

EL DORADO UNION HIGH SCHOOL DISTRICT
Educational Services

Course of Study Information Page

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| Course Title: Shop Fundamentals - Wood (#503) | |
| Rationale: Shop Fundamentals of woodworking offers a variety of exploratory experiences in basic woodworking, wood finishing, construction methods and manufacturing. | |
| Course Description: In this course, the student will learn how to use basic woodworking tools and machines, sketch working drawings, layout and construct a model of a structure, and design, plan and implement a production manufacturing process. | |
| How Does This Course Align With or Meet State and District Content Standards? Each unit is aligned with State and National Standards. | |
| Length of Course: | 1 year (part of a sequence of up to three - 12 week courses) |
| Grade Level: | Grade 9-10 |
| Credit: 5 units per semester <input type="checkbox"/> Meets graduation requirements <input type="checkbox"/> Request for UC "a-f" requirements <input type="checkbox"/> College Prep <input checked="" type="checkbox"/> Elective <input checked="" type="checkbox"/> Vocational | |
| Prerequisites: | None |
| Department(s): | Trades & Industrial Education |
| District Sites: | EDHS, ORHS, PHS, UMHS |
| Board of Trustees Adoption Date: | February 13, 2001 |
| Textbook(s)/Instructional Materials: | Miscellaneous supplementary materials |
| Date Adopted by the Board of Trustees: | May 8, 2001 |

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UNIT #1: Safety Practices and Procedures

GOAL: To teach each student the basic safety practices and procedures associated with woodworking.

“Big Idea” (Theme)

1. Demonstrate knowledge of general shop and machine safety.
2. Demonstrate working knowledge of good shop practices.

State/National Standards

Standard 101: Personal Safety

Career Performance Standard 5: Occupational Safety

Give examples of student work that demonstrates mastery of this standard

3. Safety test results (written safety test with 100% accuracy).
4. Demonstration by student of the correct safe use of each tool.
5. Safety reinforcement notebook.

Identify best practices used to teach standard

3. Modeling and lecture by teacher.
4. Safety videos.

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UNIT #2: Working Drawings, Procedures and Measurement

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| <p>“Big Idea” (Theme)</p> <p>Each student will learn the importance of a working drawing, procedures and measurement.</p> |
| <p>State/National Standards</p> <p>Standard 1: Planning and Layout</p> |
| <p>Give examples of student work that demonstrates mastery of this standard</p> <ol style="list-style-type: none">2. Students will create working drawings using sketching techniques.3. Through testing, students will show how to read information from a working drawing.4. Demonstration by measuring a piece of wood to 1/16 of an inch.5. Completed project following specific procedures. |
| <p>Identify best practices used to teach standard</p> <ol style="list-style-type: none">2. Modeling sketching techniques by the teacher.3. Step-by-step instructions from textual materials.4. Observations of other students demonstrating the processes and techniques. |

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UNIT #3: Hand Tool Care and Practices

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| <p>“Big Idea” (Theme)</p> <p>Each student will gain a working knowledge of basic hand tool use, care and practices.</p> |
| <p>State/National Standards</p> <p>Standard 2: Materials Processing</p> |
| <p>Give examples of student work that demonstrates mastery of this standard</p> <p>3. Tool identification test with a minimum score of 70 percent.</p> <p>4. Student demonstrations of the use of saws, drills and files.</p> |
| <p>Identify best practices used to teach standard</p> <p>4. Modeling by teacher.</p> <p>5. Demonstration of technique by instructor.</p> <p>6. Hands on practice and observation of other student demonstrations.</p> |

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UNIT #4: Portable and Stationary Machine Tools

“Big Idea” (Theme)

Students will experience procedures associated with selected portable and stationary machine tools used in woodworking.

1. Portable electric drill
2. Drill press
3. Jig or scroll saw
4. Router
5. Portable sanders
6. Stationary sanding machine (optional)
7. Biscuit jointer (optional)
8. Table saw (optional)

State/National Standards

Standard 2: Materials Processing

Standard 4: Machine and Tool Safety

Standard 18: Tools and Machines

Give examples of student work that demonstrates mastery of this standard

4. Project cut to prescribed lines using scroll saw to a tolerance of 1/64 inch.
5. Holes drilled using a drill press to prescribed location in a piece of wood.
6. Finish sand piece of wood to remove all scratches and rough surfaces.
7. Create wood joint created using biscuit jointer and wooden biscuits.
8. Panels cut to size within 1/32 inch using table saw.

Identify best practices used to teach standard

3. Demonstrations by the teacher.
4. Instructional videos.
5. Observations of other students demonstrating use of the tool.

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UNIT #5: Wood Finishing

“Big Idea” (Theme)

Each student will learn:

1. How to finish wood using hand and machine sanding, application of oil finish and final waxing of wood.
2. How to properly clean brushes and other material used in the finishing process.

State/National Standards

Core Standard 4: Finishing Processes

Give examples of student work that demonstrates mastery of this standard

1. Properly sanded wood with all visible surface scratches removed.
2. Finished product created by the student.

Identify best practices used to teach standard

1. Demonstration by the teacher.
2. Instructional video.
3. Observation of other students' demonstration procedures.

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UNIT #6: Construction Technology (optional)

“Big Idea” (Theme)

Students will learn the processes and practices used in simple residential building construction including:

1. Reading a floor plan and creating wall layouts
2. Using scales when building a model.
3. Working as a team to achieve a desired result.
4. Applying standards of quality in building.

State/National Standards

Core Standard 1: Planning and Layout Processes

Standard 9: Residential Construction

Give examples of student work that demonstrates mastery of this standard

3. Completed drawings of wall layouts.
4. Completed model of building constructed by student teams.
5. Test on building terminology.

Identify best practices used to teach standard

1. Demonstrations by instructor.
2. Instructional video.
3. Interaction among team members.

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UNIT #7: Manufacturing Technology (optional)

“Big Idea” (Theme)

The student will demonstrate an understanding of woodworking machines and manufacturing processes including:

1. The planning and design of a product to meet a specific need.
2. The planning and design of a production process.
3. The difference between production and custom manufacturing.
4. The need for quality and quality control in manufacturing.
5. The process of team work in designing and building products.

State/National Standards

Career Performance Standard 1: Personal Skills

Career Performance Standard 2: Interpersonal Skills

Career Performance Standard 3: Thinking and Problem-Solving Skills

Standard 34: Organization of a Manufacturing Enterprise

Standard 35: Manufacturing Enterprise Organizational Systems

Give examples of student work that demonstrates mastery of this standard

1. Test results
2. Practical application of woodworking and manufacturing practices.
3. Completed products from the production run.

Identify best practices used to teach standard

5. Lecture and modeling by the teacher.
6. Group discussions among the students.
7. Handouts and instructional videos.