE AND ROME

- Observe characteristics considered “classic”—emphasis on balance and proportion, idealization of human form—in
The Parthenon and the Pantheon
The Discus Thrower and *Apollo Belvedere*

B. GOTHIC ART (ca. 12th - 15th centuries)

- Briefly review the religious inspiration and characteristic features of Gothic cathedrals.

C. THE RENAISSANCE (ca. 1350-1600)

- Briefly review main features of Renaissance art (revival of classical subjects and techniques, emphasis on humanity, discovery of perspective) and examine representative works, including
Raphael, *The School of Athens*
Michelangelo, *David* (review from grade 5)

D. BAROQUE (ca. 17th century)

- Note the dramatic use of light and shade, turbulent compositions, and vivid emotional expression in
El Greco, *View of Toledo* (also known as *Toledo in a Storm*)
Rembrandt: a self-portrait, such as *Self-Portrait, 1659*

E. ROCOCO (ca. mid- to late-1700's)

- Note the decorative and “pretty” nature of Rococo art, the use of soft pastel colors, and the refined, sentimental, or playful subjects in
Jean Honoré Fragonard, *The Swing*

See also World History 6: Lasting Ideas from Greece and Rome, re Classical art.

See Visual Arts 4 for more detailed guidelines on Gothic architecture.

See Visual Arts 5 for more detailed guidelines on Renaissance art. See also World History 6: Lasting Ideas from Greece and Rome, re Raphael's *School of Athens*.

See also World History 6: French Revolution, *re* David. You may also wish to introduce David's *Death of Socrates* when you study Lasting Ideas from Greece and Rome. See World History 6.

See also World History 6: Romanticism, *re* Romantic art; and French Revolution, *re* Delacroix's *Liberty Leading the People*.

F. NEOCLASSICAL (ca. late 18th - early 19th century)

- Note as characteristic of Neoclassical art the reaction against Baroque and Rococo, the revival of classical forms and subjects, belief in high moral purpose of art, and balanced, clearly articulated forms in
Jacques Louis David, *Oath of the Horatii*

G. ROMANTIC (ca. late 18th - 19th century)

- Note how Romantic art is in part a reaction against Neoclassicism, with a bold, expressive, emotional style, and a characteristic interest in the exotic or in powerful forces in nature, in
Francisco Goya, *The Bullfight*
Eugene Delacroix, *Liberty Leading the People*
Caspar David Friedrich, *The Chalk Cliffs on Rugen*












H. REALISM (ca. mid- to late-19th century)

- Note the Realist's characteristic belief that art should represent ordinary people and activities, that art does not have to be uplifting, edifying, or beautiful, in
Jean Millet, *The Gleaners*
Gustave Courbet, *The Stone Breakers*
- Become familiar with examples of American realism, including
Winslow Homer, *Northeaster*
Thomas Eakins, *The Gross Clinic*
Henry O. Tanner, *The Banjo Lesson*

SEE INTRODUCTION, "The Arts in the Curriculum."

I. Elements of Music

Teachers: The Music guidelines for grades 6–8 share a basic vocabulary of the elements of music that can inform the discussion, appreciation, and study of selected musical works. Following these guidelines are recommendations in each grade for a core of musical content, broadly organized as a history of music from early to modern times, with attention to specific periods, composers, and genres. While these guidelines focus on musical vocabulary, appreciation, and history, musical performance should be encouraged and emphasized as local resources allow.

- Review as necessary from earlier grades:
 - The orchestra and families of instruments (strings, wind, brass, percussion); keyboard instruments
 - Vocal ranges: soprano, mezzo-soprano, alto; tenor, baritone, bass
- Recognize frequently used Italian terms:
 - grave* (very very slow)
 - largo* (very slow)
 - adagio* (slow)
 - andante* (moderate; "walking")
 - moderato* (medium)
 - allegro* (fast)
 - presto* (very fast)
 - prestissimo* (as fast as you can go)
 - ritardando* and *accelerando* (gradually slowing down and getting faster)
 - crescendo* and *decrescendo* (gradually increasing and decreasing volume)
 - legato* (smoothly flowing progression of notes), *staccato* (crisp, distinct notes)
- Recognize introduction, interlude, and coda in musical selections.
- Recognize theme and variations.
- Identify chords [such as I (tonic), IV (subdominant), V (dominant); V7]; major and minor chords; chord changes; intervals (third, fourth, fifth).
- Understand what an octave is.
- Understand the following notation and terms:
 - names of lines and spaces in the treble clef; middle C
 -  treble clef  bass clef  staff, bar line, double bar line, measure, repeat signs
 -  whole note  half note  quarter note  eighth note
 - whole rest, half rest, quarter rest, eighth rest
 -  grouped sixteenth notes
 - tied notes and dotted notes
 -  sharps  flats  naturals
 - Da capo* [*Da Capo*] *al fine*
 - meter signature: $\frac{4}{4}$ or common time $\frac{2}{4}$ $\frac{3}{4}$ $\frac{6}{8}$
 - soft *pp* *p* *mp* loud *mf* *f* *ff*

II. Classical Music: From Baroque to Romantic

Teachers: While these guidelines focus on musical vocabulary, appreciation, and history, musical performance should be encouraged and emphasized as resources allow. The focus here combines music history with appreciation of illustrative works, and introduces the idea of classifying Western music by periods, with examples of specific composers and works, as well as some associated musical terms. Timelines may help students situate the periods. The periods and their characteristics are not absolute distinctions but generally helpful categories often used in discussions of music. A brief review of Medieval (grade 4) and Renaissance (grade 5) music is suggested.

Note: re Baroque music, recall from grade 2, Antonio Vivaldi, *The Four Seasons*.

Note: re classical symphony, recall from grade 4, Haydn, *Symphony No. 94* (“Surprise”); and, from grade 5, Beethoven, *Symphony No. 5*.

Note: Beethoven and Schubert are often considered transitional figures between Classic and Romantic. Students will study other Romantic composers in seventh grade, including Brahms, Berlioz, Liszt, and Wagner.

A. BAROQUE (ca. 1600-1750)

- Counterpoint, fugue, oratorio
- Johann Sebastian Bach: selections from *Brandenburg Concertos*, selections from *The Well-Tempered Clavier*, selections from the *Cantatas* such as *BWV 80*, *BWV 140*, or *BWV 147*
- George Frederick Handel: selections from *Water Music*, “Hallelujah Chorus” from *The Messiah*

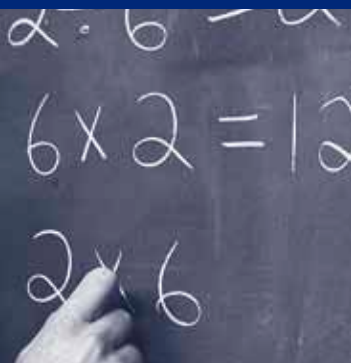
B. CLASSICAL (ca. 1750-1825)

- The classical symphony (typically in four movements)
Wolfgang Amadeus Mozart, *Symphony No. 40*
- The classical concerto: soloist, cadenza
Wolfgang Amadeus Mozart, *Piano Concerto No. 21*
- Chamber music: string quartet, sonata
Franz Joseph Haydn, *String Quartet Opus 76 No. 3, “Emperor”*
Ludwig van Beethoven, *Piano Sonata No. 14 (“Moonlight” Sonata)*

C. ROMANTIC (ca. 1800-1900)

- Beethoven as a transitional figure: *Symphony No. 9* (fourth movement)
- Romantic composers and works:
Franz Schubert, lieder (art songs): *Die Forelle* (“The Trout”), *Gretchen am Spinnrade* (“Gretchen at the Spinning Wheel”)
Frederic Chopin: “Funeral March” from *Piano Sonata No. 2 in B flat minor, “Minute” Waltz*, “*Revolutionary*” *Etude in C minor*
Robert Schumann, *Piano Concerto in A Minor*

Teachers: Mathematics has its own vocabulary and patterns of thinking. It is a discipline with its own language and conventions. Thus, while some lessons may offer occasional opportunities for linking mathematics to other disciplines, it is critically important to attend to math as math. From the earliest years, mathematics requires incremental review and steady practice: not only the diligent effort required to master basic facts and operations, but also thoughtful and varied practice that approaches problems from a variety of angles, and gives children a variety of opportunities to apply the same concept or operation in different types of situations. While it is important to work toward the development of “higher-order problem-solving skills,” it is equally important—indeed, it is prerequisite to achieving “higher order” skills—to have a sound grasp of basic facts, and an automatic fluency with fundamental operations.



I. Numbers and Number Sense

- Read and write numbers (in digits and words) up to the trillions.
- Recognize place value up to hundred-billions.
- Integers (review):
 - Locate positive and negative integers on a number line.
 - Compare integers using $<$, $>$, $=$.
 - Know that the sum of an integer and its opposite is 0.
 - Add and subtract positive and negative integers.
- Determine whether a number is a prime number or composite number.
- Round to the nearest ten; to the nearest hundred; to the nearest thousand; to the nearest hundred thousand; to the nearest million.
- Compare and order whole numbers, mixed numbers, fractions, and decimals, using the symbols $<$, $>$, $=$.
- Determine the greatest common factor (GCF) of given numbers.
- Determine the least common multiple (LCM) of given numbers.
- Exponents:
 - Review squares and square roots.
 - Using the terms *squared* and *cubed* and *to the n th power*, read and evaluate numerical expressions with exponents.
 - Review powers of ten.
 - Write numbers in expanded notation using exponents.

Note: See Math 5: Fractions and Decimals; review these topics as needed.

II. Ratio, Percent, and Proportion

A. RATIO AND PROPORTION

- Solve proportions, including word problems involving proportions with one unknown.
- Use ratios and proportions to interpret map scales and scale drawings.
- Set up and solve proportions from similar triangles.
- Understand the justification for solving proportions by cross-multiplication.

B. PERCENT

- Convert between fractions, decimals, and percents.
- Find the given percent of a number, and find what percent a given number is of another number.
- Solve problems involving percent increase and decrease.
- Find an unknown number when a percent of the number is known.
- Use expressions with percents greater than 100% and less than 1%.

III. Computation

A. ADDITION

- Addition, commutative and associative properties: know the names and understand the properties.
Understand addition and subtraction as inverse operations.
Add and subtract with integers, fractions and decimals, both positive and negative.

B. MULTIPLICATION

- Commutative, associative, and distributive properties: know the names and understand the properties.
- Multiply multi-digit factors, with and without a calculator.
- Estimate a product.
- Multiply with integers, fractions, and decimals, both positive and negative.
- Distributive property for multiplication over addition or subtraction, that is, $A \times (B+C)$ or $A \times (B-C)$: understand its use in procedures such as multi-digit multiplication.

C. DIVISION

- Understand multiplication and division as inverse operations.
- Estimate the quotient.
- Divide multi-digit dividends by up to three-digit divisors, with and without a calculator.
- Divide with integers, fractions, or decimals, both positive and negative.

D. SOLVING PROBLEMS AND EQUATIONS

- Solve word problems with multiple steps.
- Solve problems with more than one operation, according to order of operations (with and without a calculator).

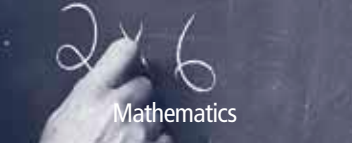
IV. Measurement

Teachers: Students should know all information regarding measurement presented in grades 4 and 5; review and reinforce as necessary.

- Solve problems requiring conversion of units within the U. S. Customary System, and within the metric system.
- Associate prefixes used in metric system with quantities:
kilo = thousand
hecto = hundred
deka = ten
deci = tenth
centi = hundredth
milli = thousandth
- Time: solve problems on elapsed time; express parts of an hour in fraction or decimal form.

V. Geometry

- Identify and use signs that mean
congruent \cong
similar \sim
parallel \parallel
perpendicular \perp
- Construct parallel lines and a parallelogram.
- Construct a perpendicular bisector.
- Know that if two lines are parallel, any line perpendicular to one is also perpendicular to the other; and, that two lines perpendicular to the same line are parallel.



- **Angles:**
 - Identify and measure the degrees in angles (review terms: right, acute, obtuse, straight).
 - Bisect an angle.
 - Construct an angle congruent to a given angle.
 - Construct a figure congruent to a given figure, using reflection over a line of symmetry, and identify corresponding parts.
 - Show how congruent plane figures can be made to correspond through reflection, rotation, and translation.
- **Triangles:**
 - Know that the sum of the measures of the angles of a triangle is 180° .
 - Construct different kinds of triangles.
 - Know terms by which we classify kinds of triangles:
 - by length of sides: equilateral, isosceles, scalene
 - by angles: right, acute, obtuse
- Identify congruent angles and sides, and axes of symmetry, in parallelograms, rhombuses, rectangles, and squares.
- Find the area (A) and perimeter (P) of plane figures, or given the area or perimeter find the missing dimension, using the following formulas:
 - rectangle
 - $A = lw$
 - $P = 2(l + w)$
 - square
 - $A = s^2$
 - $P = 4s$
 - triangle
 - $A = \frac{1}{2}bh$
 - $P = s_1 + s_2 + s_3$
 - parallelogram
 - $A = bh$
 - $P = 2(b + s)$
- **Circles:**
 - Identify arc, chord, radius (plural: radii), and diameter; know that radius = $\frac{1}{2}$ diameter.
 - Using a compass, draw circles with a given diameter or radius.
 - Solve problems involving application of the formulas for finding the circumference of a circle: $C = \pi d$, and $C = 2\pi r$, using 3.14 as the value of π .
 - Find the area of a circle using the formula $A = \pi r^2$
- Find volume of rectangular solids, or given the volume find a missing dimension, using the formulas $V = lwh$, or $V = bh$ (in which b = area of base).

VI. Probability and Statistics

- Find the range and measures of central tendency (mean, median, and mode) of a given set of numbers.
- Understand the differences among the measures of central tendency and when each might be used.
- Understand the use of a sample to estimate a population parameter (such as the mean), and that larger samples provide more stable estimates.
- Represent all possible outcomes of independent compound events in an organized way and determine the theoretical probability of each outcome.
- Compute the probability of any one of a set of disjoint events as the sum of their individual probabilities.
- Solve problems requiring interpretation and application of graphically displayed data.
- Given a set of data, find the mean, median, range, and mode.
- Construct a histogram; a tree diagram.

- Coordinate plane:
 - Plot points on a coordinate plane, using ordered pairs of positive and negative whole numbers.
 - Use the terms *origin* (0,0), *x-axis*, and *y-axis*.
 - Graph simple functions and solve problems involving use of a coordinate plane.

VII. Pre-Algebra

- Recognize uses of variables and solve linear equations in one variable.
- Solve word problems by assigning variables to unknown quantities, writing appropriate equations, and solving them.
- Find the value for an expression, given replacement values for the variables; for example, what is $7/x - y$ when x is 2 and y is 10?
- Simplify expressions with variables by combining like terms.
- Understand the use of the distributive property in variable expressions such as $2x(2y + 3)$.

Teachers: Effective instruction in science requires not only hands-on experience and observation but also book learning, which helps bring coherence and order to a student's scientific knowledge. Only when topics are presented systematically and clearly can students make steady and secure progress in their scientific learning. The Science sequence for the middle school grades aims for more intensive and selective study of topics, a number of which were introduced in earlier grades. It also continues the practice of studying topics from each of the major realms of science (physical, life, and earth science). Students are expected to do experiments and write reports on their findings.



I. Plate Tectonics

- The surface of the earth
 - The surface of the earth is in constant movement.
 - The present features of earth come from its ongoing history. After the sun was formed, matter cooled creating the planets. The continents were once joined (Pangaea).
- Layered structure of the earth
 - Crust: surface layer of mainly basalt or granite, 5 to 25 miles thick
 - Mantle: 1,800 miles thick, rock of intermediate density, moves very slowly
 - Outer core: liquid iron and nickel
 - Inner core: solid iron and nickel, 800 miles thick, about 7,000 degrees C
- Crust movements
 - The surface of earth is made up of rigid plates that are in constant motion.
 - Plates move because molten rock rises and falls under the crust causing slowly flowing currents under the plates.
 - Plates move at speeds ranging from 1 to 4 inches (5-10 centimeters) per year.
 - Earthquakes usually occur where stress has been built up by plates moving in opposite directions against each other. Earthquakes cause waves (vibrations) which have:
 - focus, the point below the surface where the quake begins
 - epicenter, the point on the surface above the focus
 - Severity of ground shaking is measured on the Richter scale; each unit on the scale represents a tenfold severity increase
- Volcanoes usually occur where plates are pulling apart or coming together, but some occur at holes (hot spots) in the crust away from plate boundaries. As plates move over these hot spots, they cause chains of volcanoes and island chains like the Hawaiian Islands.
- Evidence for long-term movement of plates includes fit of continents and matches of rock types, fossils, and structures; ocean floor age and topography; ancient climate zones; locations of earthquakes, volcanoes, and mountain ranges; magnetic directions in ancient rocks.

II. Oceans

- Surface
 - The world ocean covers most of the earth's surface (71 per cent).
 - Three major subdivisions of the world ocean: Atlantic, Pacific, and Indian Oceans
 - Islands consist of high parts of submerged continents, volcanic peaks, coral atolls.
- Subsurface land features
 - Continental shelf, continental slope, continental rise, abyssal plains
 - Mid-ocean ridges and trenches, plate tectonics
 - Mid-Atlantic Ridge, Mariana Trench
- Ocean bottom: average depth of sediment .3 mile, consists of rock particles and organic remains
- Composition of seawater: dilute solution of salts which come from weathering and erosion of continental rocks.
 - Sodium chloride is the main salt.

- **Currents, tides, and waves**
 - Surface currents: large circular streams kept in motion by prevailing winds and rotation of the earth; Gulf Stream (North Atlantic), Kuroshio (North Pacific)
 - Subsurface currents are caused by upwelling from prevailing offshore winds (Peru, Chile) and density differences (Antarctica); the upwelling pushes up nutrients from the ocean floor.
 - Tides are caused by gravitational forces of the sun and moon; there are two tides daily.
 - Waves are caused by wind on the ocean's surface.
 - Water molecules tend to move up and down in place and not move with the wave.
 - Crest and trough, wave height and wavelength, shoreline friction
 - Tsunamis: destructive, fast-moving large waves caused mainly by earthquakes
- **Marine life**
 - Life zones are determined by the depth to which light can penetrate making photosynthesis possible, and by the availability of nutrients.
 - The bottom (benthic zone) extends from sunlit continental shelf to dark sparsely populated depths. Shallow lighted water extending over continental shelf contains 90% of marine species.
 - Pelagic zone: water in open oceans
 - Classification of marine life
 - Bottom-living (benthic) such as kelp and mollusks
 - Free-swimming (nekton) such as fish and whales
 - Small drifting plants and animals (plankton), which are the dominant life and food source of the ocean
 - The basis for most marine life is phytoplankton (plant-plankton), which carry on photosynthesis near surface; contrast zooplankton (animal plankton).
 - Most deepwater life depends on rain of organic matter from above. The densest concentration of marine life is found in surface waters, such as those off Chile, where nutrient-rich water wells up to the bright surface.

III. Astronomy: Gravity, Stars, and Galaxies

- **Gravity: an attractive force between objects**
 - Newton's law of universal gravitation: Between any two objects in the universe there is an attractive force, gravity, which grows greater as the objects move closer to each other.
 - How gravity keeps the planets in orbit
- **Stars**
 - The sun is a star.
 - Kinds of stars (by size): giants, dwarfs, pulsars
 - Supernova; black holes
 - Apparent movement of stars caused by rotation of the earth
 - Constellations: visual groupings of stars, for example, Big Dipper, Orion
 - Astronomical distance measured in light years
- **Galaxies**
 - The Milky Way is our galaxy; the Andromeda Galaxy is closest to the Milky Way.
 - Quasars are the most distant visible objects (because the brightest).

See below, Energy: Nuclear energy, re Stars.

IV. Energy, Heat, and Energy Transfer

A. ENERGY

- Six forms of energy: mechanical, heat, electrical, wave, chemical, nuclear
- The many forms of energy are interchangeable, for example, gasoline in a car, windmills, hydroelectric plants.
- Sources of energy: for example, heat (coal, natural gas, solar, atomic, geothermal, and thermonuclear), mechanical motion (such as falling water, wind)



- Fossil fuels: a finite resource
Carbon, coal, oil, natural gas
Environmental impact of fossil fuels: carbon dioxide and global warming theory, greenhouse effect, oil spills, acid rain
- Nuclear energy
Uranium, fission, nuclear reactor, radioactive waste
Nuclear power plants: safety and accidents (for example, Three Mile Island, Chernobyl)

B. HEAT

- Heat and temperature: how vigorously atoms are moving and colliding
- Three ways that heat energy can be transferred: conduction, convection, radiation
The direction of heat transfer

C. PHYSICAL CHANGE: ENERGY TRANSFER

- States of matter (solid, liquid, gas) in terms of molecular motion
In gases, loosely packed atoms and molecules move independently and collide often. Volume and shape change readily.
In liquids, atoms and molecules are more loosely packed than in solids and can move past each other. Liquids change shape readily but resist change in volume.
In solids, atoms and molecules are more tightly packed and can only vibrate. Solids resist change in shape and volume.
- Most substances are solid at low temperatures, liquid at medium temperatures, and gaseous at high temperatures.
- A change of phase is a physical change (no new substance is produced).
- Matter can be made to change phases by adding or removing energy.
- Expansion and contraction
Expansion is adding heat energy to a substance, which causes the molecules to move more quickly and the substance to expand.
Contraction is when a substance loses heat energy, the molecules slow down, and the substance contracts.
Water as a special case: water expands when it changes from a liquid to a solid.
- Changing phases: condensation; freezing; melting; boiling
Different amounts of energy are required to change the phase of different substances.
Each substance has its own melting and boiling point.
The freezing point and boiling point of water (in degrees Celsius and Fahrenheit)
- Distillation: separation of mixtures of liquids with different boiling points.

V. The Human Body

- The circulatory and lymphatic systems
Briefly review from grade 4: circulatory system
Lymph, lymph nodes, white cells, tonsils
Blood pressure, hardening and clogging of arteries
- The immune system fights infections from bacteria, viruses, fungi.
White cells, antibodies, antigens
Vaccines, communicable and non-communicable diseases, epidemics
Bacterial diseases: tetanus, typhoid, tuberculosis; antibiotics like penicillin, discovered by Alexander Fleming
Viral diseases: common cold, chicken pox, mononucleosis, rabies, polio, AIDS

Note: See Science 5 for the human reproductive system. There is some flexibility in the grade-level placement of the study of topics relating to human reproduction, as different schools and districts have differing local requirements, typically introducing these topics in either fifth or sixth grade.

See above, Plate Tectonics
re Wegener; Energy re
Curie; Astronomy, Gravity,
re Newton. See also World
History 6, The Enlightenment,
re Newton.

VI. Science Biographies

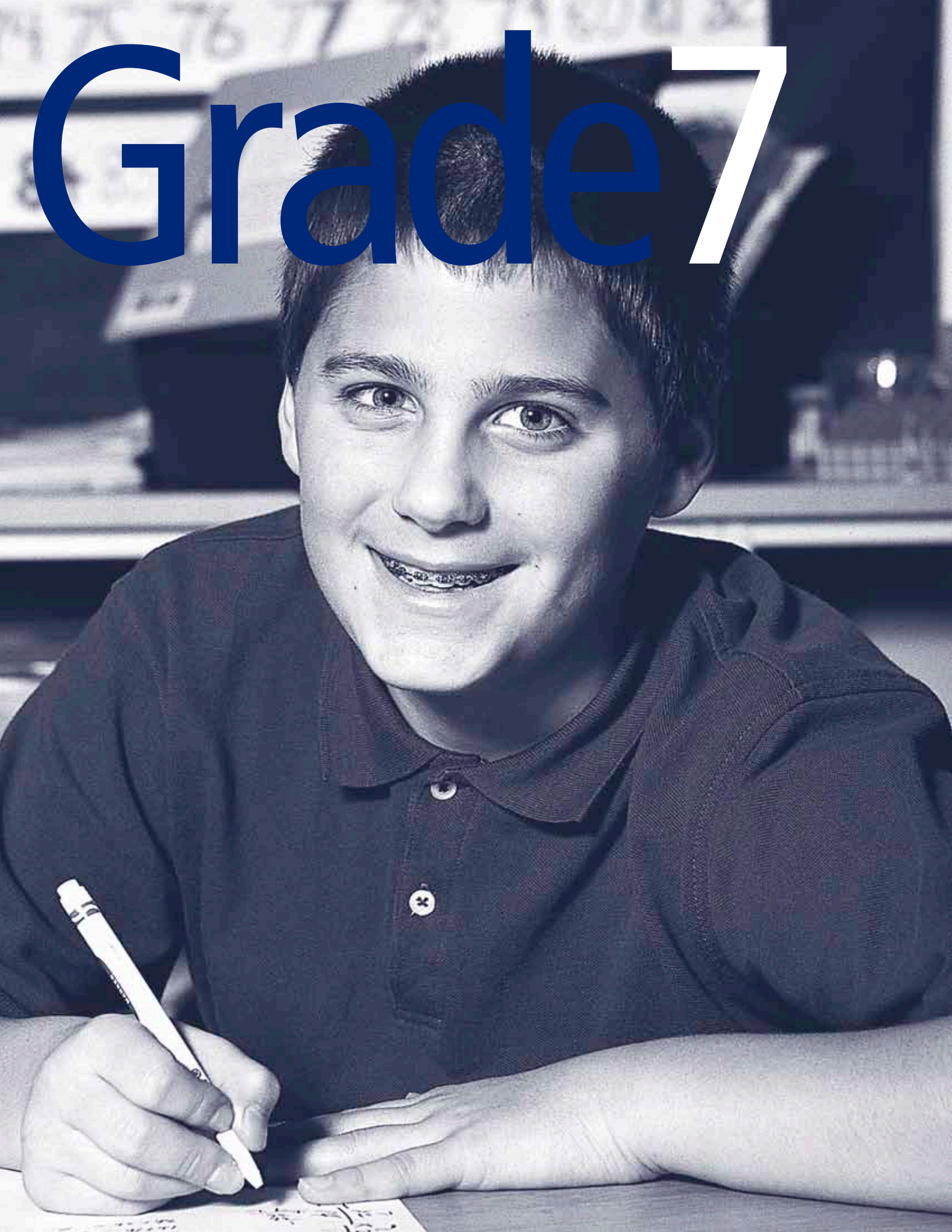
Marie Curie (advances in science of radioactivity; discovered the elements polonium and radium)

Lewis Howard Latimer (worked with Alexander Graham Bell on drawings of Bell's invention, the telephone; improved Thomas Edison's light bulb)

Isaac Newton (known for advances in physics; outlined laws of gravity and invented the telescope)

Alfred Wegener (known for theory that the continents were once joined together and split apart to form the continents; now known as "the continental drift")

Grade 7



Overview of Topics

Grade 7

English

- I. Writing, Grammar, and Usage
 - A. Writing and Research
 - B. Speaking and Listening
 - C. Grammar
 - D. Spelling
 - E. Vocabulary
- II. Poetry
 - A. Poems
 - B. Elements of Poetry
- III. Fiction, Nonfiction, and Drama
 - A. Short Stories
 - B. Novels
 - C. Elements of Fiction
 - D. Essays and Speeches
 - E. Autobiography
 - F. Drama
 - G. Literary Terms
- IV. Foreign Phrases Commonly Used in English

History and Geography

- I. America Becomes a World Power
- II. World War I: "The Great War," 1914–1918
 - A. History
 - B. Geography of Western and Central Europe
- III. The Russian Revolution
 - A. History
 - B. Geography
- IV. America from the Twenties to the New Deal
 - A. America in the Twenties
 - B. The Great Depression
 - C. Roosevelt and the New Deal
- V. World War II
 - A. The Rise of Totalitarianism in Europe
 - B. World War II in Europe and at Home, 1939–45
 - C. World War II in the Pacific, and the End of the War
- VI. Geography of the United States

Visual Arts

- I. Art History: Periods and Schools
 - A. Impressionism
 - B. Post-Impressionism
 - C. Expressionism and Abstraction
 - D. Modern American Painting

Music

- I. Elements of Music
- II. Classical Music: Romantics and Nationalists
 - A. Romantic Composers and Works
 - B. Music and National Identity
- III. American Musical Traditions (Blues and Jazz)

Mathematics

- I. Pre-Algebra
 - A. Properties of the Real Numbers
 - B. Linear Applications and Proportionality
 - C. Polynomial Arithmetic
 - D. Equivalent Equations and Inequalities
 - E. Integer Exponents
- II. Geometry
 - A. Three-Dimensional Objects
 - B. Angle Pairs
 - C. Triangles
 - D. Measurement
- III. Probability and Statistics

Science

- I. Atomic Structure
- II. Chemical Bonds and Reactions
- III. Cell Division and Genetics
- IV. History of the Earth and Life Forms
 - A. Paleontology
 - B. Geologic Time
- V. Evolution
 - A. Evolution
 - B. Natural Selection
 - C. Extinction and Speciation
- VI. Science Biographies

I. Writing, Grammar, and Usage

Teachers: Students should be given opportunities to write fiction, poetry, or drama, but instruction should emphasize repeated expository writing. Students should examine their work with attention to unity, coherence, and emphasis. Expository essays should have a main point and stick to it, and have a coherent structure, typically following the pattern of introduction, body, and conclusion. Paragraphs should have a unified focus, be developed with evidence and examples, and have transitions between them. Essays should have appropriate tone and diction, as well as correct spelling and grammar in their final form. Standards for writing apply across the disciplines.

A. WRITING AND RESEARCH

- Expository writing: Write nonfiction essays that describe, narrate, persuade, and compare and contrast.
- Write research essays, with attention to
 - asking open-ended questions
 - gathering relevant data through library and field research
 - summarizing, paraphrasing, and quoting accurately when taking notes
 - defining a thesis (that is, a central proposition, a main idea)
 - organizing with an outline
 - integrating quotations from sources
 - acknowledging sources and avoiding plagiarism
 - preparing a bibliography

B. SPEAKING AND LISTENING

- Participate civilly and productively in group discussions.
- Give a short speech to the class that is well-organized and well-supported.
- Demonstrate an ability to use standard pronunciation when speaking to large groups and in formal circumstances, such as a job interview.

C. GRAMMAR

Teachers: Students should have a working understanding of the following terms and be able to use them to discuss and analyze writing.

Parts of the Sentence

- Prepositional phrases
 - Identify as adjectival or adverbial
 - Identify word(s) modified by the prepositional phrase
 - Object of preposition (note that pronouns are in objective case)
 - Punctuation of prepositional phrases
- Subject and verb
 - Find complete subject and complete predicate
 - Identify simple subject and simple verb (after eliminating prepositional phrases):
 - in statements
 - in questions
 - in commands (you understood)
 - with there and here
 - Auxiliary verbs
 - Noun of direct address
 - Subject-verb agreement:
 - with compound subjects
 - with compound subjects joined by *or*
 - with indefinite pronouns (for example, everyone, anyone, some, all)



See also English 6 for more guidelines on writing persuasive essays.



- Complements
 - Find direct and indirect objects
 - Review linking vs. action verbs
 - Predicate nominative
 - Predicate adjective
- Appositives
 - Identify and tell which noun is renamed
 - Use of commas with appositive phrases
- Participles
 - Identify past, present participles
 - Identify participial phrases
 - Find the noun modified
 - Commas with participial phrases
- Gerunds and gerund phrases
 - Identify and tell its use in the sentence (subject, direct object, indirect object, appositive, predicate nominative, object of preposition)
- Infinitives and infinitive phrases
 - Adjective and adverb: find the word it modifies
 - Noun: tell its use in the sentence

Clauses

- Review: sentences classified by structure
 - Simple; compound (coordinating conjunctions v. conjunctive adverbs); complex; compound-complex
- Review independent (main) v. dependent (subordinate) clauses
- Kinds of dependent clauses
 - Adjective clauses
 - Identify and tell noun modified
 - Introductory words: relative pronouns, relative adverbs (where, when)
 - Implied “that”
 - Commas with nonrestrictive (nonessential) adjective clause
 - Adverb clauses
 - Identify and tell the word(s) modified
 - Subordinating conjunctions (for example, because, although, when, since, before, after, as soon as, where)
 - Comma after introductory adverbial clause
 - Noun clauses
 - Identify and tell use in the sentence (subject, predicate nominative, direct object, indirect object, object of preposition, appositive, objective complement, noun of direct address)

D. SPELLING

- Continue work with spelling, with special attention to commonly misspelled words, including:

achievement	despise	muscular	scholar
address	doesn't	occasionally	shepherd
analysis	environment	offense	sincerely
anonymous	excellent	particularly	sponsor
argument	existence	persuade	succeed
beginning	grammar	politician	surprise
business	hypocrisy	prejudice	tendency
college	immediately	probably	thorough
conscience	interpret	recognize	truly
control	knowledge	remembrance	women
criticism	lieutenant	responsibility	written
definite	medieval	rhyme	
description	muscle	sacrifice	

Note: More commonly misspelled words are listed in grades 6 and 8.

E. VOCABULARY

Teachers: Students should know the meaning of these Latin and Greek words that form common word roots and be able to give examples of English words that are based on them.

Note: More Latin and Greek words and roots are listed in grades 6 and 8. In the listings here, L = Latin, G = Greek. No single form of the Latin or Greek words is consistently used here, but rather the form that is most similar to related English words.

<u>Latin/Greek Word</u>	<u>Meaning</u>	<u>Examples</u>
ab [L]	away from	abnormal, absent
ad [L]	to, forward	advocate, advance
amo [L]	love	amiable, amorous
audio [L]	hear	audience, inaudible
auto [G]	self	automobile, autocrat
bene [L]	good/well	beneficial, benefit
circum [L]	around	circulate, circumference
celer [L]	swift	accelerate
chronos [G]	time	chronological
cresco [L]	grow	increase, decrease
cum [L]	with	compose, accommodate
curro [L]	run	current, cursive, course
demos [G]	people	democracy, epidemic
erro [L]	wander, stray	error, erratic
ex [L]	from, out of	exclaim, exhaust
extra [L]	outside	extravagant, extraordinary
facio [L]	make	effect, affect
fero [L]	bring, bear	confer, defer
fragilis [L]	breakable	fragile, fragment
finis [L]	end	confine, finality
homos [G]	same	homogenous
hyper [G]	over, beyond	hypertension, hyperactive
hypo [G]	under, beneath	hypodermic, hypothesis
jacio [L]	throw	eject, interject
judex [L]	a judge	judge, prejudice
juro [L]	swear	jury, perjury
makros [G]	long	macrocosm
malus [L]	bad	malady, malice
manus [L]	hand	manufacture, manuscript
morphe [G]	form	metamorphosis, amorphous
neos [G]	new	neophyte
pan [G]	all	panorama, panacea
pedis [L]	foot	pedal, biped
polis [G]	city	metropolis
pro [L]	before, for	proceed, propose, prodigy
pseudos [G]	a lie	pseudonym
re [L]	back, again	react, reply, revise
scribo [L]	write	scribble, inscribe
sentio [L]	feel (with senses)	sensation, sensual, sentry
sequor [L]	follow	subsequent, sequel
solvo [L]	loosen	solution, dissolve, solvent
specto [L]	look at	inspect, speculate, perspective
strictus [L]	drawn tight	strict, constricted
sub [L]	under	subdue, subject, subtract
super [L]	above	superficial, superlative, supreme
syn [G]	together	synchronize, synthesis
tendo [L]	stretch	tension, intense, detention
teneo [L]	hold, keep	contain, content, maintain
trans [L]	across	transfer, transcontinental
valeo [L]	be strong	prevail, valiant
venio [L]	come	event, advent
voco [L]	call	vocal, voice, vociferous
volvo [L]	revolve	evolve, revolution
zoon, zoe [G]	animal, life	zoology, protozoa

See also History 7: World War I, re Wilfred Owen; and, America in the Twenties, Harlem Renaissance, re Langston Hughes and Countee Cullen.

II. Poetry

Teachers: The poems listed here constitute a selected core of poetry for this grade. You are encouraged to expose students to more poetry, old and new, and to have students write their own poems. Students should examine some poems in detail, discussing what the poems mean as well as asking questions about the poet's use of language.

A. POEMS

Annabel Lee (Edgar Allan Poe)
 Because I could not stop for Death (Emily Dickinson)
 The Charge of the Light Brigade (Alfred Lord Tennyson)
 The Chimney Sweeper (both versions from *The Songs of Innocence* and *The Songs of Experience*; William Blake)
 The Cremation of Sam McGee (Robert Service)
 Dulce et Decorum Est (Wilfred Owen)
 Fire and Ice; Nothing Gold Can Stay (Robert Frost)
 Heritage (Countee Cullen)
 Macavity: The Mystery Cat (T.S. Eliot)
 The Negro Speaks of Rivers; Harlem; Life is Fine (Langston Hughes)
 This Is Just to Say; The Red Wheelbarrow (William Carlos Williams)

B. ELEMENTS OF POETRY

- Review: meter, iamb, rhyme scheme, free verse, couplet, onomatopoeia, alliteration
- Stanzas and refrains
- Forms
 - ballad
 - sonnet
 - lyric
 - narrative
 - limerick
 - haiku
- Types of rhyme: end, internal, slant, eye

III. Fiction, Nonfiction, and Drama

A. SHORT STORIES

"The Gift of the Magi" (O. Henry)
 "The Necklace" (Guy de Maupassant)
 "The Secret Life of Walter Mitty" (James Thurber)
 "The Tell-Tale Heart"; "The Purloined Letter" (Edgar Allan Poe)

B. NOVELS / NOVELLAS

The Call of the Wild (Jack London)
Dr. Jekyll and Mr. Hyde (Robert Louis Stevenson)

C. ELEMENTS OF FICTION

- Review aspects of plot and setting
- Theme
- Point of view in narration
 - omniscient narrator
 - unreliable narrator
 - third person limited
 - first person
- Conflict: external and internal
- Suspense and climax

See also History 7: World War II, re Roosevelt's "Declaration of War" and Anne Frank's *Diary of a Young Girl*.

D. ESSAYS AND SPEECHES

- "Shooting an Elephant" (George Orwell)
- "The Night the Bed Fell" (James Thurber)
- "Declaration of War on Japan" (Franklin D. Roosevelt)

E. AUTOBIOGRAPHY

Diary of a Young Girl (Anne Frank)

F. DRAMA

- *Cyrano de Bergerac* (Edmond Rostand)
- Elements of drama
 - Tragedy and comedy (review)
 - Aspects of conflict, suspense, and characterization
 - Soliloquies and asides

G. LITERARY TERMS

- Irony: verbal, situational, dramatic
- Flashbacks and foreshadowing
- Hyperbole; oxymoron; parody

IV. Foreign Phrases Commonly Used in English

Teachers: Students should learn the meaning of the following Latin phrases that are commonly used in English speech and writing.

Note: In eighth grade, students will learn French phrases commonly used in English speech and writing.

ad hoc - concerned with a particular purpose; improvised [literally, "to the thing"]
 bona fides - good faith; sincere, involving no deceit or fraud
 carpe diem - seize the day, enjoy the present
 caveat emptor - let the buyer beware, buy at your own risk
 de facto - in reality, actually existing
 in extremis - in extreme circumstances, especially at the point of death
 in medias res - in the midst of things
 in toto - altogether, entirely
 modus operandi - a method of procedure
 modus vivendi - a way of living, getting along
 persona non grata - an unacceptable or unwelcome person
 prima facie - at first view, apparently; self-evident
 pro bono publico - for the public good
 pro forma - for the sake of form, carried out as a matter of formality
 quid pro quo - something given or received in exchange for something else
 requiescat in pace, R I P - may he or she rest in peace [seen on tombstones]
 sic transit gloria mundi - thus passes away the glory of the world
 sine qua non - something absolutely indispensable [literally, "without which not"]
 sub rosa - secretly

History and Geography: Grade 7

Teachers: In earlier grades, the history guidelines in the *Core Knowledge Sequence* were organized into separate strands on World History and American History. Because the World and American History strands merged chronologically in sixth grade, here in seventh grade the Sequence presents a unified section on History and Geography. Central themes of the history guidelines in grades seven and eight are growth and change in American democracy, and interactions with world forces, particularly nationalism and totalitarianism. Fundamental principles and structure of American government will be reviewed in a civics unit in eighth grade.

The study of geography aims at understanding the spatial relationship between nature and human culture and processes that change environments. Following the main outline of the history curriculum, seventh grade students study the geography of Europe, the United States, and Japan, while eighth graders will study the Middle East, South Asia, China, Canada, Mexico, and post-Cold War changes. Students should learn locations as well as the relationships between physical and human systems.

I. America Becomes a World Power

- Expansion of the U.S. Navy, Captain Alfred T. Mahan
- U.S. annexation of Hawaii
- The Spanish-American War
 - Cuban War for Independence, José Martí
 - Teddy Roosevelt and the Rough Riders
 - Spain gives the U.S. Guam, Puerto Rico, and the Philippines
- Complications of imperialism: War with the Philippines, Anti-Imperialist League
- Building the Panama Canal: “Roosevelt Corollary” to the Monroe Doctrine, “Speak softly and carry a big stick.”

II. World War I: “The Great War,” 1914–1918

A. HISTORY

- National pride and greed as causes: European nationalism, militarism, and colonialism
 - The British Empire: Queen Victoria
 - Italy becomes a nation: Garibaldi
 - German nationalism and militarism: Bismarck unifies Germany, war against France, France cedes Alsace-Lorraine to Germany
 - European imperialism and rivalries in Africa
 - Stanley and Livingstone
 - British invade Egypt to protect Suez Canal
 - French in North Africa
 - Berlin Conference and the “scramble for Africa”
- Entangling defense treaties: Allies vs. Central Powers, Archduke Ferdinand assassinated
- The Western Front and Eastern Front, Gallipoli, Lawrence of Arabia
- War of attrition and the scale of losses: Battle of the Marne (1914), new war technologies (for example, machine guns, tanks, airplanes, submarines), trench warfare
- U.S. neutrality ends: sinking of the Lusitania, “Make the world safe for democracy”
- Armistice Day, Nov. 11, 1918, abdication of Kaiser Wilhelm II
- Treaty of Versailles
 - New central European states and national boundaries
 - German reparations and disarmament
- Woodrow Wilson’s 14 Points
 - League of Nations, concept of collective security

B. GEOGRAPHY OF WESTERN AND CENTRAL EUROPE

Teachers: Students should regularly consult maps in reference to the following topics.

- Physical features
 - Mountains: Alps, Apennines, Carpathians, Pyrenees
 - Danube and Rhine Rivers
 - Seas: Adriatic, Aegean, Baltic, Black, Mediterranean, North
- Population and natural resources, acid rain damage
- Languages, major religions
- Legacy of Roman Empire: city sites, transportation routes
- Industrial Revolution leads to urbanization (review from grade 6)
- Scandinavia: comprised of Denmark, Norway, Sweden, sometimes also includes Finland and Iceland
 - Cities: Copenhagen (Denmark), Oslo (Norway), Stockholm (Sweden), Helsinki (Finland)
- United Kingdom: comprised of Great Britain (England, Scotland, Wales) and Northern Ireland
 - Irish Sea, English Channel
 - North Sea: gas and oil
 - England: London, Thames River
 - Scotland: Glasgow, Edinburgh
 - Northern Ireland: Ulster and Belfast, Catholic-Protestant strife
 - Ireland: Dublin (review from grade 6: famine of 1840s, mass emigration)
- France
 - Alps, Mont Blanc
 - Seine and Rhone Rivers
 - Bay of Biscay, Strait of Dover
 - Corsica (island)
 - Major cities: Paris, Lyon, Marseilles
- Belgium, Netherlands (Holland), and Luxembourg
 - Cities: Brussels (Belgium), Amsterdam, Rotterdam, The Hague (Netherlands)
- Germany
 - Cities: Berlin, Bonn, Hamburg, Munich
 - Ruhr Valley: mining region, industrial cities including Essen
 - Largest population in Europe, highly urbanized
- Austria and Switzerland
 - Mostly mountainous (the Alps)
 - Cities: Vienna (Austria), Bern, Geneva (Switzerland)
- Italy
 - Apennines
 - Sardinia and Sicily (islands)
 - Cities: Milan, Rome, Venice, Florence
 - Vatican City: independent state within Rome
- Iberian Peninsula: Spain and Portugal
 - Cities: Madrid (Spain), Lisbon (Portugal)

III. The Russian Revolution

A. HISTORY

- Tensions in the Russian identity: Westernizers vs. traditionalists
- Revolution of 1905, “Bloody Sunday,” Russo-Japanese War
- The last czar: Nicholas II and Alexandra
- Economic strains of World War I
- Revolutions of 1917
 - March Revolution ousts Czar
 - October Revolution: Bolsheviks, Lenin and revolutionary Marxism
- Civil War: Bolsheviks defeat Czarist counterrevolution, Bolsheviks become the Communist Party, creation of the Soviet Union

B. GEOGRAPHY

Teachers: Students should regularly consult maps in reference to the following topics.

- Overview
 - Territorially the largest state in the world
 - All parts exposed to Arctic air masses
 - Little moisture reaches Russia, because of distance from Atlantic Ocean, and because Himalayas block movement of warm, moist air from south
 - Population concentrated west of Ural Mountains
 - Siberia: rich in resources
 - Mongolia: Russian-dominated buffer state with China
 - Few well-located ports
 - Rich oil and natural gas regions
- Physical features:
 - Volga and Don Rivers (connected by canal)
 - Caspian Sea, Aral Sea (being drained by irrigation projects)
 - Sea of Japan, Bering Strait
- Cities: Moscow, Petersburg (formerly Leningrad), Vladivostok, Volgograd (formerly Stalingrad)

IV. America from the Twenties to the New Deal

A. AMERICA IN THE TWENTIES

- Isolationism: restrictions on immigration, Red Scare, Sacco and Vanzetti, Ku Klux Klan
- The “Roaring Twenties”: flappers, prohibition and gangsterism, St. Valentine’s Day Massacre, Al Capone
- The Lost Generation: Ernest Hemingway, F. Scott Fitzgerald
- Scopes “Monkey Trial”
- Women’s right to vote: 19th Amendment
- “New Negro” movement, Harlem Renaissance
 - African American exodus from segregated South to northern cities
 - W. E. B. Du Bois: *The Souls of Black Folk*, NAACP (review from grade 6)
 - Zora Neal Hurston, Countee Cullen, Langston Hughes
 - “The Jazz Age”: Duke Ellington, Louis Armstrong
 - Marcus Garvey, black separatist movement
- Technological advances
 - Henry Ford’s assembly line production, Model T
 - Residential electrification: mass ownership of radio, Will Rogers
 - Movies: from silent to sound, Charlie Chaplin
 - Pioneers of flight: Charles Lindbergh, Amelia Earhart
 - Decline of rural population

B. THE GREAT DEPRESSION

- Wall Street stock market Crash of ’29, “Black Tuesday”
- Hoover insists on European payment of war debts, Smoot-Hawley Tariff Act
- Mass unemployment
 - Agricultural prices collapse following European peace
 - Factory mechanization eliminates jobs
 - Bonus Army
 - “Hoovervilles”
- The Dust Bowl, “Okie” migrations
- Radicals: Huey Long, American Communist Party, Sinclair Lewis

See below, VII. Geography of the United States: New York City.

See also Music 7: American Musical Traditions: Jazz.

C. ROOSEVELT AND THE NEW DEAL

- Franklin Delano Roosevelt: “The only thing we have to fear is fear itself”
Eleanor Roosevelt
- The New Deal
 - Growth of unions: John L. Lewis and the CIO (Congress of Industrial Organizations),
A. Philip Randolph, Memorial Day Massacre
 - New social welfare programs: Social Security
 - New regulatory agencies: Securities and Exchange Commission, National Labor
Relations Board
 - Tennessee Valley Authority
- Roosevelt’s use of executive power: “Imperial Presidency”, “court packing”

Note: re growth of unions, recall from grade 6, American Federation of Labor.

V. World War II

A. THE RISE OF TOTALITARIANISM IN EUROPE

- Italy
 - Mussolini establishes fascism
 - Attack on Ethiopia
- Germany
 - Weimar Republic, economic repercussions of WWI
 - Adolf Hitler and the rise of Nazi totalitarianism: cult of the *Führer* (“leader”),
Mein Kampf
 - Nazism and the ideology of fascism, in contrast to communism and democracy
 - Racial doctrines of the Nazis: anti-Semitism, the concept of *Lebensraum* (literally, “living space”) for the “master race,” *Kristallnacht*
 - The Third Reich before the War: Gestapo, mass propaganda, book burning
- The Soviet Union
 - Communist totalitarianism: Josef Stalin, “Socialism in one country”
 - Collectivization of agriculture
 - Five-year plans for industrialization
 - The Great Purge
- Spanish Civil War
 - Franco, International Brigade, Guernica

See also Visual Arts 7:
Picasso’s *Guernica*.

B. WORLD WAR II IN EUROPE AND AT HOME, 1939–45

- Hitler defies Versailles Treaty: reoccupation of Rhineland, *Anschluss*, annexation of Austria
- Appeasement: Munich Agreement, “peace in our time”
- Soviet-Nazi Nonaggression Pact
- *Blitzkrieg*: invasion of Poland, fall of France, Dunkirk
- Battle of Britain: Winston Churchill, “nothing to offer but blood, toil, tears, and sweat”
- The Home Front in America
 - American Lend-Lease supplies, Atlantic Charter
 - America First movement
 - U.S. mobilization for war: desegregation of defense industries, “Rosie the Riveter,”
rationing, war bonds
 - America races Germany to develop the atomic bomb: the Manhattan Project
- Hitler invades Soviet Union: battles of Leningrad and Stalingrad
- The Holocaust: “Final Solution,” concentration camps (Dachau, Auschwitz)
- North Africa Campaign: El Alamein
- D-Day: Allied invasion of Normandy, General Dwight Eisenhower
- Battle of the Bulge, bombing of Dresden
- Yalta Conference
- Surrender of Germany, Soviet Army takes Berlin

See also English 7:
Autobiography, Anne Frank’s
Diary of a Young Girl.

See also English 7: Essays and Speeches, Roosevelt's "Declaration of War."

C. WORLD WAR II IN THE PACIFIC, AND THE END OF THE WAR

- Historical background: Japan's rise to power
 - Geography of Japan (review all topics from grade 5)
 - Sea of Japan and Korea Strait
 - High population density, very limited farmland, heavy reliance on imported raw materials and food
 - End of Japanese isolation, Commodore Matthew Perry
 - Meiji Restoration: end of feudal Japan, industrialization and modernization
 - Japanese imperialism: occupation of Korea, invasion of Manchuria, Rape of Nanking
 - Japanese-Soviet neutrality treaty
- Pearl Harbor, Dec. 7, 1941: "A day that will live in infamy."
- Internment of Japanese-Americans
- Fall of the Philippines: Bataan Death March, General Douglas MacArthur, "I shall return."
- Battle of Midway
- Island amphibious landings: Guadalcanal, Iwo Jima
- Surrender of Japan
 - Atom bombs dropped on Hiroshima and Nagasaki, the Enola Gay
 - U.S. dictates pacifist constitution for Japan, Emperor Hirohito
- Potsdam Conference, Nuremberg war crimes trials
- Creation of United Nations: Security Council, Universal Declaration of Human Rights

VI. Geography of the United States

Teachers: Students should regularly consult maps in reference to the following topics:

- Physical features
 - General forms: Gulf/Atlantic coastal plain, Appalachian highlands and Piedmont, Midwest lowlands, Great Plains, Rocky Mountains, Intermountain Basin and Range, Pacific coast ranges, Arctic coastal plain
 - Mountains: Rockies, Appalachians, Sierra Nevada, Cascades, Adirondacks, Ozarks
 - Peaks: McKinley, Rainier, Whitney
 - Main water features: Gulf of Mexico, Chesapeake Bay, San Francisco Bay, Puget Sound, Great Salt Lake, Great Lakes (freshwater)—Erie, Huron, Michigan, Ontario, Superior
 - Rivers: Mississippi, Missouri, Ohio, Colorado, Hudson, Columbia, Potomac, Rio Grande, Tennessee
 - Niagara Falls, Grand Canyon, Mojave Desert, Death Valley
- Political, economic, and social features
 - The fifty states and their capitals (review), Washington, D. C., Commonwealth of Puerto Rico, Virgin Islands, Guam
- Cities: Atlanta, Baltimore, Birmingham, Boston, Charlotte, Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, Houston, Kansas City, Los Angeles, Memphis, Miami, Milwaukee, Minneapolis, New Orleans, Norfolk, Philadelphia, Phoenix, Pittsburgh, Portland, St. Louis, San Antonio, San Diego, San Francisco, Seattle, Tampa
- Population
 - Expansion of settlement
 - Population density

- Regions
 - New England
 - Mid-Atlantic
 - South: “Dixie,” Mason-Dixon Line, Bible Belt
 - Middle West: Rust Belt, Corn Belt
 - Southwest: Sun Belt
 - Mountain States
 - West Coast: San Andreas fault, California aqueduct (water supply) system
 - Coal, oil, and natural gas deposits
 - Agricultural crop regions
- New York City
 - Bronx, Brooklyn, Manhattan, Queens, Staten Island
 - Broadway, Fifth Avenue, Madison Avenue, Park Avenue, Times Square, Wall Street
 - Central Park, Harlem, Greenwich Village

Visual Arts: Grade 7

SEE INTRODUCTION, "The Arts in the Curriculum."

Teachers: In schools, lessons on the visual arts should illustrate important elements of making and appreciating art, and emphasize important artists, works of art, and artistic concepts. When appropriate, topics in the visual arts may be linked to topics in other disciplines. While the following guidelines specify a variety of artworks in different media and from various cultures, they are not intended to be comprehensive. Teachers are encouraged to build upon the core content and expose children to a wide range of art and artists.

In studying the works of art specified below, and in creating their own art, students should review, develop, and apply concepts introduced in previous grades, such as line, shape, form, space, texture, color, light, design, and symmetry.

I. Art History: Periods and Schools

Teachers: The guidelines here continue the organizational scheme established in sixth grade, which combined art history with analysis of specific illustrative works. Timelines may help students situate the artists, periods, and schools. Note that the periods and characteristics are not absolute distinctions but generally helpful categories (to which there are always exceptions) often used in discussions of art.

A. IMPRESSIONISM

- Examine characteristics of Impressionism in
 - Claude Monet: *Impression: Sunrise, Bridge Over a Pool of Lilies*
 - Pierre Auguste Renoir, *Luncheon of the Boating Party*
 - Edgar Degas, a ballet painting such as *Dancing Class*
 - Mary Cassatt, *The Boating Party*

B. POST-IMPRESSIONISM

- Examine characteristics of Post-Impressionism in
 - Paul Cezanne: a still life such as *Apples and Oranges*, a version of *Mont Sainte-Victoire, The Card Players*
 - Georges Seurat and pointillism: *Sunday Afternoon on the Island of the Grande Jatte*
 - Vincent van Gogh: *The Starry Night*, one of his *Sunflowers*, a self-portrait such as *Self-Portrait* [1889]
 - Paul Gauguin: *Vision After the Sermon, Hail Mary (la Orana Maria)*
 - Henri Toulouse-Lautrec, *At the Moulin Rouge*
 - Art Nouveau as a pervasive style of decoration

C. EXPRESSIONISM AND ABSTRACTION

- Examine representative artists and works, including
 - Henri Matisse: *Madame Matisse, The Red Room*, cutouts such as *Beasts of the Sea*
 - Edvard Munch, *The Scream*
 - Marc Chagall, *I and the Village*
 - Pablo Picasso's early works, including *Family of Saltimbanques*
- Cubism
 - Pablo Picasso, *Les Femmes d'Alger (O. J. R. M.)*
 - Marcel Duchamp, *Nude Descending a Staircase*
- Picasso after Cubism: *Girl Before a Mirror, Guernica*

- Other developers of abstraction:
 - Vassily Kandinsky, *Improvisation 31 (Sea Battle)*
 - Paul Klee, *Senecio* (also known as *Head of a Man*)
 - Piet Mondrian, *Broadway Boogie Woogie*
 - Salvador Dali and surrealism: *The Persistence of Memory*












D. MODERN AMERICAN PAINTING

- Examine representative artists and works, including
 - Edward Hopper, *Nighthawks*
 - Andrew Wyeth, *Christina's World*
 - Georgia O'Keeffe, *Red Poppies*
- Regionalists, social realists, and genre painters
 - Grant Wood, *American Gothic*
 - Diego Rivera [Mexican], *Detroit Industry*
 - Norman Rockwell, *Triple Self-Portrait*

SEE INTRODUCTION, "The Arts in the Curriculum."

I. Elements of Music

Teachers: The Music guidelines for grades 6-8 share a basic vocabulary of the elements of music that can inform the discussion, appreciation, and study of selected musical works. Following these guidelines are recommendations in each grade for a core of musical content, broadly organized as a history of music from early to modern times, with attention to specific periods, composers, and genres. While these guidelines focus on musical vocabulary, appreciation, and history, musical performance should be encouraged and emphasized as local resources allow.

- Review as necessary from earlier grades:
 - The orchestra and families of instruments (strings, wind, brass, percussion); keyboard instruments
 - Vocal ranges: soprano, mezzo-soprano, alto; tenor, baritone, bass
- Recognize frequently used Italian terms:
 - grave* (very very slow)
 - largo* (very slow)
 - adagio* (slow)
 - andante* (moderate; "walking")
 - moderato* (medium)
 - allegro* (fast)
 - presto* (very fast)
 - prestissimo* (as fast as you can go)
 - ritardando* and *accelerando* (gradually slowing down and getting faster)
 - crescendo* and *decrescendo* (gradually increasing and decreasing volume)
 - legato* (smoothly flowing progression of notes), *staccato* (crisp, distinct notes)
- Recognize introduction, interlude, and coda in musical selections.
- Recognize theme and variations.
- Identify chords [such as I (tonic), IV (subdominant), V (dominant); V7]; major and minor chords; chord changes; intervals (third, fourth, fifth).
- Understand what an octave is.
- Understand the following notation and terms:
 - names of lines and spaces in the treble clef; middle C
 -  treble clef  bass clef  staff, bar line, double bar line, measure, repeat signs
 -  whole note  half note  quarter note  eighth note
 - whole rest, half rest, quarter rest, eighth rest
 -  grouped sixteenth notes
 - tied notes and dotted notes
 -  sharps  flats  naturals
 - Da capo* [*Da Capo*] *al fine*
 - meter signature: $\frac{4}{4}$ or common time $\frac{2}{4}$ $\frac{3}{4}$ $\frac{6}{8}$
 - soft *pp* *p* *mp* loud *mf* *f* *ff*

II. Classical Music: Romantics and Nationalists

Teachers: While these guidelines focus on musical vocabulary, appreciation, and history, musical performance should be encouraged and emphasized as resources allow. The focus here combines music history with appreciation of illustrative works, and continues from grade 6 the idea of classifying Western music by periods, with examples of specific composers and works, as well as some associated musical terms. Timelines may help students situate the periods. The periods and their characteristics are not absolute distinctions but generally helpful categories often used in discussions of music. In sixth grade students studied music and composers from the Baroque to the Romantic.

Note: In sixth grade, students were introduced to works by Beethoven, Brahms, Chopin, and Schumann.

A. ROMANTIC COMPOSERS AND WORKS

- Composers and works:
 - Johannes Brahms, *Symphony No. 1* (fourth movement)
 - Hector Berlioz, *Symphonie Fantastique*
 - Franz Liszt, *Hungarian Rhapsody No. 2* for piano
 - Richard Wagner, Overture to *Die Meistersinger von Nürnberg*

B. MUSIC AND NATIONAL IDENTITY

- Composers and works:
 - Antonín Dvořák, *Symphony No. 9* (“From the New World”)
 - Edvard Grieg, *Peer Gynt Suites Nos. 1 and 2*
 - Peter Ilich Tchaikovsky, *1812 Overture*

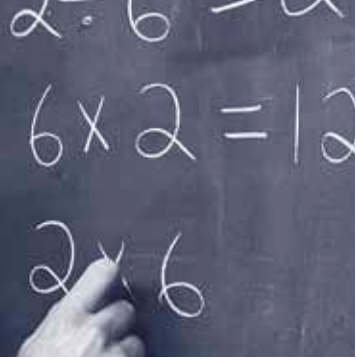
III. American Musical Traditions

- Blues
 - Evolved from African-American work songs and spirituals
 - Twelve bar blues form
- Jazz
 - African-American origins
 - Terms: improvisation, syncopation, solo and soloist
 - Ragtime: works of Scott Joplin (such as “The Entertainer” and “Maple Leaf Rag”)
 - Louis Armstrong: early recordings such as “Potato Head Blues,” “West End Blues,” or “St. Louis Blues”
 - Duke Ellington: “Caravan,” “Take the ‘A’ Train” [by Billy Strayhorn]
 - Miles Davis: “So What”
 - Influence of jazz on other music: George Gershwin’s *Rhapsody in Blue*

Teachers: In learning the new concepts and procedures, students should use previously acquired mathematics to ensure that the procedures become automatic and habitual. Students should continue to master the use of measuring and drawing instruments, develop their mental arithmetic and their approximating abilities, become more familiar with deductive reasoning, and use calculators and computers in a thoughtful way.

These guidelines are representative of the mathematics typically learned in grade 7 in countries that have strong math traditions and whose students score well in international comparisons. In the United States, most teachers of middle-school mathematics follow commercial math textbooks which vary in quality. Because teachers are often selective about the parts of the textbooks they teach, the following guidelines may prove useful as an outline by which the teacher can, regardless of the textbook adopted, make sure the competencies taught in their programs are comparable to the competencies of students in the best-achieving systems.

While teaching methods may vary, it is worth keeping in mind the psychological principle that the most effective method for learning mathematics emphasizes frequent, varied practice, and encourages multiple approaches to solving varied types of problems.



I. Pre-Algebra

A. PROPERTIES OF THE REAL NUMBERS

- Know and use the associative, commutative, and distributive properties by name and in simplifying expressions involving numbers and variables.
- Understand absolute value and evaluate expressions such as $|2x - 3| + 3x$.

B. LINEAR APPLICATIONS AND PROPORTIONALITY

- Know the concept of slope.
- Translate situations of proportionality into equations of the form $y = mx$, where m is the constant of proportionality or slope; specifically know and understand $d = rt$ and $i = prt$.
- Show situations of constant proportionality as a line on the coordinate plane.
- Introduce the concept of a function and determine the equation of a linear function given its slope and intercepts in the form $y = mx + b$.
- Estimate the values of b and m from a given linear graph.

C. POLYNOMIAL ARITHMETIC

- Add, subtract, multiply, and divide monomials and polynomials (divide polynomials by monomials only).
- Factor binomials that have a common monomial factor.

D. EQUIVALENT EQUATIONS AND INEQUALITIES

- Review equality properties for equations.
- Know that addition or subtraction of the same value from both sides of an inequality maintains the inequality.
- Know that multiplying or dividing both sides of an inequality by a positive number maintains the inequality, but multiplying or dividing by a negative number reverses the inequality; be able to show why using a number line.
- Simplify and solve linear equations in one variable such as $3(2x - 5) + 4x = 12(x + 5)$.
- Simplify and graph solutions to linear inequalities in one variable such as $3(2x - 5) + 4x \leq 12(x + 5)$.

E. INTEGER EXPONENTS

- Know the meaning of an exponent n when n is positive or negative.
- Know that a non-zero number to the zero power is one.

- Understand why a negative number to an even power is positive and a negative number to odd power is negative.
- Know the multiplication properties of exponents:
Product of powers: $(a^m)(a^n) = a^{(m+n)}$
Power of a power: $(a^m)^n = a^{mn}$
Power of a product: $(ab)^m = (a^m)(b^m)$.
- Convert decimal numbers to and from scientific notation.
- Know the proper order of operations with exponents.

II. Geometry

A. THREE-DIMENSIONAL OBJECTS

- Describe and construct simple right prisms, cylinders, cones, and spheres using the concepts of parallel and perpendicular; calculate the surface areas and volumes of these objects.
- Know that the section created by the intersection of a plane and a sphere is a circle.
- Calculate the surface area of a sphere using the equation $SA = 4 \pi r^2$.
- Calculate the volume of a sphere using the equation $V = (4/3) \pi r^3$.

B. ANGLE PAIRS

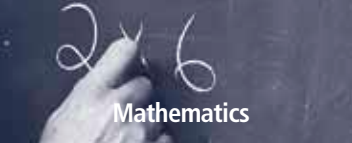
- Construct parallel lines and a transversal using a compass and straight edge.
- Understand congruent angles, vertical angles, complementary angles, supplementary angles, adjacent angles, corresponding angles, and alternate interior and alternate exterior angles.

C. TRIANGLES

- Know that a triangle is determined by its three sides or by two sides and the included angle (SSS and SAS triangle congruence) and solve problems.
- Use SSS to prove that the construction of the bisector of an angle is valid.
- Use SSS to prove that the construction of the perpendicular bisector of a segment is valid.
- Prove that the base angles of an isosceles triangle are congruent.
- Demonstrate that the sum of the interior angles of a triangle equals 180 degrees.
- Know that the shape of a triangle is determined by two (hence all three) of its angles (AA(A) triangle similarity) and solve related problems.
- Construct a circle that circumscribes a triangle using compass and straight edge.
- Know and understand the Pythagorean Theorem and its converse and use it to find the length of the missing side of a right triangle and lengths of other line segments and, in some situations, empirically verify the Pythagorean theorem by direct measurement and a calculator.
- Use the Pythagorean Theorem to determine the exact ratios of the sides in 30-60-right triangles and isosceles right triangles.
- Determine the image of a triangle under translations, rotations, and reflections.

D. MEASUREMENT

- Choose appropriate units of measure and use ratios to convert within and between measurement systems to solve problems.
- Compare weights, capacities, geometric measures, times, and temperatures within and between measurement systems (for example, miles per hour and feet per second, cubic inches to cubic centimeters).
- Use measures expressed as rates (for example, speed, density) and measures expressed as products (for example, person-days) to solve problems; check the units of the solutions; and use dimensional analysis to check the reasonableness of the answer.
- Compute the perimeter, area, and volume of common geometric objects and use the results to find measures of less common objects.
- Know how perimeter, area, and volume are affected by changes of scale.



- Estimate and compute the area of more complex or irregular two- and three-dimensional figures by breaking the figures down into more basic geometric objects.
- Relate the changes in measurement with a change of scale to the units used (for example, square inches, cubic feet) and to conversions between units (1 square foot = 144 square inches or $[1 \text{ ft}^2 = 144 \text{ in}^2]$, 1 cubic inch is approximately 16.38 cubic centimeters $[1 \text{ in}^3 = [16.36 \text{ cm}^3]$).

III. Probability and Statistics

- Show the relationship between two variables using a scatter-plot and describe the apparent relationship informally.
- Find the upper and lower quartiles for a data set.
- Understand that if p is the probability of an event occurring, $1 - p$ is the probability of the event not occurring.
- Understand the difference between independent and dependent events.

Teachers: Effective instruction in science requires not only direct experience and observation but also book learning, which helps bring coherence and order to a student's scientific knowledge. Only when topics are presented systematically and clearly can students make steady and secure progress in their scientific learning. The Science sequence for the middle school grades aims for more intensive and selective study of topics, a number of which were introduced in earlier grades. The Sequence continues the practice of studying topics from each of the major realms of science (physical, life, and earth science). Students are expected to do experiments and write reports on their findings.



I. Atomic Structure

- Review (from grade 5): Structure of atoms: protons, neutron, electrons
Molecules
Compounds are formed by combining two or more elements and have properties different from the constituent elements.
- Early theories of matter
The early Greek theory of four elements: earth, air, fire, and water
Later theories of Democritus: everything is made of atoms and nothing else (“atom” in Greek means that which can't be cut or divided); atoms of the same kind form a pure “element”
Alchemy in middle ages
- Start of modern chemistry
Lavoisier and oxygen: the idea that matter is not gained or lost in chemical reactions
John Dalton revives the theory of the atom.
Mendeleev develops the Periodic Table, showing that the properties of atoms of elements come in repeating (periodic) groups.
Niels Bohr develops a model of the atom in shells that hold a certain number of electrons. Bohr's model, plus the discovery of neutrons, helped explain the Periodic Table: atomic number, atomic weight, and isotopes.

See below, Science Biographies, Lavoisier and Mendeleev.

II. Chemical Bonds and Reactions

- To get a stable outer shell of electrons, atoms either give away, take on, or share electrons.
- Chemical reactions rearrange the atoms and the electrons in elements and compounds to form chemical bonds.
- When single atoms combine with themselves or with other atoms, the result is a molecule.
 O_2 is a molecule of oxygen. $NaCl$ is a molecule of salt, and because it has more than one element is called a compound.
- Ionic bond
Atoms like sodium that have just one or two extra electrons are very energetic in giving them away. Elements with the same number of extra or few electrons can join with each other to make an ionic bond. Example: $NaCl$, table salt.
- Metallic bond
In the metallic bond, electrons are not given away between elements, but are arranged so that they are shared between atoms. Pure metals show this sharing, and the atoms can rearrange themselves in different ways, which explains why you can pound metals into different shapes.



Note: A useful mnemonic device is "OIL RIG" — "oxidation is loss, reduction is gain."

- **Covalent bond**
Some atoms share electrons in a definite way, making them very stable and unreactive. Examples are H_2 and O_2 . Carbon, which can take up or give away 4 electrons in covalent bonds, can help make molecules that can adopt almost any shape. It is the basis of life.
- **Kinds of reactions**
Oxidation: a chemical reaction that commonly involves oxygen. More generally, oxidation is a reaction in which an atom accepts electrons while combining with other elements. The atom that gives away electrons is said to be oxidized.
Examples: rusting of iron, burning of paper. Heat is given off.
Reduction: the opposite of oxidation. Reduction involves the gaining of electrons. An oxidized material gives them away and heat is taken up.
Acids: for example, vinegar, HCl , H_2SO_4 ; sour; turn litmus red
Bases: for example, baking soda; bitter; turn litmus blue
pH: ranges from 0-14; neutral = 7, acid = below 7, base = above 7
Reactions with acids and bases
In water solution, an acid compound has an H ion (a proton lacking an electron), and the base compound has an OH ion (with an extra electron).
When the two come together, they form HOH (water) plus a stable compound called a "salt."
- How chemists describe reactions by equations, for example: $HCl + NaOH = NaCl + H_2O$
- A catalyst helps a reaction, but is not used up.

III. Cell Division and Genetics

Note: Review from grade 5: Cell Structures and Processes.

- **Cell division, the basic process for growth and reproduction**
Two types of cell division: mitosis (growth and asexual reproduction), meiosis (sexual reproduction)
Asexual reproduction: mitosis; diploid cells (as in amoeba)
Sexual reproduction: meiosis; haploid cells; combinations of traits
How change occurs from one generation to another: either mutation or mixing of traits through sexual reproduction
Why acquired characteristics are not transmitted
- **Gregor Mendel's experiments with purebred and hybrid peas**
Dominant and recessive genes
Mendel's statistical analysis led to understanding that inherited traits are controlled by genes (now known to be DNA).
- **Modern understanding of chromosomes and genes**
Double helix (twisted ladder) of DNA coding; how DNA makes new DNA
How DNA sequence makes proteins
Genetic engineering
Modern researchers in genetics: Francis Crick, James Watson, Severo Ochoa, Barbara McClintock

IV. History of the Earth and Life Forms

A. PALEONTOLOGY

- Fossils as a record of the Earth's history and past life forms
- How fossils are formed, and types of fossils (mold, cast, trace, true-form)

B. GEOLOGIC TIME

- The age of the earth is about 4.6 billion years, based on geologic evidence and radioactive dating. Life has existed on earth for more than 3 billion years.
How movements of the earth's plates have affected the distribution of organisms

- Organizing geologic time: Scientists have organized the earth's history into four major eras:
 - Precambrian Era (earliest forms of life, such as bacteria and blue-green algae; later in the period, invertebrates such as jellyfish)
 - Paleozoic Era (Pangaea; invertebrate life, such as trilobites, early in this era, followed by development of vertebrates later in the era, including fish; development of insects, amphibians, and the beginnings of reptiles; development of simple plants, such as mosses and ferns)
 - Mesozoic Era (Pangaea separates into continents; "Age of Reptiles"; dinosaurs, flowering plants, small mammals and birds)
 - Cenozoic (Present) Era (Ice Age; mammoths; gradual development of mammals, birds and other animals recognizable today; humans; flowering plants, forests, grasslands)

V. Evolution

A. EVOLUTION

- Evolution is the change in a population of organisms over time caused by both genetic change and environmental factors.
 - Adaptation and mutation
- Charles Darwin: voyages of the *Beagle*; *Origin of Species* (1859)

B. NATURAL SELECTION

- Natural selection as the mechanism of evolution: Darwin's theory that life forms better adapted to their current environment have a better chance of surviving and will pass on their traits to their offspring
 - Trait variation and change from generation to generation
- Evidence for the theory of evolution includes comparative anatomy, geology, fossils, and DNA research.

C. EXTINCTION AND SPECIATION

- Extinction occurs when an environment changes and a species is no longer adapted to it.
- New species can develop when part of the population becomes separated and evolves in isolation.
- Life forms have evolved from simple organisms in oceans through amphibians to higher forms such as primates.

VI. Science Biographies

Charles Darwin (scientist known for theory of natural selection)
 Antoine Lavoisier (chemist who discovered the process of oxidation)
 Lise Meitner (physicist who helped discover nuclear fission)
 Dmitri Mendeleev (scientist who devised the periodic table)

See below, Science Biographies, Charles Darwin.

See above, Evolution re Darwin; Atomic Structure: Start of modern chemistry, re Lavoisier and Mendeleev.

Grade 8



Overview of Topics

Grade 8

English

- I. Writing, Grammar, and Usage
 - A. Writing and Research
 - B. Speaking and Listening
 - C. Grammar
 - D. Spelling
 - E. Vocabulary
- II. Poetry
 - A. Poems
 - B. Elements of Poetry
- III. Fiction, Nonfiction, and Drama
 - A. Short Stories
 - B. Novels
 - C. Elements of Fiction
 - D. Essays and Speeches
 - E. Autobiography
 - F. Drama
 - G. Literary Terms
- IV. Foreign Phrases Commonly Used in English

History and Geography

- I. The Decline of European Colonialism
 - A. Breakup of the British Empire
 - B. Creation of the People's Republic of China
- II. The Cold War
 - A. Origins of the Cold War
 - B. The Korean War
 - C. America in the Cold War
- III. The Civil Rights Movement
- IV. The Vietnam War and the Rise of Social Activism
 - A. The Vietnam War
 - B. Social and Environmental Activism
- V. The Middle East and Oil Politics
 - A. History
 - B. Geography of the Middle East
- VI. The End of the Cold War: The Expansion of Democracy and Continuing Challenges
 - A. The American Policy of Detente
 - B. Breakup of the USSR
 - C. China under Communism
 - D. Contemporary Europe
 - E. The End of Apartheid in South Africa

VII. Civics: The Constitution—Principles and Structure of American Democracy

VIII. Geography of Canada and Mexico

Visual Arts

- I. Art History: Periods and Schools
 - A. Painting Since World War II
 - B. Photography
 - C. 20th-Century Sculpture
- II. Architecture Since the Industrial Revolution

Music

- I. Elements of Music
- II. Non-Western Music
- III. Classical Music: Nationalists and Moderns
 - A. Music and National Identity
 - B. Modern Music
- IV. Vocal Music
 - A. Opera
 - B. American Musical Theater

Mathematics

- I. Algebra
 - A. Properties of the Real Numbers
 - B. Relations, Functions, and Graphs (Two Variables)
 - C. Linear Equations and Functions (Two Variables)
 - D. Arithmetic of Rational Expression
 - E. Quadratic Equations and Functions
- II. Geometry
 - A. Analytic Geometry
 - B. Introduction to Trigonometry
 - C. Triangles and Proofs

Science

- I. Physics
 - A. Motion
 - B. Forces
 - C. Density and Buoyancy
 - D. Work
 - E. Energy
 - F. Power
- II. Electricity and Magnetism
- III. Electromagnetic Radiation and Light
- IV. Sound Waves
- V. Chemistry of Food and Respiration
- VI. Science Biographies

I. Writing, Grammar, and Usage

Teachers: Students should be given opportunities to write fiction, poetry, or drama, but instruction should emphasize repeated expository writing. Students should examine their work with attention to unity, coherence, and emphasis. Expository essays should have a main point and stick to it, and have a coherent structure, typically following the pattern of introduction, body, and conclusion. Paragraphs should have a unified focus, be developed with evidence and examples, and have transitions between them. Essays should have appropriate tone and diction, as well as correct spelling and grammar in their final form. Standards for writing apply across the disciplines.

A. WRITING AND RESEARCH

- Expository writing: Write essays that describe, narrate, persuade, and compare and contrast.
- Write research essays, with attention to
 - asking open-ended questions
 - gathering relevant data through library and field research
 - summarizing, paraphrasing, and quoting accurately when taking notes
 - defining a thesis (that is, a central proposition, a main idea)
 - organizing with an outline
 - integrating quotations from sources
 - acknowledging sources and avoiding plagiarism
 - preparing a bibliography

B. SPEAKING AND LISTENING

- Participate civilly and productively in group discussions.
- Give a short speech to the class that is well-organized and well-supported.
- Demonstrate an ability to use standard pronunciation when speaking to large groups and in formal circumstances, such as a job interview.

C. GRAMMAR

Teachers: Students should have a working understanding of the following terms and be able to use them to discuss and analyze writing.

Punctuation

- Review punctuation based on sentence structure, including
 - semi-colons
 - commas with phrases and clauses
- Review other punctuation, including
 - punctuation of quotations, dialogue
 - use of parentheses
 - hyphens
 - dashes
 - colons
 - italics
 - apostrophes

Misplaced modifiers

- Phrases and clauses go as near as possible to the word(s) they modify.
 - Dangling modifiers
 - Two-way modifiers



See also English 6 for more guidelines on writing persuasive essays.



Parallelism

- Parallelism is expressing ideas of equal importance using the same grammatical constructions.
- Kinds of parallelism
 - coordinate (using coordinating conjunctions *and, but, or, nor, yet*)
 - compared/contrasted
 - correlative (both . . . and, either . . . or, neither . . . nor, not only . . . but also)
- Correcting faulty parallelism
 - repeating words (articles, prepositions, pronouns) to maintain parallelism
 - completing parallel construction
 - revising sentences using parallel structure (for example, using all gerund phrases, or all noun clauses)

Sentence variety

- Review sentences classified by structure: simple, compound, complex, compound-complex.
- Varying sentence length and structure to avoid monotony
- Varying sentence openings

D. SPELLING

- Continue work with spelling, with special attention to commonly misspelled words, including:

absence	counterfeit	guarantee	permanence
accommodate	courageous	hygiene	physician
analysis	curiosity	independence	prairie
attendance	defendant	laboratory	sergeant
believe	dessert	library	souvenir
bureau	desperate	lightning	straight
capitol	dissatisfied	maintenance	technique
colonel	extraordinary	mileage	temporary
committee	fascinating	necessary	vacuum
correspondence	foreign	occurrence	whether

E. VOCABULARY

Teachers: Students should know the meaning of these Latin and Greek words and be able to give examples of English words that are based on them.

Note: More commonly misspelled words are listed in grades 6 and 7.

Note: More Latin and Greek words and roots are listed in grades 6 and 7. In the listings here, L = Latin, G = Greek. No single form of the Latin or Greek words is consistently used here, but rather the form that is most similar to related English words.

<u>Latin /Greek Word</u>	<u>Meaning</u>	<u>Examples</u>
aequus [L]	equal	equal, equation
ago, acta [L]	do, things done	agent, enact, transact
anthropos [G]	man, human being	anthropology, misanthrope
ars [L]	art	artist, artifact
brevis [L]	short	brevity, abbreviate
canto [L]	sing	chant, cantor
caput [L]	head	captain, decapitate
clino [L]	to lean, bend	incline, decline
cognito [L]	know	cognizant, recognize
copia [L]	plenty	copy, copious
credo [L]	believe	credible, incredulous
culpa [L]	blame	culpable, culprit
dominus [L]	a lord, master	dominate, dominion
duco [L]	lead	abduct, introduce
fido [L]	to trust, believe	confide, infidel
fundo, fustum [L]	pour, thing poured	effusive, transfusion
genus [L]	kind, origin	generic, congenital

holos [G]	whole	holistic, catholic
jungo [L]	join	junction, conjugal
lego, lectum [L]	read, thing read	intellect, legible
locus [L]	a place	local, dislocate
loquor [L]	speak	eloquent, loquacious
medius [L]	middle	mediate, mediocrity
missio [L]	a sending	emissary, mission
morior [L]	die	mortal
nego [L]	deny	negate
nihil [L]	nothing	nihilism, annihilate
occido [L]	kill	homicide, suicide
pathos[G]	suffering, feeling	sympathy, apathy
pendo [L]	weigh, hang	depend, pendant
per [L]	through	perceive, persist, persevere
phobos [G]	fear	phobia, claustrophobia
plenus [L]	full	plenty, plenary
positum [L]	placed	position, opposite
porto [L]	carry	transport, export
possum [L]	be able	possible, potent
pugno [L]	to fight	impugn, pugnacious
punctum [L]	point	punctual, punctuation
rego [L]	to rule	regular, regency
sanguis [L]	blood	sanguine
satis [L]	enough	satisfy
scio [L]	know	science, conscious
solus [L]	alone	solo, desolate
sonus [L]	a sound	unison, consonant
sophos [G]	wise	philosophy, sophomore
spiritus [L]	breath	inspire, spirit
totus [L]	whole	totalitarianism
tractum [L]	drawn, pulled	distract, tractor
usus [L]	use	abuse, utensil
vacuus [L]	empty	evacuate, vacuum
verbum [L]	word	verbal
verto [L]	turn	avert, convert, anniversary
via [L]	way, road	deviate, viaduct

II. Poetry

A. POEMS

Buffalo Bill's (e.e. cummings)

Chicago (Carl Sandburg)

Do Not Go Gentle into That Good Night (Dylan Thomas)

How do I love thee? (Elizabeth Barrett Browning)

How They Brought the Good News From Ghent to Aix (Robert Browning)

I dwell in possibility; Apparently with no surprise (Emily Dickinson)

The Lake Isle of Innisfree (William B. Yeats)

Lucy Gray (or Solitude); My Heart Leaps Up (William Wordsworth)

Mending Wall; The Gift Outright (Robert Frost)

Mr. Flood's Party (Edward Arlington Robinson)

Polonius's speech from *Hamlet*, "Neither a borrower nor a lender be . . ."

(William Shakespeare)

Ozymandias (Percy Bysshe Shelley)

Sonnet 18, "Shall I compare thee. . ." (William Shakespeare)

Spring and Fall (Gerald Manley Hopkins)

Note: The poems listed here constitute a selected core of poetry for this grade. You are encouraged to expose students to more poetry, old and new, and to have students write their own poems. Students should examine some poems in detail, discussing what the poems mean as well as asking questions about the poet's use of language.

A Supermarket in California (Allen Ginsberg)
 Theme for English B (Langston Hughes)
 We Real Cool (Gwendolyn Brooks)

B. ELEMENTS OF POETRY

- Review: meter, iamb, rhyme scheme, free verse, couplet, onomatopoeia, alliteration, assonance
- Review:
 - forms: ballad, sonnet, lyric, narrative, limerick, haiku
 - stanzas and refrains
 - types of rhyme: end, internal, slant, eye
 - metaphor and simile
 - extended and mixed metaphors
 - imagery, symbol, personification
 - allusion

III. Fiction, Nonfiction, and Drama

A. SHORT STORIES

“The Bet” (Anton Chekov)
 “Dr. Heidegger’s Experiment” (Nathaniel Hawthorne)
 “God Sees the Truth But Waits” (Leo Tolstoy)
 “An Honest Thief” (Fyodor Dostoyevsky)
 “The Open Boat” (Stephen Crane)

B. NOVELS

Animal Farm (George Orwell)
The Good Earth (Pearl S. Buck)

C. ELEMENTS OF FICTION

- Review:
 - plot and setting
 - theme
 - point of view in narration: omniscient narrator, unreliable narrator, third person limited, first person
 - conflict: external and internal
 - suspense and climax
- Characterization
 - as delineated through a character’s thoughts, words, and deeds; through the narrator’s description; and through what other characters say
 - flat and round; static and dynamic
 - motivation
 - protagonist and antagonist
- Tone and diction

D. ESSAYS AND SPEECHES

“Ask not what your country can do for you” (John F. Kennedy’s Inaugural Address)
 “I have a dream”; “Letter from Birmingham Jail” (Martin Luther King, Jr.)
 “Death of a Pig” (E. B. White)
 “The Marginal World” (Rachel Carson)

E. AUTOBIOGRAPHY

Selections (such as chapters 2 and 16) from *I Know Why the Caged Bird Sings* (Maya Angelou)

Note: See also History 8: The Kennedy Years, re J. F. Kennedy; The Civil Rights Movement, re M. L. King, Jr.; and, Emergence of Environmentalism, re Rachel Carson.

F. DRAMA

- *Twelfth Night* (William Shakespeare)
- Elements of Drama
 - Review:
 - tragedy and comedy
 - aspects of conflict, suspense, and characterization
 - soliloquies and asides
 - Farce and satire
 - Aspects of performance and staging
 - actors and directors
 - sets, costumes, props, lighting, music
 - presence of an audience

G. LITERARY TERMS

- Irony: verbal, situational, dramatic
- Flashbacks and foreshadowing
- Hyperbole, oxymoron, parody

IV. Foreign Phrases Commonly Used in English

Teachers: Students should learn the meaning of the following French words and phrases that are commonly used in English speech and writing.

- au revoir - goodbye, until we see each other again
- avant-garde - a group developing new or experimental concepts, a vanguard
- bête noire - a person or thing especially dreaded and avoided [literally, “black beast”]
- c’est la vie - that’s life, that’s how things happen
- carte blanche - full discretionary power [literally, “blank page”]
- cause célèbre - a very controversial issue that generates fervent public debate [literally, a “celebrated case”]
- coup de grâce - a decisive finishing blow
- coup d’état - overthrow of a government by a group
- déjà vu - something overly familiar [literally, “already seen”]
- enfant terrible - one whose remarks or actions cause embarrassment, or someone strikingly unconventional [literally, “terrible child”]
- fait accompli - an accomplished fact, presumably irreversible
- faux pas - a social blunder [literally, “false step”]
- Madame, Mademoiselle, Monsieur - Mrs., Miss, Mr.
- merci - thank you
- pièce de résistance - the principal part of the meal, a showpiece item
- raison d’être - reason for being
- savoir-faire - the ability to say or do the right thing in any situation, polished sureness in society [literally, “to know (how) to do”]
- tête-à-tête - private conversation between two people [literally, “head to head”]



Note: You are encouraged to use timelines to help students place these events in chronological context relative to their prior study in grade 7 of World Wars I and II.

History and Geography: Grade 8

Teachers: In grades K–6, the history guidelines in the *Core Knowledge Sequence* were organized into separate strands on World History and American History. Because the World and American History strands merged chronologically in sixth grade, the *Sequence* presents a unified section on History and Geography in grades seven and eight. Central themes of the history guidelines in grades seven and eight are growth and change in American democracy, and interactions with world forces, particularly nationalism and totalitarianism. Fundamental principles and structure of American government are reviewed in a civics unit in this grade.

The study of geography aims at understanding the spatial relationship between nature and human culture and processes that change environments. Following the main outline of the history curriculum, eighth graders study the Middle East, South Asia, China, Canada, Mexico, and post-Cold War changes. Students should learn locations as well as the relationships between physical and human systems.

I. The Decline of European Colonialism

A. BREAKUP OF THE BRITISH EMPIRE

- Creation of British Commonwealth, independence for colonial territories
- Troubled Ireland: Easter Rebellion, Irish Free State
- Indian nationalism and independence
 - Sepoy Rebellion
 - Mahatma Gandhi, Salt March
 - Partition of India into Hindu and Muslim states
- Geography of India and South Asia
 - Overview
 - Legacy of British colonial rule: English language, rail system
 - Himalayas, Mt. Everest, K-2
 - Very high population densities and growth rates, food shortages
 - Monsoons
 - Rivers: Ganges, Indus, Brahmaputra
 - Arabian Sea, Bay of Bengal
 - Pakistan, Karachi
 - Bangladesh
 - Sri Lanka
 - India
 - Second most populous country after China
 - Subsistence agriculture
 - Caste system, “untouchables”
 - Delhi, Bombay, Calcutta, Madras
 - Longstanding tension between Hindus and Moslems

B. CREATION OF PEOPLE’S REPUBLIC OF CHINA

- China under European domination
 - Opium Wars, Boxer Rebellion
 - Sun Yat Sen
- Communists take power
 - Mao Zedong: The Long March
 - Defeat of nationalists led by Chiang Kai-Shek
 - Soviet-Communist Chinese 30-Year Friendship Treaty

- Geography of China
 - Overview
 - One-fifth of world population
 - 4,000-year-old culture
 - Third largest national territory, regional climates
 - Physical features
 - Huang He (Yellow) River, Chang Jiang (Yangtze) River
 - Tibetan Plateau, Gobi Desert
 - Yellow Sea, East China Sea, South China Sea
 - Great Wall, Grand Canal
 - Social and economic characteristics
 - Major cities: Beijing, Shanghai, Guangzhou (formerly Canton), Shenyang
 - World's largest producer of coal and agricultural products, major mineral producer
 - Off-shore oil reserves
 - Multi-dialectal, including Mandarin, Cantonese
 - Hong Kong, special coastal economic zones
 - Taiwan, Taipei

II. The Cold War

A. ORIGINS OF THE COLD WAR

- Post-WWII devastation in Europe, Marshall Plan, Bretton Woods Conference
- Western fear of communist expansion, Soviet fear of capitalist influences
- Truman Doctrine, policy of containment of communism
 - Formation of NATO, Warsaw Pact
 - The “Iron Curtain” (Churchill)
 - Berlin Airlift
 - Eastern European resistance, Hungarian Revolution, Berlin Wall, Prague Spring

B. THE KOREAN WAR

- Inchon, Chinese entry, removal of MacArthur
- Partition of Korea, truce line near the 38th Parallel

C. AMERICA IN THE COLD WAR

- McCarthyism, House Un-American Activities Committee, “witch hunts”
 - Hollywood Blacklist
 - Spy cases: Alger Hiss, Julius and Ethel Rosenberg
- The Eisenhower Years
 - Secret operations, CIA, FBI counterespionage, J. Edgar Hoover, U-2 incident
 - Soviet Sputnik satellite, “Missile Gap”, Yuri Gagarin
 - Eisenhower’s farewell speech, the “military-industrial complex”
- The Kennedy Years, “Ask not what your country can do for you . . .”
 - Attack on organized crime, Robert F. Kennedy
 - Cuban Missile Crisis, Fidel Castro, Bay of Pigs invasion
 - Nuclear deterrence, “mutual assured destruction,” Nuclear Test Ban Treaty
 - Kennedy assassination in 1963, Lee Harvey Oswald, Warren Commission
- Space exploration, U.S. moon landing, Neil Armstrong
- American culture in the '50s and '60s
 - Levittown and the rise of the suburban lifestyle, automobile-centered city planning
 - Influence of television
 - Baby Boom generation, rock and roll, Woodstock festival, 26th Amendment

See also English 8: III.D, JFK’s Inaugural Address.

III. The Civil Rights Movement

- Segregation
 - Plessy v. Ferguson*, doctrine of “separate but equal”
 - “Jim Crow” laws
- Post-war steps toward desegregation
 - Jackie Robinson breaks color barrier in baseball
 - Truman desegregates Armed Forces
 - Adam Clayton Powell, Harlem congressman
 - Integration of public schools: *Brown v. Board of Education* (1954), Thurgood Marshall
- Montgomery Bus Boycott, Rosa Parks
- Southern “massive resistance”
 - Federal troops open schools in Little Rock, Arkansas
 - Murder of Medgar Evers
 - Alabama Governor George Wallace “stands in schoolhouse door”
- Nonviolent challenges to segregation: “We shall overcome”
 - Woolworth lunch counter sit-ins
 - Freedom riders, CORE
 - Black voter registration drives
 - Martin Luther King, Jr.
 - Southern Christian Leadership Conference
 - March on Washington, “I have a dream” speech
 - “Letter from Birmingham Jail”
 - Selma to Montgomery March
- President Johnson and the civil rights movement
 - The Great Society, War on Poverty, Medicare
 - Civil Rights Act of 1964, Voting Rights Act of 1965, affirmative action
- African American militance
 - Malcolm X
 - Black Power, Black Panthers
 - Watts and Newark riots
- Assassinations of Martin Luther King, Jr., and Robert F. Kennedy

See also English 8: III.D, Essays and Speeches, King’s “I have a dream” speech and “Letter from Birmingham Jail.”

IV. The Vietnam War and the Rise of Social Activism

A. THE VIETNAM WAR

- French Indochina War: Dien Bien Phu, Ho Chi Minh, Viet Cong
- Domino Theory
- U.S. takes charge of the war, Special Forces, Tonkin Gulf Resolution
- Tet Offensive, My Lai Massacre
- Antiwar protests, Kent State, The Pentagon Papers, “hawks” and “doves”
- American disengagement, Nixon’s “Vietnamization” policy, Kissinger, War Powers Act
- Watergate scandal, resignation of Nixon
- Vietnam, Hanoi, Ho Chi Minh City (formerly Saigon)

B. SOCIAL AND ENVIRONMENTAL ACTIVISM

- Feminist movement, “women’s liberation”
 - Betty Friedan, National Organization for Women
 - Roe v. Wade*
 - Failure of the Equal Rights Amendment
- Cesar Chavez, United Farm Workers
- American Indian Movement
 - Second Wounded Knee
 - Federal recognition of Indian right to self-determination
- Emergence of environmentalism
 - Rachel Carson, *Silent Spring*
 - Environmental Protection Agency, Endangered Species Act, Clean Air and Water Acts
 - Disasters such as Love Canal, Three Mile Island, Chernobyl, Exxon Valdez

See also Visual Arts 8: 20th Century Sculpture, Vietnam Veterans Memorial.

V. The Middle East and Oil Politics

A. HISTORY

- League of Nations' territorial mandates in Middle East
- Creation of Israel in 1948, David Ben-Gurion
- Suez Crisis, Gamal Abal Nasser
- Palestine Liberation Organization, Yasser Arafat
- Arab-Israeli Wars
 - Six-Day War, Israel occupies West Bank, Gaza Strip, Golan Heights
 - Yom Kippur War, OPEC oil embargo
- Camp David Peace Treaty
- Islamic fundamentalism, Iranian hostage crisis, Iran-Iraq War
- Persian Gulf War
- September 11, 2001 attacks
- Iraq war

B. GEOGRAPHY OF THE MIDDLE EAST

- Overview
 - Heartland of great early civilizations, Nile River, Mesopotamia, "Fertile Crescent"
 - Generally hot, arid conditions with thin, poor soils
 - Generally speak Arabic, except in Turkey (Turkish), Israel (Hebrew), Iran (Persian)
 - Predominant religion is Islam
 - Sunni and Shiite sects
 - Principal holy places: Makkah (also spelled Mecca) and Medina in Saudi Arabia
- Oil: world's most valuable commodity
 - Greatest known oil reserves concentrated around the Persian Gulf
 - Strait of Hormuz, shipping routes and national imports
 - Extraction of Arab oil required Western technology, which introduced competing cultural influences to Islam
- Egypt
 - Most populous Arab country
 - Nile River and delta, surrounded by inhospitable deserts
 - Aswan Dam, Lake Nasser
 - Cairo (largest city in Africa), Alexandria
 - Suez Canal, Sinai Peninsula, Red Sea
- Israel
 - Formed by the United Nations in 1948 as homeland for Jewish people
 - Jerusalem: Holy city for Judaism (Wailing Wall, Temple Mount), Christianity (Church of the Holy Sepulcher), and Islam (Dome of the Rock)
 - Tel Aviv, West Bank, Gaza Strip, Golan Heights
 - Jordan River, Sea of Galilee, Dead Sea (lowest point on earth), Gulf of Aqaba
- Middle East states and cities
 - Lebanon: Beirut
 - Jordan: Amman
 - Syria: Damascus
 - Iraq: Baghdad
 - Kurdish minority population (also in Turkey and Iran)
 - Iran: Tehran
 - Kuwait
 - Saudi Arabia: Riyadh, Makkah
- Turkey
 - Istanbul (formerly Constantinople)
 - Bosphorus, Dardanelles
 - Ataturk Dam controls upper Euphrates River

Note: Review from grade 4, World History III.A, Islam.

Note: It is recommended that you examine with students a map of the world's oil reserves.

VI. The End of the Cold War: The Expansion of Democracy and Continuing Challenges

A. THE AMERICAN POLICY OF DÉTENTE

- Diplomatic opening to China
- Strategic Arms Limitation Talks
- Jimmy Carter's human rights basis for diplomacy

B. BREAKUP OF THE USSR

- History
 - Arms race exhausts USSR economy, Afghanistan War
 - Helsinki Accord on human rights, Andrei Sakharov
 - Mikhail Gorbachev
 - Solidarity labor movement, Lech Walesa
 - Reunification of Germany, demolition of the Berlin Wall
- Geography
 - Consequences of the breakup of the Soviet Union
 - New European states from former Soviet Union:
 - Belarus, Latvia, Lithuania, Moldova, Ukraine
 - Newly independent Muslim states in Asia (with ethnic Russian minorities):
 - Kazakstan, Kyrgyzstan, Turkmenistan, Uzbekistan
 - Caucasus, mountainous region where Western and Islamic cultures meet:
 - Armenia, Azerbaijan, Georgia
- Legacies of Soviet policies
 - Numerous internal republics, many language distinctions
 - Forced relocation of large numbers of ethnic minorities
 - Environmental poisoning from industrial and farm practices

C. CHINA UNDER COMMUNISM

- The Cultural Revolution
- Tiananmen Square

D. CONTEMPORARY EUROPE

- Toward European unity
 - European Economic Community, "Common Market"
 - European Parliament, Brussels, Maastricht Treaty on European Union
 - France linked to Britain by the Channel Tunnel ("Chunnel")
 - European Union; the Euro
- Conflict and change in Central Europe
 - Geography of the Balkan region
 - Ethnically fragmented, mixture of languages and religions
 - Mountainous region, Danube River
 - Seas: Adriatic, Ionian, Black, Aegean, Mediterranean
 - Romania, Bulgaria, Greece, Albania
 - Countries that emerged from the breakup of Yugoslavia: Slovenia, Croatia, Bosnia and Herzegovina, Macedonia
 - Bosnian conflict
 - "Balkanization"

E. THE END OF APARTHEID IN SOUTH AFRICA

- Background
 - British and Dutch colonialism in South Africa, Cecil Rhodes, Afrikaners
 - African resistance, Zulu wars, Shaka
 - Boer Wars
 - Union of South Africa, majority nonwhite population but white minority rule
 - Apartheid laws
- African National Congress
 - Nelson Mandela

- Internal unrest and external pressures (such as economic sanctions) force South Africa to end apartheid, Mandela released

VII. Civics: The Constitution—Principles and Structure of American Democracy

- Overview of the U.S. Constitution
 - James Madison
 - Founders' view of human nature
 - Concept of popular sovereignty, the Preamble
 - Rule of law
 - Separation of powers
 - Checks and balances
 - Enumeration of powers
 - Separation of church and state
 - Civilian control of the military
- Bill of Rights
 - Amendments protecting individual rights from infringement (1-3)
 - Amendments protecting those accused of crimes (5-8), Miranda ruling
 - Amendments reserving powers to the people and states (9 and 10)
 - Amendment process
 - Amendments 13 and 19
- Legislative branch: role and powers of Congress
 - Legislative and representative duties
 - Structure of the Congress, committee system, how a bill is passed
 - Budget authority, “power of the purse”
 - Power to impeach the president or federal judge
- Executive branch: role and powers of the presidency
 - Chief executive, cabinet departments, executive orders
 - Chief diplomat, commander-in-chief of the armed forces
 - Chief legislator, sign laws into effect, recommend laws, veto power
 - Appointment power, cabinet officers, federal judges
- Judiciary: Supreme Court as Constitutional interpreter
 - Loose construction (interpretation) vs. strict construction of U.S. Constitution
 - Concepts of due process of law, equal protection
 - Marbury v. Madison*, principle of judicial review of federal law, Chief Justice John Marshall

VIII. Geography of Canada and Mexico

- Canada
 - The ten provinces and two territories, Nunavut (self-governing American Indian homeland), Ottawa
 - St. Lawrence River, Gulf of St. Lawrence, Grand Banks, Hudson Bay, McKenzie River, Mt. Logan
 - Two official languages: English and French, separatist movement in Quebec
 - Montreal, Toronto, Vancouver, most Canadians live within 100 miles of U.S.
 - Rich mineral deposits in Canadian Shield, grain exporter
 - U.S. and Canada share longest open international boundary, affinities between neighboring U.S. and Canadian regions
 - North American Free Trade Agreement (NAFTA)
- Mexico
 - Mexico City: home of nearly one-quarter of population, vulnerable to earthquakes
 - Guadalajara, Monterrey
 - Sierra Madre mountains, Gulf of California, Yucatan Peninsula
 - Oil and gas fields
 - Rapid population growth rate
 - North American Free Trade Agreement (NAFTA), Maquiladoras

Visual Arts: Grade 8

SEE INTRODUCTION, "The Arts in the Curriculum."

Teachers: In schools, lessons on the visual arts should illustrate important elements of making and appreciating art, and emphasize important artists, works of art, and artistic concepts. When appropriate, topics in the visual arts may be linked to topics in other disciplines. While the following guidelines specify a variety of artworks in different media and from various cultures, they are not intended to be comprehensive. Teachers are encouraged to build upon the core content and expose children to a wide range of art and artists.

In studying the works of art specified below, and in creating their own art, students should review, develop, and apply concepts introduced in previous grades, such as line, shape, form, space, texture, color, light, design, and symmetry.

I. Art History: Periods and Schools

Teachers: The guidelines here continue the organizational scheme established in sixth and seventh grades, which combined art history with analysis of specific illustrative works. Timelines may help students situate the artists, periods, and schools. Note that the periods and characteristics are not absolute distinctions but generally helpful categories (to which there are always exceptions) often used in discussions of art.

A. PAINTING SINCE WORLD WAR II

- Examine representative artists and works, including
 - Jackson Pollock and Abstract Expressionism: *Painting, 1948*
 - Willem de Kooning, *Woman and Bicycle*
 - Mark Rothko, *Orange and Yellow*
 - Helen Frankenthaler, *Wales*
 - Andy Warhol and Pop Art: *Campbell's Soup Can, Marilyn*
 - Roy Lichtenstein, *Whaam*
 - Romare Bearden, *She-Ba*
 - Jacob Lawrence, a work from his *Builder* series or *Migration of Negroes* series

B. PHOTOGRAPHY

- Examine representative artists and works, including
 - Edward Steichen, *Rodin with His Sculptures "Victor Hugo" and "The Thinker"*
 - Alfred Steiglitz, *The Steerage*
 - Dorothea Lange, *Migrant Mother, California*
 - Margaret Bourke-White, *Fort Peck Dam*
 - Ansel Adams, *Moonrise, Hernandez, New Mexico*
 - Henri Cartier-Bresson, *The Berlin Wall*

C. 20TH-CENTURY SCULPTURE

- Examine representative artists and works, including
 - Auguste Rodin: *The Thinker, Monument to Balzac*
 - Constantin Brancusi, *Bird in Space*
 - Pablo Picasso, *Bull's Head*
 - Henry Moore, *Two Forms*
 - Alexander Calder, *Lobster Trap and Fish Tail*
 - Louise Nevelson, *Black Wall*
 - Claes Oldenburg, *Clothespin*
 - Maya Lin, *Vietnam Veterans Memorial*









II. Architecture Since the Industrial Revolution

- Demonstrations of metal structure: Crystal Palace, Eiffel Tower
- First skyscrapers: “Form follows function”
 - Louis Sullivan: Wainwright Building
 - Famous skyscrapers: Chrysler Building, Empire State Building
- Frank Lloyd Wright: Fallingwater, Guggenheim Museum
- The International Style
 - Walter Gropius, Bauhaus Shop Block
 - Le Corbusier: Villa Savoye, Unite d’Habitation, Notre Dame du Haut
 - Ludwig Mies van der Rohe and Philip Johnson: Seagram Building

SEE INTRODUCTION, “The Arts in the Curriculum.”

I. Elements of Music

Teachers: The Music guidelines for grades 6–8 share a basic vocabulary of the elements of music that can inform the discussion, appreciation, and study of selected musical works. Following these guidelines are recommendations in each grade for a core of musical content, broadly organized as a history of music from early to modern times, with attention to specific periods, composers, and genres. While these guidelines focus on musical vocabulary, appreciation, and history, musical performance should be encouraged and emphasized as local resources allow.

- Review as necessary from earlier grades:
 - The orchestra and families of instruments (strings, wind, brass, percussion); keyboard instruments
 - Vocal ranges: soprano, mezzo-soprano, alto; tenor, baritone, bass
- Recognize frequently used Italian terms:
 - grave* (very very slow)
 - largo* (very slow)
 - adagio* (slow)
 - andante* (moderate; “walking”)
 - moderato* (medium)
 - allegro* (fast)
 - presto* (very fast)
 - prestissimo* (as fast as you can go)
 - ritardando* and *accelerando* (gradually slowing down and getting faster)
 - crescendo* and *decrescendo* (gradually increasing and decreasing volume)
 - legato* (smoothly flowing progression of notes), *staccato* (crisp, distinct notes)
- Recognize introduction, interlude, and coda in musical selections.
- Recognize theme and variations.
- Identify chords [such as I (tonic), IV (subdominant), V (dominant); V7]; major and minor chords; chord changes; intervals (third, fourth, fifth).
- Understand what an octave is.
- Understand the following notation and terms:
 - names of lines and spaces in the treble clef; middle C
 -  treble clef  bass clef  staff, bar line, double bar line, measure, repeat signs
 -  whole note  half note  quarter note  eighth note
 - whole rest, half rest, quarter rest, eighth rest
 -  grouped sixteenth notes
 - tied notes and dotted notes
 - # sharps ♭ flats ♮ naturals
 - Da capo* [*D.C.*] *al fine*
 - meter signature: $\frac{4}{4}$ or common time $\frac{2}{4}$ $\frac{3}{4}$ $\frac{6}{8}$
 - soft *pp* *p* *mp* loud *mf* *f* *ff*

II. Non-Western Music

- Become familiar with scales, instruments, and works from various lands, for example: 12-tone scale, sitar from India, Caribbean steel drums, Japanese koto.

III. Classical Music: Nationalists and Moderns

Teachers: While these guidelines focus on musical vocabulary, appreciation, and history, musical performance should be encouraged and emphasized as resources allow. The focus here combines music history with appreciation of illustrative works, and continues from grades 6 and 7 the idea of classifying Western music by periods, with examples of specific composers and works, as well as some associated musical terms. Timelines may help students situate the periods. The periods and their characteristics are not absolute distinctions but generally helpful categories often used in discussions of music.

Note: In seventh grade, students were introduced to works by Dvořák, Grieg, and Tchaikovsky.

A. MUSIC AND NATIONAL IDENTITY

- Composers and works:
 - Jean Sibelius, *Finlandia*
 - Bela Bartók, folk-influenced piano music such as *Allegro barbaro*, selections from *Mikrokosmos* or *For Children*
 - Joaquin Rodrigo, *Concierto de Aranjuez*
 - Aaron Copland, *Appalachian Spring (Suite)*

B. MODERN MUSIC

- Composers and works:
 - Claude Debussy, *La Mer*, first movement, “De l’aube à midi sur la mer”
 - Igor Stravinsky, *The Rite of Spring*, first performed in Paris, 1913

IV. Vocal Music

A. OPERA

- Terms: overture, solo, duet, trio, quartet, chorus, aria, recitative
- Composers and works:
 - Gioacchino Rossini, from *The Barber of Seville*: Overture and “Largo al factotum”
 - Giuseppe Verdi, from *Rigoletto*: aria, “Questa o quella”; duet, “Figlia! . . . Mio padre!”; aria, “La donna è mobile”; quartet, “Bella figlia dell’amore”

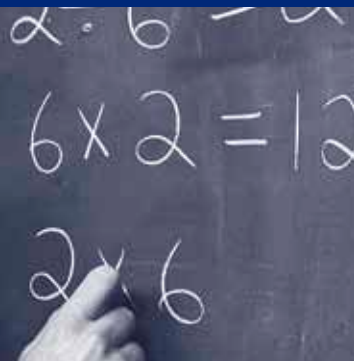
B. AMERICAN MUSICAL THEATER

- Composers and popular songs:
 - Irving Berlin, “There’s No Business Like Show Business,” “Blue Skies”
 - George M. Cohan, “Give My Regards to Broadway,” “Yankee Doodle Dandy”
 - Cole Porter, “Don’t Fence Me In,” “You’re the Top”
- Broadway musicals: selections including
 - Jerome Kern, *Showboat*: “Ole Man River”
 - Rodgers and Hammerstein, *Oklahoma!*: “Oh What a Beautiful Mornin’,” “Oklahoma”
 - Leonard Bernstein and Stephen Sondheim, *West Side Story*: “Maria,” “I Feel Pretty”

Teachers: These guidelines are representative of the mathematics typically learned at this grade level in countries that have strong math traditions and whose students score well in international comparisons. Concepts that were in the Grade 7 specifications are generally not repeated here but they are assumed.

In learning the new concepts and procedures, students should use previously acquired mathematics to ensure that the procedures become automatic and habitual. Students should continue to master the use of measuring and drawing instruments, develop their mental arithmetic and their approximating abilities, become more familiar with deductive reasoning, and use calculators and computers in a thoughtful way. The work in eighth grade requires some minimal use of a scientific calculator.

Appropriate preparation for algebra is critical for success in that subject and some students, particularly students who have not been in a Core Knowledge school, may simply not be ready for the content described herein. Most schools will need to spend a limited time reviewing prerequisite concepts, but those students for whom that is insufficient may well require a year in a program that is closer to the Grade 7 specifications.



I. Algebra

A. PROPERTIES OF THE REAL NUMBERS

- Be able to raise a positive number to a fractional power and simplify appropriately, including rationalizing the denominator of a simple radical expression.
- Know and use of the rules of exponents extended to fractional exponents.
- Use the definition of absolute value to solve equations such as $|2x - 3| + 3x = 4x - 2$ and understand why “extraneous solutions” are not solutions at all.

B. RELATIONS, FUNCTIONS, AND GRAPHS (TWO VARIABLES)

- Be able to plot a set of ordered pairs and surmise a reasonable graph of which the points are a part.
- Be able to make a reasonable table of ordered pairs from a given function rule, plot the points, and surmise its graph.
- Know that the points of intersections of two graphs are simultaneous solutions of the relations that define them and indicate approximate numerical solutions.

C. LINEAR EQUATIONS AND FUNCTIONS (TWO VARIABLES)

- Graph linear equations by finding the x- and y-intercepts; for example, know that $2x + 3y = 4$ is linear and graph it using its intercepts.
- Be able to convert between slope-intercept form ($y = mx + b$) and standard form ($ax + by = c$).
- Write an equation for a line given two points or one point and its slope.
- Know lines are parallel or perpendicular from their slopes.
- Find the equation of a line perpendicular to a given line that passes through a given point.
- Understand and be able to graph the solution set of a linear inequality.
- Solve a system of two linear equations in two variables algebraically and interpret the answer graphically.
- Solve a system of two linear inequalities in two variables and sketch the solution set.
- Solve word problems (including mixture, digit, and age problems) that involve linear equations.

D. ARITHMETIC OF RATIONAL EXPRESSION

- Factor second- and higher-degree polynomials when standard techniques apply, such as factoring the GCF out of all terms of a polynomial, the difference of two squares, and perfect squares trinomials.
- Add, subtract, multiply, and divide rational expressions and express in simplest form.

E. QUADRATIC EQUATIONS AND FUNCTIONS

- Solve quadratic equations in one variable by factoring or by completing the square.
- Complete the square to write a quadratic expression as the difference of two squares.
- Graph quadratic functions by completing the square to find the vertex and know that their zeros (roots) are the x-intercepts.
- Know the quadratic formula and be familiar with its proof by completing the square.
- Know how to clear fractions to solve equations that lead to linear or quadratic equations.
- Know how to use squaring to solve problems that lead to linear or quadratic equations.
- Solve word problems, including physical problems such as the motion of an object under the force of gravity, and combined rate (work) problems.

II. Geometry**A. ANALYTIC GEOMETRY**

- Reinforce the knowledge of algebra with geometry and vice versa.
- Know that the midpoint of a line segment of any slope, projected perpendicularly onto the horizontal x-axis or vertical y-axis, will be the midpoint of its projection.
- Know the similar triangles connection (AA Similarity) with slope and that this is the tangent of the angle the line makes with the x-axis.

B. INTRODUCTION TO TRIGONOMETRY

- Know that in a right triangle the cosine of an angle is the ratio of the adjacent side to the hypotenuse and the sine is the ratio of the opposite side to the hypotenuse.
- Know the values of the sine, cosine, and tangent of 0, 30, 45, 60, and 90 degrees and use a scientific calculator to determine the approximate value of any acute angle.
- Use a scientific calculator to determine the approximate value of an acute angle of a given sine, cosine, or tangent.

C. TRIANGLES AND PROOFS

- Prove that the bisector of an angle is the set of all points equidistant from both sides.
- Prove that any triangle inscribed in a circle with one side as the diameter is a right triangle.
- Prove the Pythagorean Theorem.
- Know that a line tangent to a circle is perpendicular to the radius at the point of tangency.
- Taking geometry as a model, understand the concept of a mathematical proof, as distinct from an opinion, an approximation, or a conjecture based on specific cases.
- In geometry and elsewhere, understand that a single-counter example suffices to disprove a general assertion.

Teachers: Effective instruction in science requires not only direct experience and observation but also book learning, which helps bring coherence and order to a student's scientific knowledge. Only when topics are presented systematically and clearly can students make steady and secure progress in their scientific learning. The Science sequence for the middle school grades aims for more intensive and selective study of topics, a number of which were introduced in earlier grades. The *Sequence* continues the practice of studying topics from each of the major realms of science (physical, life, and earth science). Students are expected to do experiments and write reports on their findings.



I. Physics

A. MOTION

- Velocity and speed

The velocity of an object is the rate of change of its position in a particular direction.

Speed is the magnitude of velocity expressed in distance covered per unit of time.

Changes in velocity can involve changes in speed or direction or both.

- Average speed = total distance traveled divided by the total time elapsed

Formula: Speed = Distance/Time ($S = D/T$)

Familiar units for measuring speed: miles or kilometers per hour

B. FORCES

- The concept of force: force as a push or pull on an object

Examples of familiar forces (such as gravity, magnetic force)

A force has both direction and magnitude.

Measuring force: expressed in units of mass, pounds in English system, newtons in metric system

- Unbalanced forces cause changes in velocity.

If an object is subject to two or more forces at once, the effect is the net effect of all forces.

The motion of an object does not change if all the forces on it are in balance, having net effect of zero.

The motion of an object changes in speed or direction if the forces on it are unbalanced, having net effect other than zero.

To achieve a given change in the motion of an object, the greater the mass of the object, the greater the force required.

C. DENSITY AND BUOYANCY

- When immersed in a fluid (i.e. liquid or gas), all objects experience a buoyant force.

The buoyant force on an object is an upward (counter-gravity) force equal to the weight of the fluid displaced by the object.

Density = mass per unit volume

Relation between mass and weight (equal masses at same location have equal weights)

- How to calculate density of regular and irregular solids from measurements of mass and volume

The experiment of Archimedes

- How to predict whether an object will float or sink

D. WORK

- In physics, work is a relation between force and distance: work is done when force is exerted over a distance.

Equation: Work equals Force x Distance ($W = F \times D$)

Common units for measuring work: foot-pounds (in English system), joules (in metric system; 1 joule = 1 newton of force x 1 meter of distance)

E. ENERGY

- In physics, energy is defined as the ability to do work.
- Energy as distinguished from work
To have energy, a thing does not have to move.
Work is the transfer of energy.
- Two main types of energy: kinetic and potential
Some types of potential energy: gravitational, chemical, elastic, electromagnetic
Some types of kinetic energy: moving objects, heat, sound and other waves
- Energy is conserved in a system.

F. POWER

- In physics, power is a relation between work and time: a measure of work done (or energy expended) and the time it takes to do it.

Equation: Power equals Work divided by Time ($P = W/T$), or Power = Energy/Time

Common units of measuring power: foot-pounds per second, horsepower (in English system); watts, kilowatts (in metric system)

II. Electricity and Magnetism**A. ELECTRICITY**

- Basic terms and concepts (review from grade 4):
Electricity is the charge of electrons in a conductor.
Opposite charges attract, like charges repel.
Conductors and insulators
Open and closed circuits
Short circuit: sudden surge of amperage due to the reduction of resistance in a circuit;
protection from short circuits is achieved by fuses and circuit breakers
Electrical safety
- Electricity as the charge of electrons
Electrons carry negative charge; protons carry positive charge
Conductors: materials like metals that easily give up electrons
Insulators: materials like glass that do not easily give up electrons
- Static electricity
A static charge (excess or deficiency) creates an electric field.
Electric energy can be stored in capacitors (typically two metal plates, one charged positive and one charged negative, separated by an insulating barrier). Capacitor discharges can release fatal levels of energy.
Grounding drains an excess or makes up a deficiency of electrons, because the earth is a huge reservoir of electrons. Your body is a ground when you get a shock of static electricity.
Lightning is a grounding of static electricity from clouds.
- Flowing electricity
Electric potential is measured in volts.
Electric flow or current is measured in amperes: 1 ampere = flow of 1 coulomb of charge per second (1 coulomb = the charge of 6.25 billion billion electrons).
The total power of an electric flow over time is measured in watts. Watts = amps x volts;
amps = watts/volts; volts = watts/amps.
The unit of electrical resistance is the ohm.



B. MAGNETISM AND ELECTRICITY

- Earth's magnetism
 - Earth's magnetism is believed to be caused by movements of charged atoms in the molten interior of the planet.
 - Navigation by magnetic compass is made possible because the earth is a magnet with north and south magnetic poles.
- Connection between electricity and magnetism
 - Example: move a magnet back and forth in front of wire connected to a meter, and electricity flows in the wire. The reverse: electric current flowing through a wire exerts magnetic attraction.
 - Spinning electrons in an atom create a magnetic field around the atom.
 - Unlike magnetic poles attract, like magnetic poles repel.
 - Practical applications of the connection between electricity and magnetism, for example:
 - An electric generator creates alternating current by turning a magnet and a coil of wire in relation to each other; an electric motor works on the reverse principle.
 - A step-up transformer sends alternating current through a smaller coil of wire with just a few turns next to a larger coil with many turns. This induces a higher voltage in the larger coil. A step-down transformer does the reverse, sending current through the larger coil and creating a lower voltage in the smaller one.

III. Electromagnetic Radiation and Light

- Waves and electromagnetic radiation
 - Most waves, such as sound and water waves, transfer energy through matter, but light belongs to a special kind of radiation that can transfer energy through empty space.
- The electromagnetic spectrum
 - From long waves, to radio waves, to light waves, to x-rays, to gamma rays
 - Called "electromagnetic" because the radiation is created by an oscillating electric field which creates an oscillating magnetic field at right angles to it, which in turn creates an oscillating electric field at right angles, and so on, with both fields perpendicular to each other and the direction the wave is moving.
 - The light spectrum: from infrared (longest) to red, orange, yellow, green, blue, violet (shortest)
 - Speed in a vacuum of all electromagnetic waves including light: 300,000 km per second, or 186,000 miles per second; a universal constant, called c
- Refraction and reflection
 - Refraction: the slowing down of light in glass causes it to bend, which enables lenses to work for television, photography, and astronomy
 - How Isaac Newton used the refraction of a prism to discover that white light was made up of rays of different energies (or colors)
 - Reflection: concave and convex reflectors; focal point

IV. Sound Waves

- General properties of waves
 - Waves transfer energy by oscillation without transferring matter; matter disturbed by a wave returns to its original place.
 - Wave properties: wavelength, frequency, speed, crest, trough, amplitude
 - Two kinds of waves: transverse (for example, light) and longitudinal (for example, sound)
 - Common features of both kinds of waves:
 - Speed and frequency of wave determine wavelength.
 - Wave interference occurs in both light and sound.
 - Doppler effect occurs in both light and sound.

- Sound waves: longitudinal, compression waves, made by vibrating matter, for example, strings, wood, air
While light and radio waves can travel through a vacuum, sound waves cannot. Sound waves need a medium through which to travel.
- Speed
Sound goes faster through denser mediums, that is, faster through solids and liquids than through air (gases).
At room temperature, sound travels through air at about 340 meters per second (1,130 feet per second).
Speed of sound = Mach number
Supersonic booms; breaking the sound barrier
- Frequency
Frequency of sound waves measured in “cycles per second” or Hertz (Hz)
Audible frequencies roughly between 20 and 20,000 Hz
The higher the frequency, the higher the subjective “pitch”
- Amplitude
Amplitude or loudness is measured in decibels (dB).
Very loud sounds can impair hearing or cause deafness.
Resonance, for example, the sound board of a piano, or plates of a violin

V. Chemistry of Food and Respiration

- Energy for most life on earth comes from the sun, typically from sun, to plants, to animals, back to plants.
- Living cells get most of their energy through chemical reactions.
All living cells make and use carbohydrates (carbon and water), the simplest of these being sugars.
All living cells make and use proteins, often very complex compounds containing carbon, hydrogen, oxygen, and many other elements.
Making these compounds involves chemical reactions which need water, and take place in and between cells, across cell walls. The reactions also need catalysts called “enzymes.”
Many cells also make fats, which store energy and food.
- Energy in plants: photosynthesis
Plants do not need to eat other living things for energy.
Main nutrients of plants: the chemical elements nitrogen, phosphorus, potassium, calcium, carbon, oxygen, hydrogen (some from soil or the sea, others from the air)
Photosynthesis, using chlorophyll, converts these elements into more plant cells and stored food using energy from sunlight.
Leafy plants mainly get their oxygen dissolved in water from their roots, and their carbon mainly from the gas CO_2 .
Plant photosynthesis uses up CO_2 and releases oxygen.
- Energy in animals: respiration
Animal chemical reactions do the opposite of plants—they use up oxygen and release CO_2 .
In animals the chief process is not photosynthesis but respiration, that is, the creation of new compounds through oxidation.
Animals cannot make carbohydrates, proteins, and fats from elements. They must eat these organic compounds from plants or other animals, and create them through respiration.
Respiration uses oxygen and releases CO_2 , creating an interdependence and balance between plant and animal life.



- Human nutrition and respiration
 - Humans are omnivores and can eat both plant and animal food.
 - Human respiration, through breathing, gets oxygen to the cells through the lungs and the blood.
 - The importance of hemoglobin in the blood
- Human health
 - While many other animals can make their own vitamins, humans must get them from outside.
 - A balanced diet: the food pyramid or “MyPlate” for humans (review); identification of the food groups in terms of fats, carbohydrates, proteins, vitamins, and trace elements

VI. Science Biographies

Albert Einstein (physicist whose theories of relativity allowed great advancements in the study of space, matter, energy, time, and gravity)

Dorothy Hodgkin (chemist who determined the structure of vitamin B12)

James Maxwell (scientist who created mathematical equations that expressed the basic laws of light, electricity, and magnetism)

Charles Steinmetz (scientist who made key advances in electric power)

appendices

Overview of Topics

Appendices

Appendix A

Why Listening and Learning are Critical
to Reading Comprehension

Appendix B

Using Trade Books to Achieve College and Career
Readiness: The Principles of Democracy

Appendix C

Domains and Core Content Objectives for the
Core Knowledge Language Arts Program, K–2

Appendix D

Core Knowledge Grade-by-Grade Resource
Recommendations

Appendix A:

Why Listening and Learning are Critical to Reading Comprehension

Appendix A: Why Listening and Learning are Critical to Reading Comprehension

Those who follow education know all too well that concern about poor student achievement in literacy has reached levels that border on desperation. By every standard measure, it is clear that large numbers of students are leaving American schools ill-prepared to pursue higher education or careers due to poor literacy skills. On international comparisons of reading achievement, the United States ranks below nearly all other countries, surpassed by the likes of Finland, Korea, Japan, and even Hungary and Poland. Longitudinal test results from the National Assessment of Education Progress (NAEP) show little or no growth over a period of decades.

Some progress has been made in recent years in the early elementary grades, thanks to both the Reading First initiative and the No Child Left Behind (NCLB) legislation which have underscored the importance of explicitly and systematically teaching decoding skills. Since the inception of these programs, test scores in the very early grades (K–2) have risen. This improvement reflects the benefits of explicit instruction in phonemic awareness, systematic phonics, and the development of fluency.

Unfortunately, however, these initial improvements have proven unsustainable. As these very same students moved into the upper elementary grades, their test scores have dropped or flatlined. The conclusion is inescapable: the explicit teaching of decoding skills is necessary, but not sufficient to achieve the goal of full literacy. While systematically teaching decoding leads to improved performance on early reading evaluations, which focus on decoding skills, American educators have yet to find an analogous remedy that leads to improved test scores in the latter grades, when the focus shifts to assessing whether students understand what they read. The approach currently favored by most language arts programs, hours of instructional time to teaching and practicing an ever expanding collection of reading comprehension strategies, has proven ineffective. Current research suggests that teaching reading strategies has value in helping students recognize the purpose for reading and may lead to a slight boost in reading comprehension scores, but not the sustained improvement that would be indicative of true literacy. Something is still missing.

What’s missing is background knowledge. “Most of us think about reading in a way that is fundamentally incorrect,” observes University of Virginia cognitive scientist Daniel T. Willingham. “We think of it as transferable, meaning that once you acquire the ability to read, you can read anything. But being able to decode letter strings fluently is only half of reading. In order to understand what you’re reading, you need to know something about the subject matter. And that doesn’t just mean that you need to know the vocabulary—you need to have the right knowledge of the world,” he says.

The successful experience of schools using Core Knowledge during the past 20 years demonstrates the importance of background knowledge to reading comprehension. Time and again, schools implementing the content-specific Core Knowledge curriculum have noted that even though state and standardized tests are not tied to the *Core Knowledge Sequence*, student performance on such tests improves at statistically significant levels when students are exposed to Core Knowledge over several years. Instead of scores dropping or flatlining at the upper grade levels, Core Knowledge students’ test scores actually rise! “General reading comprehension ability is much more than comprehension strategies,” wrote Core Knowledge founder E.D. Hirsch, Jr. in his 2006 book *The Knowledge Deficit*; “it requires a definite range of general knowledge.”

In order to understand what is read, it is absolutely necessary to have knowledge of relevant things that are not explicitly stated. Reading is a two-lock box, and opening that box requires not only adequate decoding skills but also language, vocabulary and background knowledge that provide a foundation and underlying context for students to understand what they are reading.

There is “truly a mountain of data that students must have content knowledge to read effectively,” says Willingham. Unfortunately, existing language arts programs have not been designed to build this foundation of language, vocabulary and background knowledge. This is why the Core Knowledge Foundation is creating the *Core Knowledge Language Arts* program.

LANGUAGE—LISTENING, SPEAKING, READING, AND WRITING

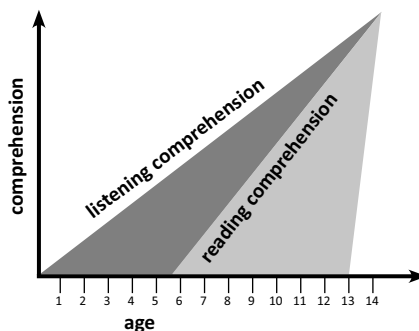
Traditional language arts instruction has typically paid little attention to listening and speaking. This failure to focus on the development of oral language in language arts instruction is a serious oversight. The ability to read and write written language, is highly correlated with students’ oral language proficiency, and the ability to understand a text read aloud is a prerequisite for making sense of the same text in printed form. It is essential that children build listening and speaking competency while also developing reading and writing skills.

Linguists distinguish between receptive and expressive language. Receptive language is language that we take in, process and understand. Expressive language is language we generate and produce. Oral language is spoken language or speech. Written language is print. Oral language is primary. Written language builds upon it.

	Receptive Language	Expressive Language
Oral Language	Listening	Speaking
Written Language	Reading (two keys: <i>decoding + comprehension</i>)	Writing (<i>handwriting, spelling, written composition</i>)

Researchers who study the development of language in young children point out that oral language development precedes and is the foundation for written language development. Children’s oral language competence is strongly predictive of their facility in learning to read and write. A child’s listening and speaking vocabulary, and even mastery of syntax, set boundaries as to what they can read and understand no matter how well they can decode.

It is important to note that for young children in preschool and the early grades, *receptive and expressive abilities do not develop simultaneously or at the same pace; receptive language generally precedes expressive language*. Science confirms what common sense suggests: children need to be able to understand words before they can produce and use them. The groundbreaking work of Hart and Risley (1995), who studied young children in the context of their early family life, found the number of words they heard before they arrived in kindergarten predicted how many words they understood and how fast they could learn new words in kindergarten. Even more significantly, five years later, in third grade, early language competence still predicted language and reading comprehension. The preschoolers who had heard more words, and subsequently learned more words orally, became better readers.



Source: T. G. Sticht and J. James, “Listening and reading,” in P. Pearson, ed., *Handbook of Research on Reading*. New York: Longmans, 1984. (1984)

This finding offers a profoundly important lesson for educators. *Early language disadvantage persists and manifests itself as illiteracy when educational practices fail to recognize the importance of oral language.* A meta-analysis of research by Thomas Sticht (1984) reinforces the importance and primacy of oral language, suggesting that it endures well past the time during which most children have started reading independently. Sticht's analysis strongly suggests that children's listening comprehension outpaces reading comprehension until the middle school years (grades 6–8).

The takeaway message is clear and obvious: we must devote at least as much time during the language arts block to reading *aloud* to young children as we currently devote to providing children with the skills they will need to decode and encode language. This is one of the fundamental premises of the Listening and Learning Strand of the *Core Knowledge Language Arts* program.

BUILDING LISTENING COMPREHENSION AND CONTENT KNOWLEDGE BY READING ALOUD

Written text makes use of richer vocabulary and more complex syntax than conversational language. It is important that young children be exposed not only to the language of everyday conversation but also to the richer and more formal language of books. This is best done through frequent reading aloud. Children's ability to understand what they hear far outpaces their ability to independently read and understand written text. By listening to stories or nonfiction selections read aloud, children can experience the complexities of written language without expending cognitive energy on decoding. Helping young children develop the ability to listen to and understand written texts read aloud must be an integral part of any initiative designed to build literacy.

CHOOSING READ-ALOUDS

Not just any read-aloud(s), however, will do. First, careful consideration should be given to the selection of text read aloud to ensure that the vocabulary and syntax presented is rich and complex.

Furthermore, to make efficient use of instructional time, read-alouds must also be selected that build a broad knowledge base, while simultaneously building listening comprehension and language skills. To do this, the selection of *read-alouds within a given grade level and across grade levels must be guided by a coherent, sequenced approach to building knowledge.* This can be achieved by selecting fiction and nonfiction read-alouds from grade level topics identified in the *Core Knowledge Sequence*. The topics for read-alouds in the Listening and Learning Strand of the *Core Knowledge Language Arts* program have been chosen on this basis.

By reading a story or nonfiction selection aloud, we allow children to experience written language without the burden of decoding, granting them access to content they may not be able to read and understand by themselves. They are then free to focus their mental energy on the words and ideas presented in the text, gaining the language and background knowledge that will be needed to tackle rich, written content on their own.

DOMAINS AND STAYING ON A TOPIC

Building knowledge systematically in language arts is like giving children various pieces of a puzzle in each grade that, over time, will form the big picture. As noted above, read-alouds—within and across grade levels—need to be selected around topics or domains that systematically build knowledge. A domain is an area of knowledge, such as the human body, plants, astronomy, Native Americans, civil rights, and so on. It is strongly recommended that daily read-alouds focus on a single domain over a sustained period of time—about two weeks—rather than intermingling randomly selected read-alouds on a variety of topics. The *Tell It Again! Read-Aloud Anthologies* for the Listening and Learning Strand are organized by domain.

Staying on a topic or domain increases the chances that students will receive multiple exposures to key vocabulary words. For example, in the kindergarten Plants domain, students get multiple

exposures to key words from this domain, such as *nutrients*, *photosynthesis*, *crop*, and *harvest*. Hearing these kinds of words used in meaningful contexts over the course of a domain efficiently and exponentially increases the rate at which children acquire new vocabulary.

Acquisition of both language and knowledge will also be enhanced if, following each read-aloud, children participate in rich, structured conversations with an adult in response to the written text that has been read aloud. In this way, they can begin to orally practice comparing, analyzing, and synthesizing ideas in written text in much the same way as they will be expected to do as independent readers in the later grades.

ENSURING COHERENCE

The knowledge children have learned about particular topics in early grade levels should then be expanded and developed in subsequent grade levels to ensure an increasingly deeper understanding of these topics.

The *Core Knowledge Sequence* is designed to provide schools with a coherent, cumulative and content-specific curriculum. In Core Knowledge schools, teaching and learning are more effective as teachers help students build upon prior knowledge and make more efficient progress from one year to the next. All students enjoy more equal educational opportunities as they are motivated by consistently challenging content. And all children are prepared to become members of the wider national community, respectful of diversity while strengthened by the shared knowledge that helps unite us on common ground.

To learn more, visit the Core Knowledge Reading Room on our website at www.coreknowledge.org.

You can also find the following articles and video online:

Building Knowledge

The Case for Bringing Content into the Language Arts Block and for a Knowledge-Rich Curriculum Core for All Children

By E.D. Hirsch, Jr.

American Educator, Spring 2006

http://archive.aft.org/pubs-reports/american_educator/issues/spring06/hirsch.htm

How Knowledge Helps

It Speeds and Strengthens Reading Comprehension, Learning—and Thinking

By Daniel T. Willingham

American Educator, Spring 2006

http://archive.aft.org/pubs-reports/american_educator/issues/spring06/willingham.htm

Teaching Content Is Teaching Reading

<http://www.youtube.com/watch?v=RiP-ijdxqEc>

The Importance of Oral Language

The Early Catastrophe: The 30 Million Word Gap by Age 3

By Betty Hart and Todd Risley

American Educator, Spring 2003

http://archive.aft.org/pubs-reports/american_educator/spring2003/catastrophe.html

Appendix B:

Using Trade Books
to Achieve
College and
Career Readiness:

The Principles of
Democracy

Appendix B: Using Trade Books to Achieve College and Career Readiness: The Principles of Democracy

To be able to read and understand the Declaration of Independence, the Preamble to the Constitution, or Dr. Martin Luther King Jr.'s "I Have a Dream" speech, all texts identified in the newly released Common Core State Standards, literate adults must have a firm grasp of both the language and historical context of these texts. Building this foundation starts in the early elementary grades.

While all American history topics are relevant in some way to the formation of the United States and to the understanding of how the principles of American democracy came about, the listing on the next page represents a grade-appropriate mini-sequence of American history topics that directly relate to the ideas and freedoms embodied in the Declaration of Independence and the Constitution. Age-appropriate trade book titles that could be used as read-alouds are also identified for each domain to illustrate how carefully selected read-alouds can be used to coherently build domain knowledge within and across grade levels.

Study of American history and geography can begin in grades K–2 with a brief overview of major events and figures, from the earliest days to recent times. (The term "American" here generally refers to the lands that became the United States.) A more in-depth, chronological study of American history can then begin again in grade 3 and continue onward.

Exemplar Texts on a Topic Across Grades

Principles of Democracy

To be able to read and understand the Declaration of Independence, the Preamble to the Constitution, or King's "I Have a Dream" speech, literate adults must have a firm grasp of both the language and historical context of these texts. Building this foundation starts in the early elementary grades. All American history topics are relevant in some way to the formation of the United States and to the understanding of how the principles of American democracy came about. This listing represents a grade-appropriate mini-sequence of American history topics that directly relate to the ideas and freedoms embodied in the Declaration of Independence and the Constitution.

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Reference the rest of this listing for more detail about specific age-appropriate subtopics as well as additional titles.

K

Early Exploration and Settlement

- The Voyage of Columbus in 1492
 - The Pilgrims
- A Picture Book of Christopher Columbus* by David A. Adler (1991)
- Christopher Columbus* by Mary Dodson Wade (2003)
- The Pilgrims' First Thanksgiving* by Anne McGovern (1973)
- Pilgrims of Plymouth* by Susan E. Goodman (1999)
- § *The Pilgrims' Thanksgiving from A-Z* by Laura Crawford (2005)

Presidents and American Symbols

- Introduction to famous presidents
 - George Washington
 - Thomas Jefferson
 - Abraham Lincoln
 - Theodore Roosevelt
 - Current United States president
 - American Symbols and Figures
- My Teacher for President* by Kay Winters (2004)
- George Washington* by Philip Abraham (2002)
- A Picture Book of Thomas Jefferson* by David A. Adler (1990)
- Abraham Lincoln's Hat* by Martha Brenner (1994)
- I pledge allegiance* by Bill Martin Jr. and Michael Sampson (2002)

1

The Birth of Our Nation

- Introduction to the American Revolution (emphasizing the story of how we went from colonies to an independent nation)
 - American Symbols and Figures
- The 4th of July Story* by Alice Dalgleish (1995)
- American Revolution (Research Guide)* by Mary Pope Osborne (2004)
- Boston Tea Party* by Pamela Duncan Edwards (2001)
- A Picture Book of Paul Revere* by David A. Adler (1995)
- Red, White, and Blue: The Story of the American Flag* by John Herman (1998)

2–3

The Thirteen Colonies Life before the Revolution

- Life in a Colonial Town* by Sally Senzell Isaacs (2000)
- Colonial Life* by Brendan January (2000)
- If You Lived in Williamsburg In Colonial Days* by Barbara Brenner (2000)

Immigration and Citizenship

- Coming to America* by Betsy Maestro (1996)
- Miss Bridie Chose a Shovel* by Leslie Connor (2004)
- Watch the Stars Come Out* by Riki Levinson (1985)
- We the Kids* by David Catrow (2002)
- The Story of the Statue of Liberty* by Betsy and Giulio Maestro (1986)

Reformers

- A Picture Book of Eleanor Roosevelt* by David A. Adler (1991)
- A Picture Book of Martin Luther King, Jr.* by David A. Adler (1989)
- Teammates* by Peter Golenbock (1990)
- Susan B. Anthony: Fighter for Freedom and Equality* by Suzanne Slade (2007)
- Harvesting Hope: The Story of Cesar Chavez* by Kathleen Krull (2003)

The Civil War

- If You Lived at the Time of the Civil War* by Kay Moore (1994)
- A Picture Book of Harriet Tubman* by David A. Adler (1992)
- Nettie's Trip South* by Ann Turner (1987)
- A Picture Book of Abraham Lincoln* by David A. Adler (1989)
- Just a Few Words, Mr. Lincoln: The Story of the Gettysburg Address* by Jean Fritz (1993)

4–5

The American Revolution

Undertake a more detailed study.

- Events Leading to the American Revolution* by Linda R. Wade (2001)
- The Revolutionary War* by Brendan January (2000)
- Paul Revere's Ride* by Henry Wadsworth Longfellow (1990)
- The Battles of Lexington and Concord* by Judith Peacock (2002)
- Can't You Make Them Behave, King George?* by Jean Fritz (1977)

Making a Constitutional Government

- A More Perfect Union: The Story of our Constitution* by Betsy and Giulio Maestro (1987)
- The Constitution* by Warren Colman (1987)
- The United States Constitution* by Karen Price Hossell (2004)
- If You Were There When They Signed the Constitution* by Elizabeth Levy (1987)
- Shh! We're Writing the Constitution* by Jean Fritz (1987)

Reformers

- Dorothea Dix: Social Reformer* by Barbara Wittman (2003)
- The Abolitionist Movement* by Elaine Landau (2004)
- If You Lived When Women Won Their Rights* by Anne Kamma (2006)
- Created Equal* by Ann Rossi (2005)
- Only Passing Through: The Story of Sojourner Truth* by Anne Rockwell (2000)

The Civil War: Causes, Conflicts, Consequences

Undertake a more detailed study.

- A Slave Family* by Bobbie Kalman (2003)
- Sisters Against Slavery: A Story about Sarah and Angelina Grimké* by Stephanie Sammartino McPherson (1999)
- Abraham Lincoln Goes to Washington* by Cheryl Harness (1997)
- The Emancipation Proclamation* by Ann Heinrichs (2002)
- The Gettysburg Address* by Abraham Lincoln (1995)

KINDERGARTEN

Domain: Early Exploration and Settlement

The Voyage of Columbus in 1492

- Queen Isabella and King Ferdinand of Spain
- The Niña, Pinta, and Santa Maria
- Columbus's mistaken identification of "Indies" and "Indians"
- The idea of what was, for Europeans, a "New World"

The Pilgrims

- The Mayflower
- Plymouth Rock
- Thanksgiving Day celebration

July 4, "Independence Day"

- The "birthday" of our nation
- Democracy (rule of the people): Americans wanted to rule themselves instead of being ruled by a faraway king.
- Some people were not free: slavery in early America

- *A Picture Book of Christopher Columbus* by David A. Adler (1991)
- *Christopher Columbus* by Mary Dodson Wade (2003)
- *Follow the Dream: The Story of Christopher Columbus* by Peter Sis (1991)
- *The Pilgrims' First Thanksgiving* by Anne McGovern (1973)
- *Pilgrims of Plymouth* by Susan E. Goodman (1999)
- *The Pilgrims' Thanksgiving from A-Z* by Laura Crawford (2005)
- *Sarah Morton's Day: A Day in the Life of a Pilgrim Girl* by Kate Waters (1989)

Domain: Presidents and American Symbols

Introduction to famous presidents (as well as a discussion at a basic level of questions such as: What is the president? How does a person become president? Who are some of our most famous presidents, and why?)

- George Washington
The "Father of Our Country"
Legend of George Washington and the cherry tree
- Thomas Jefferson, author of Declaration of Independence
- Abraham Lincoln
Humble origins
"Honest Abe"
- Theodore Roosevelt
- Current United States president

American Symbols and Figures

- Recognize and become familiar with the significance of
American flag
Statue of Liberty
Mount Rushmore
The White House

- *My Teacher for President* by Kay Winters (2004)
- *George Washington* by Philip Abraham (2002)
- *A Picture Book of Thomas Jefferson* by David A. Adler (1990)
- *Abe Lincoln's Hat* by Martha Brenner (1994)
- *I pledge allegiance* by Bill Martin Jr. and Michael Sampson (2002)
- *The White House* by Lloyd G. Douglas (2003)
- *Woodrow, the White House Mouse* by Peter W. Barnes and Cheryl Shaw Barnes (1998)
- *The Star-Spangled Banner* illustrated by Peter Spier (1973)
- *The Legend of the Teddy Bear* by Frank Murphy (2001)

GRADE 1

Domain: The Birth of Our Nation

Introduction to the American Revolution (emphasizing the story of how we went from colonies to an independent nation)

- Locate the original thirteen colonies.
- The Boston Tea Party
- Paul Revere’s ride, “One if by land, two if by sea”
- Minutemen and Redcoats, the “shot heard round the world”
- Thomas Jefferson and the Declaration of Independence, “We hold these truths to be self-evident, that all men are created equal . . .”
- Fourth of July
- Benjamin Franklin: patriot, inventor, writer
- George Washington: from military commander to our first president
Martha Washington
Our national capital city named Washington
- Legend of Betsy Ross and the flag

American Symbols and Figures

- Recognize and become familiar with the significance of
Liberty Bell
American flag
Bald Eagle
Current United States president
- *The 4th of July Story* by Alice Dalgliesh (1995)
- *American Revolution* (Research Guide) by Mary Pope Osborne (2004)
- *Boston Tea Party* by Pamela Duncan Edwards (2001)
- *A Picture Book of Paul Revere* by David A. Adler (1995)
- *Red, White, and Blue: The Story of the American Flag* by John Herman (1998)
- *A Picture Book of George Washington* by David A. Adler (1989)
- *George Washington* by Ingri and Edgar Parin D’Aulaire (1963)
- *Now & Ben: The Modern Inventions of Benjamin Franklin* by Gene Barretta (2006)
- *A Picture Book of Benjamin Franklin* by David A. Adler (1990)
- *Betsy Ross* by Alexandra Wallner (1994)
- *Yankee Doodle* by Gary Chalk (1993)
- *The Bald Eagle* by Tristan Boyer Binns (2001)
- *The Bald Eagle* by Norman Pearl (2007)
- *Saving the Liberty Bell* by Megan McDonald (2005)
- *The Liberty Bell* by Mary Firestone (2007)

GRADE 2

Domain: The Civil War

Introduction to the Civil War

- Controversy over slavery
- Harriet Tubman, the “underground railroad”
- Northern v. Southern states: Yankees and Rebels
- Ulysses S. Grant and Robert E. Lee
- Clara Barton, “Angel of the Battlefield,” founder of American Red Cross
- President Abraham Lincoln: keeping the Union together
- Emancipation Proclamation and the end of slavery

American Symbols and Figures

- Recognize and become familiar with the significance of
 - U. S. flag: current and earlier versions
 - Lincoln Memorial
- *If You Lived at the Time of the Civil War* by Kay Moore (1994)
- *A Picture Book of Harriet Tubman* by David A. Adler (1992)
- *Nettie's Trip South* by Ann Turner (1987)
- *A Picture Book of Abraham Lincoln* by David A. Adler (1989)
- *Just a Few Words, Mr. Lincoln: The Story of the Gettysburg Address* by Jean Fritz (1993)
- *If you Lived When There Was Slavery in America* by Anne Kamma (2004)
- *Civil War on Sunday* by Mary Pope Osborne (2000)
- *Abe Lincoln: The boy who loved books* by Kay Winters (2003)
- *Mr. Lincoln's Whiskers* by Karen B. Winnick (1996)
- *The Lincoln Memorial* by Kathleen W. Deady (2002)
- *Escape North! The Story of Harriet Tubman* by Monica Kulling (2000)
- *If You Traveled on the Underground Railroad* by Ellen Levine (1988)
- *Escape! A Story of the Underground Railroad* by Sharon Shavers Gayle (1999)
- *Harriet and the Promised Land* by Jacob Lawrence (1997)
- *Aunt Harriet's Underground Railroad in the Sky* by Faith Ringgold (1992)
- *Follow the Drinking Gourd* by Jeanette Winter (1988)
- *A Picture Book of Robert E. Lee* by David A. Adler (1994)
- *Clara Barton* by Wil Mara (2002)

Domain: Immigration and Citizenship

Introduction to Immigration and Citizenship

Using narrative, biography, and other accessible means to introduce children to the idea that many people have come to America (and continue to come here) from all around the world, for many reasons: to find freedom, to seek a better life, to leave behind bad conditions in their native lands, etc. Discuss: What is an immigrant? Why do people leave their home countries to make a new home in America? What is it like to be a newcomer in America? What hardships have immigrants faced? What opportunities have they found?

- America perceived as a “land of opportunity”
- The meaning of “e pluribus unum” (a national motto you can see on the back of coins)
- Ellis Island and the significance of the Statue of Liberty
- Millions of newcomers to America
 - Large populations of immigrants settle in major cities (such as New York, Chicago, Philadelphia, Detroit, Cleveland, Boston, San Francisco)
- The idea of citizenship
 - What it means to be a citizen of a nation
 - American citizens have certain rights and responsibilities (for example, voting, eligible to hold public office, paying taxes)
 - Becoming an American citizen (by birth, naturalization)

Introduction to American Government: The Constitution

Through analogies to familiar settings—the family, the school, the community—discuss some basic questions regarding American government, such as: What is government? What are some basic functions of American government? (Making and enforcing laws; settling disputes; protecting rights and liberties, etc.) Only basic questions need to be addressed at this grade level. Specific issues and institutions of American government, including, for example, the separation of powers, and the relation between state and federal government should be discussed in later grades.

- American government is based on the Constitution, the highest law of our land.
- James Madison, the “Father of the Constitution”
- Government by the consent of the governed: “We the People”

American Symbols and Figures

- Recognize and become familiar with the significance of U. S. flag; current and earlier versions
Statue of Liberty
- *Coming to America* by Betsy Maestro (1996)
- *Miss Bridie Chose a Shovel* by Leslie Connor (2004)
- *Watch the Stars Come Out* by Riki Levinson (1985)
- *We the Kids* by David Catrow (2002)
- *The Story of the Statue of Liberty* by Betsy and Giulio Maestro (1986)
- *A Very Important Day* by Maggie Rugg Herold (1995)
- *A Picnic in October* by Eve Bunting (2004)
- *One Green Apple* by Eve Bunting (2006)
- *The Keeping Quilt* by Patricia Polacco (1998)
- *Molly's Pilgrim* by Barbara Cohen (1983)

Domain: Reformers

Through narrative, biography, and other accessible means, introduce students to the idea that while America is a country founded upon “the proposition that all men are created equal, equality has not always been granted to all Americans. Many people, however, have dedicated themselves to the struggle to extend equal rights to all Americans. Specific figures and issues to study can include:

- Susan B. Anthony and the right to vote
 - Eleanor Roosevelt and civil rights and human rights
 - Mary McLeod Bethune and educational opportunity
 - Jackie Robinson and the integration of major league baseball
 - Rosa Parks and the bus boycott in Montgomery, Alabama
 - Martin Luther King, Jr. and the dream of equal rights for all
 - Cesar Chavez and the rights of migrant workers
- *A Picture Book of Eleanor Roosevelt* by David A. Adler (1991)
 - *A Picture Book of Martin Luther King, Jr.* by David A. Adler (1989)
 - *Teammates* by Peter Golenbock (1990)
 - *Susan B. Anthony: Fighter for Freedom and Equality* by Suzanne Slade (2007)
 - *Harvesting Hope: The Story of Cesar Chavez* by Kathleen Krull (2003)
 - *If a Bus Could Talk: The Story of Rosa Parks* by Faith Ringold (1999)
 - *I Am Rosa Parks* by Rosa Parks with Jim Haskins (1997)
 - *Eleanor* by Barbara Cooney (1996)
 - *Mary McLeod Bethune: A Great Teacher* by Patricia and Fredrick McKissack (2001)
 - *Martin Luther King, Jr. and His Birthday* by Jacqueline Woodson (1990)
 - *Martin's Big Words: The Life of Martin Luther King, Jr.* by Doreen Rappaport (2001)
 - *March On! The Day My Brother Martin Changed the World* by Christine King Farris (2008)
 - *Learning About Justice from the Life of César Chávez* by Jeanne Strazzabosco (1996)

GRADE 3

Domain: The Thirteen Colonies: Life before the Revolution

Focus on the definition of “colony” and why countries establish colonies. Help children see that the thirteen English colonies were not alike. Different groups of people came to America with different motivations (hoping to get rich, looking for religious freedom, etc.), and the thirteen colonies developed in different ways.

Geography

- The thirteen colonies by region: New England, Middle Atlantic, Southern
- Differences in climate from north to south: corresponding differences in agriculture (subsistence farming in New England, gradual development of large plantations in the South)
- Important cities in the development of trade and government: Philadelphia, Boston, New York, Charleston

Southern Colonies

- Southern colonies: Virginia, Maryland, North Carolina, South Carolina, Georgia
- Virginia
 - Chesapeake Bay, James River
 - 1607: three ships of the London Company (later called the Virginia Company) arrive in Virginia, seeking gold and other riches
 - Establishment of Jamestown, first continuous English colony in the New World
 - Trade with Powhatan Indians (see also Eastern Woodland Indians, above)
 - John Smith
 - Pocahontas, marriage to John Rolfe
 - Diseases kill many people, both colonists and Indians
 - The Starving Time
 - Clashes between American Indians and English colonists
 - Development of tobacco as a cash crop, development of plantations
 - 1619: first African laborers brought to Virginia
- Maryland
 - A colony established mainly for Catholics
 - Lord Baltimore
- South Carolina
 - Charleston
 - Plantations (rice, indigo) and slave labor
- Georgia
 - James Oglethorpe’s plan to establish a colony for English debtors
- Slavery in the Southern colonies
 - Economic reasons that the Southern colonies came to rely on slavery (for example, slave labor on large plantations)
 - The difference between indentured servants and slaves: slaves as property
 - The Middle Passage

New England Colonies

- New England colonies: Massachusetts, New Hampshire, Connecticut, Rhode Island
- Gradual development of maritime economy: fishing and shipbuilding
- Massachusetts
 - Colonists seeking religious freedom: in England, an official “established” church (the Church of England), which did not allow people to worship as they chose
 - The Pilgrims
 - From England to Holland to Massachusetts
 - 1620: Voyage of the Mayflower
 - Significance of the Mayflower Compact

Plymouth, William Bradford

Helped by Wampanoag Indians: Massasoit, Tisquantum (Squanto)

The Puritans

Massachusetts Bay Colony, Governor John Winthrop: “We shall be as a city upon a hill.”

Emphasis on reading and education, the New England Primer

- Rhode Island
 - Roger Williams: belief in religious toleration
 - Anne Hutchinson

Middle Atlantic Colonies

- Middle Atlantic colonies: New York, New Jersey, Delaware, Pennsylvania
 - New York
 - Dutch settlements and trading posts in “New Netherland”
 - Dutch West India Company acquires Manhattan Island and Long Island through a (probably misunderstood) purchase from the Indians; Dutch establish New Amsterdam (today, New York City)
 - English take over from the Dutch, and rename the colony New York
 - Pennsylvania
 - William Penn
 - Society of Friends, “Quakers”
 - Philadelphia
- *Life in a Colonial Town* by Sally Senzell Isaacs (2000)
 - *Colonial Life* by Brendan January (2000)
 - *If You Lived in Williamsburg In Colonial Days* by Barbara Brenner (2000)
 - *The Pilgrims of Plimoth* by Marcia Sewall (1986)
 - *A Horse’s Tale* by Susan Lubner (2008)
 - *A Day in the Life of a Colonial Indigo Planter* by Laurie Krebs (2004)
 - *Life in Colonial Boston* by Jennifer Blizin Gillis (2003)
 - *James Towne: Struggle for Survival* by Marcia Sewall (2001)
 - *Anne Hutchinson’s Way* by Jeannine Atkins (2007)

GRADE 4

Domain: The American Revolution

Undertake a more detailed study of the causes, major figures, and consequences of the American Revolution, with a focus on main events and figures, as well as these questions: What caused the colonists to break away and become an independent nation? What significant ideas and values are at the heart of the American Revolution?

Background: The French and Indian War

- Also known as the Seven Years’ War, part of an ongoing struggle between Britain and France for control of colonies in various regions around the world (in this case, in North America)
- Alliances with Native Americans
- The Battle of Quebec
- British victory gains territory but leaves Britain financially weakened.

Causes and Provocations

- British taxes, “No taxation without representation”
- Boston Massacre, Crispus Attucks
- Boston Tea Party

- The Intolerable Acts close the port of Boston and require Americans to provide quarters for British troops
- First Continental Congress protests to King George III
- Thomas Paine’s Common Sense

The Revolution

- Paul Revere’s ride, “One if by land, two if by sea”
- Lexington and Concord
 - The “shot heard ’round the world”
 - Redcoats and Minute Men
- Bunker Hill
- Second Continental Congress: George Washington appointed commander in chief of Continental Army
- Declaration of Independence
 - Primarily written by Thomas Jefferson
 - Adopted July 4, 1776
 - “We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the pursuit of Happiness.”
- Women in the Revolution: Elizabeth Freeman, Deborah Sampson, Phillis Wheatley, Molly Pitcher
- Loyalists (Tories)
- Victory at Saratoga, alliance with France
- European helpers (Lafayette, the French fleet, Bernardo de Galvez, Kosciusko, von Steuben)
- Valley Forge
- Benedict Arnold
- John Paul Jones: “I have not yet begun to fight.”
- Nathan Hale: “I only regret that I have but one life to lose for my country.”
- Cornwallis: surrender at Yorktown

American Symbols and Figures

- Recognize and become familiar with the significance of *Spirit of ’76* (painting)
- Events Leading to the American Revolution by Linda R. Wade (2001)
- The Revolutionary War by Brendan January (2000)
- Paul Revere’s Ride by Henry Wadsworth Longfellow (1990)
- The Battles of Lexington and Concord by Judith Peacock (2002)
- Can’t You Make Them Behave, King George? by Jean Fritz (1977)
- Lexington and Concord by Deborah Kent (1997)
- Sleds on Boston Common: A Story From the American Revolution by Louise Borden (2000)
- Give Me Liberty! The Story of the Declaration of Independence by Russell Freedman (2000)
- Final Years of the American Revolution by Linda R. Wade (2001)

Domain: Making a Constitutional Government

Examine some of the basic values and principles of American democracy, in both theory and practice, as defined in the Declaration of Independence and the U. S. Constitution, both in historical context and in terms of present-day practice. In examining the significance of the U. S. Constitution, introduce students to the unique nature of the American experiment, the difficult task of establishing a democratic government, the compromises the framers of the Constitution were willing to make, and the persistent threats to success. In order to appreciate the boldness and fragility of the American attempt to establish a republican government based on a constitution, students should know that republican governments were rare at this time. Discuss with students basic questions and issues about government, such as: Why do

societies need government? Why does a society need laws? Who makes the laws in the United States? What might happen in the absence of government and laws?

Main ideas behind the Declaration of Independence

- The proposition that “All men are created equal”
- The responsibility of government to protect the “unalienable rights” of the people
- Natural rights: “Life, liberty, and the pursuit of happiness”
- The “right of the people ... to institute new government”

Making a New Government: From the Declaration to the Constitution

- Definition of “republican” government: republican = government by elected representatives of the people
- Articles of Confederation: weak central government
- “Founding Fathers”: James Madison as “Father of the Constitution”
- Constitutional Convention
 - Arguments between small and large states
 - The divisive issue of slavery, “three-fifths” compromise

The Constitution of the United States

- Preamble to the Constitution: “We the people of the United States, in order to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity, do ordain and establish this Constitution for the United States of America.”
- The separation and sharing of powers in American government: three branches of government
 - Legislative branch: Congress = House of Representatives and Senate, makes laws
 - Executive branch: headed by the president, carries out laws
 - Judicial branch: a court system headed by the Supreme Court (itself headed by the Chief Justice), deals with those who break laws and with disagreements about laws
- Checks and balances, limits on government power, veto
- The Bill of Rights: first ten amendments to the Constitution, including:
 - Freedom of religion, speech, and the press (First Amendment)
 - Protection against “unreasonable searches and seizures”
 - The right to “due process of law”
 - The right to trial by jury
 - Protection against “cruel and unusual punishments”

Levels and functions of government (national, state, local)

- Identify current government officials, including
 - President and vice-president of the U.S.
 - State governor
- State governments: established by state constitutions (which are subordinate to the U.S. Constitution, the highest law in the land), like the national government, each state government has its legislative, executive, and judicial branches
- Local governments: purposes, functions, and officials
- How government services are paid for (taxes on individuals and businesses, fees, tolls, etc.)
- How people can participate in government

American Symbols and Figures

- Recognize and become familiar with the significance of
 - White House and Capitol Building
 - Great Seal of the United States

- *A More Perfect Union: The Story of our Constitution* by Betsy and Giulio Maestro (1987)
- *The Constitution* by Warren Colman (1987)
- *The United States Constitution* by Karen Price Hossell (2004)
- *If You Were There When They Signed the Constitution* by Elizabeth Levy (1987)
- *Shh! We're Writing the Constitution* by Jean Fritz (1987)
- *Designing America: The Constitutional Convention* by Sean Price (2008)
- *The Declaration of Independence* by Elaine Landau (2008)
- *The U.S. Constitution and You* by Syl Sobel (2001)
- *What Are the Parts of Government?* by William David Thomas (2008)
- *The Congress of the United States* by Christine Taylor-Butler (2008)
- *The Bill of Rights* by Michael Burgan (2002)
- *The Bill of Rights* by Christine Taylor-Butler (2008)
- *The Great Seal of the United States* by Terri DeGezelle (2004)
- *James Madison and Dolley Madison and Their Times* by Robert Quackenbush (1992)

Domain: Reformers

Introduce some prominent people and movements in the ferment of social change in America prior to the Civil War.

- Abolitionists
- Dorothea Dix and the treatment of the insane
- Horace Mann and public schools
- Women's rights
 - Seneca Falls convention
 - Elizabeth Cady Stanton
 - Lucretia Mott
 - Amelia Bloomer
 - Sojourner Truth
- *Dorothea Dix: Social Reformer* by Barbara Witteman (2003)
- *The Abolitionist Movement* by Elaine Landau (2004)
- *If You Lived When Women Won Their Rights* by Anne Kamma (2006)
- *Created Equal* by Ann Rossi (2005)
- *Only Passing Through: The Story of Sojourner Truth* by Anne Rockwell (2000)
- *In Their Own Words: Sojourner Truth* by Peter and Connie Roop (2002)
- *The Road to Seneca Falls: A Story about Elizabeth Cady Stanton* by Gwenyth Swain (1996)
- *The Seneca Falls Women's Rights Convention* by Sabrina Crewe and Dale Anderson (2005)
- *Elizabeth Cady Stanton* by Lucile Davis (1998)
- *Lucretia Mott* by Lucile Davis (1998)
- *Working for Change: The Struggle for Women's Right to Vote* by Leni Donlan (2008)
- *A Timeline of the Abolitionist Movement* by Judy Levine (2004)

GRADE 5

Domain: The Civil War: Causes, Conflicts, Consequences

Undertake a more detailed study of the causes, major figures, and consequences of the Civil War.

Toward the Civil War

- Abolitionists: William Lloyd Garrison and *The Liberator*, Frederick Douglass
- Slave life and rebellions
- Industrial North versus agricultural South
- Mason-Dixon Line
- Controversy over whether to allow slavery in territories and new states
 - Missouri Compromise of 1820
 - Dred Scott decision allows slavery in the territories
- Importance of Harriet Beecher Stowe's *Uncle Tom's Cabin*
- John Brown, Harper's Ferry
- Lincoln: "A house divided against itself cannot stand."
 - Lincoln-Douglas debates
 - Lincoln elected president, Southern states secede

The Civil War

- Fort Sumter
- Confederacy, Jefferson Davis
- Yankees and Rebels, Blue and Gray
- First Battle of Bull Run
- Robert E. Lee and Ulysses S. Grant
- General Stonewall Jackson
- Ironclad ships, battle of the USS Monitor and the CSS Virginia (formerly the USS Merrimack)
- Battle of Antietam Creek
- The Emancipation Proclamation
- Gettysburg and the Gettysburg Address
- African-American troops, Massachusetts Regiment led by Colonel Shaw
- Sherman's march to the sea, burning of Atlanta
- Lincoln re-elected, concluding words of the Second Inaugural Address ("With malice toward none, with charity for all. . . .")
- Richmond (Confederate capital) falls to Union forces
- Surrender at Appomattox
- Assassination of Lincoln by John Wilkes Booth

Reconstruction

- The South in ruins
- Struggle for control of the South, Radical Republicans vs. Andrew Johnson, impeachment
- Carpetbaggers and scalawags
- Freedmen's Bureau, "40 acres and a mule"
- 13th, 14th, and 15th Amendments to the Constitution
- Black Codes, the Ku Klux Klan and "vigilante justice"
- End of Reconstruction, Compromise of 1877, all federal troops removed from the South

- *A Slave Family* by Bobbie Kalman (2003)
- *Sisters Against Slavery: A Story about Sarah and Angelina Grimke* by Stephanie Sammartino McPherson (1999)
- *Abe Lincoln Goes to Washington* by Cheryl Harness (1997)
- *The Emancipation Proclamation* by Ann Heinrichs (2002)
- *The Gettysburg Address* by Abraham Lincoln (1995)
- *Bull Run* by Paul Fleischman (1993)
- *The Home Fronts in the Civil War* by Dale Anderson (2004)
- *Life on a Plantation* by Bobbie Kalman (1997)
- *John Brown: His Fight for Freedom* by John Hendrix (2009)
- *Seven Miles to Freedom: The Robert Smalls Story* by Janet Halfman (2008)
- *The Reconstruction Amendments* by Michael Burgan (2006)
- *The Carpetbaggers* by Lucia Raatma (2005)

Appendix C:

Domains and Core Content Objectives for the *Core Knowledge Language Arts* Program, K–2

Appendix C: Domains and Core Content Objectives for the *Core Knowledge Language Arts* Program, K–2

When using read-alouds to build content knowledge within a domain, it is important to start by identifying the specific knowledge that students are expected to learn over the course of the read-aloud domain. We offer the objectives below, taken from the Listening and Learning Strand of the *Core Knowledge Language Arts* program, as examples of what we call “Core Content Objectives.” Every read-aloud lesson should have both content objectives, as well as language arts objectives, identified as learning goals within the lesson.

Note: In the *Core Knowledge Language Arts* program, all domains are modular within a grade level, so that individual classrooms teachers may determine the teaching sequence of each domain. However, we highly recommend that, whenever possible, teachers using the *Core Knowledge Language Arts* materials follow the recommended sequence below, as many factors, including the length of individual read-alouds within the domain, overall number of lessons in the domains, vocabulary density and level of abstraction and complexity, have been used to come up with the recommended sequence.

Kindergarten

1. Nursery Rhymes and Fables
2. The Five Senses
3. Stories
4. Plants
5. Farms
6. Native Americans
7. Kings and Queens
8. Seasons and Weather
9. Columbus and the Pilgrims
10. Colonial Towns and Townspeople
11. Taking Care of the Earth
12. Presidents and American Symbols

Grade 1

1. Fables and Stories
2. The Human Body
3. Different Lands, Similar Stories
4. Early World Civilizations
5. Early American Civilizations
6. Mozart and Music
7. Astronomy
8. The History of the Earth
9. Animals and Habitats
10. Fairy Tales
11. The Birth of Our Nation
12. Frontier Explorers

Grade 2

1. Stories and Poetry
2. Early Asian Civilizations
3. Cycles in Nature
4. The Ancient Greek Civilization
5. Greek Myths
6. Insects
7. Westward Expansion
8. The U.S. Civil War
9. Charlotte’s Web I
10. Charlotte’s Web II
11. Immigration
12. Fighting for a Cause

Kindergarten

Nursery Rhymes and Fables

- Demonstrate familiarity with nursery rhymes and fables
- Recite some nursery rhymes
- Identify rhyming words in nursery rhymes
- Identify lines that repeat, and/or dialogue in nursery rhymes
- Describe the characters and events in nursery rhymes and fables
- Explain that fables teach a lesson that is stated as the moral of the story
- Identify the moral of fables
- Explain how animals often act as people in fables (personification)

The Five Senses

- Identify and demonstrate understanding of the five senses: sight, hearing, smell, taste, and touch
- Identify each of the body parts associated with the five senses
- Provide simple explanations about how the eyes, ears, nose, tongue, and skin work and their function
- Describe how the five senses help humans learn about their world
- Explain the contributions of Ray Charles
- Explain the contributions of Helen Keller
- Describe the challenges of someone who is blind or deaf
- Understand the impact of small sensations on our experiences
- Understand how we can enhance the sense of sight and sense of hearing
- Become familiar with instruments invented to aid the senses of sight and hearing

Stories

- Listen to and then demonstrate familiarity with stories, including the ideas they express
- Understand that fiction can be in many different forms, including folktales, trickster tales, and tall tales
- Identify the setting of a given story
- Identify the characters of a given story
- Identify the plot of a given story

Plants

- Understand that there are many different kinds and sizes of plants
- Understand that different kinds of plants grow in different environments
- Understand that plants are living things
- Describe what plants need to live and grow: food, water, air, and sunlight
- Identify the root, stem, branch, leaf, flower, fruit, and seed of a plant
- Explain that roots anchor the plant and take in water and nutrients
- Explain that stems support the plant and carry water and nutrients to the various parts of the plant
- Explain that the plant makes its food in the leaves
- Explain that seeds are the beginning of new plants
- Describe how bees collect nectar and pollen
- Understand how bees make and use honey
- Describe the important role bees play in plant pollination
- Understand that some plants produce fruit to hold seeds
- Demonstrate familiarity with the tall tale “Johnny Appleseed”
- Compare and contrast fruits and seeds of different plants
- Understand the basic life cycle of plants
- Identify the part of specific plants that are eaten by people
- Compare and contrast deciduous and evergreen plants
- Identify things that plants provide us: oxygen, food, and important products
- Understand the life and scientific achievements of George Washington Carver

Farms

- Explain what a farm is
- Describe a farmer's and shepherd's job
- Identify animals found on farms and the sounds they make
- Identify needs of farm animals: food, water, and space to live and grow
- Match pictures and/or names of farm animal babies to their adult parents
- Describe how farm animal babies need to be fed and cared for by their parents or people
- Explain why farmers raise animals and grow crops
- Identify foods that come from animals
- Identify crops as plants grown on farms for use as food
- Describe how farmers protect their crops from drought, weeds, and pests
- Sequence the seasonal rhythm of planting, growing, and harvesting
- Describe how some food comes from farms as crops
- Sequence events of crops from farm to store (planted, harvested, transported, packaged)
- Identify buildings found on farms
- Identify machines and tools of farming
- Describe how farming has changed through the years

Native Americans

- Explain that there are many tribes of Native Americans
- Identify the environment in which the Sioux lived
- Identify the Sioux as a nomadic tribe
- Describe the food, clothing, and shelter of the Sioux
- Understand the importance of the buffalo to the Sioux
- Identify the environment in which the Wampanoag lived
- Understand how the Wampanoag tribe lived
- Identify the Wampanoag as a settled tribe
- Describe the food, clothing, and shelter of the Wampanoag
- Understand that Native Americans still live in the U.S. today

Kings and Queens

- Describe what a king or queen does
- Identify and describe royal objects associated with a king or queen
- Indicate that kings and queens still exist today, but that there were many more kings and queens long ago
- Describe a royal family
- Identify important factors (children, partnerships, arranged marriages) that ensured a royal family's success
- Describe appropriate dress and manners used in meeting and/or talking with kings and queens
- Explain that proper dress and manners in the presence of a member of the royal family is a sign of respect for the importance of this person
- Demonstrate familiarity with the poem "Happy Thought"
- Understand that kings usually possess gold and other treasures
- Discuss the difference between valuing relationships with people and valuing wealth
- Understand contemporary references to someone having *the Golden Touch* or *the Midas Touch*
- Describe the behaviors that reinforce that kings and queens are royal
- Recite "Old King Cole"
- Recite "Sing a Song of Sixpence"
- Describe the characters, settings, and plots in the stories
- Discuss the lessons in *Cinderella* and in *Snow White and the Seven Dwarfs* that show goodness prevails and is rewarded

Seasons and Weather

- Demonstrate understanding of the following units of time and their relationship to one another: day, week, month, year
- Name the four seasons in cyclical order, as experienced in the United States, and correctly name a few characteristics of each season
- Characterize winter as generally the coldest season, summer as generally the warmest season, and spring and autumn as transitional seasons
- Characterize the North and South Poles as always cold in temperature, the middle section of the earth as usually warm, and the United States as having four seasons
- Identify the following characteristics of thunderstorms: heavy rain, thunder, lightning, and strong wind
- Name at least one month in a specific season while referring to a calendar
- Name at least one holiday in a specific season
- Describe any unique seasonal differences that are characteristic of their own locality (change of color and dropping of leaves in autumn; snow or ice in winter; increased rain and/or flooding in spring, etc.)
- Identify ways in which weather affects daily routines, such as dress, activities, etc.
- Describe daily weather conditions of their own locality in terms of temperature (hot, warm, cool, cold); cloud cover (sunny, cloudy); and precipitation (rain, snow, or sleet)
- Demonstrate familiarity with the poem “I Do Not Mind You, Winter Wind”
- Draw pictures that show an understanding of each season
- Describe safe and unsafe behaviors during severe weather
- Identify and describe different types of severe weather
- Identify a thermometer as an instrument used to measure temperature and describe how it works, i.e., when the liquid in the thermometer rises, it is hotter outside; when the liquid descends, it is cooler
- Explain the lesson the grasshopper learns at the end of the fable, “The Grasshopper and the Ants”
- Identify the four seasons and name activities that are associated with those seasons
- Understand why weather prediction is important in their daily lives

Columbus and the Pilgrims

- Identify the continents of North America, South America, Europe, Africa, and Asia
- Understand why Europeans wanted to travel to Asia
- Describe the accomplishments of Christopher Columbus
- Identify King Ferdinand and Queen Isabella of Spain
- Recall the year of Columbus’s first voyage to America: 1492
- Recall the names of Columbus’ three ships: Niña, Pinta, Santa Maria
- Explain why Columbus called the land “India” and the inhabitants “Indians”
- Explain why Europeans eventually thought Columbus had discovered a “New World”
- Identify reasons why the Pilgrims left England
- Describe the Pilgrims’ voyage on the Mayflower
- Explain the significance of Plymouth Rock
- Describe the Pilgrims’ first year in America
- Describe the first Thanksgiving Day celebration

Colonial Towns and Townspeople

- Identify the key characteristics and differences between “towns,” and “the country” or “countryside” during the colonial period of American history
- Understand that long ago, during the colonial period, families who lived in the country on farms were largely self-sufficient, and that this meant all family members had many daily responsibilities and chores
- List similarities and differences between modern family life and colonial farm life
- Describe some features of colonial towns, such as a town square, shops, and adjacent buildings
- Understand that tradespeople had an occupation and expertise in a particular job
- Name different tradespeople found in a colonial town

- Identify reasons why people who lived in the country traveled to town
- Describe how a watermill works
- Identify corn and wheat as the original plant products needed for the production of flour
- Describe a miller as a tradesperson who grinds wheat and corn into flour using a mill
- Describe a baker as a tradesperson who bakes bread using flour
- Explain how the tradespeople in colonial towns saved farming families time and effort
- Describe what working in a watermill was like
- Compare the life of a miller to the life of a king
- Identify cotton, wool, and flax as the original plant or animal products needed for making cloth
- Describe a spinner as a tradesperson who made thread or yarn from cotton, wool, or flax by spinning it on a spinning wheel
- Identify, and associate with the appropriate trade, the tools used by tradespeople
- Describe a weaver as a tradesperson who used thread or yarn on a loom to make cloth
- Describe the process of making cloth from cotton or wool
- Describe the steps involved in running a spinning wheel: licking the fingers to smooth down the fibers, twisting the thread, and stepping on the treadle
- Describe dressmakers and tailors as tradespeople who made clothing by sewing
- Describe a hatter as a tradesperson who made men's hats
- Describe a cobbler as a tradesperson who made and fixed shoes
- Understand that ready-made clothing was not available for sale in colonial shops; clothing was made to order according to the exact measurements of each person
- Describe a bricklayer as a tradesperson who built with bricks
- Describe a mason as a tradesperson who built with stones
- Describe a carpenter as a tradesperson who built with wood
- Identify some tools tradespeople used
- Describe a blacksmith as a tradesperson who heated iron and formed it into metal objects
- Identify the essential role of the blacksmith in making tools for other tradespeople
- Recognize the necessity of heating objects before the blacksmith could shape them
- Describe a teacher as a townsperson responsible for educating young children
- Identify some characteristics of colonial common schools (multiple grade levels, one-room schoolhouse, mostly boys)
- Compare and contrast common schools with today's schools
- Understand the purpose of laws
- Describe a sheriff as a townsperson who arrested criminals
- Describe a judge as a townsperson who decided who was innocent and guilty, and what punishment guilty people should receive
- Review tradespeople and their roles

Taking Care of the Earth

- Understand that Earth is composed of land, water, and air
- Identify examples of land, water, and air from their own environments
- Understand that humans, plants, and animals depend on Earth's land, water, and air to live
- Explain why people have a special responsibility to take care of the earth
- Understand that humans generate large amounts of garbage, which must be disposed of
- Sequence what happens to garbage from its creation to being dumped in the landfill
- Explain what a landfill is and why it is a dangerous place
- Evaluate whether landfills are an adequate solution to the problem of garbage
- Understand that natural resources are things found in nature that are valuable and of great importance to people
- Identify key natural resources and describe how people use them
- Recognize the phrase "Reduce, reuse, recycle!" and explain how doing these three things can help to conserve natural resources
- Understand that people can conserve natural resources by reducing their use of them
- Understand that people can conserve natural resources by reusing materials

- Identify the recycling symbol and understand that recycled materials are made from reused garbage
- Identify common recyclable materials, including glass, plastic, aluminum, cardboard, and paper
- Understand that recyclable materials go from people's homes and businesses to a recycling center, where the materials are sorted according to different types of recyclables, and then they are taken to a recycling factory to be made into something new
- Understand that composting is a type of recycling in which discarded food scraps decay in an outdoor pile or bin for that purpose and eventually become garden soil
- Sequence what happens to a piece of discarded food from table to compost pile to garden
- Identify foods that can be composted
- Discuss garbage as being a problem and various means of garbage disposal in terms of a solution
- Understand that people cause pollution when they make the earth dirty or dangerous with their garbage
- Understand that land, air, and water all suffer from different types of pollution, and all types of pollution are caused by human activities
- Understand that if people are careful and creative, they can help reduce pollution
- Understand that air pollution from one location can make even the air that is far away in other places around the world dirty
- Identify sources of air pollution, including cars and electricity produced by coal-fired power plants
- Understand the effect of air pollution on human health
- Explain how to reduce air pollution by conserving natural resources
- Compare and contrast fresh water, salt water, and wastewater
- Understand that many living things, including humans, need fresh water to survive, and that there is a limited supply of fresh water on Earth
- Identify sources of water pollution, including factory waste and garbage
- Explain that a water treatment plant can remove unhealthy chemicals and pollutants from water to make it usable again
- Understand what a conservationist does
- Understand that John Muir was one of the first conservationists
- Identify possible solutions to the problems discussed throughout the domain
- Understand the importance of individual actions to take care of the earth

Presidents and American Symbols

- Name the current president of the United States
- Recognize the White House as the president's home
- Describe Washington, D.C., as the city where the current president lives and where monuments of past presidents can be found
- Identify the American flag
- Describe the differences between a president and a king
- Name George Washington as someone admired for his honesty
- Understand that the cherry tree story is a legend
- Describe George Washington as a general who fought for American independence
- Recognize that General Washington led his army to victory even though his army was smaller than the English army
- Recognize George Washington as the first president of the United States
- Recognize the sacrifices George Washington made for the country
- Recognize Thomas Jefferson as the third president of the United States
- Identify Thomas Jefferson as the primary author of the Declaration of Independence
- Describe the purpose of the Declaration of Independence as a statement of America's liberty
- Identify the Statue of Liberty
- Recognize Abraham Lincoln as an important president of the United States

- Identify that Abraham Lincoln was known as “Honest Abe”
- Recognize Theodore Roosevelt as an important president of the United States
- Know that Theodore Roosevelt overcame childhood health problems
- Know that Theodore Roosevelt loved the outdoors
- Know that Theodore Roosevelt worked for nature conservation
- Identify the Mount Rushmore presidents
- Describe Mount Rushmore as a monument

First Grade

Fables and Stories

- Demonstrate familiarity with particular fables and stories
- Identify characteristics of fables: short, moral, personification
- Explain in their own words the moral of a particular fable
- Identify character, plot, and setting as basic story elements
- Describe the characters, plot, and setting of a given fable or story
- Understand that fables and folktales are two types of fiction

Builds on the following objectives targeted in kindergarten:

- Nursery Rhymes and Fables
 - Demonstrate familiarity with nursery rhymes and fables
 - Describe the characters and events in nursery rhymes and fables
 - Explain that fables teach a lesson that is stated as the moral of the story
 - Identify the moral of fables
 - Explain how animals often act as people in fables (personification)
- Stories
 - Listen to and then demonstrate familiarity with stories, including the ideas they express
 - Understand that fiction can be in many different forms, including folktales, trickster tales, and tall tales
 - Identify the setting of a given story
 - Identify the characters of a given story
 - Identify the plot of a given story

The Human Body

- Understand that the human body is a network of systems
- Identify each of the five body systems: skeletal, muscular, digestive, circulatory, and nervous
- Recall basic facts about the skeletal system
- Recall basic facts about the muscular system
- Define the heart as a muscle that never stops working
- Recall basic facts about the digestive system
- Recall basic facts about the circulatory system
- Recall basic facts about the nervous system
- Identify the brain as the body's control center
- Understand that germs may cause disease in the body
- Explain the importance of vaccination in preventing disease
- Identify Edward Jenner as the man who developed the first vaccine
- Identify Louis Pasteur as the man who discovered pasteurization
- Explain the importance of exercise, cleanliness, a balanced diet, and rest for bodily health
- Explain the importance of regular checkups
- Explain the importance of vaccinations
- Identify the food pyramid and its component food groups

Builds on the following objectives targeted in kindergarten:

- The Five Senses
 - Identify and demonstrate understanding of the five senses: sight, hearing, smell, taste, and touch
 - Identify each of the body parts associated with the five senses
 - Provide simple explanations about how the eyes, ears, nose, tongue, and skin work and their function
 - Describe how the five senses help humans learn about their world

Different Lands, Similar Stories

- Understand that fictional stories come from the author’s imagination
- Identify folktales as a type of fiction
- Understand that stories have a beginning, middle, and end
- Describe the characters, plot, and setting of *Little Red Riding Hood*
- Describe the characters, plot, and setting of *Lon Po Po*
- Describe the characters, plot, and setting of *Pretty Salma*
- Describe the characters, plot, and setting of *Tom Thumb*
- Describe the characters, plot, and setting of *Thumbelina*
- Describe the characters, plot, and setting of *Issun Boshi*
- Describe the characters, plot, and setting of *Mufaro’s Beautiful Daughters*
- Describe the characters, plot, and setting of *The Irish Cinderlad*
- Understand that people from different lands tell similar stories

Builds on the following objectives targeted in kindergarten:

- Stories
 - Listen to and then demonstrate familiarity with stories, including the ideas they express
 - Understand that fiction can be in many different forms, including folktales, trickster tales, and tall tales
 - Identify the setting of a given story
 - Identify the characters of a given story
 - Identify the plot of a given story
- Kings and Queens
 - Describe what a king or queen does
 - Identify and describe royal objects associated with a king or queen
 - Indicate that kings and queens still exist today, but that there were many more kings and queens long ago
 - Describe a royal family
 - Describe the behaviors that reinforce that kings and queens are royal
 - Discuss the lessons in *Cinderella* and in *Snow White and the Seven Dwarfs*, which show that goodness prevails and is rewarded

Early World Civilizations

- Locate the area known as Mesopotamia on a world map or globe, and identify it as a part of Asia
- Explain the importance of rivers, canals, and flooding to support farming in Mesopotamia and ancient Egypt
- Describe the city of Babylon
- Identify and describe the significance of structures built in Mesopotamia and ancient Egypt
- Identify the way of writing in Mesopotamia and ancient Egypt
- Explain why writing is important to a civilization
- Describe the Code of Hammurabi
- Explain why rules and laws are important to the development of a civilization
- Recognize how a leader is important to the development of a civilization
- Describe aspects of religion in Mesopotamia and ancient Egypt
- Identify Mesopotamia as the “Cradle of Civilization”
- Understand that a civilization evolves and changes over time
- Locate Egypt on a world map or globe, and identify it as a part of Africa
- Explain that much of Egypt is the Sahara Desert
- Identify and explain the significance of Hatshepsut and Tutankhamun as pharaohs of ancient Egypt
- Describe key components of a civilization
- Understand that much of what we know about ancient Egypt is because of the work of archaeologists

Three World Religions (Optional)

- Identify Judaism, Christianity, and Islam as major monotheistic world religions
- Locate Jerusalem and the area known as the Middle East on a map
- Define monotheism as the belief in one God
- Identify the Western Wall (or the Wailing Wall) as associated with Judaism, the church of the Holy Sepulchre with Christianity, and the Dome of the Rock with Islam
- Identify the Hebrews as the ancient people who were descendants of Abraham
- Identify the names for followers of Judaism, Christianity, and Islam
- Identify Moses, Jesus Christ, and Muhammad and their significance
- Demonstrate familiarity with holidays associated with Judaism, Christianity, and Islam
- Recognize symbols for Judaism, Christianity, and Islam
- Identify the holy book of Judaism, Christianity, and Islam
- Identify places of worship for Judaism, Christianity, and Islam
- Understand that the religion of Christianity developed after Judaism
- Recognize that both Christians and Jews follow the Ten Commandments
- Understand that Islam originated in Arabia

Does not build on any objectives targeted in kindergarten

Early American Civilizations

- Locate the continents of Asia and North America on a world map or globe
- Understand that prehistoric nomads followed the animals they hunted
- Explain the importance of hunting among early peoples
- Understand that the first people in North America arrived by crossing a “land bridge” between Asia and North America
- Understand that a shift occurred from hunting and gathering to farming among early peoples
- Compare and contrast hunter-gatherer societies and Mayan society
- Understand the importance of extended family to the Maya
- Identify the area in which the Maya, Aztec, and Inca each lived
- Understand that the Maya developed large cities or population centers in the rainforests of Mexico and Central America many, many years ago
- Understand that the Maya, Aztec, and Inca had a religion, leaders, towns, and farming
- Understand that much of what we know about the Maya and the Inca is because of the work of archaeologists
- Understand that the Aztecs established a vast empire in central Mexico many, many years ago
- Identify the Aztec capital as Tenochtitlan
- Recognize by name the emperor of the Aztec, Moctezuma
- Understand that the Inca established a far-ranging empire in the Andes Mountains of Peru and Chile many, many years ago
- Recall that Machu Picchu is an Incan city

Does not build on any objectives targeted in kindergarten

Mozart and Music

- Identify Mozart as a famous musician and composer who lived over two hundred years ago
- Describe Mozart as a prodigy, talented at a very young age
- Describe an instrument as an object designed to make musical sounds
- Identify a composer as a person who writes music by recording musical notes
- Describe instrumental music as a type of music that is produced by musical instruments only and does not include singing
- Retell the major events of Mozart’s life

- Recognize, sing, and play simple rhythms and melodies
- Understand the role of a patron in Mozart's time in as someone who helped a musician succeed
- Describe keyboard instruments, and name at least one example of a keyboard instrument
- Describe the woodwinds section of the orchestra, and name at least two woodwind instruments
- Describe opera as a performance in which singers tell a story with the help of the orchestra
- Describe a symphony as a composition, which uses many different instruments
- Identify the conductor as the leader of the orchestra
- Describe the brass section of the orchestra, and name at least two brass instruments
- Identify the conductor as the leader of the orchestra
- Recognize and begin to describe the mood of a piece of music

Builds on the following objectives targeted in kindergarten:

- Kings and Queens
 - Describe what a king or queen does
 - Identify and describe royal objects associated with a king or queen
 - Indicate that kings and queens still exist today, but that there were many more kings and queens long ago
 - Describe a royal family
 - Describe the behaviors that reinforce that kings and queens are royal
- Identify the beat in music, and increase his/her ability to keep a steady beat
- Describe the percussion section of the orchestra, and name at least two percussion instruments
- Describe the strings section of the orchestra, and name at least two stringed instruments
- Identify the four sections of the orchestra: woodwinds, brass, percussion, and strings

Astronomy

- Recognize the sun in the sky
- Understand that the sun, moon, and stars are located in outer space
- Understand that the sun is a source of energy, light, and heat
- Classify the sun as a star
- Identify Earth as a planet and our home
- Identify the Earth's rotation or spin as the cause of day and night
- Understand that other parts of the world experience nighttime while we have daytime
- Explain sunrise and sunset
- Understand that Earth orbits the sun
- Understand that stars are large, although they appear small in the night sky
- Describe stars as hot, distant, and made of gas
- Understand that astronomers study the moon and stars using telescopes
- Understand that people sometimes tell stories about the moon and stars
- Explain what a constellation is
- Identify the Big Dipper and the North Star
- Identify the four phases of the moon—new, crescent, half, full
- Understand that astronauts travel to outer space
- Describe the landing on the moon by American astronauts
- Explain the importance of the first trip to the moon
- State that the moon orbits the earth
- Explain that our solar system includes the sun and the planets that orbit around it
- Indicate that there are eight planets (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune)
- Classify Pluto as a dwarf planet

Builds on the following objectives targeted in kindergarten:

- Seasons and Weather
 - Demonstrate understanding of the following units of time and their relationship to one another: day, week, month, year
 - Name the four seasons in cyclical order, as experienced in the United States, and correctly name a few characteristics of each season
 - Characterize winter as generally the coldest season, summer as generally the warmest season, and spring and autumn as transitional seasons
 - Characterize the North and South Poles as always cold in temperature, the middle section of the earth as usually warm, and the United States as having four seasons
 - Describe any unique seasonal differences that are characteristic of their own locality (change of color and dropping of leaves in autumn; snow or ice in winter; increased rain and/or flooding in spring, etc.)
 - Identify a thermometer as an instrument used to measure temperature and describe how it works, i.e., when the liquid in the thermometer rises, it is hotter outside; when the liquid descends, it is cooler
- Taking Care of the Earth
 - Understand that Earth is composed of land, water, and air
 - Understand that humans, plants, and animals depend on Earth's land, water, and air to live
 - Understand that natural resources are things found in nature that are valuable and of great importance to people
 - Understand that land, air, and water all suffer from different types of pollution, and all types of pollution are caused by human activities
 - Understand that air pollution from one location can make even the air that is far away in other places around the world dirty
 - Compare and contrast fresh water, salt water, and wastewater
 - Understand that many living things, including humans, need fresh water to survive, and that there is a limited supply of fresh water on Earth

The History of the Earth

- Identify geographical features of the earth's surface: oceans and continents
- Locate the North Pole, the South Pole, and the equator on a globe
- Describe the shape of the earth
- Understand that much of our knowledge of the earth and its history is the result of the work of many scientists
- Identify the layers of the earth: crust, mantle, core (outer and inner)
- Describe the crust
- Describe each of the layers inside the earth
- Describe volcanoes and geysers
- Identify common minerals in the earth
- Explain how minerals are used by people
- Identify the three types of rocks: metamorphic, sedimentary, and igneous
- Describe how heat, pressure, and time cause many changes inside the earth
- Describe how rocks and minerals are taken from the earth
- Describe fossils
- Explain how fossils provide information about the history of the earth
- Explain how we know about dinosaurs
- Describe various dinosaurs
- Explain the significance of the La Brea Tar Pits

Builds on the following objectives targeted in kindergarten:

- Plants
 - Understand that there are many different kinds and sizes of plants

- Understand that different kinds of plants grow in different environments
- Describe what plants need to live and grow: food, water, air, and sunlight
- Identify the root, stem, branch, leaf, flower, fruit, and seed of a plant
- Taking Care of the Earth
 - Understand that Earth is composed of land, water, and air
 - Identify examples of land, water, and air from their own environments
 - Understand that humans, plants, and animals depend on Earth's land, water, and air to live
 - Understand that natural resources are things found in nature that are valuable and of great importance to people
 - Identify key natural resources and describe how people use them

Animals and Habitats

- Describe what a habitat is
- Understand that living things live in habitats to which they are particularly suited
- Identify the characteristics of the Arctic tundra habitat
- Explain how Arctic animals have adapted to the Arctic tundra habitat
- Identify the characteristics of the Arctic Ocean habitat
- Explain how Arctic animals have adapted to the Arctic Ocean habitat
- Identify the characteristics of the desert habitat
- Explain how desert animals have adapted to the desert habitat
- Identify the characteristics of the grassland habitat
- Explain how grassland animals have adapted to the grassland habitat
- Identify the characteristics of the temperate deciduous forest habitat
- Explain how temperate deciduous forest animals have adapted to the temperate deciduous forest habitat
- Identify the characteristics of the tropical rainforest habitat
- Explain how tropical rainforest animals have adapted to the tropical rainforest habitat
- Identify the characteristics of the freshwater habitat
- Understand that saltwater covers most of Earth and is found in several oceans
- Match specific plants and animals to their habitats
- Classify animals on the basis of the types of food they eat (herbivore, carnivore, omnivore)
- Describe the landscape of the ocean floor
- Understand that ocean life is very diverse
- Understand that water covers most of Earth and is found in several oceans
- Classify water habitats as either freshwater or saltwater habitats
- Understand why and how habitat destruction can cause extinction
- Identify the characteristics of the bald eagles' habitat
- Identify and locate the oceans of the world on a globe: Arctic, Pacific, Atlantic, Indian, Southern

Builds on the following objectives targeted in kindergarten:

- Plants
 - Understand that plants are living things
 - Describe what plants need to live and grow: food, water, air, and sunlight
 - Understand that there are many different kinds and sizes of plants
 - Understand that different kinds of plants grow in different environments
 - Identify the root, stem, leaf, flower, and seed of a plant
 - Explain that roots anchor the plant and take in water and nutrients
 - Explain that stems support the plant and carry water and nutrients to the various parts of the plant
 - Explain that the plant makes its food in the leaves

- Understand the basic life cycle of plants
- Compare and contrast deciduous and evergreen plants
- Farms
 - Identify needs of farm animals: food; water; and space to live and grow
 - Describe how farm animal babies need to be fed and cared for by their parents or people
 - Match pictures and/or names of farm animal babies to their adult parents
- Seasons and Weather
 - Characterize the North and South Poles as always cold in temperature, the middle section of the earth as usually warm, and the United States as having four seasons
 - Name the four seasons in cyclical order, as experienced in the United States, and correctly name a few characteristics of each season
 - Characterize winter as generally the coldest season, summer as generally the warmest season, and spring and autumn as transitional seasons
 - Describe any unique seasonal differences that are characteristic of their own locality (change of color and dropping of leaves in autumn; snow or ice in winter; increased rain and/or flooding in spring, etc.)
 - Describe the daily weather conditions of their own locality in terms of temperature (hot, warm, cool, cold), cloud cover (sunny or cloudy), and precipitation (rain, snow, or sleet)
- Taking Care of the Earth
 - Understand that humans, plants, and animals depend on Earth's land, water, and air to live.
 - Explain why people have a special responsibility to take care of the earth
 - Understand that humans generate large amounts of garbage which must be disposed of
 - Sequence what happens to garbage from its creation to being dumped in the landfill
 - Understand that natural resources are things found in nature that are valuable and of great importance to people
 - Recognize the phrase, "Reduce, reuse, recycle!" and explain how doing these three things can help to conserve natural resources
 - Understand that land, air, and water all suffer from different kinds of pollution, and all types of pollution are caused by human activities
 - Identify sources of air pollution, including cars and electricity produced by coal-fired power plants
 - Understand the effect of air pollution on human health
 - Compare and contrast fresh water, salt water, and waste water
 - Understand that many living things, including humans, need fresh water to survive, and that there is a limited supply of fresh water on Earth
 - Identify sources of water pollution, including factory waste and garbage

Fairy Tales

- Demonstrate familiarity with the fairy tale *Sleeping Beauty*
- Recognize what makes fairy tales different from other types of stories
- Identify common characteristics of fairy tales, such as "once upon a time" beginnings, royal characters, elements of fantasy, problems and solutions, and happy endings
- Identify the fairy tale elements of *Sleeping Beauty*
- Demonstrate familiarity with the fairy tale *Rumpelstiltskin*
- Identify the fairy tale elements of *Rumpelstiltskin*
- Identify the fairy tale elements of *Rapunzel*
- Demonstrate familiarity with the fairy tale *Rapunzel*
- Identify the fairy tale elements of *The Princess and the Pea*
- Compare and contrast different adaptations of fairy tales
- Demonstrate familiarity with the fairy tale *The Princess and the Pea*
- Demonstrate familiarity with the fairy tale *The Frog Prince*

- Identify the fairy tale elements of *The Frog Prince*
- Demonstrate familiarity with the fairy tale *Puss-in-Boots*
- Identify the fairy tale elements of *Puss-in-Boots*
- Identify the fairy tale elements of *Hansel and Gretel*
- Demonstrate familiarity with the fairy tale *Hansel and Gretel*
- Identify the fairy tale elements of *Jack and the Beanstalk*
- Demonstrate familiarity with the fairy tale *Jack and the Beanstalk*

Builds on the following objectives targeted in kindergarten:

- Stories
 - Listen to and then demonstrate familiarity with stories, including the ideas they express
 - Understand that fiction can be in many different forms, including folktales, trickster tales, and tall tales
 - Identify the setting of a given story
 - Identify the characters of a given story
 - Identify the plot of a given story
- Kings and Queens
 - Describe what a king or queen does
 - Identify and describe royal objects associated with a king or queen
 - Describe a royal family
 - Describe appropriate dress and manners used in meeting and/or talking with kings and queens

The Birth of Our Nation

- Identify the early English settlements on Roanoke Island and at Jamestown as colonies that were established before the Pilgrims landed at Plymouth Rock
- Understand that the first Africans in the English colonies came to Jamestown as indentured servants, not slaves
- Describe how the thirteen English colonies in America evolved from dependence on Great Britain to independence as a nation
- Locate the thirteen original colonies
- Describe the contributions of George Washington as Patriot, military commander, and first president
- Identify Washington, D.C., as the nation’s capital
- Explain that the nation’s capital, Washington, D.C., was named after George Washington
- Identify Martha Washington as the wife of George Washington
- Describe the contributions of Benjamin Franklin as Patriot, inventor, and writer
- Identify Thomas Jefferson as the author of the Declaration of Independence and the third president of the U.S.
- Explain the significance of the Declaration of Independence
- Identify “We hold these truths to be self-evident, that all men are created equal . . .” as a part of the Declaration of Independence
- Describe the Boston Tea Party
- Explain the significance of Paul Revere’s ride
- Identify “One if by land, two if by sea”
- Identify Minutemen, Redcoats, and “the shot heard round the world”
- Explain the significance of The Fourth of July
- Retell the legend of Betsy Ross and the flag
- Describe the roles of African Americans, Native Americans, and women during the evolution from thirteen English colonies in America to independence as a nation
- Identify the U.S. flag, the Liberty Bell, and the bald eagle
- Explain the significance of the flag, the Liberty Bell, and the bald eagle as U.S. symbols

Builds on the following objectives targeted in kindergarten:

- Native Americans

- Explain that there are many tribes of Native Americans
- Identify the environment in which the Sioux lived
- Identify the Sioux as a nomadic tribe
- Describe the food, clothing, and shelter of the Sioux
- Understand the importance of the buffalo to the Sioux
- Identify the environment in which the Wampanoag lived
- Understand how the Wampanoag tribe lived
- Identify the Wampanoag as a settled tribe
- Describe the food, clothing, and shelter of the Wampanoag
- Understand that Native Americans still live in the U.S. today
- Kings and Queens
 - Describe what a king or queen does
- Columbus and The Pilgrims
 - Identify the continents of North America, South America, Europe, Africa, and Asia
 - Understand why Europeans wanted to travel to Asia
 - Describe the accomplishments of Christopher Columbus
 - Recall the year of Columbus's first voyage to America: 1492
 - Explain why Columbus called the land "India" and the inhabitants "Indians"
 - Explain why Europeans eventually thought Columbus had discovered a "New World"
 - Identify reasons why the Pilgrims left England
 - Describe the Pilgrims' voyage on the Mayflower
 - Explain the significance of Plymouth Rock
 - Describe the Pilgrims' first year in America
 - Describe the first Thanksgiving Day celebration
- Colonial Towns and Townspeople
 - Describe some features of colonial towns, such as a town square, shops, and adjacent buildings
- Presidents and American Symbols
 - Describe George Washington as a general who fought for American independence
 - Recognize that general Washington led his army to victory even though it was smaller than the English army
 - Recognize George Washington as the first President of the United States
 - Describe the differences between a president and a king
 - Identify the American flag
 - Recognize Thomas Jefferson as the third President of the United States
 - Identify Thomas Jefferson as the primary author of the Declaration of Independence
 - Describe the purpose of the Declaration of Independence as a statement of America's liberty

Frontier Explorers

- Locate the Appalachian Mountains on a map
- Recall basic facts about Daniel Boone
- Understand that Daniel Boone was a trailblazer
- Understand what the term "Wilderness Road" refers to
- Locate the Mississippi River on a map
- Locate the Rocky Mountains on a map
- Identify and locate the Louisiana Territory on a map
- Understand the significance of the Louisiana Purchase
- Explain the reasons that Lewis and Clark went on their expedition
- Understand that while the territory acquired in the Louisiana Purchase had not been explored or settled by people who lived in other parts of the United States until Lewis and Clark went on their expedition, there were many, many Native American tribes already living there
- Recall basic facts about Lewis and Clark's encounters with Native Americans

- Explain why and how Sacagawea helped Lewis and Clark

Builds on the following objectives targeted in kindergarten:

- Native Americans
 - Explain that there are many tribes of Native Americans
 - Identify the environment in which the Sioux lived
 - Identify the Sioux as a nomadic tribe
 - Describe the food, clothing, and shelter of the Sioux
 - Understand the importance of the buffalo to the Sioux
 - Identify the environment in which the Wampanoag lived
 - Understand how the Wampanoag tribe lived
 - Identify the Wampanoag as a settled tribe
 - Describe the food, clothing, and shelter of the Wampanoag
 - Understand that Native Americans still live in the U.S. today
- Columbus and The Pilgrims
 - Identify the continents of North America, South America, Europe, Africa, and Asia
 - Understand why Europeans wanted to travel to Asia
 - Describe the accomplishments of Christopher Columbus
 - Recall the year of Columbus's first voyage to America: 1492
 - Explain why Columbus called the land "India" and the inhabitants "Indians"
 - Explain why Europeans eventually thought Columbus had discovered a "New World"
 - Identify reasons why the Pilgrims left England
 - Describe the Pilgrims' voyage on the Mayflower
 - Explain the significance of Plymouth Rock
 - Describe the Pilgrims' first year in America
 - Describe the first Thanksgiving Day celebration
- Kings and Queens
 - Describe what a king or queen does
- Colonial Towns and Townspeople
 - Describe some features of colonial towns, such as a town square, shops, and adjacent buildings
- American Presidents and Symbols
 - Describe the differences between a president and a king
 - Recognize Thomas Jefferson as the third President of the United States
 - Identify Thomas Jefferson as the primary author of the Declaration of Independence
 - Describe the purpose of the Declaration of Independence as a statement of America's liberty

Second Grade*

*This listing is incomplete. The materials development of Grade 2 CKLA was in progress at the time of this listing.

Stories and Poetry

- Demonstrate familiarity with a particular fairy tale *Beauty and the Beast*
- Describe the characters, plot, and setting of a particular fairy tale
- Identify common characteristics of fairy tales such as “once upon a time” beginnings, royal characters, magical characters or events, and happy endings
- Identify the fairy tale elements of a particular fairy tale
- Identify fairy tales as a type of fiction
- Understand a particular poem or poems
- Recall some of the ideas expressed and some of the memorable words or phrases in these poems
- Understand the difference between lyric and narrative poems
- Recognize that narrative poems have characters, settings, plot, and dialogue
- Identify lyric poems as short, musical works that express ideas and feelings of one speaker
- Recognize that some poems contain rhyme that is not exact
- Identify words or phrases that appeal to the senses of sight, sound, taste, smell or touch
- Understand that poems often include similes or metaphors that compare two or more things
- Demonstrate familiarity with specific tall tales
- Identify the characters, plot, and setting of specific tall tales
- Identify tall tales as a type of fiction
- Identify exaggerations as a characteristic of tall tales
- Identify the exaggerations in specific tall tales

Builds on the following objectives targeted in Kindergarten and Grade 1:

- Nursery Rhymes and Fables (Kindergarten)
 - Describe the characters and events in nursery rhymes and fables
 - Explain how animals often act as people in fables (personification)
 - Recite some nursery rhymes
 - Identify rhyming words in nursery rhymes
 - Identify lines that repeat, and/or dialogue in nursery rhymes
- Stories (Kindergarten)
 - Listen to and then demonstrate familiarity with stories, including the ideas they express
 - Understand that fiction can be in many different forms, including folktales, trickster tales, and tall tales
 - Identify the setting of a given story
 - Identify the characters of a given story
 - Identify the plot of a given story
- Fables and Stories (Grade 1)
 - Demonstrate familiarity with particular fables and stories
 - Identify character, plot, and setting as basic story elements
 - Describe the characters, plot, and setting of a given fable or story
 - Understand that fables and folktales are two types of fiction

Cycles in Nature

- Define the term *cycle*
- Define the term *seasonal cycle*
- Recognize that Earth orbits the sun and the sun does not move
- Understand that it takes one year for Earth’s orbit of the sun
- Explain the cause for seasons

- Identify four seasons in the U.S.: spring, summer, autumn (fall), winter
- Explain effects of seasonal changes on plants and animals
- Describe plant and animal processes in spring
- Describe plant and animal processes in summer
- Describe plant and animal processes in autumn
- Describe plant and animal processes in winter
- Define the term *life cycle*
- Identify four stages of the life cycle: birth, growth, reproduction, and death
- Describe the life cycle of a flowering plant (seed to seed)
- Describe the life cycle of a chicken (egg to egg)
- Describe the life cycle of a frog (egg to egg)
- Describe the life cycle of a butterfly (egg to egg)
- Define the term *metamorphosis*
- Recognize that most of Earth's surface is covered by water
- Identify the three states of matter in which water exists: solid, liquid, and gas
- Define the term *water cycle*
- Understand that there is a limited amount of water on Earth
- Describe evaporation and condensation
- Identify forms of precipitation
- Define humidity as the amount of moisture in the air
- Describe the formation of clouds
- Identify three types of clouds: cirrus, cumulus, and stratus
- Understand that not all water cycles back into the air
- Identify groundwater as a water resource for humans

Builds on the following objectives targeted in Kindergarten and Grade 1:

- Plants (Kindergarten)
 - Understand that plants are living things
 - Describe what plants need to live and grow: food, water, air, and sunlight
 - Understand that there are many different kinds and sizes of plants
 - Understand that different kinds of plants grow in different environments
 - Identify the root, stem, leaf, flower, and seed of a plant
 - Explain that roots anchor the plant and take in water and nutrients
 - Explain that stems support the plant and carry water and nutrients to the various parts of the plant
 - Explain that the plant makes its food in the leaves
 - Understand the basic life cycle of plants
- Farms (Kindergarten)
 - Identify needs of farm animals: food; water; and space to live and grow
 - Describe how farm animal babies need to be fed and cared for by their parents or people
 - Match pictures and/or names of farm animal babies to their adult parents
- Seasons and Weather (Kindergarten)
 - Demonstrate understanding of the following units of time and their relationship to one another: day, week, month, year
 - Identify a thermometer as an instrument used to measure temperature and describe how it works, i.e., when the liquid in the thermometer rises, it is hotter outside; when the liquid descends, it is cooler
 - Name the four seasons in cyclical order, as experienced in the United States, and correctly name a few characteristics of each season
 - Characterize winter as generally the coldest season, summer as generally the warmest season, and spring and autumn as transitional seasons
 - Describe any unique seasonal differences that are characteristic of their own locality (change of color and dropping of leaves in autumn; snow or ice in winter; increased rain and/or flooding in spring, etc.)

Describe the daily weather conditions of their own locality in terms of temperature (hot, warm, cool, cold), cloud cover (sunny or cloudy), and precipitation (rain, snow, or sleet)

- Taking Care of the Earth (Kindergarten)
 - Understand that Earth is composed of land, water, and air
 - Understand that humans, plants, and animals depend on Earth's land, water, and air to live
 - Compare and contrast fresh water, salt water, and wastewater
 - Understand that many living things, including humans, need fresh water to survive, and that there is a limited supply of fresh water on Earth
 - Explain why people have a special responsibility to take care of the earth
- Astronomy (Grade 1)
 - Recognize the sun in the sky
 - Understand that the sun, moon, and stars are located in outer space
 - Understand that the sun is a source of energy, light, and heat
 - Classify the sun as a star
 - Identify Earth as a planet and our home
 - Identify the Earth's rotation or spin as the cause of day and night
 - Understand that other parts of the world experience nighttime while we have daytime
 - Explain sunrise and sunset
 - Understand that Earth orbits the sun
- Animals and Habitats (Grade 1)
 - Describe what a habitat is
 - Understand that living things live in habitats to which they are particularly suited
 - Identify the characteristics of specific habitats
 - Match specific plants and animals to their habitat
 - Explain how certain animals have adapted to their habitat
 - Understand that water covers most of Earth and is found in several oceans
 - Classify bodies of water as saltwater or freshwater habitats

Insects

- Classify insects as small six-legged animals
- Identify body parts of insects: head, thorax, abdomen (wings—optional)
- Describe composition and purpose of an insect's exoskeleton
- Define metamorphosis
- Recognize that most insects undergo a complete metamorphosis
- Describe four stages of the life cycle of insects that metamorphose
- Recognize that some newborn insects resemble the adults of their species
- Describe the molting process of some insects
- Distinguish between social and solitary insects
- Identify groups of social insects
- Describe the social behavior of an ant colony
- Describe the roles of honeybee workers, drones, and queens
- Cite ways in which insects may be helpful to people
- Cite ways in which insects may be harmful to people

Builds on the following objectives targeted in Kindergarten and Grade 1:

- Plants (Kindergarten)
 - Understand that plants are living things
 - Describe what plants need to live and grow: food, water, air, and light
 - Understand that there are many different kinds and sizes of plants
 - Understand that different kinds of plants grow in different environments
 - Identify the root, stem, leaf, flower, and seed of a plant

- Explain that roots anchor the plant and take in water and nutrients
- Explain that stems support the plant and carry water and nutrients to the various parts of the plant
- Explain that the plant makes its food in the leaves
- Understand the basic life cycle of plants
- Farms (Kindergarten)
 - Identify needs of farm animals: food; water; and space to live and grow
 - Describe how farm animal babies need to be fed and cared for by their parents or people
 - Match pictures and/or names of farm animal babies to their adult parents
- Seasons and Weather (Kindergarten)
 - Name the four seasons in cyclical order, as experienced in the United States, and correctly name a few characteristics of each season
 - Describe any unique seasonal differences that are characteristic of their own locality (change of color and dropping of leaves in autumn; snow or ice in winter; increased rain and/or flooding in spring, etc.)
- Taking Care of the Earth (Kindergarten)
 - Understand that humans, plants, and animals depend on Earth's land, water, and air to live
 - Explain why people have a special responsibility to take care of the earth
- Animals and Habitats (Grade 1)
 - Describe what a habitat is
 - Understand that living things live in habitats to which they are particularly suited
 - Identify the characteristics of specific habitats
 - Match specific plants and animals to their habitat
 - Explain how certain animals have adapted to their habitat

Westward Expansion

- Learn that the frontier shifted west and southwest as the country grew
- Describe what life was like for pioneers who headed west
- Identify boats, canals, and trains as new forms of transportation that increased the movement of people west
- Identify Robert Fulton as the developer of the steamboat
- Describe the importance of the steamboat
- Describe the importance of canals
- Identify the Erie Canal as the most famous of canals built during the 'Canal Era'
- Explain the advantages of rail travel
- Identify "iron horse" as the nickname given to the first trains in America
- Identify the Transcontinental Railroad as a link between East and West
- Identify the Oregon Trail as an arduous trail traversed by wagon trains
- Identify the Pony Express as a horseback mail delivery system
- Explain that western expansion meant displacement of Native Americans
- Recognize that the development of the railroad ushered in a new era of mass exodus of the Native Americans from their land
- Describe effect of diminishing buffalo on life of Plains Native Americans
- Explain that U.S. government forced Native Americans from their lands
- Identify the Trail of Tears as forced march of the Cherokee
- Identify Sequoyah as the developer of a writing system for the Cherokee language

Builds on the following objectives targeted in Kindergarten and Grade 1:

- Native Americans (Kindergarten)
 - Explain that there are many tribes of Native Americans
 - Identify the environment in which the Sioux lived
 - Identify the Sioux as a nomadic tribe

- Describe the food, clothing, and shelter of the Sioux
- Understand the importance of the buffalo to the Sioux
- Identify the environment in which the Wampanoag lived
- Understand how the Wampanoag tribe lived
- Identify the Wampanoag as a settled tribe
- Describe the food, clothing, and shelter of the Wampanoag
- Understand that Native Americans still live in the U.S. today
- Columbus and The Pilgrims (Kindergarten)
 - Recall the year of Columbus’s first voyage to America: 1492
 - Explain why Columbus called the land “India” and the inhabitants “Indians”
 - Identify why Europeans eventually thought Columbus had discovered a “New World”
 - Identify reasons why Pilgrims left England
 - Explain the significance of Plymouth Rock
- Colonial Towns and Townspeople (Kindergarten)
 - Describe some features of colonial towns, such as a town square, shops, and adjacent buildings
- Presidents and American Symbols (Kindergarten)
 - Describe the differences between a president and a king
 - Identify the American flag
 - Recognize Thomas Jefferson as the third President of the United States
- The Birth of Our Nation (Grade 1)
 - Identify the early English settlements on Roanoke Island and at Jamestown as colonies that were established before the Pilgrims landed at Plymouth Rock
 - Describe how the thirteen English colonies in America evolved from dependence on Great Britain to independence as a nation
 - Locate the thirteen original colonies
 - Describe the contributions of George Washington as Patriot, military commander, and first president
 - Identify Washington, D.C., as the nation’s capital
 - Explain that the nation’s capital, Washington, D.C., was named after George Washington
 - Explain the significance of The Fourth of July
 - Describe the roles of African Americans, Native Americans, and women during the evolution from thirteen English colonies in America to independence as a nation
- Frontier Explorers (Grade 1)
 - Locate the Appalachian Mountains on a map
 - Locate the Mississippi River on a map
 - Locate the Rocky Mountains on a map
 - Identify and locate the Louisiana Territory on a map
 - Understand the significance of the Louisiana Purchase
 - Explain the reasons that Lewis and Clark went on their expedition
 - Understand that while the territory acquired in the Louisiana Purchase had not been explored or settled by people who lived in other parts of the United States until Lewis and Clark went on their expedition, there were many, many Native American tribes already living there
 - Recall basic facts about Lewis and Clark’s encounters with Native Americans
 - Explain why and how Sacagawea helped Lewis and Clark

The U.S. Civil War

- Describe slavery and the controversy over slavery in the United States
- Identify the Underground Railroad as a system of escape for slaves in the United States
- Describe the life and contributions of Harriet Tubman
- Differentiate between the North and South

- Differentiate between the Union and the Confederacy and the states associated with each
- Identify the people of the South as “Rebels” and those of the North as “Yankees”
- Describe why the Southern states seceded from the United States
- Define the difference between the Union and the Confederacy
- Describe the life and contributions of Abraham Lincoln
- Explain Abraham Lincoln’s role in keeping the Union together during the Civil War
- Identify Clara Barton as the “Angel of the Battlefield” and the founder of the American Red Cross
- Describe the work of the American Red Cross
- Recall that Robert E. Lee was the commander of the Confederate army
- Understand Lee’s reluctance to command the Union or the Confederate Army
- Recall that Ulysses S. Grant was the commander of the Union army
- Identify Abraham Lincoln as the author of the Emancipation Proclamation
- Explain the significance of the Emancipation Proclamation
- Identify the Civil War or the War Between the States as a war waged because of differences between the North and South
- Explain that the North’s victory united the North and South as one country and ended slavery
- Describe the life and contributions of Elijah McCoy
- Demonstrate familiarity with the poem “Harriet Tubman”
- Demonstrate familiarity with the poem “Lincoln”
- Demonstrate familiarity with the songs “Follow the Drinking Gourd” and “Swing Low, Sweet Chariot”
- Demonstrate familiarity with the song “Dixie”
- Demonstrate familiarity with the song “When Johnny Comes Marching Home”

Builds on the following objectives targeted in Kindergarten and Grade 1:

- Presidents and American Symbols (Kindergarten)
Recognize Abraham Lincoln as an important President of the United States
Identify that Abraham Lincoln was known as “Honest Abe”
- The Birth of Our Nation (Grade 1)
Describe how the thirteen English colonies in America evolved from dependence on Great Britain to independence as a nation

Charlotte’s Web I

- Understand that stories are one type of fiction
- Understand that fiction comes from the author’s imagination
- Understand why some stories are called *classics*
- Identify character, plot, and setting as basic story elements
- Describe the characters, plot, and setting of *Charlotte’s Web*
- Describe some aspects of life on a farm
- Define and identify the elements of narration and dialogue
- Define and identify the element of description
- Define and identify the element of personification
- Identify words or phrases that appeal to the senses of sight, sound, taste, smell, or touch
- Understand that an author sometimes gives the reader hints of things to come
- Recall that spiders are not insects
- Recall the seasons and the order in which they occur
- Understand how seasons affect life on a farm
- Have a general understanding of spiders and their anatomy

Builds on the following objectives targeted in Kindergarten and Grade 1:

- Stories (Kindergarten)
Listen to and then demonstrate familiarity with stories, including the ideas they express

- Farms (Kindergarten)
 - Sequence the seasonal rhythm of planting, growing, and harvesting
 - Identify buildings found on farms
 - Identify machines and tools of farming
 - Identify animals found on farms and the sounds they make
 - Identify needs of farm animals: food, water, and space to live and grow
- Seasons and Weather (Kindergarten)
 - Name the four seasons in cyclical order, as experienced in the United States, and correctly name a few characteristics of each season
- Fables and Stories (Grade 1)
 - Identify and describe the characters, plot, and setting of a particular story

Charlotte's Web II

- Understand that stories are one type of fiction
- Understand that fiction comes from the author's imagination
- Describe the characters, plot (problems and solutions), and setting of *Charlotte's Web*
- Have a general understanding of orb spiders and their webs
- Have a general understanding of how crickets make a chirping sound
- Describe some aspects of life on a farm
- Understand how seasons affect life on a farm
- Define and identify the elements of narration and dialogue
- Define and identify the element of description
- Define and identify the element of personification
- Describe some aspects of a fair
- Identify words or phrases that appeal to the senses of sight, sound, taste, smell, or touch
- Describe changes in characters
- Understand that an author sometimes gives the reader hints of things to come

Builds on the following objectives targeted in Kindergarten and Grade 1:

- Stories (Kindergarten)
 - Listen to and then demonstrate familiarity with stories, including the ideas they express
- Farms (Kindergarten)
 - Sequence the seasonal rhythm of planting, growing, and harvesting
 - Identify buildings found on farms
 - Identify machines and tools of farming
 - Identify animals found on farms and the sounds they make
 - Identify needs of farm animals: food, water, and space to live and grow
- Seasons and Weather (Kindergarten)
 - Name the four seasons in cyclical order, as experienced in the United States, and correctly name a few characteristics of each season
- Fables and Stories (Grade 1)
 - Identify and describe the characters, plot, and setting of a particular story

Immigration

- Explain the term immigrant
- Describe reasons immigrants leave their home countries to make a new home in the United States
- Explain why the United States was and is called the "land of opportunity"
- Identify the meaning of *e pluribus unum*
- Explain the significance of Ellis Island and the Statue of Liberty
- Describe how immigration has brought millions of newcomers to the United States
- Describe why large populations of immigrants settled in major cities such as New York, Chicago, Philadelphia, Detroit, Cleveland, Boston, and San Francisco
- Describe why some immigrants settled in the Midwest

- Understand that their ancestors may have been immigrants who helped make America the country that it is today
- Explain what it means to be a citizen of a country
- Identify ways that a person becomes an American citizen
- Identify that the government of the United States is based on the Constitution, the highest law of our land
- Identify James Madison, the “Father of the Constitution”
- Understand that government by the consent of the governed, American citizens: “We the People”
- Explain the basic functions of government (making and enforcing laws; settling disputes; protecting rights and liberties, etc.) by making analogies to familiar settings such as the family, the school, and the community
- Identify the Bill of Rights as a document amending the Constitution
- Describe the rights and responsibilities of an American citizen
- Demonstrate familiarity with the songs, “This Land is Your Land” and “The Star-Spangled Banner”

Builds on the following objectives targeted in Kindergarten and Grade 1:

- Columbus and the Pilgrims (Kindergarten)
 - Identify the continents of North America, South America, Europe, Africa, and Asia
 - Describe the accomplishments of Christopher Columbus
 - Explain why Europeans eventually thought Columbus had discovered a “New World”
 - Identify reasons why Pilgrims left England
 - Describe the Pilgrims’ voyage on the Mayflower
- Presidents and American Symbols (Kindergarten)
 - Describe the differences between a president and a king
 - Identify Thomas Jefferson as the primary author of the Declaration of Independence
 - Describe the purpose of the Declaration of Independence as a statement of America’s liberty
 - Identify the Statue of Liberty
- Early American Civilizations (Grade 1)
 - Locate the continents of Asia and North America on a world map or globe
 - Understand that the first people in North America arrived by crossing a “land bridge” between Asia and North America
 - Understand that the Maya developed large cities or population centers in the rainforests of Mexico and Central America many, many years ago
- The Birth of Our Nation (Grade 1)
 - Identify “We hold these truths to be self-evident, that all men are created equal . . .” as a part of the Declaration of Independence
 - Explain the significance of The Fourth of July
 - Identify the U.S. flag, the Liberty Bell, and the bald eagle
 - Explain the significance of the flag, the Liberty Bell, and the bald eagle as U.S. symbols

Fighting for a Cause

- Explain that members of one (most powerful) group have tended to exclude members of other groups from certain rights
- Identify the causes that Susan B. Anthony fought for during her lifetime
- Describe the life and contributions of Susan B. Anthony
- Understand that fighting for the right to vote was an important cause for many women throughout the United States
- Understand that organizations and movements were created as women protested their inequality and unfair treatment
- Describe the life and contributions of Eleanor Roosevelt

- Identify the causes that Eleanor Roosevelt fought for during her lifetime
- Describe the early life of Marian Anderson
- Identify the causes Marian Anderson fought for during her lifetime
- Describe the later life of Marian Anderson
- Identify one cause that Eleanor Roosevelt fought for during her lifetime
- Describe the life and contributions of Mary McLeod Bethune
- Identify the causes that Mary McLeod Bethune fought for during her lifetime
- Identify the cause that Ruby Bridges fought for in her early life
- Describe the life and contributions of Jackie Robinson
- Identify the cause that Jackie Robinson fought for during his lifetime
- Describe the life and contributions of Rosa Parks
- Identify the causes that Rosa Parks fought for during her lifetime
- Understand that fighting for the rights of African Americans has been an important cause for many people throughout the United States
- Describe the life and contributions of Martin Luther King, Jr.
- Identify the causes that Martin Luther King, Jr. fought for during his lifetime
- Describe the life and contributions of Cesar Chavez
- Identify the causes that Cesar Chavez fought for during his lifetime

Builds on the following objectives targeted in Kindergarten and Grade 1:

- Presidents and American Symbols (Kindergarten)
 - Recognize the White House as the president’s home
 - Describe Washington, D.C., as the city where the current president lives and where monuments of past presidents can be found
 - Describe the purpose of the Declaration of Independence as a statement of America’s liberty
- The Birth of Our Nation (Grade 1)
 - Explain the significance of the Declaration of Independence
 - Identify “We hold these truths to be self-evident, that all men are created equal...” as part of the Declaration of Independence

Appendix D:

Core Knowledge Grade-by-Grade Resource Recommendations

RECOMMENDED ORDER AMOUNTS:

- **Titles for teachers:** one for each teacher, including resource teachers and librarians
- **Titles for students:** one for each student
- **Classroom resources:** one per classroom as noted

General

DVD: What Is Core Knowledge?

Cultural Literacy
The Schools We Need
The Knowledge Deficit
The Making of Americans
Reading Instruction: The Two Keys
Books to Build On
Dictionary of Cultural Literacy
First Dictionary of Cultural Literacy

Preschool

For Teachers

The Core Knowledge Sequence for Preschool–Grade 8
Core Knowledge Preschool Sequence and Teacher Handbook
What Your Preschooler Needs to Know (for parents)
Preschool Snapshot: Implementation & Observation Checklists
Core Knowledge Preschool Assessment Tool
Core Knowledge Preschool Assessment Kit
Core Knowledge Preschool Video
Core Knowledge Stop and Think Songbook CD
Preschool & K Music CD
A Joyful Noise
Preschool Daily Schedule Cards
The Knowledge Tree Preschool Kits*
Social Skills Posters
The Stop & Think Social Skills Program:
 Teacher’s Manual for Pre K–1
Stop and Think Parenting Book, with DVD (for parents)

For Students

What Your Preschooler Needs to Know:
 Activity Book 1 for Ages 3–4
What Your Preschooler Needs to Know:
 Activity Book 2 for Ages 4–5
Scholastic Preschool Classroom Library (one per classroom)*

Kindergarten

For Teachers

The Core Knowledge Sequence for Preschool–Grade 8
First Dictionary of Cultural Literacy
Core Knowledge Teacher Handbook, Grade K
Text Resources, Grade K
Art Prints, Grade K
Core Knowledge Day-by-Day Planner and Workbook, Grade K
What Your Kindergartner Needs to Know (for parents)
Teacher Edition of Pearson Learning
 Core Knowledge History and Geography Resources*
Preschool & K Music CD
A Joyful Noise
Stop and Think Parenting Book, with DVD
Social Skills Electronic Books*

For Students

Listen My Children, Grade K
Pearson Learning Core Knowledge History
 and Geography Resources*
Scholastic Grade K Classroom Library (one per classroom)*

Grade 1

For Teachers

The Core Knowledge Sequence for Preschool–Grade 8
First Dictionary of Cultural Literacy
Core Knowledge Teacher Handbook, Grade 1
Text Resources, Grade 1
Art Prints, Grade 1
Core Knowledge Day-by-Day Planner and Workbook, Grade 1
What Your First Grader Needs to Know (for parents)
Teacher Edition of Pearson Learning
 Core Knowledge History and Geography Resources*
Grades 1 & 2 Music CD set
A Joyful Noise
Stop and Think Parenting Book, with DVD
Social Skills Electronic Books*
Questar Curriculum-Referenced Tests*

For Students

Listen My Children, Grade 1
Pearson Learning Core Knowledge History
 and Geography Resources*
Scholastic Grade 1 Classroom Library (one per classroom)*

Grade 2

For Teachers

The Core Knowledge Sequence for Preschool–Grade 8
First Dictionary of Cultural Literacy
Core Knowledge Teacher Handbook, Grade 2
Text Resources, Grade 2
Art Prints, Grade 2
Core Knowledge Day-by-Day Planner and Workbook, Grade 2
What Your Second Grader Needs to Know (for parents)
Teacher Edition of Pearson Learning
 Core Knowledge History and Geography Resources*
Grades 1 & 2 Music CD set
A Joyful Noise
Stop and Think Parenting Book, with DVD
Social Skills Electronic Books*
Questar Curriculum-Referenced Tests*

For Students

Listen My Children, Grade 2
Pearson Learning Core Knowledge History
 and Geography Resources*
Scholastic Grade 2 Classroom Library (one per classroom)*

Grade 3

For Teachers

The Core Knowledge Sequence for
Preschool–Grade 8
First Dictionary of Cultural Literacy
Core Knowledge Teacher Handbook, Grade 3
Text Resources, Grade 3
Art Prints, Grade 3
Core Knowledge Day-by-Day Planner and
Workbook, Grade 3
What Your Third Grader Needs to Know (for parents)
Teacher Edition of Pearson Learning
Core Knowledge History and Geography Resources*
Grades 3–5 Music CD set
A Joyful Noise
Stop and Think Parenting Book, with DVD
Social Skills Electronic Books*
Questar Curriculum-Referenced Tests*

For Students

Listen, My Children, Grade 3
Pearson Learning Core Knowledge History
and Geography Resources*
Scholastic Grade 3 Classroom Library
(one per classroom)*

Grade 4

For Teachers

The Core Knowledge Sequence for
Preschool–Grade 8
First Dictionary of Cultural Literacy
Core Knowledge Teacher Handbook, Grade 4
Text Resources, Grade 4
Art Prints, Grade 4
Core Knowledge Day-by-Day Planner and
Workbook, Grade 4
What Your Fourth Grader Needs to Know
(for parents)
Core Classics: Robinson Crusoe, Sleepy
Hollow, Gulliver's Travels, Robin Hood,
King Arthur, and Treasure Island +
Teacher's Guides
Teacher Edition of Pearson Learning
Core Knowledge History and
Geography Resources*
Grades 3–5 Music CD Set
A Joyful Noise
Social Skills Electronic Books*
Questar Curriculum-Referenced Tests*

For Students

Listen, My Children, Grade 4
Core Classics: Robinson Crusoe, Sleepy Hollow,
Gulliver's Travels, Pollyanna, Robin Hood,
King Arthur, and Treasure Island
Pearson Learning Core Knowledge History
and Geography Resources*
Scholastic Grade 4 Classroom Library
(one per classroom)*

Grade 5

For Teachers

The Core Knowledge Sequence for
Preschool–Grade 8
First Dictionary of Cultural Literacy
Dictionary of Cultural Literacy
Core Knowledge Teacher Handbook, Grade 5
Text Resources, Grade 5
Art Prints, Grade 5
Core Knowledge Day-by-Day Planner and
Workbook, Grade 5
What Your Fifth Grader Needs to Know (for parents)
Rats, Bulls, and Flying Machines + Teacher's Guide
Grace Abounding + Teacher's Kits
Core Classics: Sherlock Holmes, Don Quixote
+ Teacher's Guides
Core Classics Plus: Frederick Douglass +
Teacher's Guide
Teacher Edition of Pearson Learning
Core Knowledge History and Geography Resources*
Grades 3–5 Music CD Set
A Joyful Noise
Social Skills Electronic Books*
Questar Curriculum-Referenced Tests*

For Students

Listen My Children, Grade 5
Grace Abounding
Rats, Bulls, and Flying Machines
Core Classics: Sherlock Holmes, Don Quixote
Core Classics Plus: Frederick Douglass, Little Women
Pearson Learning Core Knowledge History
and Geography Resources*
Scholastic Grade 5 Classroom Library
(one per classroom)*

Grade 6

For Teachers

The Core Knowledge Sequence for
Preschool–Grade 8
Dictionary of Cultural Literacy
Core Knowledge Day-by-Day Planner and
Workbook, Grade 6
What Your Sixth Grader Needs to Know (for parents)
Grace Abounding + Teacher's Kits
Teacher Edition of Pearson Learning
Core Knowledge History and
Geography Resources*
Grades 6 Music CD Set
A Joyful Noise
Mackin Middle School Resource Set*
Social Skills Electronic Books*

For Students

Realms of Gold, Volume I
Grace Abounding
Pearson Learning Core Knowledge History
and Geography Resources*
Scholastic Combined Grade 6–8 Classroom
Library (one per classroom)*

Grade 7

For Teachers

The Core Knowledge Sequence for
Preschool–Grade 8
Dictionary of Cultural Literacy
Core Knowledge Day-by-Day Planner and
Workbook, Grade 7
Grace Abounding + Teacher's Kits
Grade 7 Music CD Set
A Joyful Noise
Mackin Middle School Resource Set*
Social Skills Electronic Books*

For Students

Realms of Gold, Volume II
Grace Abounding
Scholastic Combined Grade 6–8 Classroom
Library (one per classroom)*

Grade 8

For Teachers

The Core Knowledge Sequence for
Preschool–Grade 8
Dictionary of Cultural Literacy
Core Knowledge Day-by-Day Planner and
Workbook, Grade 8
Grace Abounding + Teacher's Kits
Grade 8 Classical CD Set and Set A
Blues and Jazz CD Set and Set A
Musical Theater CD Set
Mozart Essential Works CD
A Joyful Noise
Mackin Middle School Resource Set*
Social Skills Electronic Books*

For Students

Realms of Gold, Volume III
Grace Abounding
Scholastic Combined Grade 6–8 Classroom
Library (one per classroom)

*Resources not sold by Core Knowledge.
You can find information about these resources
on our website, www.coreknowledge.org

Core Knowledge at a Glance

	Preschool	Kindergarten	First Grade	Second Grade	Third Grade
Language Arts/English	<ul style="list-style-type: none"> I. Oral Language II. Nursery Rhymes, Poems, Finger-Plays, and Songs III. Storybook Reading and Storytelling IV. Emerging Literacy Skills 	<ul style="list-style-type: none"> I. Listening and Speaking II. Reading III. Writing IV. Language Conventions V. Poetry VI. Fiction VII. Sayings and Phrases 	<ul style="list-style-type: none"> I. Listening and Speaking II. Reading III. Writing IV. Language Conventions V. Poetry VI. Fiction VII. Sayings and Phrases 	<ul style="list-style-type: none"> I. Listening and Speaking II. Reading III. Writing IV. Language Conventions V. Poetry VI. Fiction VII. Sayings and Phrases 	<ul style="list-style-type: none"> I. Reading and Writing II. Poetry III. Fiction IV. Sayings and Phrases
History and Geography	<p>Time:</p> <ul style="list-style-type: none"> I. Vocabulary II. Measures of Time III. Passage of Time (Past, Present, Future) <p>Space:</p> <ul style="list-style-type: none"> I. Vocabulary II. Actual and Representational Space III. Simple Maps IV. Basic Geographic Concepts 	<p>World:</p> <ul style="list-style-type: none"> I. Geography: Spatial Sense II. Overview of the Seven Continents <p>American</p> <ul style="list-style-type: none"> I. Geography II. Native American Peoples, Past and Present III. Early Exploration and Settlement IV. Presidents, Past and Present V. Symbols and Figures 	<p>World:</p> <ul style="list-style-type: none"> I. Geography II. Early World Civilizations III. Modern Civilization and Culture: Mexico <p>American</p> <ul style="list-style-type: none"> I. Early People and Civilizations II. Early Exploration and Settlement III. From Colonies to Independence: The American Revolution IV. Early Exploration of American West V. Symbols and Figures 	<p>World:</p> <ul style="list-style-type: none"> I. Geography II. Early Asian Civilizations III. Modern Japanese Civilization IV. The Ancient Greek Civilization <p>American</p> <ul style="list-style-type: none"> I. American Government: The Constitution II. The War of 1812 III. Westward Expansion IV. The Civil War V. Immigration and Citizenship VI. Fighting for a Cause VII. Geography of the Americas VIII. Symbols and Figures 	<p>World:</p> <ul style="list-style-type: none"> I. World Geography II. The Ancient Roman Civilization III. The Vikings <p>American</p> <ul style="list-style-type: none"> I. The Earliest Americans II. Early Exploration of North America III. The Thirteen Colonies: Life and Times Before the Revolution
Visual Arts	<ul style="list-style-type: none"> I. Attention to visual detail II. Creating Art III. Looking and Talking about Art 	<ul style="list-style-type: none"> I. Elements of Art II. Sculpture III. Looking at and Talking About Art 	<ul style="list-style-type: none"> I. Art from Long Ago II. Elements of Art III. Kinds of Pictures: Portrait and Still Life 	<ul style="list-style-type: none"> I. Elements of Art II. Sculpture III. Kinds of Pictures: Landscapes IV. Abstract Art V. Architecture 	<ul style="list-style-type: none"> I. Elements of Art II. American Indian Art III. Art of Ancient Rome and Byzantine Civilization
Music	<ul style="list-style-type: none"> I. Attention to Differences in Sound II. Imitate and Produce Sounds III. Listen and Sing IV. Listen and Move 	<ul style="list-style-type: none"> I. Elements of Music II. Listening and Understanding III. Songs 	<ul style="list-style-type: none"> I. Elements of Music II. Listening and Understanding (Composers; Orchestra; Opera; Ballet; Jazz) III. Songs 	<ul style="list-style-type: none"> I. Elements of Music II. Listening and Understanding (Orchestra; Keyboards; Composers) III. Songs 	<ul style="list-style-type: none"> I. Elements of Music II. Listening and Understanding (Orchestra; Composers) III. Songs
Mathematics	<ul style="list-style-type: none"> I. Patterns and Classification II. Geometry III. Measurement IV. Numbers and Number Sense V. Addition and Subtraction with Concrete Objects VI. Money 	<ul style="list-style-type: none"> I. Patterns and Classification II. Numbers and Number Sense III. Money IV. Computation V. Measurement VI. Geometry 	<ul style="list-style-type: none"> I. Patterns and Classification II. Numbers and Number Sense III. Money IV. Computation V. Measurement VI. Geometry 	<ul style="list-style-type: none"> I. Numbers and Number Sense II. Fractions III. Money IV. Computation V. Measurement VI. Geometry 	<ul style="list-style-type: none"> I. Numbers and Number Sense II. Fractions and Decimals III. Money IV. Computation V. Measurement VI. Geometry
Science	<ul style="list-style-type: none"> I. Human Characteristics, Needs and Development II. Animal Characteristics, Needs and Development III. Plant Characteristics, Needs and Growth IV. Physical Elements (Water, Air, Light) V. Introduction to Magnetism VI. Seasons and Weather VII. Taking Care of the Earth VIII. Tools 	<ul style="list-style-type: none"> I. Plants and Plant Growth II. Animals and Their Needs III. Human Body (Five Senses) IV. Introduction to Magnetism V. Seasons and Weather VI. Taking Care of the Earth VII. Science Biographies 	<ul style="list-style-type: none"> I. Living Things and Their Environments II. Human Body (Body Systems) III. Matter IV. Properties of Matter: Measurement V. Introduction to Electricity VI. Astronomy VII. The Earth VIII. Science Biographies 	<ul style="list-style-type: none"> I. Cycles in Nature (Seasonal Cycles; Life Cycles; Water Cycle) II. Insects III. Human Body (Cells; Digestive and Excretory Systems) IV. Magnetism V. Simple Machines VI. Science Biographies 	<ul style="list-style-type: none"> I. Introduction to Classification of Animals II. Human Body (Muscular, Skeletal, and Nervous Systems; Vision and Hearing) III. Light and Optics IV. Sound V. Ecology VI. Astronomy VII. Science Biographies

	Fourth Grade	Fifth Grade	Sixth Grade	Seventh Grade	Eighth Grade
Language Arts/English	<ul style="list-style-type: none"> I. Writing, Grammar, and Usage II. Poetry III. Fiction IV. Speeches V. Sayings and Phrases 	<ul style="list-style-type: none"> I. Writing, Grammar, and Usage II. Poetry III. Fiction and Drama IV. Speeches V. Sayings and Phrases 	<ul style="list-style-type: none"> I. Writing, Grammar, and Usage II. Poetry III. Fiction and Drama IV. Sayings and Phrases 	<ul style="list-style-type: none"> I. Writing, Grammar, and Usage II. Poetry III. Fiction, Nonfiction, and Drama IV. Foreign Phrases Commonly Used in English 	<ul style="list-style-type: none"> I. Writing, Grammar, and Usage II. Poetry III. Fiction, Nonfiction, and Drama IV. Foreign Phrases Commonly Used in English
History and Geography	<p>World:</p> <ul style="list-style-type: none"> I. World Geography (Spatial Sense; Mountains) II. Europe in Middle Ages III. The Spread of Islam and the "Holy Wars" IV. Early and Medieval African Kingdoms V. China: Dynasties and Conquerors <p>American</p> <ul style="list-style-type: none"> I. The American Revolution II. Making a Constitutional Government III. Early Presidents and Politics IV. Reformers V. Symbols and Figures 	<p>World:</p> <ul style="list-style-type: none"> I. World Geography (Spatial Sense; Lakes) II. Early American Civilizations III. European Exploration, Trade, and the Clash of Cultures IV. The Renaissance and the Reformation V. England from the Golden Age to the Glorious Revolution VI. Russia: Early Growth and Expansion VII. Feudal Japan <p>American</p> <ul style="list-style-type: none"> I. Westward Expansion II. The Civil War: Causes, Conflicts, Consequences III. Native Americans: Cultures and Conflicts IV. U.S. Geography 	<p>World:</p> <ul style="list-style-type: none"> I. World Geography (Spatial Sense; Deserts) II. Lasting Ideas from Ancient Civilizations III. The Enlightenment IV. The French Revolution V. Romanticism VI. Industrialism, Capitalism, and Socialism VII. Latin American Independence Movements <p>American</p> <ul style="list-style-type: none"> I. Immigration, Industrialization, and Urbanization II. Reform 	<ul style="list-style-type: none"> I. America Becomes a World Power II. World War I: "The Great War," 1914–1918 III. Russian Revolution IV. America from the Twenties to the New Deal V. World War II VI. Geography of United States 	<ul style="list-style-type: none"> I. The Decline of European Colonialism II. The Cold War III. The Civil Rights Movement IV. The Vietnam War and the Rise of Social Activism V. The Middle East and Oil Politics VI. The End of the Cold War: The Expansion of Democracy and Continuing Challenges VII. Civics: The Constitution—Principles and Structure of American Democracy VIII. Geography of Canada and Mexico
Visual Arts	<ul style="list-style-type: none"> I. Art of the Middle Ages in Europe II. Islamic Art and Architecture III. Art of Africa IV. Art of China V. Art of a New Nation: The United States 	<ul style="list-style-type: none"> I. Art of the Renaissance II. American Art: Nineteenth-Century United States III. Art of Japan 	<ul style="list-style-type: none"> I. Art History: Periods and Schools (Classical; Gothic; Renaissance; Baroque; Rococo; Neoclassical; Romantic; Realistic) 	<ul style="list-style-type: none"> I. Art History: Period and Schools (Impressionism; Post-Impressionism; Expressionism and Abstraction; Modern American Painting) 	<ul style="list-style-type: none"> I. Art History: Periods and Schools (Painting Since World War II; Photography; 20th-Century Sculpture) II. Architecture Since the Industrial Revolution
Music	<ul style="list-style-type: none"> I. Elements of Music II. Listening and Understanding (Orchestra; Vocal Ranges; Composers) III. Songs 	<ul style="list-style-type: none"> I. Elements of Music II. Listening and Understanding (Composers; Connections) III. American Musical Traditions (Spirituals) IV. Songs 	<ul style="list-style-type: none"> I. Elements of Music II. Classical Music: From Baroque to Romantic (Bach, Handel, Haydn, Mozart, Beethoven, Schubert, Chopin, Schumann) 	<ul style="list-style-type: none"> I. Elements of Music II. Classical Music: Romantics and Nationalists (Brahms, Berlioz, Liszt, Wagner, Dvorak, Grieg, Tchaikovsky) III. American Musical Traditions (Blues and Jazz) 	<ul style="list-style-type: none"> I. Elements of Music II. Non-Western Music III. Classical Music: Nationalists and Moderns IV. Vocal Music (Opera; American Musical Theater)
Mathematics	<ul style="list-style-type: none"> I. Numbers and Number Sense II. Fractions and Decimals III. Money IV. Computation V. Measurement VI. Geometry 	<ul style="list-style-type: none"> I. Numbers and Number Sense II. Ratio and Percent III. Fractions and Decimals IV. Computation V. Measurement VI. Geometry VII. Probability and Statistics VIII. Pre-Algebra 	<ul style="list-style-type: none"> I. Numbers and Number Sense II. Ratio, Percent, and Proportion III. Computation IV. Measurement V. Geometry VI. Probability and Statistics VII. Pre-Algebra 	<ul style="list-style-type: none"> I. Pre-Algebra (Properties of the Real Numbers; Polynomial Arithmetic; Equivalent Equations and Inequalities; Integer Exponents) II. Geometry (Three-Dimensional Objects; Angle Pairs; Triangles; Measurement) III. Probability and Statistics 	<ul style="list-style-type: none"> I. Algebra (Properties of the Real Numbers; Relations, Functions, and Graphs; Linear Equations and Functions; Arithmetic of Rational Expression; Quadratic Equations and Functions) II. Geometry (Analytic Geometry; Introduction to Trigonometry; Triangles and proofs)
Science	<ul style="list-style-type: none"> I. Human Body (Circulatory and Respiratory Systems) II. Chemistry: Basic Terms and Concepts III. Electricity IV. Geology: The Earth and Its Changes V. Meteorology VI. Science Biographies 	<ul style="list-style-type: none"> I. Classifying Living Things II. Cells: Structures and Processes III. Plant Structures and Processes IV. Life Cycles and Reproduction V. Human Body (Endocrine and Reproductive Systems) VI. Chemistry: Matter and Change VII. Science Biographies 	<ul style="list-style-type: none"> I. Plate Tectonics II. Oceans III. Astronomy: Gravity, Stars, and Galaxies IV. Energy, Heat, and Energy Transfer V. The Human Body: Lymphatic and Immune Systems VI. Science Biographies 	<ul style="list-style-type: none"> I. Atomic Structure II. Chemical Bonds and Reactions III. Cell Division and Genetics IV. History of the Earth and Life Forms V. Evolution VI. Science Biographies 	<ul style="list-style-type: none"> I. Physics II. Electricity and Magnetism III. Electromagnetic Radiation and Light IV. Sound Waves V. Chemistry of Food and Respiration VI. Science Biographies

LITCHFIELD SCHOOL DISTRICT

Our mission is to provide rigorous and varied educational opportunities that challenge and engage all students to attain their highest level of intellectual, social, physical, and emotional growth. (2007)

LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27

Litchfield, New Hampshire 03052

Approved Minutes for January 16, 2014

(approved as written 1-22-14)

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair (*excused*)
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION

6:00 p.m.

A. Call to Order

Mr. Barka called the meeting to order at 6:01 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

II. OLD OR UNFINISHED BUSINESS

A. FY15 Budget Reconciliation

Mr. Markiewicz provided a reconciliation of the FY15 Budget bottom line. He reported there was a discrepancy of the totals between the Budget Committee and the School Board. He indicated that Mr. Cutter sent out an email stating that he omitted the two adjustments for the increases to the water line item and transportation. Mr. Markiewicz indicated we were able to reconcile to the total operating budget of \$20,931,024.57.

Mr. York commented that at the last Budget Committee meeting they moved a lower number. That number was incorrect by approximately \$45,000. He recommended the Board not support the Budget Committee's budget number. He recommended the Board accept the District's number.

Mr. Miller commented that we have to vote on the Budget Committee's number.

Mr. Byron commented that technically you need to vote on the Budget Committee's number.

Mr. Cutter, Budget Committee Chair, addressed the Board. He commented that the Budget Committee intends to move the School Board's number of \$20,931,024.57. He indicated that he has included it in the hearing presentation.

Mr. York asked the School Board if they would like him to ask the Budget Committee members who abstained on the teachers' contract article to provide input. He noted that additional information was provided to them and he would like to hear their feedback. He believes the citizens would like to hear their input as well.

Mr. Miller commented if the article is not approved, it would be a key point to know what the votes were. He believes it is important for everyone to weigh in no matter the outcome of the voters.

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B. FY15 Default Budget

Mr. Markiewicz provided the final FY15 Default Budget total. He noted that legal counsel provided input indicating there is wide latitude with items to include in the default budget pertaining to the items in question. He indicated that he level funded the items in question. Mr. Markiewicz reported that the total FY15 Default budget is \$20,860,034, which is \$70,661 lower than the FY15 Recommended Operating Budget.

Mr. Miller made a motion to approve the FY15 Default Budget of \$20,860,034. Mr. Bourque seconded.

Mr. Miller made a motion to reduce the FY15 Default Budget by \$55,805 for non-special education transportation. Mr. Barka seconded.

Mr. Miller commented that he wanted to ensure the Board presents the conservative number. He indicated legal counsel should be asked specifically what is the right number for the default budget.

Dr. Cochrane commented that legal counsel's opinion is that the default language can be strictly interpreted or not. He indicated if it is strictly interpreted, then everything should be reduced.

The motion to reduce the FY15 Default budget carried 4-0-0.

Vote on a new bottom line for the FY15 Default Budget of \$20,804,559: 4-0-0. The motion carried.

C. FY15 Warrant Articles

Mr. Markiewicz presented the final FY15 Warrant Articles to the Board.

Article 1: Operating Budget \$20,931,024.57; Default Budget \$20,804,559

Article 3: GMS Part Time Computer Teacher \$25,662

Article 4: Capital Reserve Fund Replenish up to \$50,000

Article 5: Security Equipment All Schools \$36,700

School Board members agreed to defer voting on FY15 Warrant Articles until the January 22, 2014 meeting.

III. ADJOURN

Mr. York made a motion to adjourn at 6:22 p.m. Mr. Miller seconded. The motion carried 4-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board

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LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27

Litchfield, New Hampshire 03052

Approved Minutes for January 22, 2014

(approved as written 2-19-14)

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair (*excused*)
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION **6:30 p.m.**

A. Call to Order

Mr. Barka called the meeting to order at 6:31 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

Superintendent's Comments will include a brief presentation. Program of Studies will not be formally presented, but has submitted a draft for School Board review.

D. Summary of Non-Public Actions from the January 8, 2014 non-public session:

Mr. Miller made a motion to approve the non-public minutes of December 18, 2013 as written. Mr. York seconded. The motion carried 5-0-0.

Mr. Miller made a motion to accept the resignation of Daizha Gatherum and release her from her contract effective February 28, 2014.

Mr. York amended the motion to accept the resignation of Daizha Gatherum and release her from her contract effective February 21, 2014. Mr. Miller seconded. The motion carried 5-0-0.

E. Presentations & Recognitions

- School District Moderator

John Regan, School District Moderator, came before the Board to coordinate warrant article order and speakers.

School Board members discussed speakers for each article. The following speakers will present the FY15 Warrant Articles at Deliberative Session:

Article 1: Mr. Barka

Article 2: Mr. Barka and Dr. Cochrane

Article 3: Dr. Cochrane

Article 4: Mr. Barka and/or Mr. Markiewicz

Article 5: Mrs. D'Alleva and/or Mr. Markiewicz

- CHS Lacrosse Donation

Coach Patterson presented a Lacrosse donation to the Board. The Litchfield Lacrosse Association donated equipment for the CHS Lacrosse program.

LITCHFIELD SCHOOL DISTRICT

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Mr. Miller made a motion to accept the donation of Lacrosse equipment from the Litchfield Lacrosse Association. Mr. York seconded. The motion carried 4-0-0.

- Wrestling Funding

Jeff Douglas came before the Board to provide input regarding the funding of Wrestling by the District. He made the following statements:

Wrestling has been a successful program since its beginning in Litchfield. Litchfield Youth Wrestling began as a USA Wrestling program in 2007. The following year the program has grown from a small group to 25 wrestlers from grades K-8. The Friends of Litchfield Wrestling Booster Club was formed. A letter of agreement between the district and Friends of Wrestling was signed and the CHS Wrestling team was formed (2009-2010). The high school program grew from 18 wrestlers to 25 over the last few years. In the program as a whole, there are now 70 wrestlers from grades 1-12 (25 CHS; 45 Youth). The popularity and growth of the team has been phenomenal. The program is going into its fifth year and has been successfully self-funded for the first four years.

Mr. Douglas indicated that the fundraising efforts for the program are becoming taxed and the charitable giving group is now divided among many interests. He commented that they may not be able to fully fund the season. He noted that it takes approximately \$10,500 to run the team and there is a possibility of another tournament from the state. Mr. Douglas commented that the program has aligned with the athletics department and school in all aspects. He indicated that the question remains if the team belongs to the school (district). Mr. Douglas requested that the district fully fund Wrestling. He noted that the Booster Club will continue to fundraise to keep up with needs of the team, but the main cost needs to be covered.

Mr. Miller asked if Mr. Douglas was asking for funding for this year or next year. Mr. Douglas commented that they should be able to fund the season, but noted that future years are the focus for funding.

Mr. Barka suggested reviewing any open spaces in current athletic stipends.

Dr. Cochrane commented that the team has been looking for funding virtually since school opened. He noted they offer a quality program. He indicated they raise funds and have many volunteers. Dr. Cochrane suggested that he Coach Patterson and Mrs. Rothhaus discuss some options. He indicated that they will bring those options to the Board.

Mr. Douglas commented that the formula in athletics is to fund a team to a certain point and fundraise for the rest. He indicated that Wrestling has come far, which is evident by the state championship banners that are displayed. He noted that they would like it to stay at CHS.

Dr. Cochrane commented that a real youth involvement has emerged from Wrestling as it is not just a high school sport. He indicated that it brings value to the students involved.

Mr. Miller commented that this is a revenues discussion. He indicated that the money can be moved from self-funded to regular athletics in the budget. He noted that we asked the Wrestling program five years ago to sign a three year agreement. He believes we should adhere to the agreement.

Mr. York asked if we move the money, where will the athletic department find the funds.

Dr. Cochrane commented that there are some options. He explained that the increase in the athletic expenditure can be equalized across all sports, but would involve a user fee structure. He indicated in the interest of fairness, people in other sports do not pay, while the wrestling program has been self-funded. Dr. Cochrane commented that he is not suggesting this method is preferred.

Mr. Miller commented that the program held up their end of the agreement and so should the Board.

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Coach Patterson commented that they held up their portion of the agreement in good faith. He indicated that he has supported wrestling in every budget he has written and every budget has been adjusted. Coach Patterson noted that some sports do fundraising. He commented that the Wrestling program needs to be funded by the district.

Mr. Miller commented that it is a matter of reallocating revenues. Mr. Markiewicz cautioned that if money is taken out of the self-funded account, we have to take care not to short another program. He noted that other options can be researched.

Mr. Barka commented that the program is very successful and some option should be found.

Mr. Miller commented that sharing co-curricular funds should be an option. He thanked Mr. Douglas and supporters of the program for taking someone's idea and promoting a successful program.

- 2014-2015 CHS Program of Studies

A draft version of the 2014-2015 CHS Program of Studies was presented to the Board, along with a summary of changes from the previous year.

Dr. Cochrane commented that the administration believes there are still some conversations to have with the departments. He noted they changed their request to the Board and asked if the Board would review the changes and the administration will return to the Board with the final version. Dr. Cochrane pointed out that new Honors Option language will be included in the Program of Studies as the Board had concerns regarding the Honors program recently.

Referring to math courses, Mr. York asked why we would accept a B student into an Honors class.

Mr. Barka commented that we want as many students as possible going into more rigorous classes.

Mr. Miller commented that if more than 30 students request the course, they will take the top 30.

Mr. York was concerned about offering courses with increased rigor as Honors courses and having students opt for the course without doing due diligence to get into that class.

Mr. Miller believes we should let students challenge themselves and it will become evident if a B+ is enough to get into an Honors course.

Dr. Cochrane indicated if we hold those students to the same high expectations, they may feel the class is not a good fit.

Mr. Miller commented that there is virtually no difference in an Honors course and a regular course in terms of work.

Mr. York commented that this is an opportunity for the Math department at CHS to fix their curriculum and implement a plan. He indicated that we need to see a stark change in this year's freshmen class.

Dr. Cochrane indicated the appropriate metrics are being reviewed and discussed.

Mr. Miller commented that we have had conversations about a 28 credit diploma of distinction. He noted it is not mentioned in the Program of Studies. He asked if it can be included.

Dr. Cochrane indicated that the administration will bring the final presentation to the Board at the February 19 meeting.

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- Wrestling (Continued)

Referring to the previous discussion earlier in the meeting, Mr. Douglas asked Board members for direction. He asked if the Board would be supportive if a voter changed the budget at Deliberative Session to include funding in the budget for Wrestling.

Mr. York indicated that the money is in the budget. He clarified that the Board is questioning the source of those funds.

Mr. Miller commented that the budget number in the warrant includes everything. He indicated allocation of the money is the decision of the Board.

Mr. Markiewicz commented that if the Board chooses to fund wrestling in the budget, we will have to lower it to local tax appropriation.

Laura Gandia, 3 Chamberlin Drive, asked if there needs to be a vote of the Board to change the program from self-funded to district funded.

Mr. Barka commented that it is just a reallocation of funds upon which the Board will vote.

Ms. Gandia commented that the Friends of Litchfield Wrestling are concerned they may not have support of the Board in that vote, which is the reason they suggested the option to amend the bottom line of the budget.

Mr. Markiewicz clarified that it is a decision of the Board to make Wrestling a regular program. He noted that the revenue comes through the self-funded budget. He indicated there needs to be a plan for the remainder of the self-funded programs. He cautioned when money is shifted around there are consequences.

Mr. Miller commented that revenues are included in the budget bottom line and is usually set over the summer. Mr. Barka commented they are saying they do not want to wait for the Board to make the decision.

Mr. Markiewicz commented that the only action at Deliberative is to change the bottom line of the budget. He noted that you cannot impact revenue. He indicated that the Board has to make a motion to make Wrestling a regular program.

Ms. Gandia commented that Wrestling is at the will of the Board.

Mr. Markiewicz cautioned that “no means no” is taken very seriously in Litchfield and if it is not approved you will risk not running the program at all. He noted that the voters do not make decisions on how programs are funded as they can only vote on the appropriation.

Mr. Miller commented when the operating budget is increased there is a risk it will not be approved. He believes the Board heard the group’s concerns and believes that including Wrestling in the regular programming is the right decision.

F. Correspondence

Mr. York announced that he received an email from Frank Byron regarding a grant from General Mills for physical activity for the students.

Mr. Bourque announced that the Board received an email from Kathleen Follis thanking the Board for recommending the LEA contract go to the voters.

G. Approval of Draft Minutes:

- Public Session January 8, 2014

Mr. York made a motion to approve the public minutes of January 8, 2014 as written. Mr. Bourque seconded. The motion carried 3-0-0.

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- Public Session January 16, 2014

Mr. York made a motion to approve the public minutes of January 16, 2014 as written. Mr. Bourque seconded. The motion carried 3-0-0.

H. Community Forum

Jason Guerrette, 11 Perry Court, commented that he is not supportive of waiting until September and making adjustments to set the tax rate. He believes that is neither honest nor transparent. Referring to Wrestling, he indicated that it should be included in the whole athletic program, with the money being allocated among the sports, and everyone shares the burden of fundraising. Referring to the default budget, Mr. Guerrette commented that he believes there are a number of issues that should be addressed (i.e. self-funded increase, non-special education transportation). He indicated that Mr. York stated he would be open to the challenge of the default budget. Mr. Guerrette commented that it is not about the money or the challenge, but about fixing the ambiguity of the law. He noted the only entity that can review the law is the Superior Court. He indicated he would not like for Litchfield to be known for fixing the law regarding the default budget. He encouraged the Board to post the final version of the default budget on the website.

I. Superintendent's Comments

- Enrollment Dec 2013

Dr. Cochrane presented the enrollment report for December 2013. There were 1,438 students enrolled in the district at the end of December 2013.

- Student Information System Presentation

Dr. Cochrane provided a presentation regarding the student information system. He indicated that he worked in conjunction with a representative from 2 Revolutions regarding functionality of a student information system. He noted that he is looking to put a committee together to move the district to a new system. Dr. Cochrane explained that the existing system is dysfunctional. He indicated that the system that he is considering can record, store, embed and manipulate more student data. He commented that the system incorporates student information, learning management, data management, grading, and assessment in one platform. Dr. Cochrane indicated he is looking for a solution over the long term with a decreased cost of ownership.

Mr. York believes the committee should present three choices for a student information system to the Board. He commented they should be focused on functionality and not be concerned with cost.

Mr. Miller commented that he would like the committee to bring costs of the options to the Board.

Dr. Cochrane provided information regarding how a student information system functions and implementation. He indicated that professional development would be offered to teachers regarding use of a new student information system.

A lengthy discussion followed regarding the proposed implementation, other options and questions and answers.

Dr. Cochrane indicated he discussed the student information system with Mr. Hancock, Dr. Heon and the Administration.

Mr. Miller asked about the size of the committee. Dr. Cochrane indicated that there could be as many as 18 members, including the Superintendent's Administrative Assistant, Curriculum Director, Business Administrator, Librarian, Unified Arts teachers from each school, principals, guidance, school administrative assistants, and a Board member.

Mr. York made a motion to approve the establishment of a Committee to study a new student information system. Mr. Miller seconded. The motion carried 4-0-0.

- Student Information System Vendor Resolution Summary

Dr. Cochrane provided a summary regarding vendor resolution for the student information system.

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II. REPORTS

A. School Board Comments

Mr. York commented that Mr. Guerrette has been providing commentary regarding the default budget preparation at every meeting for the last few months. He indicated that Mr. Guerrette has stated that he will challenge the default budget in court. Mr. York believes that Mr. Guerrette has the right to comment, but repetitious comment is unnecessary.

Mr. Barka reported that he had conversations with parents of third and fourth graders that claim their students are struggling in math and would like a resource to assist.

Dr. Cochrane commented that there is an imbalance of tutoring support. He indicated that in every grade level that is transitioning, there seems to be more catch up. He noted we are increasing math teaching capacity and plan to track fluency levels this year.

Mr. Miller commented that while he understands Mr. York's comments regarding Mr. Guerrette's statements, he would not recommend curtailing anyone's comments. He suggested if there is repetitious comment the Board can acknowledge the position of that person and ask if there is something specific about which s/he would like to comment. He commented that it is Mr. Guerrette's prerogative to express his opinion.

B. Committee Reports

• Budget Committee

Mr. York and Mr. Bourque provided a report from the recent Budget Committee meetings. He reported that the Budget Committee met during the hearing and adjusted the budget number. The Budget Committee met after the hearing. Mr. York indicated that he made a motion to reopen Article 2, LEA CBA, and a discussion ensued. He asked Budget Committee members that initially abstained from voting on the recommendation of the article to provide feedback regarding their abstentions. He indicated that one person who spoke for those that abstained requested that questions be answered and more information provided, but asked no questions. Mr. York noted that information was provided regarding actual costs of raises and relative items. He indicated that comments were made about requesting information about healthcare, but there was no request or questions regarding that topic. Mr. York reported that the three Committee members that initially abstained, changed their votes to "opposed" and the final vote for recommendation of Article 2 was 4-4-0.

Mr. Miller reported that he spoke to the Budget Committee as a citizen and questioned why some members abstained on one item presented that night, but not others. He noted that the response was that information for the items they did vote on was not as complex as the item in question. Mr. Miller indicated that Mr. Peebles was concerned about voting on the same night as an item is presented. Mr. Miller noted that his response was that there were many parties present during the presentations who could have answered their questions. He indicated that Mr. Spencer had questions regarding healthcare.

• NHSBA Delegates Assembly

Mr. Bourque provided a report from the delegates' assembly. He reported that there was a segment on Common Core and the Evaluation Process. He noted that approximately 40 delegates attended.

C. Business Administrator's Report – Dec 2013

• YTD FY14 Budget Status Report

Mr. Markiewicz presented an update of the status of the FY14 budget and revenues. He reported that we are six months into the fiscal year and the District is at 6% of unencumbered appropriations. Mr. Markiewicz indicated that the District is in good shape at this point.

Mr. Markiewicz reported that the oil situation cost the District approximately \$1,400.

Mr. Miller was concerned about what was budgeted for health insurance. He commented that the Budget Committee reduced health insurance, which is a concern.

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Mr. Markiewicz commented that the biggest expenditure is salaries. He noted it becomes problematic when new hires elect for higher insurance. He indicated many people switched from single to family plans.

Dr. Cochrane commented with the attraction of public service healthcare, we expect there will be more change.

Mr. Miller commented that the employer mandate for PPACA begins after August of this year. He indicated that private employers will use creative ways to control their costs.

- MS-27

Mr. Markiewicz provided the MS-27 to the Board for an informational review. Budget Committee needs to sign – will post along with budget and warrant -

- 2013 Audit Findings

Frank – there are three items of concern and will bring corrective action plan to the Board –

D. Technology Report

The December 2013 Technology Report was provided to the Board.

III. OLD OR UNFINISHED BUSINESS

A. Budget Committee Actions from January 16, 2014

The Board did not discuss any Budget Committee actions from the Budget Hearing.

B. Voting:

1) FY15 Default Budget

Mr. Markiewicz presented the FY15 Default Budget for the Board to sign.

2) FY15 Warrant Articles

Board members voted on FY15 warrant articles not previously voted.

Article 3: GMS part time computer teacher

Mr. York made a motion to recommend Article 3 as written. Mr. Bourque seconded.

Mr. Miller believes that we do not know if we need this position. He indicated that there is no data regarding the impact on students of the computerization of the Smarter Balance Assessment test. Mr. Miller commented he would like to have the rationale and real data before supporting this position.

Mr. York believes that there will be an issue at the elementary school. He commented there are no teachers that can address this problem currently at GMS.

The motion carried 3-1-0, with Mr. Miller opposing.

Article 4: Capital Reserve Fund

Mr. Miller made a motion to recommend Article 4. Mr. York seconded. The motion carried 4-0-0.

Article 5: Security Equipment

Mr. Miller expressed concern that if the article fails the District will not be able to add security if the necessity arises. He suggested purchasing the equipment with end of year funds.

Mr. Bourque commented that the citizens should understand the necessity of security equipment. Mr. Miller commented that the “no means no” law has year-long ramifications.

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Dr. Cochrane indicated that the Committee discussed whether the communications system was a higher priority. He noted that the Committee was unsure what was necessary for security recommendations. He commented if the article fails, it would give the Committee time to research the other options.

Mr. Miller made a motion to recommend Article 5. Mr. York seconded. The motion carried 4-0-0.

Article 1: Operating Budget

Mr. Miller made a motion to recommend Article 1. Mr. York seconded. The motion carried 4-0-0.

IV. NEW BUSINESS

A. Acceptance of Wellness Grant

Mrs. Flynn reported that she attended the Health Trust Health and Safety Coordinators' Academy training last Monday. As a result of the partnership and coordinating wellness activities for staff during the year, Health Trust provides a grant of \$500 for participating districts to use to run activities and for participation incentives.

Mr. York made a motion to accept a grant in the amount of \$500 from Health Trust for district wellness activities and incentives. Mr. Miller seconded. The motion carried 3-0-0.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

There was no community input.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered non-public session at 9:48 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. York seconded. The motion carried by roll call vote: Mr. Barka, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

IX. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller, the Board returned to public session at 10:25 p.m. Mr. York seconded. The motion carried by roll call vote: Mr. Barka, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

Board members discussed non-union employees' healthcare costs.

X. ADJOURN

Mr. Miller made a motion to adjourn at 10:35 p.m. Mr. York seconded. The motion carried 4-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board

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LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27

Litchfield, New Hampshire 03052

Approved Minutes for February 19, 2014

(approved as written 3-5-14)

In Attendance: Derek Barka, Chair
Patricia D'Alleva, Vice Chair
John York, Board Member (*excused*)
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Dr. Julie Heon, Director of Curriculum and Instruction
Mrs. Laura Rothhaus, Principal, CHS
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION **7:30 p.m.**

A. Call to Order

Mr. Barka called the meeting to order at 7:30 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

D. Summary of Non-Public Actions from:

- January 22, 2014 non-public session:

Mr. Miller made a motion to approve the non-public minutes of January 8, 2014 as written. Mr. York seconded. The motion carried 4-0-0.

E. Presentations & Recognitions

There were no presentations or recognitions.

F. Correspondence

Mr. Barka mentioned there were four emails from Mr. Guerrette regarding Common Core State Standards.

G. Approval of Draft Minutes:

- Public Session January 22, 2014

Mr. Miller made a motion to approve the public minutes of January 22, 2014 as written. Mr. Bourque seconded. The motion carried 3-0-1, with Mrs. D'Alleva abstaining.

H. Community Forum

There was no community input.

I. Superintendent's Comments

- NECAP Update

Dr. Cochrane announced that he has been informed by Commissioner Barry that the NH DOE has worked with the US DOE to obtain approval to remove CHS from Title I Priority School status since the school is no longer accepting Title I funds. He commented that the identification of CHS as a Priority School was because it was one of the few high schools in the state that was accepting Title I funds and not because it was a failing school. He

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indicated there is an abundance of internal and external data documenting CHS' steady improvement in aggregate student academic achievement over the last 4-5 years.

Dr. Cochrane presented data regarding the Fall 2013 NECAP test results. He indicated that there is some good news at CHS, as well as the upper grades in elementary and the middle school. He noted that we are trending in the right direction. Dr. Cochrane commented that the district schools' scores continue to trend higher in Reading, Math and Writing than the state average for the last three years. He commented that NECAP results for each school and the district can be found on the NH DOE website.

II. REPORTS

A. School Board Comments

There were no Board comments.

B. Curriculum Report

Dr. Heon presented the February 2014 Curriculum Report.

Dr. Heon indicated that PERC has reviewed and evaluated selected resources for school district use. She presented the following reading material recommendations to the Board.

- Horten's Miraculous Mechanisms – Gr 4

Mr. Miller made a motion to approve the selection of Horten's Miraculous Mechanisms for use in Grade 4. Mr. Bourque seconded. The motion carried 4-0-0.

- The White Giraffe – Gr 4

Mr. Miller made a motion to approve the selection of The White Giraffe for use in Grade 4. Mrs. D'Alleva seconded. The motion carried 4-0-0.

- Helen's Eyes – Gr 7

Mr. Miller made a motion to approve the selection of Helen's Eyes for use in Grade 7. Mrs. D'Alleva seconded. The motion carried 4-0-0.

- AP Calculus BC Course Description, Syllabus, Competencies

Dr. Heon presented to the Board the course description for AP Calculus BC, as well as the syllabus and competencies. She asked the Board to approve the inclusion of the course description in the CHS Program of Studies. She noted that the course would require a specific enrollment to be considered a "stand alone" course.

Dr. Cochrane commented that CHS is effective at finding ways to offer a full range of courses despite having a limited number of staff. He noted that they are creative with extended work and remedial work. He indicated that the processes need to be formalized. Dr. Cochrane mentioned he is working with the administration on a draft proposal. He commented that in this situation, it is not likely AP Calculus BC will be offered as a course every year, but by including the course in the Program of Studies, it resolves whether or not it will count toward the GPA.

Mr. Miller commented that there appears to be subjectivity in the syllabus and that it should be in alignment with the Student Handbook.

Dr. Heon clarified that the syllabus is not part of the curriculum.

Mr. Miller made a motion to approve the inclusion of the AP Calculus BC course description in the CHS Program of Studies. Mr. Bourque seconded. The motion carried 4-0-0.

- Pre-Algebra Daily Course Description

Dr. Heon presented to the Board the course description for Pre-Algebra Daily. She indicated that this course should be eligible for one math credit and one elective credit. She explained the course is for students who are not successful in Algebra I and are further behind in their mastery of skills. Dr. Heon added that Geometry should be approved as a requirement for graduation.

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Dr. Cochrane commented that our credits are competency-based. He indicated given the same level of competency and the time to achieve it, we can offer this course with one credit in math and one elective credit so that students do not fall behind in their studies. He noted that this is the best solution.

Mrs. D'Alleva asked how a student gets into the class and at what point is the course re-evaluated to discern if it is needed further.

Mrs. Rothhaus indicated that students are assessed before placement.

Dr. Cochrane commented that Algebra I Daily yields results that it is helping students. He indicated that a year from now we can reassess if it is working and if we need to continue offering the course.

Mr. Miller made a motion to approve offering the course Pre-Algebra Daily and including the course description in the CHS Program of Studies. Mr. Bourque seconded. The motion carried 4-0-0.

- Literature and Film Course Description

Dr. Heon presented to the Board the course description for Literature and Film and noted that the course was originally entitled Storytelling in Film. She commented that the course does not meet NCAA eligibility for English. She indicated that PERC was favorable upon presentation. Dr. Heon noted that the course focuses more on literature.

Mr. Miller commented that historically comments were made that senior English consists of many films. He asked how this course is different.

Dr. Heon commented that the course focuses more on literature, integrating some film. She noted that the course description was revised for this year.

Mr. Miller made a motion to approve the Literature and Film course description. Mrs. D'Alleva seconded. The motion carried 4-0-0.

- Curriculum Resource Evaluation Tool Revised
- Curriculum Resource Evaluation Tool Comparison to Policy IJL

Dr. Heon presented the revised Curriculum Resource Evaluation Tool to the Board. She indicated that the revised tool has been compared to the Instructional Resources policy (IJL) and notations have been made on alignment. She also presented recommendations for changes to the policy as some items are broad and over-reaching. Dr. Heon noted that there are also suggested changes to policy wording/language.

Mr. Miller commented that the criteria stated on the evaluation to the policy does not match the policy procedures criteria. He indicated that the form should be using what the procedures call out. He noted that the form should be in line with what the procedures state. Mr. Miller was concerned that issues arise when we link the policy to another document, which results in a policy change. He suggested it is more reasonable to link with the procedures as changes can be approved with less complexity.

Mr. Guerrette commented that he is on the PERC committee. He noted that PERC is happy with the resource evaluation tool. He noted that teachers use the tool to provide PERC with resources and their recommendations.

Mr. Miller commented that he has no objections if the form is used internally for teachers. He was concerned that it was being presented at the Board level. He indicated if the form is a vehicle or is the procedure we are going to use it should become the criteria section in the procedures. Mr. Miller suggested if that is not the case, then the form can be attached to the policy/procedures.

Dr. Heon commented that she misunderstood the charge of the Board regarding the resource evaluation tool relative to Policy IJL. She asked for clarification regarding the charge of the Board.

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Mr. Miller indicated that the form should not be brought before the Board.

Mr. Barka clarified that it is the report to the Board.

Dr. Heon asked if certain areas could be revised.

Mr. Miller indicated that Dr. Heon provide Mrs. Flynn with any and all changes so that she can apply the revisions and bring it forward to the Board for approval.

C. CHS Program of Studies

Mrs. Rothhaus and Ms. Callinan presented a summary of changes, as well as the 2014-2015 CHS Program of Studies to the Board. The Board reviewed and discussed changes.

Board members recommended revisions to the document presented.

Dr. Heon asked Board members if they would consider adding Geometry as a requirement of graduation at CHS.

Mrs. D'Alleva made a motion to add Geometry as requirement for graduation requirement at CHS. Mr. Barka seconded. The motion carried 4-0-0.

The Student Handbook and Graduation Requirements policy will be changed.

D. CHS Principals Report

Mrs. Rothhaus presented the February 2014 Principals Report to the Board. She thanked Board members for approving Geometry as a graduation requirement. She reported:

- Common Core work continues to be implemented at CHS
- Math curriculum is currently being revised
- A math tutor has been hired
- In process of hiring a Spanish teacher
- 23 students and staff raised \$6,800 for the Special Olympics winning 1st place for Division III schools
- Honor Roll cards will be used to recognize high achieving students
- The fashion show was successful
- 2 CHS swimmers placed second at the States
- Girls' Varsity Softball 2013 State Championship banner raised in the gymnasium
- Student Council had a successful Valentine's Day flower sale
- Shawn Munnely won a State Championship at the Winter State Track meet
- Acknowledged Gil Walton for his dedication to the Booster Club
- Welcomed new President Cara Gannon
- Acknowledged Patricia D'Alleva's dedication and thoughtful deliberations on the PERC committee
- PTO is forming to support CHS
- 8th Grade parent night is March 24.

Mrs. Rothhaus reported that she, Mr. Perez and Ms. Callinan met with Bow High School and discussed the Student Exchange Program. She indicated that CHS would like to focus on J1 Visa students. She commented that it costs \$2,000 to apply and the students would pay tuition to attend the school.

Dr. Cochrane commented on the Freshmen Seminar student data. He noted that it is a student evaluation of teacher behavior.

Dr. Cochrane commented on the Student Exchange Program. He indicated that he spoke with Dean Cascade, Superintendent in Bow, regarding their International Students Program. He commented that the students we have now are limited to a one year stay and there is no cost to the district. He clarified under the program Mrs. Rothhaus mentioned, Superintendent Cascade indicated the cost is closer to \$10,000 for the district; however, the student can

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attend for four years, which would cover the district's cost. Dr. Cochrane commented if the district decides to proceed with this program, the question becomes who pays the money and who receives the funds. He indicated that would be a district function.

- Freshman Seminar Teacher Evaluation by Students

Mrs. Rothhaus provided student data regarding the Freshman Seminar course to the Board.

- CHS NECAP Test Results and Comparison

Mrs. Rothhaus provided the CHS School Results of the Fall 2013 Grade 11 NECAP test results to the Board.

- Growth Trend of CHS NECAP

Mrs. Rothhaus presented a growth data analysis of CHS progress with NECAP over the last several years in comparison to surrounding high schools and those of the same size. She indicated that CHS is above the state average.

Dr. Cochrane commended the CHS administration on the representation of the NECAP comparison and growth data.

- Acceptance of Donation: Pickle Ball

Mrs. D'Alleva made a motion to accept the donation from the Litchfield Pickleball Association to CHS of Pickleball equipment valued at \$1,045. Mr. Miller seconded. The motion carried 4-0-0.

Mrs. Flynn reminded the Board they did not officially vote to approve the CHS 2014-2015 Program of Studies.

Mr. Miller made a motion to approve the 2014-2015 CHS Program of Studies with suggested revisions, deletions and additions discussed. Mrs. D'Alleva seconded. The motion carried 4-0-0.

E. Student Representatives Report

The Student Representatives report was postponed to March 5.

F. Committee Reports

- Budget Committee

The Budget Committee has not met since February 8, 2014.

- LSB Building/Planning Committee

The committee has not meet.

- SIS Committee

Dr. Cochrane reported that the committee met last Tuesday and will meet tomorrow afternoon. He noted the committee will be working from the rubric used in Nashua in 2008 and will make modifications based on our set of criteria. He indicated the committee will finalize that rubric for decision-making. Dr. Cochrane reported that vendor presentations are expected from Follet, Aspen, Power School and Infinite Campus. He asked if any Board members would like to attend some of the presentations. He commented that site visits with vendors are anticipated and a recommendation should be brought forward in early April. Dr. Cochrane indicated that the cost is expected to be lower than that of the existing system.

Dr. Cochrane reported the Technology Committee will be completing a technology plan the first week of June.

G. Business Administrator's Report – Jan 2014

Mr. Markiewicz presented the January 2014 Finance report to the Board. He provided a financial summary of the district's current fund balance, revenue, expenditures and encumbrances to the Board. He noted that the summary was broken down into categories (i.e. salaries, benefits, utilities, transportation). He noted the forecast is significantly tighter than last year and expressed concerns regarding utilities.

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Mr. Markiewicz provided an update regarding Fuller Oil. He reported the district has terminated the contract with Fuller Oil due to non-performance. He indicated that Burke Oil has made a commitment to supply oil for the district at a fixed rate price that is approximately \$0.20 per gallon higher. Mr. Markiewicz reported that deliveries are received as promised. He commented that correspondence was received from Fuller Oil stating that if we have sustained financial loss, we can submit a claim through the vendor. He noted the difference in the cost of fuel per vendor is approximately \$2,500 to date.

- Food Service POS

Mr. Markiewicz presented a proposal for a new food service point of sale system, Nutrikids. He explained that there have been issues with the POS system currently in place. He noted there were three occurrences where the software did not function properly uploading end of day information to MealTime, which resulted in a loss of data for the free/reduced lunch program that cannot be recovered. Mr. Markiewicz indicated that the hardware is breaking down as well. He reported that when relaying the issue to MealTime, their advice was to purchase our own server.

Mr. Markiewicz indicated that Mrs. Lawrence and Mr. Hancock have reviewed POS hardware and software and recommended NutriKids. He indicated that the total cost includes hardware, software, POS manager enterprise, training, annual license and is compatible with any student information system that may be chosen. He noted the total cost is \$24,670. He suggested that part of the cost can be absorbed with the Food Service fund balance and part with the unassigned fund balance. Mr. Markiewicz also presented other options for funding the new system to the Board.

Mr. Miller made a motion to approve the purchase of NutriKids Food Service Point of Sale system. Mrs. D'Alleva seconded. The motion carried 4-0-0.

- PPACA Update

Mr. Markiewicz indicated that an update will be provided to the Board at the March 5 meeting.

III. OLD OR UNFINISHED BUSINESS

There was no old or unfinished business.

IV. NEW BUSINESS

A. Acceptance of Donation: Knights of Columbus

Dr. Cochrane presented a donation from the Litchfield Knights of Columbus for GMS Special Education to the Board.

Mr. Bourque made a motion to accept a donation in the amount of \$395.73 from the Litchfield Knights of Columbus for the Special Education program at GMS. Mr. Miller seconded. The motion carried 4-0-0.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Jason Guerrette, 11 Perry Court, commended the Business Administrator on providing a forecast with appropriate detail. Mr. Guerrette commented regarding CHS Priority School status, noting that CHS' removal from that list does not change who we are.

With regard to Smarter Balance Assessment testing, Mr. Guerrette suggested that the district consult the Smarter Balance Assessment test expert in Nashua. He noted that much feedback has been negative. He mentioned there was a hearing in Concord today regarding that this test is about how well a child can use a computer and not about content. Mr. Guerrette was concerned that the district is going in the right direction with assessments.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

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Upon a motion by Mr. Miller, the Board entered non-public session at 10:30 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Miller, the Board returned to public session at 10:44 p.m. Mr. Barka seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. D'Alleva, yes; Mr. Miller, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. Miller made a motion to adjourn at 10:45 p.m. Mr. Barka seconded. The motion carried 4-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

One Highlander Court

Litchfield, NH 03052

Phone: (603) 578-3570

Fax: (603) 578-1267

Equal Opportunity Employer

Derek Barka, Chair

Patricia D'Alleva, Vice Chair

Dennis Miller

John York

Brian Bourque

February 19, 2014

Attachment to the February 19, 2014 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the February 19, 2014 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

From: Jason Guerrette [sts3717@gmail.com]

Sent: Tuesday, January 28, 2014 8:18 AM

To: Derek Barka; Patricia D'Alleva; John York; Brian Bourque; Dennis Miller

Subject: Fwd: Nashua , NH Principal confirms: BIG problems with the new Smarter Balanced Asses.

From our own backyard.

Subject: Nashua , NH Principal confirms: BIG problems with the new Smarter Balanced Asses.

<sigh> I've been trying to warn everyone.

Now the question I have is, why are we only hearing from ONE Principal in Nashua?? Where are the Administrators in ALL of NH's school districts?

Nashua middle school principal outlines serious concerns by staff about new assessment in letter By ANDRES CAAMANO Staff Writer

Courtesy photo

John Nelson, Fairgrounds Middle School principal.

NASHUA – If there was any question about how well the state's transition from the New England Common Assessment Program to the Smarter Balanced assessment for 2015 is progressing, a recent letter by Fairgrounds Middle School Principal John Nelson to Nashua Superintendent Mark Conrad paints a rather disturbing picture.

After many of the Fairgrounds Middle School staff took an early version of the Smarter Balanced assessment in December, Nelson said he was surprised by the strong reaction from teachers.

"Teachers shared frustrations they had when they were taking the test and disappointment in test format and the difficulties they had trying to use their computer to take this test," Nelson said in his letter shared with members of the Nashua Board of Education.

Based on the experience of Fairground teachers, the test should not be used on Nashua students.

"The FMS staff collectively believe that the Smarter Balance Test is inappropriate for our students at this time and that the results from this test will not measure the academic achievement of our students; but will be a test of computer skills and students' abilities to endure through a cumbersome task," Nelson wrote.

The school piloted the test to help figure how best to incorporate the Common Core standards, and to learn what the new assessment could include come next year.

Nelson offered dozens of specific examples from teachers, including:

- Frustration level builds as you take the test creating mental despair – students will shut down.
- Some terms in the reading seemed out-dated – "Plumb crazy and millwright" for example.
- I feel sad for the students who have to take this test – not many will be successful.
- I did 30 questions in an hour and then had to take a break. My eyes hurt and my shoulders felt strained. When I returned 5 minutes later the work was gone.
- This was more of a test on the computer skills than on the math concepts. If I was a student I would just pick out an answer and move on.

During a discussion about field testing the Smarter Balanced tests in the district later this year at the Jan. 13 Board of Education meeting, some members voiced concerns regarding the new assessment, citing feedback from district teachers about largely not being heard about their concerns involving the new tests.

Nelson said he hoped the staff's comments wouldn't be viewed as "negative" or "unprofessional" and would be accepted by the district in a positive way.

Andres Caamano can be reached at 594-6402 or acaamano@nashuatelegraph.com. Also, follow Caamano on Twitter (@Telegraph_Andre).

Sent from my iPhone

From: Jason Guerrette [sts3717@gmail.com]

Sent: Tuesday, January 28, 2014 3:59 PM

To: John York; Derek Barka; Patricia D'Allewa; Brian Bourque; Dennis Miller

Subject: RE: Nashua , NH Principal confirms: BIG problems with the new Smarter Balanced Asses.

I would be more than happy to test it when the district does our testing, however I do believe we can all find it in ourselves somewhere to trust the well respected principal in Nashua and his staff.

Jason

John York <jyork@litchfieldsd.org> wrote:

Jason have you tried the test and did you have the same issues?

Thanks

John York

jyork@litchfieldsd.org

From: Jason Guerrette [sts3717@gmail.com]
Sent: Monday, February 10, 2014 1:59 PM
To: Derek Barka; Patricia D'Alleva; John York; Brian Bourque; Dennis Miller
Subject: Fwd: Mass. adoption of Common Core proven to hurt academic achievement

----- Forwarded message -----

Date: Mon, Feb 3, 2014 at 8:35 AM
Subject: Mass. adoption of Common Core proven to hurt academic achievement

<http://www.providencejournal.com/opinion/commentary/20140203-charles-chieppo-patrick-fails-test-in-mass.-education.ece>

When politics become more important than what is good for the students.....

Charles Chieppo: Patrick fails test in Mass. education February 03, 2014 01:00 AM Comments
0<http://www.providencejournal.com/opinion/commentary/20140203-charles-chieppo-patrick-fails-test-in-mass.-education.ece#slcgm_comments_anchor>
[http://www.providencejournal.com/incoming/20140131-ax008_5830_9.jpg1.ece/BINARY/w620x413/AX008_5830_9.JPG]

Massachusetts Gov. Deval Patrick delivers his State of the State speech last Tuesday.

5 [<http://w.sharethis.com/images/check-big.png>] 2 +10 0 0

0[http://res.providencejournal.com/test/assets/images/print_icon-grey-bg.gif]

<<http://www.providencejournal.com/opinion/commentary/20140203-charles-chieppo-patrick-fails-test-in-mass.-education.ece>>

BY CHARLES CHIEPPO

There's a big difference between not lying and telling the whole truth. Nowhere is that distinction on display more than in political speeches.

Gov. Deval Patrick began his final State of the Commonwealth address with a litany of accomplishments from his seven years in office. First on the list was that Massachusetts public school students lead the nation in student achievement.

The statement is true, but the whole truth leaves a distinctly different impression.

Massachusetts led the nation in student achievement well before Patrick took office in 2007. That year, our students even scored among the best in the world in math and science. Since then, the facts are sobering.

The commonwealth's SAT scores are down 20 points from their 2006 highs. Third-grade reading scores are the best predictor of future academic success. Last year, after several years of stagnation, the percentage of Massachusetts third-graders who scored proficient or advanced on Massachusetts Comprehensive Assessment System reading tests fell to its lowest level since 2009. At 57 percent, the portion of third-graders reading at or above the proficient level is 10 points lower than it was in 2002. Results from the 2013 National Assessment for Educational Progress, known as the nation's report card, tell a similarly disturbing story. Massachusetts' five-point decline in fourth-grade reading was the largest in the country.

Such rapid deterioration doesn't happen by accident. Soon after taking office, Patrick eliminated the commonwealth's independent school district accountability office, because it told inconvenient truths to an education establishment that has been among the governor's largest campaign contributors.

Today we have virtually no accountability for a system on which state and local taxpayers spend about \$9 billion annually.

In the wake of Massachusetts' landmark 1993 Education Reform Act, the commonwealth's independent Board of Education developed the MCAS exam, curriculum frameworks and teacher testing. These improvements all had two things in common: They sparked a meteoric rise in student achievement, and they were put in place in the face of fierce special-interest opposition.

Only an independent body can stand up to that kind of political pressure. But in 2008, Patrick eliminated the board's 170-year tradition of independence and centralized education policy-making authority under his control.

Two years later, MCAS tests and the K-12 academic standards in English and math on which the tests are based were jettisoned. The less rigorous national standards that are replacing them cut the amount of classic literature and poetry public school students will read by more than half, and new math standards are insufficient to prepare students for college majors in science, technology, engineering and math.

During his speech, Patrick repeatedly talked about how much the commonwealth is investing in education. But it's not about how much we invest; it's what we get in return.

Patrick wasn't lying when he told Massachusetts citizens that the commonwealth's public school students lead the nation in student achievement. But the whole truth reveals that undoing the damage done to public education over the last seven years could well be his successor's most daunting task.

Charles Chieppo is the principal of Chieppo Strategies, a public policy writing and media strategy firm. This piece first appeared in the Boston Herald.

From: Jason Guerrette [sts3717@gmail.com]

Sent: Monday, February 10, 2014 2:01 PM

To: Derek Barka; Patricia D'Allewa; John York; Brian Bourque; Dennis Miller

Subject: Fwd: The failures of the NH Board of Ed when adopting Common Core Standards

----- Forwarded message -----

Date: Mon, Feb 3, 2014 at 7:37 PM

Subject: The failures of the NH Board of Ed when adopting Common Core Standards

To:

The Common Core State Standards: the Train Has NOT Left the Station Submitted by ... on 31 January 2014 - 2:30pm Please listen to video tapes of the NH Board of Education meetings for June 9th 2010 and July 8th 2010. These are the two meetings which supposedly discussed and debated Common Core State Standards (CCSS) before the Board formally "adopted" them by a 4-1 vote.

Here's the link: <http://www.nhboardofeducation.com/>

Click on either June 2010 or July 2010 on the left hand side column. The video plays from the beginning without stopping. This is very annoying because they are fairly long videos. However, you can Control-Click on the video screen itself to open the video in Flip Player (Flip4Mac WMV Plug-In) with Firefox. Might be similar tool for Windows. With this Flip Player you can stop and start and jump forward past irrelevant sections.

From these videos you will learn that CCSS were released the same week as the June meeting. Board members had barely read the standards which were published in two separate sixty page documents. There were a number of teachers in the audience who informally joined the discussion of the CCSS with Board members. No one spoke at the 2:00 pm public hearing for CCSS English Language Arts held at the June Board meeting. Not a single member of the public attended.

By the way, these teachers only discussed CCSS in comparison to the NH standards, the Grade Level Expectations (GLE's). They did not compare CCSS to internationally benchmarked standards, such as those from Massachusetts, which were well known to be some of the best standards. Fortunately, Massachusetts is finally losing interest in CCSS and reconsidering their old standards.

Chair John Lyons spoke out against the standards. He disliked the centralization of CCSS and thought they were being shoved down our throats. He felt the standards would undermine local and state control over education. He was concerned that there was no process in place to amend the standards. He believed the standards would eliminate innovation. Lyons felt that NH's unique voice and contribution to education would be lost with these nationwide standards. Unlike within the very small New England Common Assessment Program (NECAP) consortia which contained only NH, VT and RI. Lyons worried that what the procedure was for leaving Common Core.

Deputy Commissioner Paul Leather informed the Board that in order to add 15% to the standards that the Board needed to adopt 100% of the CCSS. They could not adopt 60% or 80% and then add 15%. There was a second public hearing at 10:00 am for CCSS Mathematics, which was held at a "special" meeting of the Board in July. Once again there was an informal roundtable discussion between a half dozen teachers and Board. Keep in mind that many teachers are restricted in their union contract from speaking out publicly against school policies. Not to denigrate their input, but were these teachers candidly expressing their views when their livelihood depends upon supporting policies being put forward by school administrators? Were these teachers selected by administrators to give a good showing at the hearing? Once again there were no members of the public in attendance or testifying at this hearing.

Keep in mind that this decision to adopt CCSS occurred at the end of the school year. Many families are on vacation in July. Was the public notified? There was no notice in the House Calendar. The NH Board of Education did not meet regularly over the summer. This was a "special" meeting, which was called in order to hold a public hearing and vote before the Aug. 2nd deadline for the NH DoE's Race to the Top (RttT) grant application. NH did not even win RttT money, yet NH students got stuck with CCSS. The NH Board of Education did not have an informed discussion or debate with the public on the CCSS. Despite what Board Chairman Raffio said later in 2013 to the contrary, there is no evidence that these standards were given a rigorous review. In the interim since CCSS was adopted on July 8, 2010 there has been very little public discussion as these standards were implemented in each and every district through federally funded Regional liaisons who meet monthly with district superintendents, principals and curriculum specialists.

Many parents have asked why the public wasn't informed before CCSS were implemented in their schools? Why weren't parents told that federally funded Regional liaisons working to implement CCSS without the knowledge or consent of parents or local school boards?

From all the evidence this has been a stealth operation from beginning to end. The Board of Education and the Department of Education believed: The Ends (federal dollars) Justified the Means (no transparency, loss of governance, etc.).

Don't listen to the Department of Education's claim that the Board only "endorsed" but did not "adopt" CCSS.

Don't believe the Board of Education when they tell you that "the train has left the station" on CCSS.

Massachusetts and many other states are pulling out and rejecting CCSS . New Hampshire should reject Common Core State Standards!

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27**

Litchfield, New Hampshire 03052

Approved Minutes for March 5, 2014

(approved as written 3-19-14)

In Attendance: Derek Barka, Chair (*excused*)
Patricia D'Alleva, Vice Chair
John York, Board Member
Dennis Miller, Board Member
Brian Bourque, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Scott Thompson, Principal, GMS
Tom Lecklider, Principal, LMS
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION 6:30 p.m.

A. Call to Order

Mrs. D'Alleva called the meeting to order at 6:30 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from:

- February 19, 2014 non-public session:

Mr. Miller made a motion to approve the non-public minutes of January 22, 2014 as written. Mr. Barka seconded. The motion carried 3-0-1, with Mrs. D'Alleva abstaining.

Mr. Miller made a motion to approve the non-public minutes of February 8, 2014 as written. Mr. Barka seconded. The motion carried 4-0-0.

Mr. Miller made a motion to accept the nomination of Natalia Umpierrez as Full Time Spanish teacher at CHS at a prorated salary of \$14,141.13 for the 2013-2014 school year. Mrs. D'Alleva seconded. The motion carried 4-0-0.

Mr. Miller made a motion to deny the grievance. Mr. Bourque seconded. The motion carried 4-0-0.

E. Presentations & Recognitions

- L Stagnone (Youth and Government – U.S. Senate)

The Board presented Leah Stagnone with a certificate of achievement for being selected for the Youth and Government-U.S. Senate position.

- CHS Athletic Booster Club Yard Sale Fundraiser

A community yard sale fundraiser proposal was presented to the Board by the new CHS Athletic Booster co-president, Cara Gannon.

Mr. Miller made a motion to approve a CHS Community Yard Sale as presented. Mr. York seconded. The motion carried 4-0-0.

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F. Correspondence

Mr. Miller mentioned there was email correspondence from Jason Guerrette, 11 Perry Court, regarding Common Core State Standards.

G. Approval of Draft Minutes:

- Public Session February 19, 2014

Mr. Bourque made a motion to approve the public minutes of February 19, 2014 as written. Mr. Miller seconded. The motion carried 3-0-1, with Mr. York abstaining.

H. Community Forum

There was no public input.

I. Superintendent's Comments

Dr. Cochrane announced that the CHS Robotics team was successful in winning the New England Granite State District event competition in alliance with teams from South Windsor High School (CT) and Souhegan High School. He indicated that the CHS Robotics was invited to the March 19 Board meeting to be recognized for their achievement. Dr. Cochrane mentioned that the team will perform at UNH this Friday and are guaranteed to go to the Boston Regional competition.

- Revised 2013-2014 School Board Meeting Calendar

Dr. Cochrane indicated that there are revisions on the Board meeting calendar for the remainder of this year. Board members briefly discussed changes in meeting dates for the month of May.

Mr. York made a motion to approve the revised 2013-2014 School Board Meeting calendar. Mr. Bourque seconded. The motion carried 4-0-0.

II. REPORTS

A. School Board Comments

Mr. York expressed his sentiments and well wishes to Mrs. D'Alleva as she completes her term with the School Board. Mr. Miller echoed Mr. York's sentiments and wishes. Mr. Bourque commented that Mrs. D'Alleva provided a needed balance on the Board.

Mrs. D'Alleva commented that it was a great opportunity to serve on the Litchfield School Board.

B. LMS Lit/Tech Course

Mr. Lecklider and Ms. Corbett presented a proposal for the Lit/Tech course at LMS. Mr. Lecklider indicated that Ms. Corbett is the teacher of the class, which is titled Literacy with Technology.

A presentation was prepared online with Prezi, which is a presentation program that allows for the integration of resources. Mr. Lecklider highlighted key points in the presentation:

- Foundation

Brings together the revised standards for ELA while looking for critical thinking and transfer of knowledge in students. Aligns with Common Core ELA Standards and ISTE NETS (International Technology and National Education Technology Standards).

- Motivation

Students use technology as learning/collaboration/communication tool. They are motivated through inquiry and real world connection and have an opportunity to create and share.

- Key Skills

Communication, collaboration, reading comprehension, using text support for ideas, expressing ideas in written form (both text and project-based), being a contributing member to an online learning community.

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- Online Class Forum

Assignments are posted online and students engage in an online class environment, with access to their virtual classroom 24/7.

- Discussion

Students read from a variety of online sources and text complexities. Students formulate arguments, which are backed up with text support, as well as respond to others' arguments.

- Projects

Students work alone or with peers. Projects include research, reading, analyzing and synthesizing information. Students collaborate, create, present and share information.

Mr. Lecklider commented that Schoology is the online classroom forum. Ms. Corbett explained that it is a learning management system and every class has a forum. She noted that announcements are posted and students can have discussions regarding their work. She indicated that teachers are able to grade papers and provide feedback to students. Ms. Corbett commented that students can message teachers and teachers can message students; however, students cannot message each other. She provided examples of those types of discussions in the presentation. She also provided examples of projects that were developed with applications including infographics, Excel, Publisher and Word. Ms. Corbett stated that the course is worthwhile and it is nice to see students expand their thinking to another level.

Dr. Cochrane asked Ms. Corbett if she believes what the class offers is different or helps improve students to be ready to be successful in high school, but does not double ELA.

Ms. Corbett commented that the technology is the difference. She noted there is value in students being able to read non-fiction and understand it. She indicated that the other difference is students have to provide evidence in their arguments. She noted that by using non-fiction texts, students are able to hone those skills.

Mr. Lecklider commented that students in Language Arts class are receiving the literature experience (fiction, etc.).

Mr. Miller asked about an alternative to parental objection to the privacy policy. Ms. Corbett indicated that the parent(s) can have access to their student's information or anything done on the site can be printed.

Mrs. D'Alleva asked if parents have to sign in for Schoology. Ms. Corbett indicated that information is sent home at the beginning of the year. She mentioned that some parents are on the site and monitor their child's work.

Dr. Cochrane indicated that students are expected to sign the Acceptable Use Policy each year.

Mrs. D'Alleva expressed that her preference would be for parents to have the option to "sign off" on everything.

Mr. Miller commented that it is important to be cautious that we are doing what is right for students. He indicated all precautions should be taken.

Mr. York suggested releasing course information to parents and sending out notification prior to the opening of school that includes the students' schedules.

Dr. Cochrane commented that one of the things we have to consider is how we can use the technology to close the circle between teacher, student, school and parent. He indicated the technology will allow an extension of the students' day by allowing them to use these resources, as well as allows them the availability to make things that go on in schools more visible to parents.

Mr. Miller expressed support for the idea and commented that we need to ensure that we take appropriate precautions.

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Dr. Cochrane commented that during class students are protected within our firewall and monitored appropriately. He noted that they may have less protection at home and suggested we become more proactive providing that type of information to parents.

Dr. Cochrane thanked Ms. Corbett for her work and leadership. He noted he was pleased with the vision that was presented. He informed the Board Dr. Heon will return with further recommendation in this regard.

C. Principals Report

• GMS

Mr. Thompson presented the GMS Principals report to the Board. He reported the following:

- Teacher Workshop Day is scheduled for March 11
- The second annual Math and Reading Winter Carnival was held on February 19
- 43 Fourth graders participated in the Tournament of Readers this year
- Students are also participating in the Fisher Cats Reading Challenge
- GMS Chorus will participate in the NHMEA Large Group Musical Festival on March 15
- The GMS chorus and Fourth Grade Recorder Ensemble will participate in the District Fine Arts Festival on March 18 and 20
- Quality Performance Assessment Team is focusing on Mathematics
- GMS PTO for support of school events
- Stacey Leary for helping to organize Kids Vote on March 11
- Chris Tate, Paula CullenKent, Mary Lou Saxton, Susan Jozitis, Maura McCullough-Hein and Judi Peterson for their work on the Tournament of Readers
- GMS staff and Chris Tate, Sandie Johnstone, Susan Jozitis, Maura McCullough-Hein and Judi Peterson for their work on the Math and Reading Winter Carnival
- Star Labs for Grade 2
- NH History Museum presentations to Grade 4
- Grade 4 will visit Lowell Mills in April
- PTO Annual Bingo Night March 14
- Spelling Bee June 4
- Fourth Grade Move Up Day is being planned
- Student Council sold sweatshirts and raised \$900
- Art to Remember fundraiser being run by Heidi Miller – funds will go toward adopting a tiger (school mascot)
- GMS Day at the Manchester Monarchs February 23
- Lego Clubs started February 3
- Destination Imagination students will present in front of live audience before going to competition.

Mr. York asked about the late arrival scheduled days and each school's experience.

Mr. Thompson indicated performance assessment projects and information were presented to the staff on the late arrival days.

Mr. Lecklider indicated that time was focused on performance assessments at LMS.

Dr. Cochrane indicated that professional development has been mapped to the school goals. He noted that all principals forwarded plans for all in-service days as well as late arrival days. He commented that professional development has been well thought out, well aligned and well conducted this year.

• LMS

Mr. Lecklider presented the LMS Principals report to the Board. Included in his report were the following acknowledgments:

- The MathCounts team competed in the regional tournament in February
- Boys and Girls Basketball teams had successful seasons

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- The Student Council recognized 25 students at the quarterly Doing Your Best breakfast
- John Halligan presented to students in January
- 5 students qualified for the 2014 NH Middle Level Honors Band
- 32 students attended the Solo and Ensemble Festival on February 15
- CHS Guidance counselors provided a presentation of the Program of Studies to 8th grade students on Tuesday
- The Performance Assessment Team attended the latest network meeting in February
- All students were assessed in Reading and Math with AIMSweb in September
- NWEA testing is scheduled in May
- LMS was selected for a field test for Smarter Balance Assessment.

Mr. York asked about scoring results for the Smarter Balance Assessment tests. Dr. Cochrane commented that it is anticipated that the reported results will be similar to how NECAP results are reported.

Mr. York asked how results for struggling students are analyzed and the process for improvement. Mr. Lecklider indicated that there are CHAT teams for grades 5/6 and 7/8. He explained that student scores are screened and if anything drops below proficiency the student or students are flagged. He noted that results are analyzed for patterns and/or anomalies. Mr. Lecklider indicated if a student is at risk the student is tracked and their progress is monitored with AIMSweb. He noted we also consider interventions for those students.

Mr. York asked what is being done to create challenges for students who are proficient with distinction. Mr. Lecklider commented that resources we have for those students are not nearly as abundant. He indicated more resources are needed.

Mr. York suggested purchasing more challenging materials.

Dr. Cochrane commented that a math program subscription that is available 24/7 is planned for grade 7 next year. He indicated that students should be able to access the resource at any time. He noted that VLACS is being examined for inclusion in our acceleration model.

○ The Omnivore's Dilemma – Gr 8

Mr. Lecklider presented a text recommendation to the Board. He commented that it was approved by PERC this afternoon. He indicated that the book was recommended by Ms. Corbett and aligns with the Lit/Tech course.

Mrs. D'Alleva was concerned about the low Lexile score.

Mr. York felt that the context was below middle school level.

Board members were disinclined to acquiesce and requested that the recommendation be discussed with Dr. Heon at the April 9 Board meeting.

D. Student Representatives Comments

Ms. Stagnone commented that she and Mr. Perigny have not met with Mrs. Rothhaus. She mentioned that the Student Council attended a conference in Salem today and heard an inspirational speaker. She noted that because school was closed on Valentine's Day because of the weather, carnations that were purchased were delivered to students' homes by Mr. Perigny.

E. Committee Reports

Mr. York reported that the Budget Committee is scheduled to meet on March 27 and will discuss an overview of what has transpired over the last year. Mr. York commented that it was frustrating that department heads were made available to the Budget Committee during budget presentation and questions were not asked for a week or more after department heads attended the meeting(s). He suggested that the Board review the budget process and determine when it is advantageous for the attendance of department heads.

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F. Enrollment Report – Jan 2014

Dr. Cochrane reported there are 1,443 students enrolled in the district. He reported there are 44 kindergarten registrations and 68 first grade registrations. He noted that projections reflect declining enrollment for upcoming year. Dr. Cochrane indicated that it will be challenging to maintain or improve programs with declining enrollment while being fiscally responsible.

III. OLD OR UNFINISHED BUSINESS

There was no old or unfinished business.

IV. NEW BUSINESS

A. 2014-2015 Draft School Calendar

Dr. Cochrane presented the draft 2014-2015 school district calendar to the Board. The Board discussed some calendar date issues. The Board will revisit the school calendar on March 19 and review for approval.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

There was no public input.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Miller, the Board entered non-public session at 9:07 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Bourque seconded. The motion carried by roll call vote: Mrs. D'Alleva, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. York, the Board returned to public session at 9:14 p.m. Mr. Bourque seconded. The motion carried by roll call vote: Mrs. D'Alleva, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. York made a motion to adjourn at 9:15 p.m. Mr. Bourque seconded. The motion carried 4-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

One Highlander Court

Litchfield, NH 03052

Phone: (603) 578-3570

Fax: (603) 578-1267

Equal Opportunity Employer

Derek Barka, Chair

Patricia D'Alleva, Vice Chair

Dennis Miller

John York

Brian Bourque

March 5, 2014

Attachment to the March 5, 2014 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the March 5, 2014 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

From: Jason Guerrette [sts3717@gmail.com]
Sent: Thursday, February 20, 2014 6:34 PM
To: Derek Barka; Patricia D'Allewa; John York; Brian Bourque; Dennis Miller
Subject: Fwd: Testimony on HB 1508

Please take a few moments to read testimony provided to the legislature.

Jason

The Common Core Standards were officially adopted by "unelected" members of the New Hampshire Board of education in 2010. If you go back and watch the few hearings that were held, you will notice the discussion never includes an analysis of the Common Core Standards vs state Standards that were considered the best in the country. That's where the problems begin.

The New Hampshire Board of Education did not do the necessary work to evaluate the New Hampshire GLE's/GSE's to standards you'd find in states that were identified as having the best academic standards in the country.

To quote Professor Stephen Wilson, Mathematician from Johns Hopkins and the one who analyzed the Math Standards for the Fordham Institute, "There is much to criticize about them, and there are several sets of standards, including those in California, the District of Columbia, Florida, Indiana, and Washington, that are clearly better." (1)

The Fordham Institute has come out in support of the Common Core Standards, however as you can see, their mathematician who conducted the analysis for Fordham admits there are better math standards than Common Core.

So the question is, why would the state of New Hampshire fail to develop the best standards in the nation? Why are we settling for standards that even supporters acknowledge as inferior?

There are dozens of missing math concepts from the Common Core Math standards. There is a mistake in teaching long and short vowels and when Dr. Bill Evers asked how to get that fixed, he was told they are unable to fix it. They've already been published and there's no way to fix anything. Prof. McCullum, one of the Math Professors on the Common Core writing team has been quoted for saying, "The overall standards are not high, certainly not in comparison with other nations including East Asia." (2) What are some of the problems parents are seeing? The Common Core Standards mandate teaching first-graders to "decompose" two digit numbers in an effort to emphasize the concept of place value. Thus $13-4$ becomes $13-3=10-1=9$. Decomposition is a useful skill for older children but this is a skill that is extremely difficult for a young child to understand. Expecting Six and Seven year old children to think abstractly has been at the heart of the debate in New York by child psychologists who've acknowledged this kind of expectation is developmentally inappropriate.

I am submitting written testimony from Dr. James Milgram. Dr. Milgram sat on the Common Core Math Validation Committee but refused to sign off on the math standards for Common Core.

There is also a heavy emphasis on explaining your work. No longer is it acceptable to solve a word problem or algebraic equation and show your work, the student is now expected to explain it. We see it on the sample questions provided by Smarter Balanced and we are seeing it in the Common Core aligned textbooks and curriculum.

This approach automatically dooms students in elementary school who have reading difficulties or who are not fluent in English. How all of this writing helps students with math has yet to be demonstrated.

I was aware of this problem in 2010 when Professor Wilson wrote a scathing critique on the Smarter Balanced Assessment. He wrote, "The conceptualization of mathematical understanding on which the SBAC will base its assessments is deeply flawed. The Consortium focuses on the Mathematical Practices of the Common Core State Standards for Mathematics at the expense of content, and they outline plans to assess communication skills that have nothing to do with mathematical understanding." (3) Common Core is looking more like the failed New Math programs that have led students straight to tutoring services or simply left them illiterate in mathematics.

The way Common Core requires abstract thinking in young children will continue to put children who already struggle with math, at a disadvantage. Forcing children to explain what they do not understand makes me wonder about the long-term impact on those children. It sounds like a wonderful way to kill the love of learning math in young children.

So why do people think Common Core is so difficult if it's isn't so high?

That is because Common Core requires children to explain their answer and to use particular words in a particular way.

The actual academic expectation is pretty low, but the approach is convoluted. This is why you will hear parents and teachers say, it's a set up for failure.

It is a disaster in many ways to teach kids multiple strategies for doing math problems. It adds confusion and the inability to master one algorithm. This is a big push from Common Core.

My biggest concern with Common Core is the impact it will have on Special Ed. students. In an article by Nancy Bailey, Special Education teacher writes, "Speaking of institutions...CCSS also worries me. With public schools emphasizing the all or nothing approach with CCSS, where will autistic students, who can't master the standards go? Already we see a mass exodus to home-schooling. Parents of children with autism need something more. They require support and school programs that reflect up-to-date research." (4)

I fear that New Hampshire walked down another road where we "passed a Bill in order to find out what's in it." What we are seeing coming out of Common Core and the new assessments has caused states to begin putting the brakes on moving forward.

It was recently reported in US News and World Report that the New York Teachers withdraw Common Core Support and Declare No Confidence.

This issue will continue to grow because the Standards, the Math Practices and Exemplars are being rejected by parents all across the country. The flawed Smarter Balanced Assessment only adds to the anger and frustration from teachers who are beginning to see that they've become the target for education reform. Not a target to help improve the quality of education, but a scapegoat to a system run by bureaucrats that think they know better how to run a classroom.

I will conclude with this; Manchester and Alton have both publicly acknowledged their commitment to superior academic standards. Chairman of the New Hampshire Board of Education: Tom Raffio, acknowledged in an e-mail to me that he is supportive of school districts that seek to develop higher and better quality academic standards for their students. I appreciate his commitment but I question why the New Hampshire Department of Education would not make the same commitment at the state level.

HB 1508 terminates our participation in Common Core and with that directive the New Hampshire Dept. of Ed can begin the work of setting the best standards for our children and finding ways that set teachers up for success. That should be the message we send with the passage of this legislation.

- (1) <http://educationnext.org/the-common-core-math-standards/>
- (2) <http://www.youtube.com/watch?v=rYMdLkvv5eA>
- (3) <http://www.edexcellence.net/commentary/education-gadfly-daily/flypaper/2011/guest-post-sbac-math-specifications-dont-add-up.html>
- (4) <http://www.nancyebailey.com/2014/01/23/common-core-state-standards-and-autistic-students-the-shoe-doesnt-fit/>

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27**

Litchfield, New Hampshire 03052

Approved Minutes for March 19, 2014

(approved as written 4-9-14)

In Attendance: Dennis Miller, Board Chair
Brian Bourque, Vice Chair
Derek Barka, Board Member
Janine Lepore, Board Member
John York, Board Member
Dr. Brian Cochrane, Superintendent
Frank Markiewicz, Business Administrator
Tracy Micali, Director of Human Resources
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION 6:30 p.m.

A. Call to Order

Dr. Cochrane called the meeting to order at 6:35 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

Revisions to the agenda including moving Presentations and Recognitions before School Board Reorganization.

D. Summary of Non-Public Actions from:

- March 5, 2014 non-public session:

Mr. Miller made a motion to approve the non-public minutes of February 19, 2014. Mr. Bourque seconded. The motion carried 3-0-1, with Mr. York abstaining.

Mr. York made a motion to accept the resignation of Leslie Kahn, CHS French teacher. Mr. Miller seconded. The motion carried 4-0-0.

E. Presentations & Recognitions

- CHS Robotics Team #3323 Recognitions

Dr. Cochrane and the Board presented members of the CHS Robotics Team with certificates of achievement for winning the Granite State FIRST Robotics Challenge.

Dr. Cochrane announced that the CHS Girls Basketball team will be recognized at the April 9 School Board meeting. Emily Thorpe will be recognized in April for a national art scholastic achievement.

F. School Board Reorganization

- School Board Welcome New Members

Dr. Cochrane congratulated and welcomed new Board member, Janine Lepore.

- School Board Nominations

Dr. Cochrane accepted nominations for Board Chair.

Mr. York nominated Dennis Miller as Board Chair. Mr. Bourque seconded. The motion carried 4-0-1, with Mr. Miller abstaining. Mr. Miller was elected School Board Chair.

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Mr. Miller nominated Brian Bourque as Vice Chair.

Mrs. Lepore nominated Derek Barka as Vice Chair.

Mr. Miller's motion to nominate Mr. Bourque as Vice Chair failed 1-2-3.

Mrs. Lepore's motion to nominate Mr. Barka as Vice Chair failed 2-2-1.

Re-vote:

The motion to nominate Mr. Bourque as Vice Chair carried 2-1-2. Mr. Bourque was elected School Board Vice Chair.

- School Board Code of Ethics and Conduct Policy

Board members were asked to read and sign the Code of Ethics and the Conduct policies.

- School Board Assignments

Board members were assigned to the following committees:

- Budget Committee: Mr. Bourque
- LSB Building/Planning Committee: Mr. York
- Safety Committee: Mr. York
- Partnerships, Grants and Donations Committee: Mr. Bourque
- Technology Committee: Mr. Miller
- PERC Committee: Mr. Barka
- Prevention of Drugs/Alcohol Use by Students: Mrs. Lepore
- Wellness Committee: Mrs. Lepore.

G. Correspondence

Mr. Miller mentioned that correspondence regarding Common Core State Standards was received from Jason Guerrette, 11 Perry Court.

Mr. Bourque mentioned that he was approached regarding the policy for transportation of a student to an event. Mr. Miller indicated that the policy helps control post game attendance and safety. He noted that the person providing the transportation must have insurance the District will accept.

H. Approval of Draft Minutes:

- Public Session March 5, 2014

Mr. York made a motion to approve the public minutes of March 5, 2014 as written. Mr. Bourque seconded. The motion carried 3-0-2, with Mr. Barka and Mrs. Lepore abstaining.

I. Community Forum

Carolyn Leite, LEA President, thanked the School Board for taking the vote to allow the teachers' contract to go before the voters. She thanked the community for their support in passing the contract.

J. Superintendent's Comments

Dr. Cochrane thanked the CHS Boys Basketball team and coach for a great season. He noted that the team lost in the finals, but played very well. He complimented the team members on their professional graciousness. Dr. Cochrane commented that the team was disciplined and understood their expectations. He commended the coaches for their service to the students, the school and the town.

II. REPORTS

A. School Board Comments

Mr. Barka welcomed Mrs. Lepore to the School Board.

Mrs. Lepore thanked the community for their support during the election.

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Mr. Miller echoed Dr. Cochrane's comments regarding the Boys Basketball team. He noted he had the opportunity to watch the Boys and Girls teams play and complimented coaches on their excellent efforts. He commented that the coach's speech on Awards Night was a life lesson. He congratulated both teams. Mr. Miller announced that the Sprit team ended in 4th place this year. He complimented the student art hanging in the walls at CHS.

Mr. York commented that there was an excellent choral concert at CHS last night. He indicated that he attended both basketball games and asked the administration to keep the Board informed regarding when these events are scheduled. He noted that the students go above and beyond with regard to extra-curricular activities.

Mr. Miller mentioned that the NHIAA held Scholar Athlete Awards on Monday. He noted that 20 CHS student athletes had a 3.3 or higher GPA and lettered in a sport. He indicated that it was wonderful to see those students get recognized.

B. Business Administrator's Report – Feb 2014

Mr. Markiewicz presented the February 2014 finance report to the Board. He indicated the executive finance summary provides a current snapshot of the two major funds: general and food service. He noted that the report signifies the current status of the district with regard to cash balance and expenditures. He reported the Capital Reserve funds' balances and the Self-Funded account balance reconciliation. He provided a Student Activities Fund recap and noted that he will bring forward a recommendation regarding applying more controls with student activity funds.

Mr. Miller asked if there was an update regarding transportation. Mr. Markiewicz indicated he received an update that Nashua will be voting next Monday on their transportation vendor. He reported that he received an email from First Student on the current information. Mr. Markiewicz commented that the vendor for Nashua may provide an advantage for Litchfield.

Mr. York asked if a date can be set to discuss student activities funds.

Mr. Miller agreed. He commented that CHS parking money and gate receipts are deposited in those funds. He noted that student dues are collected and deposited and able to be returned to the students, but most students use their dues for a gift at the end of four years.

Mr. Markiewicz explained most of the rules governing student activities funds are written by an auditor. He suggested that the lead auditor discuss their findings and other issues with these funds with the Board.

Dr. Cochrane commented that a forensic audit may not be able to identify the origins and uses for these funds. He indicated the money should be used for what it was intended and that a system should be in place to prevent co-mingling of funds.

- Fuller Oil Analysis

Mr. Markiewicz provided an analysis of fuel oil used at GMS and LMS. He noted that the fuel oil budget has been overspent for both schools, which is not surprising with the weather this winter. He indicated that LMS' trending analysis reflects sharper variances and GMS is trending downward, which is a result of excellent building management by Mr. Ross. Mr. Markiewicz reported that the problem we experienced with the former vendor cost the district \$7,700.

- 2013 Audit Report

Mr. Markiewicz provided the 2013 audit report to the Board.

- PPACA Update

Mr. Markiewicz and Mrs. Micali provided an update regarding PPACA and the impact it will have on the District, as well as provided some recommendations for remedy.

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Mrs. Micali reported that there have been changes to the rules for implementation. She noted that one change is to the definition of Substantially All, which requires that insurance is offered to 70% of all employees in the first year and 95% in years thereafter. She indicated that the district will perform a 12 month look back period and will implement the stability period to ensure everyone eligible is offered insurance. Mrs. Micali indicated that the district performed a sample look back measurement to determine if we currently were to offer insurance to all full time eligible employees under PPACA, 13 employees would fall into that category. She noted that employees with more than one assignment would need to be monitored.

Recommendations for implementing PPACA were provided to the Board for review.

- Recommendation 1: **In 2015-2106 manage those employees who are coaches to one season per year and invite external applications for coaching positions. Co-curriculars (clubs, non-athletic activities) should be filled by teachers who are willing to accept assignments, as well as inviting external applications for such positions.**
- Recommendation 2: **Discussion regarding alternate method for payment of game officials and scoreboard operators, other than through the district (as employees).**

Mr. Markiewicz explained we are considered a major employer by PPACA standards. He noted that the district would not be required to offer insurance to full time eligible employees until July 2016. He indicated that more recommendations and information will be brought to the Board.

Mr. York commented that information regarding opting out of providing insurance for non-contract employees be provided. He indicated that the private sector has made their determination and believes that the public sector should mirror the private sector.

Dr. Cochrane commented that we should start by managing paraprofessionals and those with additional assignments. He noted as part of the FY16 budget process, we will know what to budget for the smaller group.

Mr. York commented that the Board has discussed this issue and decided to try not to micromanage personnel to under 30 hours.

Mr. Miller indicated that the new information has shed a different light on the issue. He commented that we need to look forward and manage to 30 hours for paraprofessionals.

Mr. Markiewicz commented that IEP teams make the determination for paraprofessionals. He indicated that there are 56 to date and 9 that may present an issue. He noted that a normal one on one paraprofessional can be managed to 30 hours and the coordination falls under the Director of Special Services. Mr. Markiewicz commented that we are in the look back period cycle and in a good position. He suggested to determine a way to manage those 9 paraprofessionals.

Mr. Miller asked about the impact regarding substitutes and if they should be managed on 1099's.

Mr. Markiewicz commented that the SAU will coordinate substitutes and impose a maximum 4 day per week rule.

Mr. Miller commented that he heard about districts hiring teachers as a substitute pool. He suggested offering a high deductible plan to those employees who work over 30 hours.

C. Technology Report – Feb 2014

The Board was provided the February 2014 Technology report. Dr. Cochrane reported that there are two committees meeting regarding technology: the Student Information System Committee and the Committee meeting to rewrite the Technology Plan for the DOE and for eligibility for eRate monies. He indicated the District has been saving eRate monies, which will pay for the new Student Information System.

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Mr. York asked for a breakdown of detail for the SchoolDude tickets. He commented that the Board would like to determine if there is a pattern of issues for which the Board can provide guidance.

D. March 2014 Election Results

Mrs. Flynn provided March election results for the Board.

Mr. Miller mentioned that the School Board has an opportunity under the law to hold a special meeting to revise the budget.

Mr. York commented there may be legitimate reasons to consider a special meeting subject to information on the default budget impact.

Mr. Miller recommended the Board discuss the issue at the April 9 meeting.

Mr. Bourque inquired about the method of reporting of tax impact of a warrant article.

Mr. Miller indicated the total tax impact of the warrant article is printed on the article. He asked about forecasting the budget to a \$200,000 underspend.

Mr. Markiewicz commented that he prefers to report that the district will use the entire budget until we get further into the year. He noted that as the year progresses he will be better equipped to project a fund balance.

E. Enrollment Report – Feb 2014

Dr. Cochrane presented the February 2014 enrollment report to the Board. He reported there are 1,444 students in the district. He noted that there are 69 1st grade registrations and 47 Kindergarten registrations to date.

III. OLD OR UNFINISHED BUSINESS

A. Wrestling Funding

Jeff Douglas asked about funding resolutions for Wrestling, which is a self-funded program currently in its fifth year. He commented that the original agreement was after three years, if the program was successful, the Board would decide if they would approve funding the program in the budget. Mr. Douglas indicated there is a finite amount of fundraising in the community and is divided among all the worthy programs and causes.

Dr. Cochrane indicated that the wrestling numbers are increasing.

Mr. Douglas concurred and reported that enrollment has grown from 10 wrestlers to 26 and youth wrestling is growing from 22 members to 40 members. He noted that no student is turned away from being on the team.

Mr. York commented that the Board is considering a decision to fund wrestling in total or in part. He suggested that the district should provide transportation as the program has met their requirement. He encouraged the Friends of Wrestling to merge their efforts with the Athletic Boosters.

Mr. Barka agreed in part with Mr. York. He concurred that the program should not be 100% self-funded. He suggested dividing the \$10,000 in the self-funded budget among all sports. He also suggested that CHS athletics raise \$10,000.

Mr. Miller commented that it is expected that the wrestling team will continue to fundraise.

Mrs. Lepore expressed her support for wrestling, but was concerned about the FY15 default budget. She expressed concern that education would be impacted if the program is fully funded.

Mr. York commented that funding a self-funded program will not impact education.

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Mr. Markiewicz commented that as the default budget is built, programs will be prioritized. He noted recommendations will be made to the Board by the Administration.

Elizabeth McDonald, Naticook Avenue, commented that Girls JV Softball was not run last year and asked where the funds for that program are spent.

Mr. Miller indicated that those funds should still be in the budget. He commented that the issue is a revenue discussion. He believes that we have never had less than \$50,000 in unanticipated revenue, which is more than enough to cover the program.

Mr. York made a motion to move Wrestling out of the self-funded budget and into the operating budget. Mr. Bourque seconded.

Dr. Cochrane indicated that the difference between the Budget Committee's budget and the School Board's budget was approximately \$174,000. He noted the Budget Committee reduced the budget by an additional \$50,000. He commented it will not be difficult to find that money across the scope of athletics and other co-curricular programs. Dr. Cochrane expressed support to find a way to fund the program.

The motion carried 5-0-0.

B. 2014-2015 School District Calendar

Dr. Cochrane asked Board members to approve the 2014-2015 District calendar.

The Board discussed moving the June 23 Professional Development day to November 4 as they believe the schools should be closed for the general election.

Mr. York asked when the discussion regarding Blizzard Bags will be scheduled.

Dr. Cochrane indicated that the Board should first approve the district calendar for 2014-2015. He noted that once the calendar is approved, the Board can schedule a sidebar discussion with the LEA.

Regarding the 2014-2015 school calendar, Mr. York suggested three days of two-hour delays across the schools instead of four.

Dr. Cochrane suggested removing the March late arrival day.

Mr. Miller commented that the original intent of the late arrival days was to work on accreditation. He noted that those days are aligned with Hudson because of the CTE programs.

Dr. Cochrane commented that NEASC is ramping up. He indicated that losing a day or two negatively impacts the CTE students.

Mr. Miller recommended keeping four late arrival days.

Dr. Cochrane suggested moving the June 23 Professional Development day to November 4 and adding GMS and LMS to the April 15 late arrival day. He indicated the revised calendar will be revisited at the April 9 meeting.

C. Superintendent's Technology Vision

Dr. Cochrane presented his technology vision to the Board. He noted that information was taken from various sources, including the Superintendent's Conference in Nashua, NH. He commented that schools need to develop students who know how to learn and solve problems. He indicated that changes for schools include high expectations, more independent and collaborative learning, digital literacy in conjunction with strong traditional literacy and numeracy skills, and increased cognitive rigor. Dr. Cochrane commented that by using technology to

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enhance human functions, children become fluent and provides a more interesting, purposeful and autonomous way of learning.

Dr. Cochrane pointed out that technology yields student engagement, mastery, time and location flexibility, and ownership of learning. He commented that it strengthens communication and the partnership with parents. Dr. Cochrane indicated that a web based student information system should consist of:

- Curriculum management functionality
- Learning management functionality
- Standards and competency based grading and reporting
- A communications portal.

He commented that teacher technology should consist of:

- Portability with high resolution
- Quick internet capability
- Digital ink capability
- Support integration of text, video and audio across a variety of platforms
- Classroom smart boards.

Technology Functions suggested: One Note, Windows 8 tablets with keyboards and MS Office 365. This platform would yield curriculum delivery and management capability, email and calendar access, digital ink capability, and internal and “cloud” information storage (Skydrive).

Free or reduced cost resources for teachers and students can be found in digital form at:

- CK-12 Foundation
- Khan Academy
- MOOC (Massive Open Online Course).

Dr. Cochrane provided short videos that portrayed a potential teaching and learning environment consisting of this type of technology.

Implementation

- Phased over 5-7 years
- Start with grades 9-12
- Identify student information system vendor this year
- Begin scheduling and grading in the SIS one year from September 2014
- Pilot 1 to 1 computing beginning with grade 9 in Spring 2015, progressing in grades over 4 years
- 5 year step scale to implantation of 1 to 1 computing.

Cost

A third IT technician will be needed for implementation. The District has \$101,288 in eRate monies, which will delay any cost to the district until 2018. 2018 would be the last year of implementation and could result in an estimated cost to the district of \$23,760. It is expected that there will be an infrastructure cost with connectivity (access points and servers).

Dr. Cochrane indicated that the cost for student computing is calculated at \$77,000 assuming that tablets are estimated at \$700 and provided for 110 students. He suggested that tablets can be purchased by the district and students can be charged a \$100 rental fee each year.

Mr. Miller asked how the cost of text books factors into the cost.

Dr. Cochrane commented that has not been calculated at this time; however, he believes the estimates are conservative and should yield significant savings over time.

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Mr. Miller commented that there is little saving with digital textbooks as they cannot be repurposed from one student to another.

Dr. Cochrane commented that a Bring Your Own Device (BYOD) model can be implemented this September with use of MS Office 365.

Mr. Miller commented that a pilot would need to be structured with clear goals that can be measured so that the success of the program can be determined.

Dr. Cochrane thanked the Board for allowing him to present the technology vision.

IV. NEW BUSINESS

A. Staff Renewals

Dr. Cochrane reviewed the staff renewal process with the Board. He noted that staff renewals will be addressed in non-public session.

B. FY15 Operating Budget Update

Mr. Markiewicz reported that salaries are being entered into the 2014-2015 budget. He indicated that once complete, adjustments for the FY15 budget will be brought to the Board. He commented that direction is needed for non-LEA positions as step increases as well as a 1% increase for administrators was budgeted. He reported that the total cost of the step increases is \$35,115 and \$10,386 for the 1% increase for administrators.

Mr. York commented that he would like to see a plan for implementing the default budget before voting on salary increase allocations. He indicated that we need to determine the actual savings from the LEA contract.

Mr. Markiewicz commented that the district has 20 days to formulate the new budget. He noted that what is submitted to the DRA is a starting point and the Board can make adjustments.

Dr. Cochrane indicated that open enrollment for health insurance is in May. He suggested preparing our best rendition, which can be amended by the Board. He commented that Mr. Markiewicz is building the budget from the ground up. He noted we will take the savings from the LEA contract and determine where we can make some reductions.

Mr. York commented he does not want the operating budget negatively impacted by the reductions. He suggested that reductions should be made in equal portions between Salaries/Benefits and Operations.

C. 2014-2015 School Board Meeting Calendar

The 2014-2015 School Board Meeting calendar to was deferred to the April 9 Board meeting.

D. Set CHS Graduation Day 2014

Dr. Cochrane discussed the date for CHS graduation with the Board. He indicated that past practice for redeeming snow days, the Board has allowed the high school to count Senior Project Night as a day of attendance.

Mr. Miller mentioned that the Board has also allowed the high school to use the Saturday before graduation as a potential "make up" day.

Dr. Cochrane indicated that the high school will use Senior Project Night as a day of attendance, which will allow graduation to commence on June 13.

Board members agreed.

E. School District Clerk Duties/Description

Dr. Cochrane and Mrs. Flynn provided the Board with a description of School District Clerk duties, responsibilities and past practices. Laws governing the School District Clerk were also provided.

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Mr. Miller indicated that he wanted the Board to have information regarding the School District Clerk position.

Dr. Cochrane commented that RSA 197:20 states the School District Clerk is responsible for the accurate recording of the minutes of the Annual School District meeting and not School Board meetings, which was confirmed and verified by District legal counsel. Legal counsel also confirmed that the School District Clerk is responsible for preparing the School District ballot.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

There was no public input.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Bourque, the Board entered non-public session at 10:18 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. York seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. York, the Board returned to public session at 11:19 p.m. Mr. Barka seconded. The motion carried by roll call vote: Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes; Mr. Miller, yes; Mr. Bourque, yes.

IX. ADJOURN

Mr. Barka made a motion to adjourn at 11:20 p.m. Mr. York seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

One Highlander Court

Litchfield, NH 03052

Phone: (603) 578-3570

Fax: (603) 578-1267

Equal Opportunity Employer

Dennis Miller, Chair

Brian Bourque, Vice Chair

Janine Lepore

John York

Derek Barka

March 19, 2014

Attachment to the March 19, 2014 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the March 19, 2014 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

From: Jason Guerrette [sts3717@gmail.com]

Sent: Saturday, March 15, 2014 11:19 AM

To: Janine Lepore; Derek Barka; John York; Dennis Miller; Brian Bourque

Subject: Huff Post/Pioneer blog: "NY ObamaCore Panel Must Scrutinize Influence of Political Philanthropy on Implementation"

Good morning,

The saying "always follow the money" is accurate because it is rooted in the truth.

Jason

Subject: Huff Post/Pioneer blog: "NY ObamaCore Panel Must Scrutinize Influence of Political Philanthropy on Implementation"

To:

•

[The Huffington Post]

NY ObamaCore Panel Must Scrutinize Influence of Political Philanthropy on Implementation

Posted: 02/27/2014 12:45 pm EST Updated: 02/27/2014 12:59 pm EST

Recent coverage and commentary on the controversial New York Regents Research Fund (RRF), hasn't completed the circle of political influence philanthropists have exerted on state education policy. The RRF is a privately funded think tank nested within the State Department of Education (SED) which is heavily involved in the implementation of the Common Core Standards Initiative, an effort to get states to adopt national K-12 academic requirements in English and math.

The missing link is the role the Bill & Melinda Gates Foundation has played every step of the way. That the implementation of Common Core in New York is being driven by private contractors that influence public decisions is in some ways a fitting end for an initiative that has sidestepped transparency and democratic processes from the start.

Leveraging its unrivaled \$40 billion endowment, the Gates Foundation gave millions to Common Core's four major developers: the National Governors

Association<<http://www.gatesfoundation.org/search#q/k=national%20governor>>, the Council of Chief State School

Officers,<<http://www.gatesfoundation.org/search#q/k=Council%20of%20Chief%20State%20School%20Officers>> Achieve, Inc.<<http://www.gatesfoundation.org/search#q/k=achieve,%20inc>>, and Student

Achievement

Partners<<http://www.gatesfoundation.org/search#q/k=student%20achievement%20partners>>.

The pro-liberal arts group Common Core, Inc.<<http://www.gatesfoundation.org/How-We-Work/Quick-Links/Grants-Database/Grants/2009/12/OPP1011748>> received \$550,000 from Gates to create English curriculum maps aligned to the standards. Then,

incongruously<<http://www.washingtonpost.com/blogs/answer-sheet/wp/2013/11/24/following-the-common-core-money-where-are-millions-of-dollars-going/>>, New York awarded the state K-12 math

curriculum<<http://www.oms.nysed.gov/press/ELAMathCurricula.SEDAwardsContractsForDevelopment.htm>> contract to Common Core, Inc., despite its nearly non-existent math experience.

The D.C.-based Fordham Institute<<http://www.gatesfoundation.org/How-We-Work/Quick-Links/Grants-Database/Grants/2009/10/OPP1005845>>, a longtime beneficiary of Gates funding, received grants to review the quality of the standards. Massachusetts' Board of Elementary and Secondary Education<<http://www.doe.mass.edu/news/news.aspx?id=5634>> relied upon the evaluations of three Gates grantees -- Fordham, the Massachusetts Business Alliance for Education, and Achieve, Inc. -- to validate its decision to adopt Common Core.

At an event sponsored by Pioneer Institute, a Boston-based think tank, former Texas Education Commissioner Robert Scott recalled a conversation in which Gates Foundation Education Director Vicki Phillips emphasized that funding they had discussed was contingent upon the state adopting Common Core. Gates grants seem to come with Common Core strings attached.

These examples illustrate the financial self-interest and insular practices that propelled Common Core's hasty ascent. Independent research depends on private funding; however, there is a risk that a single interest can monopolize the market, diminishing diversity of opinion and creating a self-promoting reform.

Now, a think tank embedded within the NYSED receives 20 percent of its budget <<http://www.washingtonpost.com/blogs/answer-sheet/wp/2013/12/10/millions-in-private-money-poured-into-common-core-promotion/>> -- \$3.3 million -- from Gates.

Merryl Tisch, Chancellor of the state legislature-appointed NYS Board of Regents, described the RRF as a response to department vacancies caused by budget cuts. It's a great way to advance one's own agenda, but less so in a public setting in which transparency is supposed to matter.

So Tisch joined Gates in this web of conflict of interest by jumpstarting the RRF with a \$1 million pledge from her personal foundation, the James S. and Merryl H. Tisch Fund<<http://www.nyssba.org/index.php?src=news&refno=1605&category=On>>. The RRF's highest paid fellow<<http://www.timesunion.com/local/article/Education-reform-backed-by-the-wealthy-5006670.php>> earns just under \$200,000 annually which, compared to SED salaries, is second only to Commissioner King's \$212,500<http://www.nytimes.com/2011/05/17/nyregion/new-york-names-new-state-education-commissioner.html?_r=1&>. Despite rewriting the state curriculum and aligning it to national requirements adopted without public input or legislative vote, the fellows are not public employees and therefore not subject to state public officer or ethics laws.

Where is the public oversight when state ethics laws are apparently being circumvented? New York State law defines lobbying<<http://www.jcope.ny.gov/law/lob/lobbying2.html>> as "any attempt to influence ... any determination ... by a public official, or by a person or entity working in cooperation with a public official related to a governmental procurement."

These private funders, advocates for governmental action that includes spending tens of millions of dollars for professional development and instructional materials, tread perilously close to the line. Governor Cuomo's formation of a panel to provide recommendations for how to improve Common Core in the wake of criticism of its "fast track" rollout and concerns over the Board of Regents' competency offers an opportunity for oversight. To properly investigate Common Core, the panel must go to the source of implementation, the Regents Research Fund, and determine if, as a private charity developing education programs under a contract with the state, its work, ethics agreements and statements of financial interest can be accessed via the Freedom of Information Act or governmental probes.

The merits of Common Core aside, this vertical integration of education reform by philanthropists raises a question: Are policymakers are accountable to the public or to their benefactors?

--

Katherine Apfelbaum is the Peters Education Fellow at the Pioneer Institute, a Boston-based think tank

http://www.huffingtonpost.com/kate-apfelbaum/ny-obamacore-panel-common-core_b_4863099.html

From: Jason Guerrette [sts3717@gmail.com]

Sent: Wednesday, March 19, 2014 5:10 PM

To: Derek Barka; John York; Dennis Miller; Brian Bourque; Janine Lepore

Subject: Opt out

<http://mathwizards.files.wordpress.com/2014/03/peabody-teacher-union-opt-out.jpg>

Please read this letter from the Peabody teachers union speaking to standardized testing.

Jason

LITCHFIELD SCHOOL DISTRICT

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LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27

Litchfield, New Hampshire 03052

Approved Minutes for April 9, 2014

(approved as written 4-23-14)

In Attendance: Dennis Miller, Board Chair (*excused*)
Brian Bourque, Vice Chair
Derek Barka, Board Member
Janine Lepore, Board Member
John York, Board Member
Dr. Brian Cochrane, Superintendent
Dr. Julie Heon, Director of Curriculum and Instruction
Scott Thompson, Principal, GMS
Tom Lecklider, Principal, LMS
Laura Rothhaus, Principal, CHS
Leah Stagnone, Student Representative
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION

6:30 p.m.

A. Call to Order

Mr. Bourque called the meeting to order at 6:30 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from:

- March 19, 2014 non-public session:

Mr. York made a motion to approve the non-public minutes of March 5, 2014 as written. Mr. Bourque seconded. The motion carried 4-0-1, with Mrs. Lepore abstaining.

Mr. York made a motion to accept the 2014-2015 GMS staff nominations as presented. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Barka made a motion to accept the 2014-2015 LMS staff nominations as presented. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. York made a motion to accept the 2014-2015 CHS staff nominations as presented. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Barka made a motion to accept the 2014-2015 District-wide staff nominations as presented. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. York made a motion to accept the 2014-2015 revised Administrative staff nominations as presented. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Barka made a motion to accept the resignation of Maureen Carr, LMS Nurse, effective June 30, 2014. Mr. York seconded. The motion carried 5-0-0.

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Mr. Barka made a motion to accept the resignation of Maria Simoneau, LMS Spanish teacher, effective June 30, 2014. Mr. York seconded. The motion carried 5-0-0.

Mr. Barka made a motion to accept the resignation of Susan McGowan, GMS teacher, effective June 30, 2014. Mr. Bourque seconded. The motion carried 5-0-0.

E. Presentations & Recognitions

- CHS Girls Basketball Team Recognitions

The School Board recognized the CHS Girls Basketball team for winning the 2013-2014 NHIAA Division III Championship.

F. Correspondence

Mr. Bourque announced that Harrison Hidalgo, a CHS sophomore, achieved the honor of Eagle Scout.

Correspondence was received from Jason Guerrette, 11 Perry Court, regarding Common Core.

Dr. Cochrane responded to Mr. Guerrette's correspondence. He commented that the video that was included in the correspondence was critical and negative toward Common Core Standards and procedures. He indicated that it was mostly based on allegations of using "soft money" to push a federal mandate in education. Dr. Cochrane commented that there was not much substantive comment about Common Core Standards themselves. He mentioned that one of the people considered to be an expert who criticized Smarter Balance Assessment was the person who referred to SAT as Scholastic Aptitude Test. He noted that SAT has not been referred to as Scholastic Aptitude Test for 20 years.

G. Approval of Draft Minutes:

- Public Session March 19, 2014

Mr. Barka made a motion to approve the public minutes of March 19, 2014 as written. Mrs. Lepore seconded. The motion carried 4-0-0.

H. Community Forum

There was no public input.

I. Superintendent's Comments

Dr. Cochrane commented that LMS is starting the Smarter Balance Assessment field test this week. He indicated that data will be collected from a range of students. He observed that students were working hard and were quite engaged during the testing.

Mr. Lecklider commented that prior to the first week of the field test we had students participate in a practice test to help them navigate the tools of the test. He indicated that training was done with the staff and test proctors. He noted that the staff engaged in the test as well. He explained there were performance tasks and non-performance tasks. Performance tasks are more interactive and focus on real world problems. Non-performance tasks are quicker. Mr. Lecklider commented that he was impressed with the student engagement. He indicated that the English Language Arts portion takes more time and there is a classroom activity occurs prior to the performance task. He commented it is not computer based and the teacher follows a script. Mr. Lecklider noted there are many components to the test and infrastructure is the biggest challenge. He commented that the testing aligns with the performance assessments the staff has been engaged in this year.

Dr. Cochrane commented that he was impressed at how challenging the questions were and that the students were persevering. He indicated that the environment was engaging and the students did not appear to struggle with the technology.

Mr. York asked how quickly the results will be generated. Mr. Lecklider indicated there are no individual results from the field test.

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Mr. Barka was concerned about student performance with the questions and the technology. Mr. Lecklider indicated the students figured it out quickly. He noted that math is a bit challenging.

Mrs. Leite commented that teachers taught students how to add the fractions using technology during the classroom practice test.

Mr. Lecklider commented the field test has been helpful in anticipating what will be coming next year.

II. REPORTS

A. School Board Comments

There were no Board member comments.

B. Curriculum Report

• Curriculum Report Apr 2014

Dr. Heon presented the April 2014 Curriculum report. She reported that plans are underway for summer curriculum work to move forward toward approval of subject areas not yet adopted and the development of instructional units that align with the district curriculum frameworks.

Mr. York made the following statements regarding testing in social studies and science: The Board discusses making certain that the education process in the classroom is more rigorous and that students are being challenged. The law states students are to be tested across all content areas. There should be a process to monitor academic progress in social studies.

Dr. Heon indicated that first we need to write a curriculum, build rigorous assessments and monitor them. She noted that PERC is bogged down with resources at this time. She indicated that a program evaluation tool will be created so that we can eventually move to the content areas.

Mr. York was concerned that we are spending more time updating our technology progress. He encouraged that the Board be approached to determine a process for the use of more resources. He commented that the challenge to PERC and all administrators is that the budget should not drive the decision process. He indicated that rigor should be increased and the process be monitored.

Dr. Heon suggested a local process where assessments are built into the instructional units. She noted the skills and concepts that go through several grades should be monitored

Dr. Cochrane commented that with Smarter Balance Assessment results, three factors must be considered: 1) how long it takes to make the transition; 2) what are the results compared to the standard; 3) how are our results and how do they compare to state and national.

• Draft K-8 ELA Curriculum Frameworks

Dr. Heon presented the draft K-8 English Language Arts curriculum frameworks to the Board for review.

Mr. York indicated that he is still reviewing the document.

Mr. Barka was concerned about foundation skills and Lexile band. He wanted to be sure that teachers are giving students tests within that level and measuring their levels.

Dr. Heon explained that there are interventions for students who are more challenged. She noted that some students meet or exceed the learning levels. She indicated that the goal is that more students will improve their reading and in every grade students will be assigned more developmentally guided reading. Dr. Heon commented that students are expected to read independently as well. She offered for Board members to email her or Dr. Cochrane with any questions regarding the curriculum frameworks so that the answers can be prepared for the next meeting where the frameworks are discussed.

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The Board deferred the K-8 ELA Curriculum Framework to the April 23 Board meeting.

- PERC Recommendations
 - Freshman Science Course

Dr. Heon indicated that PERC recommended the course, which integrates Physical and Earth/Space Science. The key is integrating all of the sciences.

Mr. Barka made a motion to approve the Freshman Science Course as presented. Mr. York seconded. The motion carried 4-0-0.

- Clothing and Textiles Course

Dr. Heon indicated that PERC recommended the new course to meet the NH Minimum Standards for Family and Consumer Science.

Mr. York made a motion to approve the Clothing and Textiles Course as presented. Mr. Barka seconded. The motion carried 4-0-0.

- Grade 5 Reading:

The following selections were recommended by PERC, which will help to develop a unit of various readings at different ability levels around the theme of Sports in America through which students will use reading, writing and complex thinking skills.

- Promises to Keep: How Jackie Robinson Changed America

Mr. Barka made a motion to approve the selection of Promises to Keep: How Jackie Robinson Changed America for use in Grade 5. Mrs. Lepore seconded. The motion carried 4-0-0.

- Jackie Robinson

Mr. Barka made a motion to approve the selection of Jackie Robinson for use in Grade 5. Mrs. Lepore seconded. The motion carried 4-0-0.

- Satchel Paige

Mr. Barka made a motion to approve the selection of Satchel Paige for use in Grade 5. Mrs. Lepore seconded. The motion carried 4-0-0.

- Grade 5 Social Studies:
 - The History of US

Dr. Heon indicated that this selection was recommended by PERC to supplement other social studies materials.

Mr. Barka made a motion to approve the selection of The History of US for use in Grade 5. Mrs. Lepore seconded. The motion carried 4-0-0.

- Grade 8 LitTech Course:
 - The Omnivore's Dilemma

Dr. Heon indicated that this selection was recommended by PERC. She noted that the committee reviewed the higher Lexile version and determined that the difficulty was an impediment to understanding the content. She explained there is a great deal of technical vocabulary that makes the text more difficult than just the Lexile (qualitative component). She indicated that the reader task component is a strong vehicle for the complex thinking skills of analysis, synthesis, and evaluation/judgment.

Dr. Heon commented that she understands the concerns of the Board regarding the Lexile score; however, there are different versions of the book. She noted this is informational text that is engaging for students and provides information about choosing food and analyzing types of appropriate food choices. Dr. Heon pointed out that PERC felt strongly about this recommendation.

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Mr. Barka made a motion to approve *The Omnivore's Dilemma* for use in Grade 8 LitTech. Mrs. Lepore seconded. The motion carried 4-0-0.

- Policy IJL Recommended Changes

Dr. Heon presented suggested revisions to the Selection of Instructional Resources policy and procedures. She indicated that PERC recommended replacing the language of Section III (Criteria) of the procedures with suggested wording to reflect that the criteria for adoption of curriculum resources are contained in the Curriculum Resource Evaluation Tool, which will be attached to the policy procedures.

Board members agreed to defer the agenda item to the April 23 meeting.

C. Principals Report

- GMS

Mr. Thompson presented the following report:

- April is National Poetry Month
 - Mrs. Ashe's students read poetry over the intercom each morning
 - Mrs. Prevel-Turmel is organizing Poem in My Pocket Day for April 18 where each student carries a poem with them and finds an audience so they can read the poem out loud
- Grade 4 will have a visit from the NH History Museum April 21
- Grade 4 will visit Lowell Mills National Historic Site April 24
- GMS Chorus traveled to and participated in the NHMEA Large Group Musical Festival in Goffstown
- Six teams participated in the NH Destination Imagination Kingston Regional Tournament in March
- The Chorus and 4th Grade Recorder Ensemble performed at the District Fine Arts Festival in March
- Grade 1 through 3 students are getting ready for the Spring Arts performances
- Special Friends Day performance is April 25
- Mrs. LaBatt, a Litchfield parent, was acknowledged for her choreography for the choruses
- The Performance Assessment Team went to Grappone Center for the final network meeting
- The Spring assessment schedule has been finalized
- Volunteers were acknowledged for their work with Music Chorus, Destination Imagination, Lego Club, the District Arts Festival, and Chess Club
- An in-house field trip/enrichment activity for Grade 3 is planned with Captain Morrills' Company, a band of Revolutionary re-enactors.

- LMS

Mr. Lecklider presented the following report, which included dates of end of the year events and activities for LMS:

- Acknowledged the PTO for the Annual Opening Day celebration on Friday
- The annual LMS 5K Raider Run took place last Sunday
- Students performed at the District Art/Music Festival
- Spring sports has begun
- Project Safeguard pizza fundraiser was held
- Four students represented LMS at 2014 the Middle Level Honors Bank Festival
- 55 students attended the Large Group Festival and received A's from the judges
- The Drama Club's Spring production will take place next week
- CHS Guidance counselors presented the Program of Studies to 8th graders
- The Performance Assessment Team attended the final network meeting last week
- LMS is using the principles of Core Six this year as the foundation for professional development
- The next Doing Your Best breakfast sponsored by Student Council will be held this month.

Mr. Lecklider provided a list of events at LMS for the remainder of the year.

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- CHS

Mrs. Rothhaus presented the following report:

- 17 Superintendents and administrators from Atlanta, GA arrived at CHS to learn about competencies, standard based grading, personalized learning and sophomore/senior projects
- A speaker who was formerly a student of John Patterson visited CHS to give a motivational speech about the dangers of drugs/alcohol
- CHS faculty is planning for the Smarter Balance field test
- Facilitators continue to align curriculum
- The Performance Assessment Team attended the final network meeting
- Teachers are working on implementation of Common Quality Performance Assessments and to create and use more rigorous rubrics.

Mrs. Callinan reported that:

- guidance is preparing for scholarship and award season, as well as for summer learning opportunities
- the guidance department is working with juniors on post high school options
- a college information night was held
- students completed course selections by March 14
- a presentation regarding Social Media/Internet Safety was held in March
- AP exams are scheduled for May
- Guidance worked with 8th grade students on course selections at the presentation of the CHS Program of Studies
- Career and technical education was presented to all sophomores.

Mrs. Rothhaus acknowledged:

- Chet Orban's nomination for Teacher of the Year
- Outstanding district and choral band concerts
- 21 students were recognized by the Governor and the NHIAA for their GPA and participating in two Varsity sports.

Mrs. Rothhaus provided the Board with a list of senior activities for the remainder of the year.

- International Exchange Students Application Process

Mrs. Rothhaus and Mrs. Callinan discussed the application process for International Exchange students with the Board. They reported that they took a group to Bow High School to learn about the program that has been implemented. Mrs. Callinan provided an explanation of the application process to Board members and noted it is a 5 month process with a \$1700 application fee. She indicated that the F1 Visa application process cost is \$650. She commented that there is a possibility the process will be extended to one year.

Mrs. Rothhaus indicated that student can attend the high school for all four years if they so desire. She commented that host families receive a stipend to host an exchange student. She mentioned that when a student comes to CHS for an international program, the school receives all the money.

Dr. Cochrane asked who is legally responsible to apply for the student's Visa. Mr. York indicated that the school is responsible to apply for the Visa.

Dr. Cochrane announced that Principal Rothhaus has been presenting in the NHIAA a program called the Life of an Athlete. He noted that she ran the Cheering competition this year and is serving on the search committee for the new executive director of NHIAA.

Mrs. Callinan presented a proposal to offer a Diploma with Distinction at CHS. The diploma will be awarded to graduating students with 28 or more credits, a minimum weighted GPA of 3.80 and six or more credits from Honors or AP courses.

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Mrs. Rothhaus suggested beginning this diploma program with this year's Freshmen class.

Mr. York was concerned with any conflicts that could arise with the criteria for class valedictorian and the number of credits that student may have earned.

Dr. Cochrane suggested that it could be mandated that the valedictorian must achieve a diploma of distinction. He noted that any student competing for valedictorian wants to take every Honors or AP class possible.

Mr. York commented that the Board can endorse the proposal, but not vote on it tonight.

Dr. Cochrane commented that the 24 credit diploma can be referred to as the academic diploma.

Mrs. Rothhaus commented that some students from CHS attend night school in Londonderry to obtain a 20 credit diploma. She was concerned about the consequences if even one student was only able to obtain 20 credits.

Mr. York indicated that student would have to come before the Board, but there is not enough information at this time for that process to be considered.

Ms. Stagnone commented that there are cases where some students have serious medical problems, which makes it important to have the 20 credit diploma option.

Dr. Cochrane suggested that the Board contemplate consideration for a 20 credit diploma on a case by case basis.

Mr. York asked administrators if there were any issues in the schools that require School Board direction. He encouraged principals to bring these types of issues to the Board.

Mr. Thompson, Mr. Lecklider and Mrs. Rothhaus indicated there are no such issues in their buildings at this time.

D. Student Representatives Comments

Ms. Stagnone read the list of CHS students who received Scholastic Art Awards. She reported on student achievement with regard to receiving scholarships, FBLA awards, the Academic Excellence Fair and students that were selected to attend St. Paul's School. She mentioned that upcoming events include Spring Fling Clean Up, a blood drive hosted the National Honor Society, the Senior trip to Disney, the Mr. CHS Pageant, the Neon Dance, and the May production of "Crumpled Classics".

E. Committee Reports

• Budget Committee

Mr. York reported the Budget Committee met on March 27 and Cindy Couture was elected as Chair. Committee members raised the School Board's concern regarding budget presentations with department heads and questions for those experts. He indicated that he expressed that some of the Budget Committee members are not looking at the budgets until they come to the meeting. He noted that the Board of Selectmen representative agreed. Mr. York reported that the Budget Committee suggested that department heads come to both the budget presentation meeting and the subsequent meeting. He noted that Budget Committee members believe they are there to present their budgets and answer questions. Mr. York commented that the issue was if we did not provide the answer to their questions, they would reduce that line. He believes it is necessary for the School Board to discuss that process.

Mr. Bourque commented that the Budget Committee received the budget two weeks early, which provided more than adequate time to review the budget and formulate questions.

Mr. York explained that in the past Budget Committee members sent their questions directly to the Business Administrator or the Superintendent.

Dr. Cochrane indicated that Mrs. Couture contacted him to request a meeting. He commented that he will schedule to meet with Mrs. Couture and the Business Administrator.

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Mr. York believes that any questions should be sent through the Budget Committee representatives and should only pertain to budget amounts.

Mr. York conveyed questions from the Budget Committee. He noted that a member asked why the handicapped tuition and transportation accounts are underspent to date.

Dr. Cochrane indicated that two or three students moved out of district in the January/February timeframe. He noted that part way through the budget there are students who enter the district with IEP's and we are legally bound to provide their education.

Mr. York indicated that the Budget Committee requested revenue projections with the budget. He noted that members asked why the School Board and Business Administrator would not prepare the MS-27. Mr. York indicated his response was that it is the Budget Committee's responsibility. He commented that there could be a strong response on that issue.

- LSB Planning/Building Advisory Committee

Mr. York asked if meetings have been scheduled for the Litchfield School Board Planning/Building Advisory Committee. Dr. Cochrane indicated that to date there are no scheduled meetings, but a May meeting is a possibility.

- PERC

Mr. Barka reported PERC met recently and will be meeting again in May.

F. Enrollment Report – Mar 2014

Dr. Cochrane reported there are 1,445 students enrolled in the district. He announced there are 54 Kindergarten registrations and 73 Grade 1 registrations as of the end of March.

III. OLD OR UNFINISHED BUSINESS

A. 2014-2015 School Calendar

Dr. Cochrane presented the revised 2014-2015 school district calendar to the Board for approval.

Mr. York commented that CHS does not need a fourth delayed opening and suggested to eliminate either the March 18 or April 15 delayed opening.

Dr. Cochrane indicated that the March 18 late arrival day will be eliminated.

Mr. York made a motion to approve the 2014-2015 school district calendar with the suggested revision. Mr. Barka seconded. The motion carried 4-0-0.

B. 2014-2015 Operating Budget

Dr. Cochrane updated the Board on the 2014-2015 Operating budget as follows:

- The FY15 Default budget is \$174,000 less than the Recommended Operating budget
- The current budget included \$150,000 reduction in Salaries and \$50,000 reduction in Benefits
- Managing the budget to a \$200,000 under spend is not feasible this year as the budget is "tight"
- Salaries are being posted into the FY15 budget, which will include a computer integration teacher and the Grade 2 teacher position is still in the budget [as we will be operating with a default budget]
- A high school English position was reduced next year
- Healthcare numbers were higher as four or five employees changed their healthcare status – approximate increase of \$48,800.

Dr. Cochrane commented that when looking at the projected salaries based on Article 2 (CBA), the projected difference is approximately \$40,000 and projections are based on all vacant positions being filled. He reported that Mr. Markiewicz began negotiations with First Student who was the successful bidder in Nashua. Dr. Cochrane commented that Open Enrollment for health insurance is in May and we should have an idea of savings when it is completed.

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IV. NEW BUSINESS

A. 2014-2015 Draft School Board Meeting Calendar

Dr. Cochrane presented the 2014-2015 School Board meeting calendar to the Board for approval.

Mr. York made a motion to approve the 2014-2015 School Board meeting calendar as presented. Mr. Barka seconded. The motion carried 4-0-0.

B. Acceptance of Wellness Award

Mrs. Flynn presented a Wellness Award from HealthTrust for increasing the percentage of completion of Health Assessments.

Mr. York made a motion to accept the HealthTrust Wellness Award of \$100. Mr. Barka seconded. The motion carried 4-0-0.

C. Acceptance of Donations – CHS Robotics

Mrs. Flynn reported the following donations were made to the CHS Robotics Team: \$200.00 from DLB Paving, \$50.00 from Lewis Engineering, PLLC, and \$1,000 from Continental Paving.

Mr. Barka made a motion to accept donations in the amount of \$1,250 for the CHS Robotics Team as presented. Mr. York seconded. The motion carried 4-0-0.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

There was no public input.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. York, the Board entered non-public session at 9:52 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mrs. Lepore seconded. The motion carried by roll call vote: Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

VIII. RETURN TO PUBLIC SESSION

Upon a motion by Mr. Barka, the Board returned to public session at 10:29 p.m. Mr. York seconded. The motion carried by roll call vote: Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

IX. ADJOURN

Mr. Barka made a motion to adjourn at 10:30 p.m. Mr. York seconded. The motion carried 4-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

One Highlander Court

Litchfield, NH 03052

Phone: (603) 578-3570

Fax: (603) 578-1267

Equal Opportunity Employer

Dennis Miller, Chair

Brian Bourque, Vice Chair

Janine Lepore

John York

Derek Barka

April 9, 2014

Attachment to the April 9, 2014 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the April 9, 2014 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

From: Jason Guerrette [sts3717@gmail.com]

Sent: Thursday, March 20, 2014 12:50 PM

To: Dennis Miller; John York; Brian Bourque; Derek Barka; Janine Lepore

Subject: Common Core's End Game: Redistributing Grades | Dr. Rich Swier

<http://drrichswier.com/2014/03/19/common-cores-end-game-redistributing-grades/>

From: Jason Guerrette [sts3717@gmail.com]

Sent: Thursday, March 20, 2014 11:02 AM

To: Dennis Miller; Brian Bourque; Derek Barka; John York; Janine Lepore

Subject: Fwd: Another Superintendent speaks out...why isn't your's? ie..where are the LEADERS?

Good morning

Here us a very well articulated expression of this superintendents thoughts

Jason

Subject: Another Superintendent speaks out...why isn't your's? ie..where are the LEADERS?

OVER 80 pages of RULES were recently passed by the NH DOE & members of the legislature JLCAR. Many of them carry out the Federal US DOE ed reforms.

<http://superintendentlps.blogspot.com/2014/03/enough-is-enough.html>

Todd Gazda, Superintendent, Ludlow Public Schools

Wednesday, March 19, 2014

Enough is Enough!

We are at a pivotal juncture in this country with respect to education. Over the past decade, we have seen a dramatic escalation in the involvement of the Federal Government in education. There seems to be the belief in Washington that the alleged problems in public education in the U.S. can be corrected through national standards, increased regulations, standardized testing, and mandates regarding what and how our children should be taught. It seems that government at both the State and Federal levels want to take control of education away from locally elected officials and place that control in the hands of bureaucrats in the various state capitals and Washington. Nowhere is that practice more evident than here in Massachusetts.

We are drowning in initiatives. Even if they were all good ideas, there is no way we could effectively implement them all. They are getting in the way of each other and working to inhibit necessary change and progress. The number and pace of regulations to which we must respond and comply is increasing at an alarming rate. The following information is taken from the testimony of Tom Scott, Executive Director of the Massachusetts Association of School Superintendents, presented to the Massachusetts Legislature's Joint Education Committee on June 27, 2013. An examination of the regulations and documents requiring action by local districts on the Massachusetts Department of Elementary and Secondary Education website demonstrates that from the years 1996 -2008 (13 years) there were 4,055 (average of 312 each year) documents requiring action of local districts in response to regulations. The same examination conducted on the four year period of 2009-2013 reveals that there were 5,382 (an average of 1077 each year) multiple page documents requiring action by local school districts. How are we effectively supposed to implement local initiatives and meet the needs of our students when we are mired in this bureaucratic nightmare of a system?

Education is an inherently local pursuit. To view it otherwise is misguided and detrimental to the mission of educating our children. In order for schools to be effective they must be responsive to the culture of the community in which they reside. The culture of those individual communities differ greatly and mandates which dictate uniformity for schools across the state, and now even the nation, are in direct contravention to that reality. Educational historian, David Tyack, stated that "The search for the one best system has ill served the pluralistic character of American Society. Bureaucracy has often perpetuated positions and outworn practices rather than serving the clients, the children to be taught."

Current education reform is not designed to truly change education it merely adds additional levels of bureaucracy to an already overburdened system. The extreme emphasis on standardized testing is an unproductive exercise in bureaucratic compliance. As educators, however, if we speak out against the standardized testing movement and the amount of time it takes away from instruction then we are not for accountability. If we point out that many of the standardized test questions are not developmentally appropriate for the age of the students to whom they are being given, then we are not for rigor.

Assessments are an essential part of education. They serve as diagnostic tools that afford teachers the opportunity to determine areas where students need extra assistance or demonstrate when a topic needs to be re-taught. However, standardized tests whose scores take months to arrive, often after the student has moved on to another teacher, have a limited utility for shaping the educational environment. I am concerned that we are creating students who will excel in taking multiple choice tests. Unfortunately, life is not a multiple choice test. Enough is enough!

It is time for educators to push back against the standardized, centralized, top-down mandate driven school reform environment. I agree with the need for standards, but those standards need to be broadly written. Local communities, school boards, administrators and teachers should then be afforded the flexibility to demonstrate how they have worked to creatively to implement local initiatives in order to meet those broadly construed standards. The problem is that it is difficult to boil down creativity to a data point and that makes bureaucrats uncomfortable to say the least.

Well, where does that leave us? Education in the United States is constantly being compared to the systems in countries around the world. One important characteristic of education in those countries, which is consistently linked to the success of their students, is the esteem with which they hold their educators. It is time to treat our teachers with respect. It is time that we involve teachers in the discussion to set the direction for education in this country. They are the ones with the training and expertise. They are on the front lines in this battle. It is time that as educators we let our representatives at the state and federal levels know that we are headed in the wrong direction. It is time that, rather than be influenced by special interests, we focus on the students and the skills they need to be successful in our modern society. I will do my part. Will You?

Posted by Todd Gazda, M.Ed., JD at 7:32 AM

From: Jason Guerrette [sts3717@gmail.com]

Sent: Monday, March 24, 2014 6:54 PM

To: Dennis Miller; Brian Bourque; John York; Janine Lepore; Derek Barka

Subject: Fwd: IN rejects Common Core putting NH students at a possible disadvantage

Good afternoon

Another state moves away from common core to develop higher standards and retain local control

Jason

Subject: IN rejects Common Core putting NH students at a possible disadvantage

INDIANA REJECTS COMMON CORE STATE STANDARDS!

"I believe our students are best served when decisions about education are made at the state and local level," the Republican governor said, adding:

By signing this legislation, Indiana has taken an important step forward in developing academic standards that are written by Hoosiers, for Hoosiers, and are uncommonly high."

<http://blog.heritage.org/2014/03/24/indiana-ends-common-core-education-standards/>

From: Jason Guerrette [sts3717@gmail.com]

Sent: Saturday, March 29, 2014 10:24 AM

To: Dennis Miller; Brian Bourque; John York; Janine Lepore; Derek Barka

Subject: Utah High School Student Captures Screen Shots of the Anti-Book Common Core Test | COMMON CORE

Good morning

While some may not see what the problem is with this, I clearly do. To me it implants the wrong message on impressionable minds. Why would we want our children to make an argument that reading is somehow bad then correct the syntax....getting a good grade then leaving the child with the positively reinforced idea?

#wrong direction

Jason

<http://whatiscommoncore.wordpress.com/2014/03/28/utah-high-school-student-captures-screen-shots-of-the-anti-book-common-core-test/>

From: Jason Guerrette [sts3717@gmail.com]

Sent: Monday, March 31, 2014 10:43 PM

To: Dennis Miller; Brian Bourque; Janine Lepore; John York; Derek Barka; Brian Cochrane; Julie Heon

Subject: Fwd: Must See Video: Common Core, Building the Machine

Good evening,

PLEASE take the few minutes to see what the fuss is all about. As the leaders of our community in education, you have taken oaths to keep our students in the highest regard and to provide to the best that we can. Please take the time to see another side of the story.

<http://www.commoncoremovie.com/> <--This documentary on Common Core was released today.

Jason

LITCHFIELD SCHOOL DISTRICT

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LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27

Litchfield, New Hampshire 03052

Approved Minutes for April 23, 2014

(approved as written 5-14-14)

In Attendance: Dennis Miller, Board Chair
Brian Bourque, Vice Chair
Derek Barka, Board Member
Janine Lepore, Board Member
John York, Board Member
Dr. Brian Cochrane, Superintendent
Mr. Frank Markiewicz, Business Administrator
Mrs. Tracy Micali, Director of Human Resources
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

A. NON-PUBLIC SESSION: RSA 91-A:3II (c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. York, the Board entered non-public session at 6:03 p.m. under RSA 91-A:3II (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Barka seconded. The motion carried by roll call vote: Mr. Miller, yes; Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

B. RETURN TO PUBLIC SESSION

Mr. York made a motion to return to public session at 11:19 p.m. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Miller, yes; Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

I. PUBLIC SESSION

A. Call to Order

Mr. Miller called the meeting to order at 7:30 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from:

- April 9, 2014 non-public session:

Mr. York made a motion to approve the non-public minutes of March 19, 2014 as written. Mr. Bourque seconded. The motion carried 4-0-0.

Mr. Barka made a motion to accept the resignation of Emily Checkoway, Speech Pathologist, effective June 30, 2014. Mrs. Lepore seconded. The motion carried 4-0-0.

E. Presentations & Recognitions

- 2014 CHS Scholastic Art Awards

The School Board presented CHS art students with awards of recognition for their achievement in the 2014 Scholastic Art Awards competition. Emily Thorpe, a CHS art student, was recognized for receiving a National Silver Medal award.

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F. Correspondence

Mr. Miller announced that he received two items from Jason Guerrette, 11 Perry Court, regarding Common Core State Standards and C Skills.

Dr. Cochrane announced he received an inquiry from Mr. Guerrette regarding the day of silence at CHS last week. He noted he responded to Mr. Guerrette's questions.

G. Approval of Draft Minutes:

- Public Session April 9, 2014

Mr. York made a motion to approve the public minutes of April 9, 2014 as written. Mr. Barka seconded. The motion carried 4-0-1, with Mr. Miller abstaining.

H. Community Forum

Jason Guerrette, 11 Perry Court, mentioned that the Wakefield, NH School Board voted against implanting CCSS. He indicated that more districts are seeing this there is more evidence presented that CCSS is not what as was represented. He commented that a recent press release indicated that a study found that Common Core Standards are not properly validated. Mr. Guerrette noted that some members of the Common Core Validation Committee refused to sign a report attesting that the standards are research-based, rigorous and internationally benchmarked. He commented that they are going in the right direction according to the experts. He mentioned that it is concerning where CCSS lead students in high school, especially in math. Mr. Guerrette indicated that we need to continue rigor through high school and prepare children to go beyond Algebra II. He commented that this year's rankings of high school across America was disappointing as Litchfield was not even in the top 500. He mentioned that Litchfield is not in the top 30 in the State. He commented that it is disappointing in our small town with people that are educated we want our children to succeed at the highest level. Mr. Guerrette mentioned that the top high school in the country has 50% free/reduced lunch statistics. He indicated that he is not advocating following their example, but he proposed the Board to determine what they are doing best and try to implement it in Litchfield. Mr. Guerrette hinted there may be a petition warrant article in March regarding adopting a national/international methodology that has proven success. He encouraged Board members to read the correspondence he sent.

I. Superintendent's Comments

Dr. Cochrane commented that he agreed with some of Mr. Guerrette's points and acknowledged that Massachusetts has the most effective school system in the country. He noted there are three components to that: high/well articulated standards; detailed written state curriculum; students that do not pass the high school assessment do not graduate. Dr. Cochrane indicated that the curriculum is mandated by the state, written by the state with a high stakes assessment. He pointed out that CCSS does not stop at the end of Algebra II and there is the expectation that schools will offer higher level classes, as CHS does.

- Hudson VFW Loyalty Day Awards Announcement

Dr. Cochrane announced that Connie Faro, GMS; Elizabeth Dodd, LMS; and Kelly Frasier, CHS will be honored at a ceremony at the Hudson VFW on May 2, 2014 for outstanding contributions in education and to the community.

II. REPORTS

A. School Board Comments

Referring to the correspondence from Mr. Guerrette regarding Massachusetts, Mr. Barka commented that he research Massachusetts' standards and found similarities between our standards and their standards. He noted that our standards do not include money and are lighter on fractions in the earlier years.

Mr. York referred to the HLN Thumbs comments regarding the playing of an inappropriate song in the high school on a religious weekend. He noted that he spoke with Dr. Cochrane regarding the incident and is hopeful that the decision process will be better. He believes that the schools should reflect the community, but did not in that situation.

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Mr. Miller commented that he attended the All A's Celebration, which was a surprisingly lightly attended event. He indicated that approximately 50% of those students whose names were called were not in attendance. He mentioned that he supports the event and believes it is a nice celebration for the success of the students.

Mr. Bourque informed the School Board that he submitted his name in candidacy for co-president of the GMS PTO.

Dr. Cochrane commented there is confusion at times over the separation of church and state in public schools. He indicated that the free expression of religion is something most schools and districts encourage. He noted it is not mandated; however, the school can support it as an elective activity.

B. Business Administrator's Report – Mar 2014

Mr. Markiewicz reported that the Joint Loss Management Committee met this week. He commended the district because of there was low incident of slips/falls during the winter that we endured. He indicated that the salt budget was overspent as it was necessary during the winter to keep facilities and grounds safe.

Mr. Markiewicz presented the March 2014 financial report. He commented that the district is in the process of reviewing available balances and deciding where to transfer appropriations that are under spent. He noted that at the end of March the general fund balance was \$804,109, which includes a Special Services out of district tuition under spend of \$240,000 and a Buildings/Grounds under spend of \$145,000. He noted we try to hold back planned expenditures and this is the time of year that budget begins to be spent down. Mr. Markiewicz included a reconciliation of self-funded programs and student activity funds.

Mr. York referred to the balances in the student activities funds and asked why the money is sitting in those accounts.

Mr. Markiewicz indicated that student activity funds is money raised by students, spent by student, for students and are not donations from parents or the community.

Mr. York commented that he plans to make a motion at the next meeting that all fees paid for parking and transportation be placed in the School Board budget as revenue and the School Board will decide how the money is allocated. He noted that the money students pay for parking and transportation are not for student activities.

Mr. Miller agreed with Mr. York's suggestion regarding the parking fees and transportation fees. He indicated that for budget setting and revenue setting for next year it should count as revenue in the general fund.

Mr. Markiewicz indicated that all three schools have an administrative assistant that handles the bookkeeping for student activity accounts. He noted that the district's auditor has recommended looking at student activity funds. He indicated there is much oversight of these funds and the policy is very specific on the criteria to expend those funds.

Mr. Miller indicated that Mrs. Flynn can quickly write policy that states parking and transportation fees are not part of the student activity fund. Mr. Markiewicz offered to bring some sample policies from other districts forward. He noted most of those policies agree that those types of fees go through the general fund.

Mr. Miller asked that a draft revised policy be reviewed at the next meeting along with a breakdown of student activity funds for all three schools.

Mr. York suggested researching the last three years, showing the revenue from transportation and parking fees, as well as expenditures from the activity funds.

- MS-22

Mr. Markiewicz presented the FY15 MS-22 for Board members to sign. He commented that the MS-22 is a report of appropriations approved by the voters. The report is filed with the NH DRA and NH DOE. Mr. Markiewicz indicated that the report is required to be filed 20 days after the election. He explained that it is late this year

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because the voters did not approve the proposed budget and because we had to populate the salaries from the approved CBA. He noted that the default budget will be the operating budget for FY15.

C. Committee Reports

- Safety Committee

Mr. Markiewicz reported that the District Safety Committee met yesterday and discussed building walkthroughs and reviewed insurance losses.

- Technology Committee

Mr. Miller reported the Technology Committee has been meeting every two weeks, led by Mr. Hancock. He indicated the committee is trying to account for some of the initiatives brought forth by Dr. Cochrane.

III. OLD OR UNFINISHED BUSINESS

A. 2014-2015 Operating Budget

Mr. Markiewicz commented that the FY15 default budget will be the operating budget for the District. Mr. Markiewicz provided the following to the Board: a budget comparison by object account, a projection of salaries and benefits. He noted that the estimated cost savings is \$113,000.

Dr. Cochrane commented that this year's budget is tight and a \$200,000 under spend may not be realized this year. He noted that the difference between the default budget and the operating budget is over \$200,000 and that areas that are increasing (transportation, utilities) are contributing factors.

Dr. Cochrane indicated that potential reductions for FY15 are:

- At CHS: English position was reduced, Unified Arts 6th period block reductions, computer lab lease
- At LMS: Unified Arts 6th period reductions, Buildings and Grounds shed
- At GMS: Swale
- At SAU: non-LEA healthcare savings
- At School Board: Legal fees

Total reductions: \$108,779.

Dr. Cochrane discussed class sizes with the Board.

B. Policy Revision: Selection of Instructional Resources (IJL/R)

Dr. Cochrane indicated that Dr. Heon requested to move voting on the policy to the May 14 meeting.

Voting on this agenda item was deferred to May 14, 2014.

IV. NEW BUSINESS

A. Educator Evaluation Processes Update

Dr. Cochrane provided information to the Board regarding the processes for educator evaluations.

Mr. Miller commented that we have to modify our processes to what the state requires. He suggested discussing the educator evaluation process at the next Board meeting.

Dr. Cochrane indicated that one year ago we invited some teacher representatives to attend this session at the NH DOE. He noted that the next session deals with the process. He commented that there is concern with the teaching staff regarding the declining enrollment. Dr. Cochrane explained that teachers are always concerned about the accuracy and validity of evaluations when it involves reductions in force. He noted they want to be sure we are always looking at the same criteria, which should be consistent across the district. Dr. Cochrane indicated the May 2010 Professional Growth Plan needs to be updated and that consistent information and evaluations are essential. He noted that the teachers' rubric and special educators' rubric are the same; however, there are several areas that are not represented well. Dr. Cochrane suggested to start with the Danielson 2013 Rubrics and fine tune it to meet our expectations. He indicated that the state model (which is required of all Title I schools) uses 20% of the

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evaluation for student learning/growth. He noted many mini-observations are recommended. Dr. Cochrane commented that although the Board approved the document, the faculty needs to be able to provide some feedback.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

Jason Guerrette, 11 Perry Court, commended Dr. Cochrane and his approach. He mentioned there was a slight disagreement by Dr. Cochrane in the minutes from the last meeting regarding information provided by Mr. Guerrette on CCSS.

Dr. Cochrane commented that there is some validity with the lack of process in Common Core. He indicated that they are a good set of standards, but there is much concern in the lack of process and feedback. He noted there are some serious concerns raised about the surveys that are at the start of Smarter Balance Assessment, which is optional and is used to generate demographic backgrounds. Dr. Cochrane commented that he was not convinced that the survey piece is valid and offered to review the information. He indicated that he appreciates the information regarding the aspects of Common Core. He asked Mr. Guerrette to bear in mind that they are a set of standards and that everything can be approved.

Mr. Guerrette indicated that Dr. Cochrane's tone [in the minutes] was dismissive. He commented when you look at other states that are well ahead of us the evaluation of CCSS hurts teachers. He noted that states tell teachers what they should learn.

Mr. Guerrette commented on the budget. He noted that budgets are tight as they are everywhere. He expressed concern over the swale at CHS. He commented that it is overgrown and needs to be addressed.

Mr. Guerrette spoke to Mr. Barka's comments earlier regarding the similarities between NH and MA curriculum. He disagreed with Mr. Barka's comments. He indicated that the expert who wrote Massachusetts' frameworks offers them for free.

Mr. Guerrette spoke to Mr. York's comments regarding the playing of an inappropriate song in one of the schools. He indicated that tolerance is a two-way street and one cannot teach a lesson in tolerance by being intolerance. He commented that someone will request a meeting regarding this issue.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. York, the Board entered non-public session at 9:25 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Barka seconded. The motion carried by roll call vote: Mr. Miller, yes; Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

VIII. RETURN TO PUBLIC SESSION

Mr. York made a motion to return to public session at 11:19 p.m. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Miller, yes; Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

IX. ADJOURN

Mr. York made a motion to adjourn at 11:20 p.m. Mr. Bourque seconded. The motion carried 5-0-0.

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Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

One Highlander Court

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Equal Opportunity Employer

Dennis Miller, Chair

Brian Bourque, Vice Chair

Janine Lepore

John York

Derek Barka

April 23, 2014

Attachment to the April 23, 2014 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the April 23, 2014 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

From: Jason Guerrette [sts3717@gmail.com]
Sent: Wednesday, April 23, 2014 5:07 PM
To: Dennis Miller; John York; Janine Lepore; Brian Bourque; Derek Barka
Subject: Fwd: MUST READ: on 21st C skills movement vs. the Humanities

Good afternoon

A very well articulated argument

Subject: MUST READ: on 21st C skills movement vs. the Humanities

Respond to this post by replying above this line
New post on Jay P. Greene's Blog

Shakespeare's Birthday and the Death of Humanities by Jay P. Greene

Today is being recognized as the 450th anniversary of Shakespeare's birth. Harold Bloom helpfully suggests that our continued interest in Shakespeare has something to do with Shakespeare's particular insight into what it means to be a human being: "Shakespeare not only invented the English language, but also created human nature as we know it today."

This may also help explain the declining interest in Shakespeare in schools and among some of the more prominent ed reform movements -- they don't really care about teaching children about what it means to be a human being (otherwise known as "the humanities"). They increasingly view school as a mechanism for improving students' economic prospects. And of course, training students to earn a living is an important component of school, but it is not the only or even most important element of education.

We aren't gorillas, for whom zoo-keepers seek to optimize food, shelter, and longevity. Unlike gorillas we are inclined to reflect on what our existence means and try to give that existence purpose. Education should help guide us in doing that, not just train us to optimize food, shelter, and longevity by becoming the best future workers we can be. To reflect on what it means to be a human being we need to learn the humanities, including history, literature, and art.

Who is against the humanities? Few will say it out loud, but it is the dominant thrust in the 21st Century Skills movement, which is backed by the same people who gave us Common Core, with its shift away from literature to "informational texts." When confronted with their manifest disinterest in the humanities, 21st Century Skills folks tend to respond that of course they are also for art, history, and all that stuff. But I challenge you to find where the humanities are in their "framework for 21st century learning." See if you can find it in this graphic they say represents the "key elements of 21st century learning":

Did you find the humanities? Is it in in "Life and Career Skills"? Does poetry fit in "Information, Media, and Technology Skills"? It can't be in the "4Cs" or "3Rs" because history doesn't start with an R or C. Anyone who thinks that alliteration constitutes a persuasive argument is likely to be an uncultured barbarian.

Remember that Microsoft and the Gates Foundation are important supporters of the "Partnership for 21st Century Skills." And Bill Gates himself seems to have a low opinion of the art and humanities, or at least museums devoted to those subjects:

"Quoting from an argument advanced by moral philosopher Peter Singer, for instance, [Gates] questions why anyone would donate money to build a new wing for a museum rather than spend it on preventing illnesses that can lead to blindness. 'The moral equivalent is, we're going to take 1 per cent of the people who visit this [museum] and blind them,' he says. 'Are they willing, because it has the new wing, to take that risk? Hmm, maybe this blinding thing is slightly barbaric.'"

To which Terry Teachout, the Wall Street Journal's art and theater critic, replied masterfully. Let me take the liberty of quoting him at length:

Where to start sifting through the nonsense? For openers, Mr. Gates would do well to find a better guru than Mr. Singer, whose greatest-good-for-the-greatest-number approach to moral philosophy (if you want to call it that) has led him to advocate, among other horrific things, what he politely calls "permissible infanticide." It strikes me that Mr. Gates might possibly want to be a bit more careful about the intellectual company that he keeps.

More to the point, though, it seems clear to me that Mr. Gates thinks it immoral for rich people to give money to museums instead of medical projects, presumably those that have received the official Bill Gates Seal of Moral Approval. To be sure, he deserves full credit for putting his own money where his mouth is: The Bill & Melinda Gates Foundation gives away some \$4 billion a year, much of which is used to support health-related initiatives in developing countries, including a world-wide initiative to stamp out polio.

Good for him—but when it comes to art, he's got it all wrong, and then some.

It almost embarrasses me to restate for Mr. Gates's benefit what most civilized human beings already take to be self-evident, which is that art museums, like symphony orchestras and drama companies and dance troupes, make the world more beautiful, thereby making it a better place in which to live.

Moreover, the voluntary contributions of rich people help to ensure the continued existence of these organizations, one of whose reasons for existing is to make it possible for people who aren't rich to enjoy the miracle that is art. If it weren't for museums, you wouldn't get to see any of the paintings of Rembrandt and Monet and Jackson Pollock (and, yes, Francis Bacon). Instead they'd be hanging in homes whose owners might possibly deign to open their doors to the public once a year. Maybe.

As long as folks have little appreciation for the arts and humanities are dominating ed reform discussions, we are unlikely to make much progress in reviving those topics in schools. We may be celebrating Shakespeare's birth, but what he stood for is dying.

Jay P. Greene | April 23, 2014 at 11:01 am | Categories: Uncategorized | URL: <http://wp.me/peH0y-3gm>

Comment

See all comments

Trouble clicking? Copy and paste this URL into your browser:

<http://jaypgreene.com/2014/04/23/shakespeares-birthday-and-the-death-of-humanities/>

Thanks for flying with WordPress.com

From: Jason Guerrette [sts3717@gmail.com]

Sent: Wednesday, April 23, 2014 2:05 PM

To: Dennis Miller; Derek Barka; Brian Bourque; Janine Lepore; John York

Subject: Fwd: Press Release: Study Finds Common Core Standards Not Properly Validated

Good afternoon

Just like most top down initiatives CC is another process sold to us as "the next big thing"

A new study is out. Please take the time to see what we are really putting in front of our children.

Jason

Subject: Press Release: Study Finds Common Core Standards Not Properly Validated

Press Release

Study Finds Common Core Standards Not Properly Validated Some Validation Committee members refused to attest that the standards are comparable to those in the world's highest-performing countries

BOSTON - Five of the 29 members of the Common Core Validation Committee refused to sign a report attesting that the standards are research-based, rigorous and internationally benchmarked. The report was released with 24 signatures and included no mention that five committee members refused to sign it, according to a new study published by Pioneer Institute.

No member of the Validation Committee had a doctorate in English literature or language and only one held a doctorate in math. He was one of only three members with extensive experience writing standards. Two of the three refused to sign off on the standards.

"Since all 50 states have had standards for a decade or more, there is a pool of people out there experienced in writing English and math standards," said Ze'ev Wurman, author of "Common Core's Validation: A Weak Foundation for a Crooked House." "It's unclear why so few of them were tapped for the Common Core Validation Committee."

Wurman describes two studies conducted by members who signed the Validation Committee report in an attempt to provide post facto evidence that supported their earlier decisions. In both cases, the research was poorly executed and failed to provide evidence that Common Core is internationally competitive and can prepare American high school students for college-level work.

One study, conducted by Validation Committee member and Michigan State University educational statistician William Schmidt and a colleague, explored whether the Common Core math standards are comparable to those in the highest-performing nations and what outcomes might reasonably be expected after Common Core is implemented.

Wurman describes how even after Schmidt and his colleague rearranged the logical order in which concepts would be taught to make Common Core look more like the math standards in high-performing

countries, there was still less than a 60 percent congruence between the two. Their initial results also found no correlation between student achievement and the states that have math standards most like Common Core.

After engaging in highly unconventional steps to increase both the congruence between Common Core and the international standards and the correlation between Common Core and student achievement (based on states whose standards were most similar to Common Core), Schmidt and his colleague wrote that they estimate congruence "in a novel way... coupled with several assumptions." They acknowledge that their analyses "should be viewed as only exploratory... merely suggesting the possibility of a relationship," yet such caution disappears in their final conclusion.

Wurman's research also uncovered that basic information was coded incorrectly for Schmidt's study and shows examples of concepts introduced in high school under Common Core listed as being taught in seventh grade.

Other studies have come to very different conclusions. Stanford University mathematician R. James Milgram, the only member of the Validation Committee with a doctorate in mathematics, said that Common Core is two years behind the math standards in the highest-performing countries. Milgram also wrote that Common Core fails to prepare students for careers in science, technology, engineering, and math.

Ze'ev Wurman is a visiting scholar at the Hoover Institution and a former senior policy adviser at the U.S. Department of Education's Office of Planning, Development, and Policy Development. In 2010, he served as a commissioner on the California Academic Content Standards Commission that evaluated Common Core's suitability for adoption in that state.

Pioneer's comprehensive research on Common Core national education standards includes: Lowering the Bar: How Common Core Math Fails to Prepare High School Students for STEM; How Common Core's ELA Standards Place College Readiness at Risk; Common Core Standards Still Don't Make the Grade; The Road to a National Curriculum: The Legal Aspects of the Common Core Standards, Race to the Top, and Conditional Waivers; National Cost of Aligning States and Localities to the Common Core Standards, and A Republic of Republics: How Common Core Undermines State and Local Autonomy over K-12 Education. Pioneer produced a video series: Setting the Record Straight: Part 1, and Part 2, and has earned national media coverage.

Pioneer Institute is an independent, non-partisan, privately funded research organization that seeks to improve the quality of life in Massachusetts through civic discourse and intellectually rigorous, data-driven public policy solutions based on free market principles, individual liberty and responsibility, and the ideal of effective, limited and accountable government.

Contact Us:

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Common Core, the Fordham Institute, and the D.C. Edu-Blob

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ObamaCore: \$16 Billion Unfunded Mandate

The Wall Street Journal: Common Core Education Is Uncommonly Inadequate

The Weekly Standard: The Beginning of Common Core's Trouble

Breitbart News: ObamaCore: The Nationalization of K-12 Education

Visit Pioneer's Common Core Toolbox for related research, press releases, blog posts, and a video playlist of events and interviews.

Setting the Record Straight on Common Core - Part 1

Setting the Record Straight on Common Core - Part 2

Related Research:

Claims and Facts about Common Core

Common Core Facts

One-Page Primer on Common Core: Legality

One-Page Primer on Common Core: Cost

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Lowering the Bar: Common Core Math Fails to Prepare Students for STEM

A Republic of Republics: How Common Core Undermines State and Local Autonomy over K-12 Education

How Common Core's ELA Standards Place College Readiness at Risk

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27**

Litchfield, New Hampshire 03052

Approved Minutes for May 14, 2014

(approved as amended 5-29-14)

In Attendance: Dennis Miller, Board Chair
Brian Bourque, Vice Chair
Derek Barka, Board Member
Janine Lepore, Board Member
John York, Board Member
Dr. Brian Cochrane, Superintendent
Mr. Frank Markiewicz, Business Administrator
Dr. Julie Heon, Director of Curriculum & Instruction
Mr. Scott Thompson, Principal, GMS
Mrs. Laura Rothhaus, Principal, CHS
Student Reps?
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Note: Agenda items may not have been addressed in the order they were presented on the agenda.)

I. PUBLIC SESSION

6:30 p.m.

A. Call to Order

Mr. Miller called the meeting to order at 6:32 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from:

- April 23, 2014 non-public session:

Mr. York made a motion to approve the non-public minutes of April 9, 2014 as written. Mr. Barka seconded. The motion carried 4-0-1, with Mr. Miller abstaining.

Mr. York made a motion to seal the April 23, 2014 non-public minutes (first session) until February 2015, when the Board will decide to further seal said minutes. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. York made a motion to accept the nomination of Alex Scarelli as CHS English teacher at a salary of \$41,557 for 2014-2015. Mr. Barka seconded. The motion carried 5-0-0.

Mr. York made a motion to accept the nomination of Anna Helbling as LMS Spanish teacher at a salary of \$51,985 for 2014-2015. Mrs. Lepore seconded. The motion carried 5-0-0.

Mr. York made a motion to accept the nomination of Katherine Seaver as LMS part time Reading Specialist at a salary of \$25,992.50 for 2014-2015. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. York made a motion to accept the nomination of Kellie Chambers as LMS Nurse at a salary of \$49,536 for 2014-2015. Mr. Barka seconded. The motion carried 5-0-0.

Mr. York made a motion to accept the nomination of John Verity as LMS Special Education teacher at a salary of \$40,370 for 2014-2015. Mr. Bourque seconded. The motion carried 5-0-0.

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Mr. York made a motion to accept the nomination of Amy Paradise as LMS Special Education teacher at a salary of \$35,070 for 2014-2015. Mr. Barka seconded. The motion carried 5-0-0.

Mr. York made a motion to accept the following resignations:

- *Michael Boutselis, English teacher at CHS*
- *Cheryl Berhane, math teacher at LMS*
- *Patricia Waggoner, librarian at LMS*
- *Allison Eley, special educator at GMS*

Mr. Bourque seconded. The motion carried 5-0-0.

Mr. York made a motion to deny the grievance. Mr. Bourque seconded. The motion carried 5-0-0.

E. Presentations & Recognitions

There were no presentations or recognitions.

F. Correspondence

The School Board received email correspondence from Jason Guerrette, 11 Perry Court, regarding Common Core State Standards.

G. Approval of Draft Minutes:

- Public Session April 23, 2014

Mr. Bourque made a motion to approve the public minutes of April 23, 2014 as written. Mr. Barka seconded. The motion carried 5-0-0.

H. Community Forum

There was no community input.

I. Superintendent's Comments

Dr. Cochrane commented that he attended Project Safeguard at St. Anselm's this week. He indicated that it was an excellent program. He mentioned there were conversations about the roles of parents relative to supporting their children, as well as preparing students for later life. Dr. Cochrane commented that we want our students to be successful, but sometimes set ourselves up as parents by not allowing students to have some negative consequences for choices they make at a younger age. He indicated that, from a Superintendent's perspective, one of the greatest difficulties is that many students have never been allowed to fail [at anything] before high school. He noted that the two presenters gave parents a nice set of perspectives to look at for their children's behavior and how they can help them become more independent.

II. REPORTS

A. School Board Comments

Mr. York commented that he attended a school event and spoke to parents regarding Edline. He noted that most parents were satisfied with Edline, but high school parents complained they have not had any updates since the middle of April. Mr. York suggested that more updates are necessary.

Mr. York commented that Windham School District has put four new curriculum directors in place for math, science, fine arts and guidance. He suggested that the SAU Office undertake a process for the Board to consider if there is a need to restructure job descriptions and expectations of the department heads as we begin to move into the new standards. Mr. York commented that the SAU Office needs to begin ensuring that the curriculum we want is aligned to the Common Core Standards. He suggested that the Board reconsider using a curriculum cycle in the process of changing curriculum. He requested the topic as a future Board discussion.

Mr. Barka commented that he liked the school programming presentations that were done in past meetings.

Dr. Cochrane commented that small school districts are limited by capacity issues. He noted small districts have to write the same curriculum as larger districts. He indicated that two-day strategic planning meetings are scheduled

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for the summer where the topics will be discussed. Dr. Cochrane commented that the goal is to include this as a major piece of a long term plan.

Mr. Miller commented that he sent everyone a copy of the senior activities as there is much happening at CHS over the next 30 days. He encouraged Board members to attend the events.

B. Principals Report

- GMS

Mr. Thompson presented the GMS Principals report for May 2014 to the Board.

- Integrated Technology Program and Staff Position

Mr. Thompson discussed the Integrated Technology Program and the part time technology teacher position with the Board. He reported that the computer lab will be located in Room 18, which is adjacent to the Library/Media Center. There will be desk space at the back of the room that can be used for the IT people. He indicated that he met with Dave Ross and Kyle Hancock to discuss the timing of the transition and support for maintenance staff. Mr. Thompson noted that students in Grades 3 and 4 will benefit directly from the lab. He commented that there will be a 5-day schedule for Grades 3-4, and a 4-day schedule for Grades K-2. He indicated that the teacher will be available for technology integration from 10:00 am – 12:00 pm and the lab will be available at the end of the day for students to use for projects, etc.

Mr. Thompson reported that it is anticipated that the following will be covered in the classes: keyboarding skills, use of devices, navigation skills, use of equipment, word processing, research using the internet, digital citizenship, responsible use of technology and responsible use of social media. He indicated that we would like students to use the class to develop an authentic project. He noted that students in Grades 3-4 should learn some of the basic functions they will face on the Smarter Balance Assessment tests.

- LMS

The LMS Principals report for May 2014 was presented to the Board.

Mr. York commented that the 8th graders arrived successfully in Washington DC.

- CHS

Mrs. Rothhaus presented the CHS Principals report for May 2014 to the Board.

- Summer School Revisions

Mrs. Rothhaus discussed summer school revisions with the Board. She explained that currently we charge \$150 per course, but would like to reduce that fee to \$125. She noted that summer school students attend summer school for four weeks when they do not pass competencies. Mrs. Rothhaus proposed a new schedule for summer school classes that would create a greater opportunity for credit recovery for students. She explained that the schedule would be broken down into weeks: Social Studies Week 1, English Week 2, Math Week 3, Science Week 4. She indicated if a student requires more assistance after the first week, they can attend another week.

Dr. Cochrane commented that this is a well thought out proposal and responds to students' needs. He indicated this will give them the opportunity to demonstrate mastery and puts more focus on what we envision for summer school.

- Diploma of Distinction

Mrs. Rothhaus reviewed the Diploma of Distinction proposal with the Board. Proposed criteria:

- 28 credits
- Minimum weighted GPA of 3.80
- 6 or more credits from Honors or AP courses.

Mr. Miller asked if the weighted GPA would change over time. Dr. Cochrane commented that the scale may have to be modified.

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Mrs. Rothhaus commented that the committee wanted the diploma to be based on the GPA and grades. She noted that the Board asked about a 20 credit diploma, but the committee was not in support.

Mr. York commented that for the AP credits to count toward the Diploma of Distinction, Honors students should be required to take the AP exam. He indicated they should be required to have a score that is accepted by a college. He noted that to attain a Diploma of Distinction the process should have a level of difficulty.

Mrs. Lepore disagreed with Mr. York's statement regarding the requirement to take and pass an AP exam. She believes it would be too restrictive and that if the student takes an AP course and passes, they should receive the credit. She pointed out some students decide not to take the exam and some cannot afford the cost.

Mr. York commented that either the GPA should be raised or the students should be required to pass the AP exam.

Dr. Heon interjected that the AP scores are not ready until July.

Mr. York believes that the rigor is not difficult enough. He commented the GPA should be 3.92 and align with academic excellence.

Mr. Miller commented that the Diploma of Distinction should be a diploma which is achieved by 10% or less of the graduating class.

Mr. York commented that the number of credits should be increased to make it an achievement for which students strive. He expressed support for the concept of the Diploma of Distinction, but believes that the criteria is not rigorous enough.

Mrs. Lepore agreed that the number of credits required appears low. She commented that from her perspective it has to do more with the rigor of the courses the students are taking as that is what the colleges are looking for. She noted that diploma should show more of the credits that came from Honors or AP or Honors equivalent.

Mrs. Rothhaus indicated that they encourage more students to take the more rigorous courses. She offered to return to the committee with the direction from the Board and revisit the proposal with the Board.

Dr. Cochrane recommended for Mrs. Callinan to prepare a chart of what Honors courses are available to students so we can decide where the number of courses should be set.

Mr. York indicated that students who receive a Diploma of Distinction should be recognized by a different hat, robe or tassel.

Dr. Cochrane asked Mrs. Rothhaus to articulate to the committee that he and the Board are supportive of the idea, but would like more information before going forward.

Mrs. Rothhaus updated the Board regarding the International Students Program. The Board previously asked about a fee and who would be paying that fee, as well as information about the application. Mrs. Rothhaus indicated that there is a fee of \$9,200 for the family, which the sending family pays. She noted the school would receive over \$12,000 per student. She explained the only fee the school would have to pay is the application fee of \$1,700. Mrs. Rothhaus indicated that a site visit must be completed in order to determine if the high school is selective enough and asked the Board if they would like to move forward with the application process.

Mr. York made a motion to allow CHS to continue with the International Student Program application process. Mr. Bourque seconded. The motion carried 5-0-0.

C. Curriculum Report

- Curriculum Report Apr 2014

Dr. Heon presented the May 2014 Curriculum report to the Board.

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- Draft K-8 ELA Curriculum Frameworks

Dr. Heon noted that the K-8 English/Language Arts Curriculum Framework was recommended by PERC.

Mr. York asked who was on the team that prepared the ELA curriculum frameworks. Dr. Heon reported the team consisted of a Grade 1 teacher, the GMS Reading Specialist, a Grade 4 teacher, a Grade 8 LA teacher, the LMS Reading Specialist, two high school teachers, a high school curriculum facilitator who is also an English teacher, and herself.

Mr. Miller asked if the high school teachers were part of the team for continuity. Dr. Heon indicated that they have been working on the courses themselves. She noted the curriculum outlines came from the curriculum facilitator and are not in a reader friendly format.

Mr. Barka asked how the teachers will map these frameworks to the curriculum. Dr. Heon indicated that will be discussed this summer as strategic planning committees are scheduled for June and August. She explained this will allow them the opportunity to work with a district template across all grades to create the instructional units. She noted that she would like to come back to the Board with a recommendation for a pilot for next year.

Dr. Cochrane commented that this will take two or three years to get this program together. He indicated that it includes bringing teachers together and mapping report cards to major competencies. He noted the program would have to be implemented for one year before teachers have enough information to make a decision.

Mr. Barka made a motion to approve the K-8 English/Language Arts Curriculum Framework. Mrs. Lepore seconded. The motion carried 5-0-0.

- PERC Recommendations

Dr. Cochrane commented that PERC was established by the Board and a Board member sits on the committee. He noted that PERC is vetting resources before they are recommended to the Board. Dr. Cochrane asked Board members to consider placing curriculum recommendations on a consent agenda and the Board can approve them as one item if they are able to review them prior to the meeting. He indicated that we are spending much time re-reviewing things that have already been reviewed by the Board member and the committee. He noted that if any of the items are questioned, they can be taken off the consent agenda and addressed separately.

Mr. York asked Mr. Barka if there were any issues in what was reviewed. Mr. Barka indicated that the resources recommended to the Board this evening were whole-heartedly endorsed. He commented that the math book is cohesive throughout the grades and the Social Studies books were excellent.

Dr. Heon commented that it would be beneficial to have a program with K-3 continuity at a low cost. She explained that we will receive the consumables for five years. She noted that most programs emerging now have strong digital components, which will engage students, especially in Social Studies.

Mr. Miller indicated that he was supportive of a consent agenda for these items.

- Pie – Grade 4 Language Arts
 - Elijah of Buxton – Grade 8 Language Arts
 - Stolen into Slavery – Grade 8 Language Arts
 - Networks: Who We Are as Americans – Grade 2 Social Studies
- Math Book Recommendation/Purchase
 - Big Ideas – Grades 6-11

Dr. Heon indicated that the math book is new and comprehensive for all grades involved. There are numerous features, such as: essential questions to guide student learning, digital component, extensions for students who need more challenge, much guidance for the teachers. She noted that this company will be able to provide training in

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June and a digital platform in August. Dr. Heon commented that the math book aligns with the Smarter Balance Assessment.

Mr. Barka asked about plans to combine books for Grades 7 and 8. Dr. Heon indicated that the recommendation is we only buy that one book for all of 7th grade. Students moving into 8th grade will have the topics. She noted that book has all the material for 7th and 8th grades and has been thoroughly vetted. She indicated that we will use the Algebra I book both in Grades 8 and 9.

Mr. York mentioned that the legislature is discussing requiring math all four years in high school.

Dr. Cochrane commented that he and Mrs. Rothhaus discussed Everyday Geometry. He noted if this model works as expected and we run Everyday Pre-Algebra, we should eliminate the need for Everyday Geometry.

Mr. Miller asked if the consumables are free for the first year for Grade 2. Dr. Heon indicated that the text is free next year because of the pilot. She noted that after that time, if we purchase it will be for five years and explained that the cost is what would amount to a hard cover prices for other companies. She indicated we would not be signing up for five years until PERC makes that recommendation.

Mr. Barka made a motion to approve the adoption of:

- *Pie – Grade 4 Language Arts*
- *Elijah of Buxton – Grade 8 Language Arts*
- *Stolen into Slavery – Grade 8 Language Arts*
- *Networks: Who We Are as Americans – Grade 2 Social Studies*
- *Grades 6 – 11 Math Purchase*

Mrs. Lepore seconded. The motion carried 5-0-0.

- Policy IJL Recommended Changes

The Board discussed revisions to the policy with Dr. Heon.

Mr. York made a motion to approve the Selection of Instructional Resources policy as amended. Mr. Bourque seconded. The motion carried 5-0-0.

D. Student Representatives Comments

The Student representatives were not in attendance.

E. Committee Reports

- Budget Committee

Mr. Bourque reported that the Budget Committee met on April 24, 2014. He indicated that at the July meeting the Budget Committee will determine a dollar amount for impact on the tax rate and direction for the Board to make the budget fit in that amount. Additionally, he noted that they will discuss a past history of the tax rate and try to assess the impact. Mr. Bourque reported the Budget Committee requested self-funded programs not be included in the budget as they do not believe it is in the RSA.

Mr. Markiewicz commented that self-funded programs are offset by equal revenue and there is no tax impact. He explained it is a gross appropriation and has to be included in the budget.

Mr. Miller commented that we do not know what we can do legally to comply with their request as that would include the whole food service program.

Mr. York commented that a few years ago they directed level funded budgets. He indicated that there is nothing in the law that enables them to give that direction. He commented that all they can do is review the budget and make recommendations.

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Mr. Miller commented that the Board would be interested in hearing their number, but cannot commit to it. He indicated that the Board's responsibility is to budget for the educational community.

- PERC

Mr. Barka reported that the PERC Committee met and referred to the discussion under the Curriculum report section.

F. Technology Report – May 2014

Dr. Cochrane presented the May 2014 Technology report to the Board.

Mr. York asked if there was an outage last week and commented that it was not included on the report.

Mr. Markiewicz indicated that the outage lasted less than one day.

Mr. Miller asked about the launch of the new Food Service POS system. Mr. Markiewicz announced that it was launched today at all three schools and was successful. He indicated there were no issues and is a much better system.

G. Enrollment Report – Apr 2014

Dr. Cochrane presented the April 2014 Enrollment report to the Board. He noted that there are 1,448 total students enrolled in the district. There are 56 Kindergarten registrations and 74 Grade 1 registrations.

III. OLD OR UNFINISHED BUSINESS

A. Student Activity Fund Manual Draft – FYI (Discussion 5.28.14)

Mr. Markiewicz presented a draft student activity fund manual to the Board to review. He indicated that it is for information purposes only and a discussion is planned for the next School Board meeting.

Mr. York observed that the Board needs to make a decision on what will be done with the CHS parking fees and bus pass fees. He indicated that guidance is also necessary for gate receipt funds.

Mr. Miller commented that there is a gate receipt policy, but is interested in those funds being used for maintenance for the students (i.e. fence repair, drama club). Mr. York suggested gate receipts can be used for maintenance on the scoreboards.

IV. NEW BUSINESS

A. Policies to Amend:

- Reporting Child Abuse or Neglect (JLF)
- Updated Procedures for Reporting Child Abuse or Neglect (JLF-R) – **FYI**

Dr. Cochrane presented revisions to the Reporting Child Abuse and Neglect policy to the Board. He noted that the revisions were made to keep the policy aligned with the law and DCYF practices.

Mr. Barka made a motion to approve the Reporting Child Abuse or Neglect policy as amended. Mrs. Lepore seconded. The motion carried 5-0-0.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

There was no community input.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

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Upon a motion by Mr. York, the Board entered non-public session at 8:53 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Miller, yes; Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

VIII. RETURN TO PUBLIC SESSION

Mr. Bourque made a motion to return to public session at 10:29 p.m. Mrs. Lepore seconded. The motion carried by roll call vote: Mr. Miller, yes; Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

IX. ADJOURN

Mr. York made a motion to adjourn at 10:30 p.m. Mr. Bourque seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board



LITCHFIELD SCHOOL DISTRICT

School Administrative Unit #27

Litchfield Board of Education

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Equal Opportunity Employer

Dennis Miller, Chair

Brian Bourque, Vice Chair

Janine Lepore

John York

Derek Barka

May 14, 2014

Attachment to the May 14, 2014 Public Minutes

The following is a collection of written correspondence to the Litchfield School Board, which were read during School Board Comments at the May 14, 2014 School Board meeting.

Respectfully submitted,

Michele E. Flynn
School Board Administrative Assistant

From: Jason Guerrette [sts3717@gmail.com]

Sent: Wednesday, May 14, 2014 11:03 AM

To: Derek Barka; Brian Bourque; John York; Dennis Miller; Janine Lepore

Subject: Fwd: Teachers Union in Mass elects anti-Common Core President as Opposition Increases

Good morning

Teachers across the country are becoming aware of the massive failure CC is. I spoke to some teachers in our district as recently as yesterday that are very frustrated with the direction we are going in.

Jason

Subject: Teachers Union in Mass elects anti-Common Core President as Opposition Increases

MTA Elects Anti-Common Core President as Opposition Increases

Staff Attorney Mike Donnelly answers questions and assists members regarding legal issues in Massachusetts. He and his wife homeschool. Read more >> The Massachusetts Teachers Association (MTA), a union that represents about 110,000 teachers in the Bay State, elected an anti-Common Core president on May 10 in a hotly contested and close election. Barbara Madeloni, a clinical psychologist turned teacher, beat a Brockton teacher by 681 to 584 votes. A proponent of local control, Madeloni opposes high stakes testing and nationalization of educational standards.

State Representative Keiko Orrall, a former public school teacher and homeschooling mom, who has been tirelessly hitting Common Core issues, welcomes Madeloni's reinforcement in the fight. Orrall has filed numerous bills in the legislature to slow or stop Common Core. One of her bills demanded a cost benefit analysis from the commissioner of education, Mitchell Chester, chairman of the PARCC Commission which is developing the new test. The cost benefit analysis on changing assessments from the MCAS to PARCC passed the Democrat-controlled House.

Taking Notice

"This election is significant." Orrall told HSLDA. "I welcome the MTA to the fight. Teachers are beginning to wake up and notice the attempted takeover of local control. A national approach is not the right direction. Students, teachers, homeschoolers—everyone should be concerned about this issue. This is an attempt to totally change the way we make decisions in education. I am committed to local control and will continue to give parents and teachers a voice pressing for transparency with this process. Massachusetts has the best-rated public education results in the country and it is not clear why we need to change. I also do not want the Common Core standards and the PARCC to interfere with the ability of homeschoolers to secure employment and access to higher education."

Many homeschoolers oppose the Common Core for this very reason—it has the potential to create significant barriers to homeschooled graduates in getting jobs and college acceptance. The implementation system which has grown up around the Common Core includes standards, data collection, and assessments: it lays out a cradle-to-grave education process that would grant college- and career-ready status to public school students who go through it.

Mounting Difficulties

Already, in some cases homeschoolers who lack a publically issued graduation credential have encountered difficulty with gaining employment or college acceptance. HSLDA recently reported on a highly qualified homeschool graduate in Ohio whose job offer was revoked when NiSoure, an energy company headquartered in Indiana found out he was homeschooled. This is precisely what many

homeschoolers expect would happen as the Common Core is institutionalized around the country and why we have actively opposed the standards' implementation.

When two of the largest teachers' unions in two of the most progressive states are joining homeschooling advocates to oppose Common Core, policy makers should take note! While the two groups may hold divergent views on how and where children should be educated, they both seem to agree that the nationalization of education is bad for everyone.

While the battle against Common Core continues to pick up steam, advocates of nationalizing education are unlikely to give up. For example, in an April 25 Washington Post article, Lindsey Layton reported on the Department of Education writing rules to create a national teacher certification program.

Although federal law prohibits the national government from having anything to do with curriculum or instruction in education, where there is a will, there is a way. Advocates of local control and opponents of increasing nationalization will have to stay alert for these and other attempts to centralize control the education of children.

<http://www.hslda.org/hs/state/ma/201405130.asp> • •

LITCHFIELD SCHOOL DISTRICT

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27**

Litchfield, New Hampshire 03052

Approved Minutes for May 29, 2014

(approved as written 6-4-14)

In Attendance: Dennis Miller, Board Chair
Brian Bourque, Vice Chair
Derek Barka, Board Member
Janine Lepore, Board Member
John York, Board Member
Dr. Brian Cochrane, Superintendent
Mr. Frank Markiewicz, Business Administrator
Mrs. Michele E. Flynn, School Board Administrative Assistant

I. PUBLIC SESSION

6:30 p.m.

A. Call to Order

Mr. Miller called the meeting to order at 6:45 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from:

- May 14, 2014 non-public session:

Mr. York made a motion to approve the non-public minutes of April 23, 2014 as written. Mr. Barka seconded. The motion carried 5-0-0.

Mr. York made a motion to allow Allison Eley, special educator at GMS, to rescind her resignation. Mr. Barka seconded. The motion carried 5-0-0.

E. Presentations & Recognitions

There were no presentations or recognitions.

F. Correspondence

There was no correspondence.

G. Approval of Draft Minutes:

- Public Session May 14, 2014

Mr. York made a motion to approve the public minutes of May 14, 2014 as amended. Mr. Bourque seconded. The motion carried 5-0-0.

H. Community Forum

Nate Cooper, LEA President, thanked the Board for allowing him to speak. He commented that the LEA conducted an election and new officers were elected. He thanked all officers from last year for their service. He thanked Carolyn Leite for her service to the LEA. Mr. Cooper indicated there are new faces in leadership this year with fresh ideas. He commented that the LEA is looking forward to continuing a respectful and working relationship with Board and the District.

I. Superintendent's Comments

Dr. Cochrane extended congratulations to the seniors who presented their Senior projects last night. He indicated that there was such a range within those projects and there is also tremendous value to the senior project process.

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He noted that students spoke of how they were inspired to go into a direction based on their projects. Dr. Cochrane commented that students spoke eloquently about their projects and how their work changed their career paths.

- **NH Minimum Standards for Public School Approval**

Dr. Cochrane provided the Board with an update regarding NH Minimum Standards for Public School Approval. He explained that every four years the State Board distributes changes to the minimum standards. He indicated that these changes are well vetted. Dr. Cochrane commented this is a policy setting agenda. He noted there are changes to competency based education and movement away from seat time to broad based competencies. He indicated that the information provided includes: credits and what it means to graduate from high school and required development of high school competencies. Dr. Cochrane commented that competencies could become the modules for something greater as education is being modulized.

Dr. Cochrane commented that the results of teaching and learning done well in public school cannot be equated to competencies completed. He noted many areas cannot be evaluated in some of the competencies. He indicated that is something we have to keep in mind as we move forward in this policy direction.

Mr. Barka asked how we determine those competencies. Dr. Cochrane commented that it is part of the strategic plan. He noted that we have to write the grade 8 competencies. He indicated the standards say students who pass competencies are promoted to the next level, not grade. He noted we can still be compliant without changing our system.

II. REPORTS

A. School Board Comments

Mr. York commented that the LMS concerts at CHS were standing room only. He indicated there were excellent performances. Mr. York suggested that the Board consider changing the part time co-curricular choir teacher position to an instructional position that is part of the school program.

Mrs. Lepore commented that she attended the Mr. CHS pageant on May 15. She indicated that it was an excellent event that was well attended and very entertaining. She commended the twelve participants and encouraged Board members to attend the event next year.

Mr. Barka echoed Mr. Cooper's previous comments. He thanked Ms. Leite for her service and noted that he worked with her on the negotiations team and has come to respect her deeply.

Dr. Cochrane commented that the HLN had several good comments regarding the concerts and Ms. Leite.

Mr. Miller commented it is a busy time of the year. He encourage Board members to attend any events at CHS. He noted that the Academic Excellence event had a full house attendance. He indicated that students spoke about teachers and coaches who were inspirational to that student. Mr. Miller commented that he spoke to many students at Senior Projects night. He indicated that many students were excited about what they were talking about. He mentioned some of the projects that students exhibited.

Mr. Bourque wished good luck to all the school in the Great East Music Festival.\

B. Business Administrator's Report – Apr 2014

Mr. Markiewicz presented the April financial report to the Board. He provided an overview of the status of expenditures and revenues as follows:

Revenues

- Current tax appropriation (Local Tax Rate and State Education Taxes) revenue on schedule
- Self-funded \$43,498 balance due, reflected in underspend of self-funded (Function 1501) programs
- Other local revenue exceeds projection \$228,502 due to two (2) LGC refunds totaling \$295,421 and the district distributing to employees/former employees \$64,059, with the district retaining approximately \$231,362. The LGC revenue was not scheduled as the amount of the refund was

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unknown at the time revenues were estimated. The district attempted to offset the cost of health insurance this current year with the LGC refund, unable to as the LGC payment is a refund of past-years premiums paid.

- Medicaid reimbursement is \$57,469 over projection

Expenditures

- Total operating budget expenditures is currently tracking at \$694,018 under appropriation
- Less \$145,767 budget amendments from carry-over FY13, special education \$126,302 underspending appropriations, and \$38,927 self-funded balance, leaves an adjusted operating budget balance of \$344,654
- Anticipated expenditures not encumbered; substitute salaries (39,516), course reimbursement (15,111) and textbook replacement (36,177)

Mr. Markiewicz noted that historically facility managers hold their funds until the end of the year for unanticipated expenditures that may arise.

Mr. York requested that the administration bring recommendations for any encumbrances to the Board for discussion at the next meeting.

Mr. Barka asked if the computer lab slated for FY15 can be encumbered this year. Mr. Markiewicz commented that ordering for the lab has begun. He noted that there are construction needs for the room at GMS where the lab will be located.

Board members discussed ideas for encumbrances, such as paving at GMS and the drop off area project.

Mr. Bourque commented it appears that approximately \$350,000 will be returned to the town at this point. Mr. Markiewicz clarified that the amount to be returned will be in the upper \$200,000 range based on unanticipated revenue.

- **FY15 Budget**

Mr. Markiewicz presented the FY15 Operating Budget to the Board. He explained how the FY15 budget was determined. He reported that the total FY15 Operating Budget is \$19,956,828. He indicated there are major components of the budget, such as increased salaries/benefits based on the approval of the teachers' contract; increases in benefits for this year due to life changing events. Mr. Markiewicz commented that we took the Budget Committee Recommended Budget and retained all changes, then made some reductions to get to the default number.

Mr. York requested a hard copy of the budget for Mrs. Lepore. He commented it is easier to understand in hard copy form.

- **Dead River EFT Payment**

Mr. Markiewicz presented the Board with a one-year fixed priced agreement for oil with Dead River Company. He noted that the fixed price for fuel oil through Dead River Company is very fair and equitable at \$3.1399 per gallon. He indicated it is a 12 month contract with a commitment for 40,000 gallons of fuel oil for GMS and LMS. He noted there is a 2 cents per gallon discount if the invoice is paid within 10 days. Mr. Markiewicz reported that the vendor agreed to accept EFT payments, which would require authorization from the Board to make the advanced payment prior to approval of the manifest.

Mr. Miller was concerned that EFT payment arrangements would violate the RSA that requires Board approval and/or signature on a manifest. He suggested calculating a regular monthly payment based on the delivery and cost per gallon commitment. He noted that in April or May a reconciliation can be performed.

Mr. York agreed with Mr. Miller.

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Mr. Markiewicz commented that he would rather pay on delivery as paying ahead is not good business. He indicated that he can further discuss with the vendor use of the p-card for payment.

- FOBS/Key (Sole Provider/Bid)

Mr. Markiewicz presented a proposal for the security and access control project. He provided background on how the District plans to proceed with the project.

Phase 1 is scheduled for completion by the end of June 2014. This will include re-keying all three schools on one common control key. This is a specialized key that cannot be easily duplicated. Once complete, control of the keys will be coordinated by the SAU with issuance to the following:

Building Principal and Assistant Principal (6)	Key access to assigned
building Facility Directors (3)	Key access to all three
schools Superintendent, Business Administrator, IT Director (3)	Key access to all
three schools Coordinator of Buildings and Grounds (1)	Key access to all three
schools Fire and Police Department (2)	Key access to all three
schools	

This phase is necessary to gain key control of all three buildings prior to Phase 2 Access Control that will enable all school district employees to gain access to their assigned building using the proximity card.

Phase 2 will include and be completed this summer:

SAU	Installing Intelli-Site ES, fully customizable integration platform for all three locations
CHS	Replacing existing access control hardware and install OSSI Compass and 2 wireless portable panic buttons
LMS & GMS	Install new access control panel hardware OSSI Compass and 2 wireless portable panic buttons

Mr. Markiewicz indicated that there will be one master key for all buildings in the district. He noted that the system allows restrictions of specific areas of the buildings as well as access code entry. He reported that both phases exceed \$10,000 or greater by policy criteria, which requires three bids. Mr. Markiewicz asked Board members to waive the bid requirement as this system is proprietary and only two vendors provide this security system, hardware and software.

Mr. Markiewicz recommended that Board members approve the project vendor B & S Integrated Security Systems as the sole source provider of the recommended computer software and associated hardware as it is in the best interest of the district.

Mr. Barka made a motion to suspend policy DJB and approve the recommendation as presented by the Business Administrator. Mr. Bourque seconded. The motion carried 5-0-0.

Dr. Cochrane commented that he received the Department of Safety's Physical Security Self-Assessment Guidelines for School Buildings from the Fire Chief and discovered that the security targeted by the district aligns well with the recommendations in that document.

- Food Service Job Descriptions Revisions

Mr. Markiewicz reported that there has been an issue with supervision of the food service technicians. He explained that lead technician do not know they do not supervise food service technicians. He noted the Director receives input from the lead technicians regarding the food service technicians' performance. He indicated the lead technicians are the eyes and ears for the Director. Mr. Markiewicz recommended revising the job descriptions to allow lead technicians to supervise food service technicians and to adopt the amended organizations chart. He also recommended a 5% increase in the hourly rate for lead technicians after a 90 day probationary period.

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Mr. Miller referred to the job descriptions and expressed concern regarding the lifting criteria. He asked if it is necessary to specify age requirement for use of equipment.

Mr. Markiewicz indicated that he would ask Primex to review those areas and provide a recommendation.

Mr. York suggested revisiting the job descriptions and proposal after review from Primex.

The agenda item will be revisited at the June 25 meeting.

- First Student Contract

Mr. Markiewicz that the district agreed to a contract with First Student. He noted that the final contract is not completed at this time.

C. Committee Reports

- Budget Committee

Mr. Bourque reported that the Budget Committee met on May 22 and discussed earlier delivery of the district monthly financials. He indicated that the Budget Committee discussed an inquired about the communication process by the Budget Committee, specifically if they should communicate through the Chair to the Superintendent who can distribute that communication to whomever it is directed, or can they contact the Superintendent and/or Business Administrator directly.

Mr. Miller commented having one point to go through is preferred.

Mr. Markiewicz commented that he understood this issue to be resolved with the Budget Committee Chair as she felt it should be filtered through the Chair.

Dr. Cochrane indicated that he and Mr. Markiewicz met with Mrs. Couture and it was decided that if there were additional questions in an area Committee members could contact the Superintendent or Business Administrator directly, copying both the School Board and Budget Committee Chairs. He noted that initial inquiry would go through the Budget Committee Chair.

Mr. York indicated they are concerned about the time of response. He agreed that the initial inquiry should go through the Chair and that Committee members can contact parties directly with any additional inquiries as long as they copy the School Board and Budget Committee Chairs.

Mr. Bourque reported the Budget Committee also discussed department heads attendance at budget presentation/voting meetings. He indicated that the Budget Committee members are split on if the department heads should attend the first meeting or the second meeting.

Mr. Miller suggested they pick which meeting they would like the department heads to attend as they are only attending once.

Mr. York commented that as a School Board representative on that committee it is frustrating when Committee members do not ask question when the director or administrator is present. He indicated that they have time to review the budgets in advance and should have those questions prepared. He believes the administrators can handle the budget presentations and that directors should be present on the night the Committee votes in order to answer any additional questions that may arise.

Mr. Bourque agreed that department heads should attend the second meeting. He reported that the Budget Committee will try to determine the tax impact or a potential bottom line on June 26. He indicated that Mr. Peeples stated the Committee should look at what people can afford and not what they need.

Mr. York made a motion for the School Board representative to the Budget Committee to convey that the School Board will not accept any cap on the budget. Mr. Barka seconded.

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Mr. Miller believes that is out of their statutory responsibilities.

The motion carried 5-0-0.

- PERC

Mr. Barka reported that the PERC Committee met on May 21 and discussed recommended books to purchase.

- PERC Recommendations

Dr. Cochrane asked the Board for approval to purchase the following PERC recommendations

- Transition to Algebra

Dr. Cochrane indicated that the Transition to Algebra text will be used in Algebra I Daily for freshmen. He noted that this book is broken up into units or modules.

Mr. York commented that our expectation is that students complete Algebra in grade 8.

Dr. Cochrane commented that we do not expect all students in grade 8 will take Algebra. He indicated there will always be a need for some students to take another course before high school. He explained that the only change projected for next year is that grade 7 will be at an accelerated model. Dr. Cochrane indicated if the grade 7 curriculum is completed and student take Algebra in grade 8, and this cycle is successful, there may not be a need for Everyday Geometry.

- The War Horse

Dr. Cochrane indicated that this is a non-fiction text for grade 8 and has been vetted through PERC.

Mr. Barka made a motion to accept Transition to Algebra and The War Horse. Mrs. Lepore seconded. The motion carried 5-0-0.

III. OLD OR UNFINISHED BUSINESS

A. Student Activity Funds

Mr. Markiewicz presented a draft manual of procedures for student activity funds.

- Student Activity Funds Manual Draft

Mr. Markiewicz indicated that the 2013 audit recognized some exposure in student activity account management, such as deposits not verified in some schools. He provided the current cash balance report for all schools' student activity accounts. He indicated that these reports are signed by principals. Mr. Markiewicz provided a corrective action plan that will be provided to the auditors. He indicated that in the attempt to determine if the accounts are truly student activity accounts, an eligibility test was used. He noted that the Board was concerned that some of these accounts do not pass the test of a student activity account.

Mr. Markiewicz indicated that some of the accounts are budgetary accounts that should be included in the general fund at the end of the year if they end with a balance.

Mr. York commented that those accounts fall under the abandoned property law.

Mr. Markiewicz respectfully disagreed. He noted that it is notated in the student handbook that the district is simply a custodian of those funds and that we have no legal responsibility or right to retain monies of any graduating class.

Mr. Miller suggested legal opinion for clarification regarding the RSA on abandoned property.

Mrs. Lepore was concerned that the students were told the parking fees they paid would be applied toward student activities.

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Dr. Cochrane explained that his understanding from Dr. Cutler was that the first year that was done on a first time basis and was not the intention going forward.

Mrs. Lepore suggested starting the new policy/procedures with the newest incoming class and noting that parking fees are not student activity fees.

The manual will be revisited at the June 25 School Board meeting.

- Student Activity Funds Policy Amendment

The Student Activity Funds policy was amended to exclude high school bus fees and parking fees from student activity accounts. The policy was deferred to the June 25 meeting.

IV. NEW BUSINESS

A. Non-Affiliated-Non-Administrator Salaries

Mr. Markiewicz discussed a salary adjustment proposal for non-affiliated employees that are not administrators. He noted that the Board previously approved a 1% salary increase for administrators at a cost of \$12,254. He indicated that the Board adopted a salary step schedule and longevity scale for non-LEA staff and has frozen the steps in the past. He recommended a 1% increase for non-LEA staff and longevity for those eligible at a cost of \$24,881.

Mr. Miller commented that the default budget should contain step increases for those employees. He indicated that a 1% adjustment is not included in the default budget. Mr. Markiewicz commented that we are not recommending a 3% step increase.

Mr. Miller asked what happened to the 3% step increase. Mr. Markiewicz indicated it has been re-allocated.

Mr. Miller was concerned that staff eligible for step increases are not receiving those increases.

Mr. York disagreed with longevity and believes that step schedules should include more steps so employees can continue to grow.

Dr. Cochrane explained that the recommendation for the 1% increase and longevity is the minimum in fairness to people across all salaries. He indicated that some of the salary schedules will be rest. He noted that the non-affiliated professional group are those with degrees, but there is confusion about how they are paid. Dr. Cochrane commented that those employees should be placed on a scale comparable to teacher salary scales. He recommended a 1% increase for the non-affiliated professional group.

Mr. York commented that he is not happy with the current pay plan, but that it is our pay plan and we should fulfill our commitment to it until it is changed.

Mr. York made a motion to follow the existing pay plan according to the FY15 Default Budget for non-affiliated hourly employees. Mr. Barka seconded. The motion carried 4-0-1, with Mr. Miller abstaining.

Mr. York made a motion to approve a 1% increase in salary for the non-affiliated district professional group (social worker, behavior specialist, psychologist). Mr. Barka seconded. The motion carried 5-0-0.

B. Healthcare Changeover Savings

The agenda item was deferred to the June 25 School Board meeting.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

There was no public input.

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VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. York, the Board entered non-public session at 9:13 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Miller, yes; Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

VIII. RETURN TO PUBLIC SESSION

Mr. Bourque made a motion to return to public session at 10:30 p.m. Mr. Barka seconded. The motion carried by roll call vote: Mr. Miller, yes; Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

Board members discussed upcoming School Board meeting agendas.

IX. ADJOURN

Mr. Bourque made a motion to adjourn at 10:47 p.m. Mrs. Lepore seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27**

Litchfield, New Hampshire 03052

Approved Minutes for June 4, 2014

(approved as written 6-25-14)

In Attendance:

Dennis Miller, Board Chair
Brian Bourque, Vice Chair
Derek Barka, Board Member
Janine Lepore, Board Member
John York, Board Member
Dr. Brian Cochrane, Superintendent
Mr. Frank Markiewicz, Business Administrator
Dr. Julie Heon, Director of Curriculum and Instruction
Mr. Scott Thompson, Principal, GMS
Mr. Tom Lecklider, Principal, LMS
Mrs. Laura Rothhaus, Principal, CHS
Mr. Ryan Perigny, Student Representative
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Agenda items may not be taken in the order they appear)

I. PUBLIC SESSION

6:30 p.m.

A. Call to Order

Mr. Miller called the meeting to order at 6:35 p.m. The meeting was not televised or broadcast.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from: May 29, 2014

Mr. York made a motion to approve the May 14, 2014 non-public minutes as written. Mr. Barka seconded. The motion carried 5-0-0.

Mr. York made a motion to accept the nomination of Heather Davis as Part Time (67%) Spanish teacher at CHS for a salary of \$37,064.40 for the 2014-2015 year. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Bourque made a motion to accept the nomination of Jessica Lachance as Math teacher at LMS for a salary of \$35,070 for the 2014-2015 year. Mrs. Lepore seconded. The motion carried 5-0-0.

Mr. Barka made a motion to accept the nomination of Amy Berube as Media Specialist at LMS for a salary of \$50,984 for the 2014-2015 year. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Bourque made a motion to accept the nomination of Scott Turcotte as Part Time Technology Education/Integration Specialist (50%) at GMS for a salary of \$17,535 for the 2014-2015 year. Mrs. Lepore seconded. The motion carried 5-0-0.

Mr. Barka made a motion to accept the resignation of Tracy Micali, HR Director, effective June 30, 2014. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Bourque made a motion to accept the resignation of Kerry Finnegan, LMS Assistant Principal, effective June 30, 2014. Mrs. Lepore seconded. The motion carried 5-0-0.

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E. Presentations & Recognitions

- Lady Raiders

Dr. Cochrane and the School Board recognized the LMS Lady Raiders Softball team for their championship win at the Tri-County Division III Championship game.

- Wrestling/Lacrosse Golf Fundraiser

The Friends of Litchfield Wrestling and the Friends of Litchfield Lacrosse presented a fundraiser proposal to the Board. A golf tournament is planned for June 30 that will include a silent auction, raffles and refreshments.

Mr. York made a motion to approve the Golf Fundraiser. Mrs. Lepore seconded. The motion carried 4-0-1, with Mr. Barka abstaining.

- Great Schools Partnership: NESSC Grant

Mrs. Rothhaus presented a grant proposal from the New England Secondary School Consortium. Mr. Skip Hanson spoke about a grant opportunity for CHS. He explained that an investment from the NextGen Systems Initiative will enable Great School Partnerships to provide technical assistance to each League school. He noted there are three beneficial strategies of assistance offered:

- 10-15 League schools will receive intensive, on-site school coaching provided by an experience professional to facilitate planning, implementation, evaluation and self-accountability;
- All League schools will receive a comprehensive system of specialized resources regarding personalized learning systems and expanding learning pathways;
- All League schools will receive online and person to person professional development through conferences, webinars, training sessions and school visits.

Mr. Hansen indicated that CHS has an impressive competency-based assessment system and would benefit from the NextGen Systems Initiative grant. He explained that the grant opportunity (RFP) was initially open to schools with Gates Foundation put out RFP to urban schools with free and reduced lunch rates of 40% or higher. Mr. Hansen indicated that a subset of schools are selected through a multistep process outlining a rigorous set of development standards and a mandatory series of self-assessment and early implementation activities.

Mr. Hansen noted that NextGen offers a summer institute where the Gates Foundation will pay for a school to bring in staff to map out things to do to become proficient, to be in the running for the grant and to look at a summer plan for the following year. He indicated that evaluators will decide who goes to the next round (2015) in the fall. He commented that each school will get a highly trained school coach who will talk to the faculty about personalized learning. He indicated that each school will receive resources subject to the needs of the school.

Mr. Hansen commented that when NESSC answered the RFP we made it clear that we would not change our mission or standards. He indicated that the consortium has won some national awards for their efforts.

Mr. Barka referred to the three main goals referenced in the materials provided by Mr. Hansen: 90% graduation rate, 80% post-secondary enrollment, less than 5% drop out rate. He asked if those goals were too low.

Mr. Hansen indicated that those goals were set four years ago and the League has been discussing raising the bar on the goals. He noted that the conferences have been most successful and discussions at the conferences and meetings are very meaningful.

Mr. York asked about the resources. Mr. Hansen indicated that the resources depend upon the school needs.

Mr. York asked about costs associated with teachers attending conferences and meetings. Mr. Hansen indicated that the costs are paid by the grant. He noted that the 4 day workshop that runs July 28-31 is an opportunity to bring 5-6 staff members at no cost to the district.

Dr. Cochrane asked about the requirement that schools must have 40% free and reduced lunch to receive financial support. Mr. Hansen indicated that requirement was changed as the consortium is being treated differently.

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Dr. Cochrane expressed concern with what is meant by personalization and a general tone to what the school would be committing.

Mr. Hansen commented that the consortium would like to personalization to all schools in New England by 2020. He explained that a plan would be mapped out with each student. He indicated that competencies, as in Campbell's case, are excellent indicators.

Mr. Miller referred to the wording "comprehensive system of specialized resources" and expressed concern over who decides what is comprehensive. He noted that in Litchfield, the community decides. Mr. Hansen indicated that the consortium would not differ with the desires of the community.

Dr. Cochrane asked about scoring across the areas and if there is room for negotiation in the scoring. Mr. Hansen affirmed that there would be conversation regarding negotiation for scoring.

Dr. Cochrane asked if there would be an opportunity for preliminary conversation in the fall if CHS is identified and that would be the first time the Board would have to act on the application. Mr. Hansen indicated that Dr. Cochrane was correct and that all costs from now to November would be subsidized by the grant.

Mr. Barka made a motion to move forward with enrollment for the NESSC NextGen grant application. Mrs. Lepore seconded. The motion carried 5-0-0.

F. Correspondence

- NEASC

The School Board received a copy of the correspondence from NEASC sent to CHS. Mrs. Rothhaus explained that CHS is moving forward with accreditation and gearing up for visitation. She indicated that CHS was required to send in their pre-report and will do much work on school-wide rubrics. She noted all work must be completed in the next two years.

G. Approval of Draft Minutes:

- Public Session May 29, 2014

Mr. Barka made a motion to approve the public minutes of May 29, 2014 as written. Mrs. Lepore seconded. The motion carried 5-0-0.

H. Community Forum

There was no public input.

I. Superintendent's Comments

Dr. Cochrane announced that the GMS Grades 3 and 4 Chorus participated in the Great East Music Festival and earned a Platinum Medal.

- CHS Graduation and Drop Out Rates

Dr. Cochrane commented on graduation and drop-out rates for CHS. He provided the NH Annual Graduation Rate and Drop Out Report to the Board. Dr. Cochrane indicated that the state averages for drop outs is 5.6% and CHS is at 1.59% (4 year cumulative percentage). He pointed out that the annual rate cohort for CHS would be 0%.

Mrs. Rothhaus announced that six student are graduating from Londonderry night school.

II. REPORTS

A. School Board Comments

There were no school board comments.

B. Principals Report

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- GMS

Mr. Thompson provided his monthly report for the Board.

- Quality Performance Assessments

Mr. Thompson announced that the Nathan Santos was declared the winner of the GMS Spelling Bee after exhausting the Trophies text list and using words from the Scripps list.

Mr. Thompson reported on quality performance assessments at GMS. He noted that GMS is in the process of submitting the documents for consideration for inclusion in the State of Lists. Mr. Thompson provided the following:

- Grade 4 Writing Opinion Model
- Grade 4 Opinion Rubric
- Grade 4 Opinion Tool
- Grade 4 “Dog Park” Rubric
- Grade 4 “Dog Park” Task
- Grade 4 “Dog Park” Tool.

He explained that the team began with the school goals and crafted questions and a list of what students will know and be able to do. He noted the team has to go through the planning process. Mr. Thompson commented that the opinion piece was devised by our team. He indicated that the team decided we needed to focus on the process, what we needed to do and to do it well. He explained that the students have to submit one task for reading and one for math. He noted that the focus is on how the students perform math as well as the feasibility of having the dog park in Litchfield.

- LMS

Mr. Lecklider provided his monthly report for the Board. He indicated that it was an eventful week at LMS. He reported:

- the Washington DC trip was successful
- the Baseball team was victorious in the Tri-County Championship
- LMS won the Annual Staff Volleyball Game.

- Grade 7 Math

Mr. Lecklider reported on Grade 7 Math. He noted currently:

- The students are grouped heterogeneously
- Math 7 curriculum consists of grade 7 level skills and concepts
- Math 8 curriculum consists of grade 8 level skills and concepts
- Students who are recommended for Algebra I in grade 8 currently never take Math 8 (approx. 40% of the 7th grade class).

Mr. Lecklider reported what will change with the revised structure:

- All students will receive a double block of math in grade 7
- Students who qualify for Math 7/8 in gr 7 will receive Math 7 and Math 8 curriculum
- Students will be selected for Math 7/8 based on assessment data, grades, and teacher feedback (40%)
- Students who successfully complete Math 7/8 in grade 7 will take Algebra I in grade 8.

Mr. Lecklider reported the double block impact on student learning and instruction:

- 90 minutes of math per day: students will experience direct instruction, guided practice, performance tasks/assessments and independent practice
- Math 7 will include the use of technology to differentiate instruction and support a problem-based approach to learning
- Math 7/8 will cover what has traditionally taken two years in one year new resources.

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Mr. Lecklider noted that depth of knowledge will be the key component to the new math structure. He indicated that students will now have 45 minutes of English Language Arts instead of 90 minutes. He commented that a team approach will be used to cover the ELA standards with the students. Mr. Lecklider indicated that the new schedule will not affect the students' day or ability to have Unified Arts classes as the number of periods will remain the same.

Mrs. Lepore asked if there are plans to increase the percentage of students who take Math 8. Mr. Lecklider indicated that with children there is some pre-requisite maturity that needs to occur. He noted that the number will increase.

Mrs. Lepore commented that the issue is students in Math 7 and 8 in 8th grade that are taking Algebra I in grade 9. She indicated that once they become competent enough to be challenged in math and take the courses in high school, then move onto college, they are behind. She commented that not having an accelerated program is a problem.

Mr. Lecklider commented that we let the numbers speak for what is going to drive our schedules. He indicated that we will cap it at these numbers for our schedule. He noted that the hope is to see a trend toward an increase.

- CHS

Mrs. Rothhaus provided her monthly report for the Board.

Mr. Barka inquired about the percentage of graduates who are going to college. Mrs. Rothhaus reported that 78% of this year's graduates are enrolled in college/university. She indicated that the percentages of graduates enrolled in college/university are as follows: 2013, 82.5%; 2012, 88.9%; 2011, 85.6%.

- Geometry Graduation Requirement Clarification

Mrs. Rothhaus asked for clarification regarding the implementation date for the geometry graduation requirement previously approved by the Board. She recommended implementation with the incoming freshmen class (Class of 2018).

Mr. York commented the only class that would be at a disadvantage would be the senior class if the requirement were implemented this year. He expressed concern with delaying the institution of a more rigorous process.

Mr. Miller commented that essentially we are keeping the required courses at three, but taking out an elective requiring geometry.

Dr. Heon commented that the minimum standards require math in every year. She indicated as we move toward senior years we can extract math skills from other areas.

Mr. Miller inquired the percentage of students that do not take geometry. Ms. Callinan commented that we have had students coming into the high school that never took geometry. Mrs. Rothhaus indicated that we would have to look at students that have low math scores. She noted with Everyday Geometry the students feel more successful.

- NH Minimum Standards for High School Math

Dr. Cochrane indicated that the minimum standards high school math requirements state we have to offer six courses no later than July 1, 2015 and meet all required math graduation competencies. He noted that if we do this well, this year's freshmen will have had Everyday Algebra and next year's freshmen will have had Geometry Daily. He commented that this is a significant step, but could be successful. Dr. Cochrane recommended that the geometry graduation requirement be implemented with the incoming freshmen class as he believes the pre-algebra course will help them be more successful. He noted that last year, students signed up for pre-algebra, but were placed in regular algebra with the mentality that more math would be better. Dr. Cochrane commented that placement of the incoming freshmen this year was well intentioned, but too large a gap.

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Dr. Heon indicated that the Board has approved the use of materials for transition to Algebra I in order to strengthen struggling students' skills. She expressed concern over moving those students into a daily algebra course if they are not ready. She commented that each individual student's skills must be considered before making that decision.

Mr. York believes that by delaying implementation of the geometry graduation standard we are allowing the current sophomore class not to rise to the standard we currently have. He disagreed in delaying the more rigorous process because of the difficulties of a handful of students.

Mr. Barka expressed concern with the implementation of the rigorous courses without having support in place.

Mr. Miller commented that he would like to see us get there as fast as we can, but is struggling with the implementation while students are still in the ranks. He indicated that it is not fair to those students that are past their freshmen year. He noted that the middle school plan for math will help align this.

Ms. Callinan commented that the additional rigor should be aligned with the new math offerings in the middle school. She indicated that when that class moves into their freshmen year, it makes sense to require the additional rigor.

Dr. Cochrane indicated he was comfortable with incoming freshmen in pre-algebra daily for one year and Algebra for one year. He noted that at that point they should be ready to be held accountable for requiring geometry for graduation.

Mr. Barka made a motion to implement the geometry requirement for graduation with the incoming freshmen class (Class of 2018). Mr. Bourque seconded. The motion carried 5-0-0.

- Diploma of Distinction

Mrs. Rothhaus reported that she is still meeting with the committee to discuss revisions to the criteria for the Diploma of Distinction.

Ms. Callinan provided data regarding GPAs of graduating senior for the past two years.

2014 – 100 graduates:

- 17 seniors have a GPA of 3.92 or higher with an average of 30.5 credits
- 25 seniors have a GPA of 3.85 or higher with an average of 29.65 credits
- 26 seniors have a GPA of 3.80 or higher with an average of 28.25 credits.

Mr. Miller suggested aligning the criteria on the Diploma of Distinction with the 3.92 GPA and 15 or 16 Honors, AP or Honors Option courses.

Dr. Cochrane referenced the data regarding the number of classes taken by the students with the higher GPAs and commented that if a student is taking 10 Honors, AP, or Honors Options classes it is significant.

Mr. Barka believes that 15 or 16 classes is excessive.

Mr. Miller commented that Honors courses are spread across the curriculum. He indicated that a student has to be willing to challenge him/herself all four years.

Mrs. Lepore indicated that the nursing program is a separate program and suggested there be a diploma for those students.

Dr. Cochrane indicated there are some Diplomas of Distinction that reflect the successful completion of a CTE program and high school requirements.

Mr. Miller asked Mrs. Rothhaus to bring the Board direction back to the committee and asked that they explore non-traditional offers.

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C. Curriculum Report

- Curriculum Report June 2014

Dr. Heon presented the June Curriculum report to the Board. She reported that the student digital portfolio pilot this year will lead to each middle and high school students adding to their portfolio next year. She indicated the ICT Committee will try to complete the K-12 curriculum and that competencies are being embedded. She noted that there will be indicators that go with that competency for every grade and high school course. Dr. Heon reported that the new minimum standards have altered the K-4 piece that has to do with hardware availability.

Dr. Heon reported that PERC began discussing a broader vision at the last few meetings. She indicated that much time was spent on resources and revising the policy for newly adopted materials. She noted that the Committee spent time discussion program review and guiding questions for that process, and the Committee will meet in August to plan for next year and look at the curriculum areas in the curriculum review cycle. Dr. Heon reported that the Committee would like to create a timeline and guidance in looking at those programs and analyze what is working and what can work better in a certain program.

Dr. Heon reported that we are looking at new science standards and what kinds of sciences will be most effective.

D. Student Representatives Comments

Mr. Perigny reported the following events at CHS:

- Springfest hosted by the Student Council was held two weeks ago
- Spirit Week was most successful
- Mr. CHS Pageant was very well attended with the highest attendance recorded
- 8th Graders came to tour CHS and were very respectful
- Student Forum was hosted during a 22 minute Advisory where students were asked for their opinion on how the Student Council can improve the school
- Class Officer elections are on Friday
- Playoff opportunities for Baseball and Softball
- Track team will be going to the championship
- Spring Sports Awards were held on Monday
- Spring Concert was held last week
- Senior Project Night was held last week
- Academic Excellence Banquet was held on May 20
- Next week is Senior Week and Graduation is June 13.

Mrs. Rothhaus commented that the feedback from the Student Council forum asked the administration to address things such as the dress code. She noted it will be good for the administration to review the survey results and determine how we can better promote a positive culture.

Mr. Perigny thanked the Board for the opportunity to serve this year.

Mr. Miller thanked Mr. Perigny and Ms. Stagnone for their time and service.

E. Committee Reports

There were no committee reports.

F. Technology Report – June 2014

Dr. Cochrane provided the June Technology Report for the Board.

Mr. Miller indicated that the 2014-2017 Technology Plan was included in the packet for the Board to read. He asked Board members to send any questions through the Chair.

Dr. Cochrane added that the technology plan is subject to the budgeting process.

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III. OLD OR UNFINISHED BUSINESS

A. Non-Affiliated Salaries Increase

Mr. Markiewicz presented an addition to the previous non-affiliated salary increase request that was approved at the May 29 meeting. He indicated that three categories of non-affiliated staff were omitted from the previous recommendation: monitors, tutors, and salaried non-affiliated, non-certified. He recommended a 1% adjustment for these categories.

Mr. York made a motion to approve a 1% adjustment for monitors, tutors, and salaried non-affiliated, non-certified employees. Mr. Bourque seconded. The motion carried 4-0-1, with Mr. Barka abstaining.

IV. NEW BUSINESS

A. End of Year Encumbrances Discussion

Mr. Markiewicz commented that we are attempting to spend the budget forward. He noted that approximately \$108,000 has been spent on the computer lab, with half going to the GMS computer lab; math textbooks; locks that are being changed; and a new mower. He indicated we are looking to spend forward for some of the tables for the CHS library as one time expenditures.

Mr. Miller asked if there are any items that may be encumbered at the next meeting. Mr. Markiewicz indicated that is unknown at this time. He commented that expenditures for the GMS computer lab are the focus.

Dr. Cochrane commented that the GMS parking lot is under consideration. He indicated that the parking lot next to the soccer field can be considered to increase the amount of parking. Dr. Cochrane was concerned with safety in front of the playground.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

There was no public input.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

Upon a motion by Mr. Barka the Board entered non-public session at 9:15 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Miller, yes; Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

VIII. RETURN TO PUBLIC SESSION

Mr. Bourque made a motion to return to public session at 10:02 p.m. Mr. Barka seconded. The motion carried by roll call vote: Mr. Miller, yes; Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

IX. ADJOURN

Mr. Bourque made a motion to adjourn at 10:05 p.m. Mrs. Lepore seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board

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**LITCHFIELD SCHOOL BOARD
SCHOOL ADMINISTRATIVE UNIT NO. 27**

Litchfield, New Hampshire 03052

Approved Minutes for June 25, 2014

(approved as written 7-9-14)

In Attendance: Dennis Miller, Board Chair
Brian Bourque, Vice Chair
Derek Barka, Board Member
Janine Lepore, Board Member
John York, Board Member
Dr. Brian Cochrane, Superintendent
Mr. Frank Markiewicz, Business Administrator
Mr. Kyle Hancock, Director of IT
Mrs. Michele E. Flynn, School Board Administrative Assistant

(Agenda items may not be taken in the order they appear)

I. PUBLIC SESSION

6:30 p.m.

A. Call to Order

Mr. Miller called the meeting to order at 6:34 p.m.

B. Pledge of Allegiance

C. Review & Revision of Agenda

There were no revisions to the agenda.

D. Summary of Non-Public Actions from:

- June 4, 2014 non-public session:

Mr. York made a motion to approve the non-public minutes of May 29, 2014 as written. Mr. Bourque seconded. The motion carried 5-0-0.

Mr. Barka made a motion to accept the nomination of Brandon Kear as CHS Physical Education/Health teacher at a salary of \$17,535 for the 2014-2015 year. Mrs. Lepore seconded. The motion carried 5-0-0.

Mr. Bourque made a motion to accept the nomination of Rebecca Goldfarb as GMS/District Speech Pathologist at a salary of \$38,710 for the 2014-2015 year. Mr. Barka seconded. The motion carried 5-0-0.

E. Correspondence

There was no correspondence.

F. Approval of Draft Minutes:

- Public Session June 4, 2014

Mr. Barka made a motion to approve the public minutes of June 4, 2014 as written. Mrs. Lepore seconded. The motion carried 5-0-0.

G. Community Forum

Kathleen Follis, 8 Mike Lane, proposed math leveling to the Board. She encouraged the Board to consider beginning math leveling in grade 3. She shared some research that she did regarding math topics students are required to learn in grade 3. She indicated that students have 33 topics to learn, which is too much to be expected to learn in the academic year timeframe (32 weeks excluding vacations and testing weeks). Mrs. Follis commented that having limited time to learn the numerous topics results in average students, who were not struggling in math, hating the subject. She noted that third graders have gone through many concepts and the language is difficult. Students who are struggling in math get more frustrated when the class is just cruising through the curriculum. Mrs.

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Follis suggested slowing the pace before students give up entirely. She commented that Reading groups are leveled because it is more successful to teach difficult concepts in smaller groups. She indicated the same should be done with math. She noted when students struggle they receive Title I services, which are leveled. She commented that teachers are expected to teach all concepts in a limited amount of time and cannot identify the students' areas of weakness because it is moving too fast. Mrs. Follis suggested considering leveling math at the elementary and middle school levels.

Mrs. Follis commented that she is not supportive of AIMSWeb. She asked for it to be explained. She indicated it is an 8 minute snapshot of the student and the AIMSWeb scores do not match the standardized test scores. She asked if it is an accurate picture and the purpose for its use.

Mrs. Follis expressed concern with charging students bus fees. She commented that the district charges students to for transportation to school, but does not charge for transportation to athletic events. She believes that students should not be charged for transportation to school, but that students who participate in athletics and co-curricular activities should be charged for transportation provided to those events.

Nate Cooper, LEA President, thanked Board for allowing him to comment. He noted that yesterday was the last day for teachers who are looking forward to the summer months. Mr. Cooper indicated that the LEA is conducting a survey of the teaching staff regarding school climate. He explained that the survey is being done to collect quantitative and qualitative data. He commented the survey must be completed by July 2 and data will be aggregated after July 4. Mr. Cooper indicated information will be disseminated to the Superintendent and the School Board by the end of July or early August.

Mr. York believes it is a very "one-sided" survey and is not fair to district administrators. He noted that the LEA does not know the direction given to the administrators by the School Board. He suggested the questions be reworded. Mr. York believes the survey is a judgment of the administration.

H. Superintendent's Comments

- SIS Update

Dr. Cochrane updated the Board on the Student Information System selection process. He indicated that it began with three products and Mr. Hancock led the group through two rounds. The two final products are Infinite Campus and Follet Aspen. Dr. Cochrane reported that the group will visit districts with these products the third week of September. He expects the group to make a recommendation to the Board in late October.

Mr. Hancock indicated that work will begin on setting up the new SIS early after the first of the year. Dr. Cochrane commented that both vendors anticipate a four-month work period. He noted that data must be extracted from the old system and put into the new system and users of the software have to be trained. He indicated that 2015-2016 will be scheduled in the new system with a web based grade book.

Mr. Hancock commented that the ultimate goal would be going live September 2016.

I. CHS Day of Silence – Community Member Requested Agenda Topic

Laura Gandia, 3 Chamberlin Drive, commented on the CHS Day of Silence that previously occurred. She mentioned that she has two young boys in middle school. She believed that the Day of Silence held at CHS was sponsored by GLSEN, Gay Lesbian Straight Education Network. She explained that students who participated took a badge and write a message on it that is important to them. Mrs. Gandia was curious about who the group is and what they do. She indicated that she researched the group and discovered that their mission is to educate students about the damaging effects of non-tolerance. She noted that the founder and creator led the organization for 17 years. Mrs. Gandia commented that schools are the place children spend most of their time between ages 5 and 18. She commented that the founder of the organization has made his beliefs known to students and the mission of the group is multi-faceted. She claimed that the group is trying to infiltrate school systems with their beliefs and books. She indicated that the organization believes that religious organizations are intolerant of same sex marriages and are stating that children who attend church may be potential future bullies. She asked if this is a group that CHS wants to endorse.

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Mrs. Gandia stated that during the CHS morning announcement of April 11, the administration approved and allowed to be played a song by Macklemore titled “Same Love”, which is about same sex marriages. She believes the school needs to be “viewpoint neutral”. She indicated that this day was to be a day of anti-bullying, but she claimed that was not the case. Mrs. Gandia provided the song lyrics and excerpts from the video for Board members. She indicated that the students were encouraged to take a badge and be silent during non-academic times during the day. She stated that the vow of silence took place all day. She was concerned that the vow of silence impacted teacher instruction as there would be no dialogue between the students who took the vow of silence and the teachers.

Mrs. Gandia indicated that some students who wore a badge had no idea what it was about. She commented that there was no notification about the Day of Silence and that the proper procedures should have been followed. She cited violations to the following policies:

- Advertising in the Schools (KHB)
 - A table set up with a banner for GLSEN

She commented that setting up a banner for GLSEN was commercial activity, which is not allowed according to the policy.

- Campaigning (BBBG)
 - Posting a banner for GLSEN

She noted the policy states that campaign materials may be posted and distributed in a school rented for a campaign meeting or being used for an all-candidate forum. She commented that according to the policy, the school was not being rented nor was a meeting being held during this time.

- Staff Participation in Political Activities (GBI)
 - CHS teachers wearing badges

She indicated that the policy states that employees shall not advocate their personal political views or engage in political activities during the hours of official employment. She asked if CHS teachers advocated their political views and promoted their views by wearing the badges.

- School Ceremonies, Observances and Patriotic Exercises (IND)
 - Same Love song lyrics

She indicated that the policy states instructional materials, activities, decoration, or assembly programs that are introduced into schools shall not promote any religion. She commented that the converse was the case and asked if the song denigrated any religion.

- Student Rights and Responsibilities (JF)
 - Playing of the song interfering with rights of others

She commented that the policy state students shall have the right to peaceably and responsibly advocate change of the law, policy or regulation and that students may exercise their right to freedom of expression through speech, assembly, petition, and other lawful means. The exercise of this right must not interfere with the rights of others. Freedom of expression may not be utilized to present material that tends to be obscene or slanderous..... She asked if the Day of Silence advocated for change by playing the song, Same Love. She asked if the silence of faculty and students during academic times interfered with the rights of those who sought a day of quality education. She asked if the song was slanderous to Catholics or Christians.

- Student Co-Curricular Activities (JJ)
 - Did the playing of the song uphold the values as stated in the policy?

She asked if the playing of the song upheld the values of CHS and asked if this was a violation of the policy.

- RSA 193-E – Adequate Public Education
 - Did this Day of Silence interfere with the students’ opportunities to acquire certain skills according to the law?

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Mrs. Gandia commented that a student chose to advocate his viewpoint of heterosexuality on this day and was told to remove his badge. She asked if this was a message of tolerance. She wanted to know if CHS is teaching tolerance from only one viewpoint. Mrs. Gandia indicated that the first amendment guarantees freedom of speech that does not interfere with or substantially disrupt classroom time and academic instruction. She was concerned that was not the case.

Mr. Barka asked Mrs. Gandia what she would like to see happen. Mrs. Gandia commented that GLSEN should not be in the schools as sponsoring the outside group is inappropriate.

Mrs. Lepore asked if Mrs. Gandia considered that the teachers that wore badges were showing respect for some of the students they teach. Mrs. Gandia was concerned that they were wearing a badge and not teaching because of the vow of silence. She indicated that is a political statement.

Mrs. Lepore asked which party was being represented. Mrs. Gandia responded that the political issue was that of same sex marriage.

Mrs. Lepore disagreed that the lyrics to the song are a political statement. She indicated that wearing the badges is in support of those who take the vow.

Mrs. Gandia commented that same sex marriage is a political statement and that the author of the song specifically states in the lyrics he wants to see same sex marriage become law.

Mr. York was concerned that many policies and procedures were not followed. He indicated that administrators should explain to the Board how these policies were followed [or not followed] so the Board can determine if the policies were violated.

Mrs. Gandia commented that the Day of Silence should be for all views no matter the lifestyle.

Mr. Barka agreed that we have to be tolerant of all lifestyles. He commented that the important message of the day is tolerance of all lifestyles and that we continue to support the message that bullying is not allowed in schools.

Mrs. Gandia commented that the lyrics of the song played speaks of “holy water I am baptized in is poison” and Catholics find that offensive.

Mrs. Lepore commented that it is important to remember that songs and videos are pieces of art. She indicated whether or not people find art to be beautiful or offensive is in the eye of the beholder. Mrs. Gandia commented that this was not an art exhibit, but a day of silence with lyrics to a song that violates the viewpoint of neutrality.

Mr. Miller commented that the expectation the administration set forth was if a student took the vow of silence and were called upon, the student would respond.

Mrs. Gandia commented that did not happen and the expectations were not followed. She thanked the Board for allowing her to speak.

II. REPORTS

A. School Board Comments

Mr. Barka agreed with Mrs. Follis’ comments regarding math leveling. He commented that the third grade spent approximately a whole month on multiplication and moved on to fractions. He believes that there is a problem in that area.

Mr. Miller expressed congratulations to the CHS Baseball and Softball team for winning the Championship for Division III. He commended the high school for their hard work with the CHS indoor graduation ceremony.

B. Technology Report

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- Technology Plan 2014-2017

Mr. Miller indicated that the Technology Plan was presented to Board members two weeks prior and asked if any Board members had questions for Mr. Hancock.

Mr. Barka commented that the plan mentions technical literacy and professional development. He asked if that should that be addressed in the plan.

Mr. Hancock indicated that this is a framework that is given to us by the State that we are required to follow.

Mr. York commented that there are 100 – 140 individual printers in the three schools.

Mr. Hancock indicated that there are 56 network printers included in the Technology Plan.

Mr. York indicated that the Board discussed with Mr. Martin (former Business Administrator) that copiers were being placed in each school with the capability to delay printing and password login, which would replace the printers. He commented that the toner on the printers is expensive and it is more economical to print off the copiers. He indicated that there needs to be a plan that eliminates these printers.

Mr. Hancock clarified that there are no ink jet printers and less than 10 color devices in the district. He commented that the district has made an effort to move in the direction Mr. York is speaking about. He indicated that the district has made a strong effort to start driving capabilities into the copy machines and implemented print release stations, which exist throughout the buildings.

Mr. Bourque commented that the big copier at GMS is in use constantly and if someone in the administration had to go to the copier to release a job it would not be a wise use of time.

Mr. Miller indicated that this conversation would be best served during the budget review process.

Mr. Bourque commented that he heard conflicting stories that smart boards are fading away. Mr. Hancock explained that several years ago there was an idea that every classroom should have a smart board. He indicated that they are being underutilized. He noted that the district took a step back and began training staff so they know how to properly use smart boards and are targeting classrooms for smart boards.

Mr. Bourque commented that he heard that BYOD exists in the Londonderry School District. He indicated that we keep discussing going in that direction.

Dr. Cochrane commented that we have a policy that permits BYOD and at some point will try to implement that practice. He noted that discussion needs to occur.

Mr. York made a motion to approve the 2014-2017 Litchfield School District Technology Plan. Mr. Barka seconded. The motion carried 5-0-0.

- Technology Recycling

Mr. Hancock asked the Board for approval to dispose of obsolete IT equipment through the Apple Technology Recycling Program, which is free to the school district.

Mr. York made a motion to approve the disposition of technology equipment as requested. Mr. Barka seconded. The motion carried 5-0-0.

- Technology Intern

Mr. Hancock requested approval from the Board to hire an additional technology intern for the summer. He indicated that additional assistance is needed with all routine maintenance and consolidation of three databases, routine upgrades and upgrade of the email server.

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Dr. Cochrane indicated that there is much physical work do be done this summer (i.e. new computer lab at GMS, new high end lab replacements, servers, reimage machines, implementation of fobs and security). He commented that the cost for a second intern would be approximately \$3,000.

Mr. York made a motion to authorize the Superintendent to hire a second IT intern for the summer. Mr. Barka seconded. The motion carried 5-0-0.

C. Business Administrator's Report – June 2014

Mr. Markiewicz presented the June 2014 Financial report to the Board. He indicated that the June 2014 financial report is an attempt to project the end of the fiscal year fund balances, providing current financials as of June 22, 2014. He commented that much work remains to be completed in order to get a more accurate reflection of what the end of year fund balances will be when finalized by the auditor.

Mr. Markiewicz reported that revenue is 1.5% over projection; expenditures are under spent 1.8%; and salaries and benefits are currently overspent by 0.7%. He reported that Food Service is overspent by approximately \$12,000 due to unanticipated expenditures during the fiscal year (i.e. converted to new POS system).

Dr. Cochrane indicated that the Food Service department has been fortunate to this point, but equipment is aging. Mr. Markiewicz indicated that a three year plan for improvements needs to be developed.

Mr. Miller mentioned that a lunch price increase is anticipated as we edge closer to the federal mandate. Mr. Markiewicz indicated that the SAU will bring a recommendation regarding a price increase over the summer.

- FY14 Budget Update

Mr. Markiewicz provided an update regarding the FY14 Budget. He reported:

- Revenue is 1.5% over projection or \$288,089
 - Major contributors:
 - LGC Health Insurance Premium of \$238,181
 - Medicaid reimbursement of \$87,831
- Expenditures are under budget by 1.8% or \$361,300
 - Major contributors:
 - Regular education \$170,952
 - Special education \$119,230
 - District/school administration \$65,442
- Salaries and Benefits is overspent by 0.7% or \$96,570
 - Major contributors:
 - Salaries \$67,813
 - Paraprofessionals/monitors \$36,416
- Health insurance decreased approximately \$58,000 after open enrollment.

Mr. Miller asked about the year end fund balance total. Mr. Markiewicz indicated adjustment still need to be made before a total can be determined.

- FY15 Budget

Mr. Markiewicz provided an update regarding the FY15 Budget. He provided the Board with the final operating budget with salary and insurance adjustments.

- Food Service Job Descriptions Revisions

Mr. Markiewicz presented Food Service job description revisions to the Board. The Board previously requested information from Primex regarding lifting criteria and age requirements for operating certain equipment. The response from Primex indicates that there is no requirement for a two-person lift for a 50-lb. load, but it is recommended from a risk management perspective that a heavy load either be lifted by two people or be broken down into lighter loads. Included in the response was the Ergonomic Guidelines for Manual Material Handling.

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The response from Primex regarding age requirements for equipment operation reflects that this criteria applies to youth employment and that the proper applicable youth employment regulations should be followed. Included in the response was a Youth Employment and Safety bulletin from Primex, as well as the Department of Labor regulations for youth employment.

Mr. York made a motion to approve the changes to the Food Service organizational chart as presented. Mr. Barka seconded. The motion carried 5-0-0.

Mr. York made a motion to approve the changes to the Food Service job descriptions for Lead Food Service Technician and Food Service Technician as presented. Mr. Barka seconded. The motion carried 5-0-0.

- Investment Policy Re-Approval

The Board was asked to re-approve the Investment Policy according to audit requirements.

Mr. York made a motion to re-approve the Investment Policy (DFA). Mr. Barka seconded. The motion carried 5-0-0.

- First Student Contract

Mr. Markiewicz presented the First Student Contract for 2014-2019 to the Board. He noted that the original contract dated back to 2004 and has gone through several amendments. He indicated that upon legal review the contract was found to be outdated and legal opinion was to start a new contract. Mr. Markiewicz reported that the District and First Student agreed on a five-year contract, with a 15% increase in year 1 and 5% increase in each subsequent year; late buses will increase 18% in Year 1 and 5% in each subsequent year.

Mr. York commented that in the policy review agenda topic that follows, he noticed a policy relative to drug testing for bus drivers. He believes that should be part of the contract.

Mr. Miller indicated that the RSA is mentioned in the contract and it states that First Student will comply with all federal and state laws.

Mr. York commented that the Superintendent in Salem is working to create a massive Southern NH bus district where it is hoped that a larger company will service the area. He noted that Salem is signing a two-year contract.

Mr. Barka thanked Mr. Markiewicz for his work on the transportation contract.

Mr. Barka made a motion to approve the 2014-2019 Transportation Contract between First Student and the Litchfield School Board. Mr. York seconded. The motion carried 5-0-0.

D. Committee Reports

There were no committee reports.

E. Enrollment Report – May-June 2014

Dr. Cochrane presented the May and June enrollment reports to the Board. He indicated as of the end of May, there were 1,445 students enrolled in the District, with 56 Kindergarten registrations and 76 Grade 1 registrations. He reported as of the end of the school year in June, there were 1,446 students enrolled in the District, with 58 Kindergarten registrations and 77 Grade 1 registrations.

III. OLD OR UNFINISHED BUSINESS

There was no old or unfinished business.

IV. NEW BUSINESS

A. Authority to Sign

The Board was asked to grant authority to the Superintendent and Business Administrator to sign business management forms, contracts and grants on behalf of the School Board for the 2014-2015 year.

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Mr. Barka made a motion to authorize the Superintendent and Business Administrator to sign all Office of Business Management forms, all contracts, and all grants on behalf of the Litchfield School Board. Mr. York seconded. The motion carried 5-0-0.

B. Policies to Revise:

- Use of Private Vehicles to Transport Student (EEAG)
- Transportation Consent Forms

Dr. Cochrane presented transportation consent forms to the Board for their review and approval. He explained there are three different forms: parental consent/waiver, staff consent/waiver, and student consent/waiver. He noted that the forms were included as references in the policy. Dr. Cochrane indicated that procedures for the policy will be drafted and brought forward to the Board.

Mr. Miller suggested that the lease or rental of a van should be researched. Mr. Markiewicz indicated that the state law requires the driver of a van to transport students to have a school bus driver license.

Mr. York made a motion to approve the parental transportation consent agreement, student self-transportation consent agreement, and teacher transportation agreement as EEAG-R, and minor amendment to Policy EEAG. Mr. Bourque seconded. The motion carried 5-0-0.

C. Policies Overview

Mrs. Flynn presented a policy overview to the Board. It was explained that since 2004, 256 policies have been created, revised and approved. A policy revision cycle was created in 2010 and has since been completed. A new policy revision cycle was presented, which includes repeating years for more comprehensive policy review. Mrs. Flynn noted that policies required by law are mostly up to date, with few exceptions. She proposed that the Board work on new policies over the summer to update the policy manual. She included a list of policies required by law as well as an updated approved policies list. Board members agreed.

- Policies Required by Law
- Approved Policies List Updated
- Proposed Policy Review Cycle

Mrs. Flynn and Dr. Cochrane proposed a revised policy review cycle to the Board. The policy review cycle will be a 2 year cycle, which will repeat after the second year. Mrs. Flynn indicated that she will monitor all policies for any legislative, state or federal law changes and bring forward amendments to the Board.

Mr. Miller suggested that policies not being revised be brought forward as a group to document review by the Board. Board members agreed.

V. MANIFEST

The manifest was circulated and signed by the Board.

VI. PUBLIC INPUT

A. Community Forum

There was no public input.

Mr. Miller asked if any year end encumbrances are being brought forward for Board approval. Mr. Markiewicz indicated that the GMS parking lot paving project was not brought forward because the bid received was higher than the cost to pave the whole parking lot.

Mr. Miller asked Board members if there were suggestions for any end of year encumbrances. There were no suggestions for end of year encumbrances by Board members.

VII. NON-PUBLIC SESSION: RSA 91-A:3II (a-c)

[Minutes of Non-Public Session are written under separate cover.]

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Upon a motion by Mr. Barka the Board entered non-public session at 9:10 p.m. under RSA 91-A:3II (a) The dismissal, promotion or compensation of any public employee or the disciplining of such employee, or the investigation of any charges against him, unless the employee affected (1) has a right to a meeting and (2) requests that the meeting be open, in which case the request shall be granted. (b) The hiring of any person as a public employee. (c) Matters, which, if discussed in public, would likely affect adversely the reputation of any person, other than a member of the body or agency itself, unless such person requests an open meeting. Mr. Bourque seconded. The motion carried by roll call vote: Mr. Miller, yes; Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

VIII. RETURN TO PUBLIC SESSION

Mr. York made a motion to return to public session at 10:15 p.m. Mr. Barka seconded. The motion carried by roll call vote: Mr. Miller, yes; Mr. Bourque, yes; Mr. Barka, yes; Mrs. Lepore, yes; Mr. York, yes.

IX. ADJOURN

Mr. Barka made a motion to adjourn at 10:16 p.m. Mrs. Lepore seconded. The motion carried 5-0-0.

Respectfully submitted,

Michele E. Flynn
Administrative Assistant to the School Board