

Curriculum Outline



Campbell High School

Character – Courage – Respect – Responsibility

Course & Level: Basic Woodworking

Department: Technology Education

Teacher: Mr. Mower

Grade level: 9-12

Description of Course:

This course is designed so that a beginning student will be introduced to basic wood hand and machine tools. Students will be able to design and build projects of increasing complexity. Basic materials are provided, but students are expected to pay for the materials they use.

School – Wide Expectations:

Academic

1. Read, write and speak effectively
2. Exhibit critical thinking and problem solving skills
3. Use resources to obtain information and facilitate learning

Civic/Social

1. Exhibit personal responsibility
2. Work cooperatively in an atmosphere of mutual respect
3. Contribute to the stewardship of the community

The school-wide expectations are incorporated into all courses at Campbell High School. Underlined words in the following text illustrate this alignment between the school-wide expectations and the course

Core Competencies and alignment with State Standards:

Perform

The student will measure using English and Metric units. The student will estimate time, procedures, and calculations related to course assignments and projects. The student will demonstrate the application of effective safety practices through the usage of common hand tools and power tools found in the home or in the school laboratory.

A1. Select and use appropriate measuring tools to accurately gather, manipulate, and communicate information.

A2. Exhibit the safe and proper selection, use and maintenance of technical equipment, materials, and processes.

Respond

The student will demonstrate an understanding of design principles and ergonomics through the selection and creation of projects of choice to meet a need.

A4. Demonstrate an awareness of career opportunities and requirements needed to make informed and meaningful choices in their education/employment in technical occupations.

B1. Design, schedule, manage, and assess technical processes and systems

D1. Design, develop, manage, and evaluate activities using identified problem-solving techniques.

Engage

The students will demonstrate the safe and proper use of tools, processes and materials that will be utilized in their project work.

E1. Exhibit an understanding of the relationship between academic concepts and practices to their applications in a technological setting.

H1. Demonstrate an understanding of and an appreciation for the importance of accepting individual responsibility, developing a solid work ethic and learning to plan and work effectively.

Suggested Texts and Media (Software, A/V, etc.):

Text: Wood Technologies and Processes, John and Mark Feirer

Magazines: Handyman, Popular Mechanics, Woodcraft, etc.

Additional plans and ideas obtained through Internet research or marketing strategies for items created from wood.

There is a compilation of plans in classroom binders available for student investigation

Suggested Instructional Strategies:

Lecture and Demonstration –

At the beginning of each woodworking machine and tool introduction, there is a teacher demonstration reinforcing proper technique and safety considerations. There are also basic demonstrations on planning, measurement, and woodworking processes. There is a demonstration on applying stain and finish.

As an integral part of the demonstrations and to gauge their understanding of safe practice, the students are then given a written test on each machine and tool. To be allowed to use the machine or tool, it is expected for the student to get a grade in the “excellent” range.

Mastery through Selection and Multiple Use

At each stage of the woodworking experience, there are several opportunities for students to demonstrate craftsmanship and mastery of the tools available to them. Project selection and development may be based on need and ability.

In one example, through the usage of the table saw, students may “rip” a board, square it off, or possibly even make a rabbit joint, all for just one component of a project. The ability to measure and cut to a dimension is always critical.

Project Development

Students are expected to produce a series of projects throughout the semester. All students learn biscuit joints, and router application regardless of project selection. All students use the planer, jointer, miter box, table saw, band saw, scroll saw, drill press, and sanders regardless of selection at some point in the creation of their items.

The most common projects have been boxes, shelves, puzzles and tables although this is not a limitation.

Suggested Assessment Strategies:

Students are given multiple opportunities to meet competencies through project based learning. Daily work in the shop is formative and project completion is summative.