Career & College Readiness

Common Core State Standards

Jobs in Today's (and Tomorrow's) Workforce Require More <u>Education and Training</u>

Percentage of Workforce by Education Level

■ 1973 ■ 2002 ■ 2018



More knowledge and skills needed

In 1950, 60% of jobs were classified as unskilled, attainable by young people with high school diplomas or less. Today, less than 20% of jobs are considered to be unskilled.

College Preparation

- 42% of Community College Students take at least 1 remedial course nationally.
- 20% of University freshmen have to take at least 1 remedial course nationally.
- This remediation costs \$1.3 billion annually.
- Only 37% of students who remediate 1 or more class go on to graduate.

Student Relocation

46% of all students move during school age years

Career & College Readiness

Requires:

Conceptual understanding

Depth of knowledge

Integrated knowledge

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Complex thinking

Common Core State Standards Design:

- Staircased learning progressions
 Progression of difficulty from grade to grade, course to course
- Mastery of core, rigorous knowledge and skills
- Learning related to real life
- Collaboration
- Equity

Literacy

- Focus and coherence
 - Coherent progressions develop literacy skills across grade levels
- Focus on text complexity
 - Students required to read texts of increasing complexity
- College and career readiness in writing
 - Students required to write using evidence from informational reading.
- Literacy as a shared responsibility
 - Literacy skills in reading and writing included in history/social studies, science, and technical areas





- Emphasis on informational text
- Increased text complexity
- Integrated media with research skills
- Integrated media with visual and oral presentation of text
- Integrated literacy across all content areas



- Read closely and analytically comprehend a range of increasingly complex literary and informational texts
- Compare content across reading passages
- Integrate reading and writing

Results

continued

- Provide justifications for answers
- Articulate different points of view
- Identify points of view
- Read and analyze actual historical
 - documents

Lexile "stretch bands"

Figure 3: Text Complexity Grade Bands and Associated Lexile Ranges (in Lexiles)

| Old Lexile Ranges | Lexile Ranges Aligned to CCR expectations |
|-------------------|---|
| N/A | N/A |
| 450-725 | 450-790 |
| 645-845 | 770-980 |
| 860-1010 | 955-1155 |
| 960-1115 | 1080-1305 |
| 1070-1220 | 1215-1355 |
| | Old Lexile Ranges N/A 450-725 645-845 860-1010 960-1115 1070-1220 |

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Mathematics

Focus, coherence, rigor

- Focus on key topics at each grade level, clarity & specificity
- > Coherent progressions across grade levels.

Balance of concepts and skills

Content standards require both conceptual understanding and procedural fluency.

Mathematic practices (8 practices)

Foster reasoning and sense making in mathematics.

College and career readiness

- Level is ambitious but achievable.
- Internationally benchmarked

COMMON CORE STATE STANDARDS FOR

STANDARDS FOR MATHEMATICAL PRACTICE

Describe habits of mind used by a mathematically expert student. They are the process standards and proficiencies that are important in mathematics education.

STANDARDS FOR MATHEMATICAL CONTENT

Mathematics

Define what students should understand and be able to do in their study of mathematics. They stress balancing procedure and conceptual understanding of key ideas.

MATHEMATICAL PRACTICES

K-12

- 1. Make sense of problems and persevere in solving them
- 2. Reason abstractly and quantitatively
- 3. Construct viable arguments and critique the reasoning of others
- 4. Model with mathematics
- 5. Use appropriate tools strategically
- 6. Attend to precision
- 7. Look for and make use of structure
- 8. Look for and express regularity in repeated reasoning

| DOMAINS AND CONCEPTUAL CATEGORIES | | | | | | |
|---|---|---|--|--|--|--|
| K-5 Domains | 6-8 Domains | HS Conceptual Categories | | | | |
| Counting and Cardinality (K only) Operations and Algebraic Thinking (K-5) Number and Operations in Base Ten (K-5) Number and Operations—Fractions (3-5) Measurement and Data (K-5) Geometry(K-5) | Ratios and Proportional Relationships (6-7) The Number System (6-8) Expressions and Equations (6-8) Functions (8 only) Geometry (6-8) Statistics and Probability (6-8) | Number and Quantity Algebra Functions Modeling Geometry Statistics and Probability | | | | |

Mathematics Expectations

- (Conceptual Understanding & Procedural Fluency) Explain and apply mathematical concepts and interpret and carry out mathematical procedures with precision and fluency.
- (Problem Solving) Solve a range of complex wellposed problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies.

Mathematics Expectations

- (Communicate Reasoning) Clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.
- (Modeling and Data Analysis) Analyze complex, real-world scenarios and can construct and use mathematical models to interpret and solve problems.

Math Design & Organization

Mathematical Practice (K-12)

- 8 standards describe varieties of expertise that math educators al all levels should seek to develop in their students
- "These practices rest on important processes and proficiencies with longstanding importance in math"
- The practices are the same for all grade levels
- The practices need to be connected to standards of mathematical content

Standards of Mathematical Practice <u>"Habits of Mind"</u>

- Make sense of problems & persevere in solving them
- Reason abstractly & quantitatively
- Construct viable arguments & critique the reasoning of others
- Model with mathematics
- Use appropriate tools strategically
- Attend to precision
- Look for & make use of structure
- Look for & express regularity in repeated reasoning

NH State Testing

Fall 2012 - NECAP (with transitional items)

Fall 2013 – final NECAP

(best possible transitional test)

Fall 2014 - no test (with USED approval)

Spring 2015 – new assessments based on CCSS

CCSS versus GLE/GSE emphasis In NECAP

| CCSS K – 8 Domains Progression | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|
| Domains | к | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Counting and Cardinality | | | | | | | | | |
| Operations and Algebraic Thinking | | | | | | | | | |
| Number and Operations in Base Ten | | | | | | | | | |
| Number and Operations – Fraction | | | | | | | | | |
| Ratios and Proportional Reasoning | | | | | | | | | |
| The Number System | | | | | | | | | |
| Expressions and Equations | | | | | | | | | |
| Functions | | | | | | | | | |
| Measurement and Data | | | | | | | | | |
| Geometry | | | | | | | | | |
| Statistics and Probability | | | | | | | | | |

Mathematics Distribution of Emphasis

| | 2(3) | 3(4) | 4(5) | 5(6) | 6(7) | 7(8) | 9-10(11) |
|-----------------------------------|------|------|------|------|------|------|----------|
| Number and Operations | 55% | 50% | 45% | 40% | 30% | 20% | 15% |
| Geometry and Measurement | 15% | 20% | 20% | 25% | 25% | 25% | 30% |
| Algebra and Functions | 15% | 15% | 20% | 20% | 30% | 40% | 40% |
| Data, Statistics, and Probability | 15% | 15% | 15% | 15% | 15% | 15% | 15% |
| | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Changes in K - 5

More:

- Numerations & operation intensified and introduced earlier
- Early place value foundations in K
- Regrouping as composing/decomposing, gr. 2
- Decimals to the hundredths, gr. 4
- All 3 types of measurement simultaneously (non-Standard, English, and metric)
- Emphasis on fractions as numbers
- Emphasis on number line as visualization/structure

Less:

- Algebraic patterns, K-5
- Stats & probability, K-5
- (Delayed content)
 - percent, ratio and proportion