

DESE Model Curriculum

GRADE LEVEL/COURSE TITLE: Carpentry, Introductory Craft Skills –
Module 27109-06 Windows and Exterior Doors

Course Code:

COURSE INTRODUCTION:

17003 Carpentry

Carpentry courses provide information related to the building of wooden structures, enabling students to gain an understanding of wood grades and construction methods and to learn skills such as laying sills and joists; erecting sills and rafters; applying sheathing, siding, and shingles; setting door jambs; and hanging doors. Carpentry courses may teach skills for rough construction, finish work, or both. Students learn to read blueprints, draft, use tools and machines properly and safely, erect buildings from construction lumber, perform finish work inside of buildings, and do limited cabinet work. Carpentry courses may also include career exploration, good work habits, and employability skills.

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| UNIT (#) TITLE: Carpentry, Introductory Craft Skills (27109-06) – Windows and Exterior Doors [This module introduces the carpentry trainee to methods and procedures used in the selection and installation of residential windows and exterior doors.] | | SUGGESTED UNIT TIMELINE: CLASS PERIOD (min.): | | | | |
|--|--|--|----|--|----------|---------|
| ESSENTIAL QUESTIONS: 1. What are the key considerations when selecting windows and doors? 2. What factors impact the installation of windows and doors? 3. How can installation problems be prevented? | | | | | | |
| ESSENTIAL MEASURABLE LEARNING OBJECTIVES | CCSS LEARNING GOALS (Anchor Standards/Clusters) | CROSSWALK TO STANDARDS | | | | |
| | | GLEs/CLEs | PS | CCSS | OTHER | DOK |
| 1. Identify various types of fixed, sliding, and swinging windows. | | | | RST 11-12.3 | 27109-06 | Level 1 |
| 2. Identify the parts of a window installation. | | | | RST 11-12.3 | 27109-06 | Level 1 |
| 3. State the requirements for a proper window installation. | | | | RST 11-12.3, N-Q 1, N-Q 2, N-Q 3 | 27109-06 | Level 1 |
| 4. Install a pre-hung window. | | | | RST 11-12.3, N-Q 1, N-Q 2, N-Q 3 | 27109-06 | Level 2 |
| 5. Identify the common types of exterior doors, and explain how they are constructed. | | | | RST 11-12.3 | 27109-06 | Level 1 |
| 6. Identify the parts of a door installation. | | | | RST 11-12.3 | 27109-06 | Level 1 |
| 7. Identify the types of thresholds used with exterior doors. | | | | RST 11-12.3 | 27109-06 | Level 1 |
| 8. Install a pre-hung exterior door. | | | | RST 11-12.3, N-Q 1, N-Q 2, N-Q 3 | 27109-06 | Level 2 |
| 9. Identify the various types of locksets used on exterior doors, and explain how they are installed. | | | | RST 11-12.3 | 27109-06 | Level 1 |

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|--|--|--|--------------------|----------|---------|
| 10. Install a lockset. | | | RST 11-12.3, N-Q 3 | 27109-06 | Level 2 |
| <p>ASSESSMENT DESCRIPTIONS*: (Write a brief overview here. Identify Formative/Summative. Actual assessments will be accessed by a link to PDF file or Word doc.)</p> <p>*Attach Unit Summative Assessment, including Scoring Guides/Scoring Keys/Alignment Codes and DOK Levels for all items. Label each assessment according to the unit descriptions above (i.e., Grade Level/Course Title/Course Code, Unit #).</p> | | | | | |
| <p>Obj. # 1-10</p> | <p>INSTRUCTIONAL STRATEGIES (research-based): (Teacher Methods)</p> <p><input checked="" type="checkbox"/> Direct</p> <p><input type="checkbox"/> Indirect</p> <p><input type="checkbox"/> Experiential</p> <p><input type="checkbox"/> Independent Study</p> <p><input type="checkbox"/> Interactive Instruction</p> | | | | |
| <p>Obj. # 1-10</p> | <p>INSTRUCTIONAL ACTIVITIES: (What Students Do)</p> <p>1.</p> <p>2.</p> <p>3.</p> | | | | |
| <p>UNIT RESOURCES: (include Internet addresses for linking)</p> <p>(MCCE Resource) Building Construction: Fundamentals CEV Multimedia LUBBOCK, TX, CEV MULTIMEDIA, 2003.</p> <p>DVD ROM This presentation includes how to layout plates, make corners and tees, construct wall units, partitions, window and door units and headers. Step-by-step instructions are provided for cutting ceiling joists and rafters with demonstrations on proper techniques for some of the more exacting procedures (“lipping” a joist, cutting a “birdsmouth,” marking a ridgeboard and assembling the rafters) necessary for beginning builders. During completion of the 16’ X 10’ portable building, you will learn proper techniques for laying a roof with discussions and demonstrations of the following roof construction steps: laying the roof deck, attaching metal flashing along the edges, rolling out and laying the roofing felt, marking the felt to prepare it for the asbestos shingles, and cutting a nailing composition shingles in an effective method and pattern. 160 min, 4 sections, 1 printable resource and 17 Web resources.</p> <p>(MCCE Resource) TE DVD ROM 11 Deconstruction: The Science of Building a House-Plumbing to Paint</p> | | | | | |

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Course Code:

Discovery Channel University

LAWRENCEVILLE, NJ, SHOPWARE, 2004.

DVD ROM

A home is more than a house; technologically speaking, it's an engineered habitat. This video explains how electrical, plumbing, and HVAC systems work with selected parts of the building envelope — building wrap, windows, fiberglass insulation, gypsum wallboard, and paint — to keep the weather out and comfort in. Animated diagrams, microscopic and thermal imaging, on-site demonstrations, and off-site tests are used to show how things like circuit breakers and P-traps work; to define U-factor, R-value, permeance, and other technical terms and concepts; to demonstrate color-matching and paint-making; and to isolate envelope failures leading to moisture infiltration and mold. A visit to a USG wallboard plant is also included. 50 minutes.

(MCCE Resource) TE DVD ROM 13

The Future of Home Construction: New Techniques, New Technologies

Meridian Education Corporation

MONMOUTH JCT., NJ, MERIDIAN EDUCATION CORPORATION, 2001.

VIDEO This program travels to the National Association of Home Builders' Research Center to study four townhouses constructed using some of today's most innovative building materials and energy-saving technologies. Filmed at each stage of construction, these houses showcase foundations made of precast, pre-insulated, high-strength reinforced concrete or insulating concrete forms; walls made of ICFs, Hebel blocks, or steel framing; exterior finishes that incorporate thermally elastic stucco; and standing seam steel roofs. Photovoltaic roofing panels, a natural gas heat pump that uses a non-CFC refrigerant, an electronic home energy management system, gas fireplaces, doors made from sawmill residue and wood scraps, a geothermal heat pump, a pellet stove, and a combined space heating and water heating system are also featured. 11 minutes.