

Furniture Making

Teacher: Roger Bovee

September 2016

| Content | Skills | Learning Targets | Standards | Assessment | Resources & Technology |
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| <p>CEQ: How can you build simple furniture project with no knowledge of woodworking?</p> <p>UEQ: <i>How do you draw a set of plans for building a piece of furniture?</i> </p> <p>A: Drawing types</p> <p>A1. Three view A1: Detail drawing A2: Cabinet Oblique A3: Solid model drawing</p> <p>UEQ:</p> | <p>A: Drawing types</p> <p>A1: Draw a three view drawing of project. A1: Align views of a drawing in proper locations with each other. A2: Draw details of drawers. A2: Draw a cabinet oblique of project. A3: Draw with computer a solid model of project. A1-A3: Properly constrain all drawings</p> | <p>A: Drawing types</p> <p>A1-3: I can choose the proper drawing type for my project. A1-3: I can accurately represent all parts of my project in the drawing type of my choice A1-3: I can accurately constrain all parts of my project.</p> | | <p>A: Drawing types (student chooses one of the following)</p> <p>CFA A1: A computer aided or pencil drawn plan of project. CFA A2: A cabinet oblique pencil drawn sketch of project. CFA A3: A project drawing using solid</p> | <p>A: Drawing types</p> <p>Internet and project plan library in shop Oblique drawing paper Graph paper Straight edges and rulers</p> |

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| <p><i>What are different species of wood?</i> </p> <p>B: Wood types</p> <p>B1. Deciduous B2. Coniferous B3. Laminate B3. Composites</p> <p>UEQ: <i>How do you estimate the cost of a wood project?</i> </p> <p>C: Estimating Material Cost</p> <p>C1: Board footage C2: Bill of materials C2: Waste estimating</p> <p>UEQ: <i>How are hand and power tools used in the woodshop?</i></p> | <p>B: Wood types</p> <p>B1: Indentify hardwoods available in the woodshop B2: Indentify the softwood available in the woodshop B3: Indentify the veneer laminate and composite materials available in todays woodworking industry.</p> <p>C: Estimating Material Cost</p> <p>C1: Calculate the board footage C2: Write a bill a materials C2: Calculate the estimated cost of the project.</p> | <p>B: Wood types</p> <p>B1-3: I can identify and sort the different wood types into three groups: hardwood, softwood, and laminate/composite</p> <p>C: Estimating Material Cost</p> <p>C1: I can calculate board footage from a variety of shapes of wood. C2: I can create and complete a bill of materials C3: I can estimate the cost of the project to accurately include the materials necessary to complete the project.</p> | <p>modeling</p> <p><u>Suggested wood projects:</u> coffee tables, night stands, small gun cabinets, game tables.</p> <p>B: Wood types</p> <p>CFA B1-3: 10 point test on various types of wood and laminates.</p> <p>C: Estimating Material Cost</p> | <p>B: Wood types</p> <p>wood samples from each category</p> <p>C: Estimating Material Cost</p> <p>C1-2: A bill of materials form</p> <p>D: Hand and Power tool</p> |
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|  <p>D: Hand and Power tool operation</p> <ul style="list-style-type: none"> D1. Measuring tools D1. Sawing tools D1. Cutting tools D1. Drilling tools D1. Sanding tools D1. Fastening tools D2. Table saws D2. Compound mitre saws D2. Wide Belts <p>Sanders</p> <ul style="list-style-type: none"> D2. Edge Sanders D2. Routers & <p>Shapers</p> <ul style="list-style-type: none"> D2. Band saw D2. laser engraving D2. CNC router/lathe <p>UEQ: <i>What safety rules should followed in a woodshop?</i></p>  <p>E: Woodshop safety</p> <ul style="list-style-type: none"> E1. Tool operation E2. Eye and ear protection | <p>D: Hand and Power tool operation</p> <p>D1: Identify hand tools and correct application of each tool.</p> <p>D1. Master measuring to the nearest 1/16 of an inch.</p> <p>D1. Identify fasteners and machine tooling</p> <p>D2: Identify power tools and correct application of each tool.</p> | <p>D: Hand and Power tool operation</p> <p>D1: I can accurately identify and name hand tools from the following categories: measuring tools, sawing tools, cutting tools, drilling tools, sanding tools, and fastening tools.</p> <p>D1: I can use a tape measure to accurately measure various pieces of wood to the nearest 16th of an inch.</p> <p>D2: I can accurately identify and name power tools from the following list: Table saw, miter saw, wide-belt sander, edge sander, routers and shapers, band saws, laser engraving, and CNC router/lathe.</p> | <p>CFA C1: Written bill of materials for a shop project.</p> <p>CFA C2: Estimated cost of the project.</p> <p>D: Hand and Power tool operation</p> <p>CSA D1: 10 point hand tool identification test</p> <p>CFA D1. After the instructor demonstrates the tool, a student is asked to re-demo the</p> | <p>operation</p> <p>D1: hand tools from the woodshop</p> <p>D1: tape measures and labeled wood samples</p> <p>D2: access to the woodshop power tools</p> <p>F: Woodshop safety</p> <p>E1: Woodshop safety test handout.</p> <p>E1: SMART Response Clickers</p> <p>E1: Process Rubric</p> |
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| <p>E3. Proper clothing</p> <p>UEQ: <i>How do you fabricate a woodshop project?</i></p>  <p>G: Fabrication</p> <p>G1. Gluing wood panels G2. Correct wood joints G2. Assembling cases or body of project</p> <p>UEO: <i>What type of finishes are applied to furniture?</i></p> | <p>E: Woodshop safety</p> <p>E1. Recognize potential hazards E2. Demonstrate proper tool set-up E3. Follow all shop safety rules E3. Respect others and property.</p> <p>G: Fabrication</p> <p>G1. Glue top of project and panels G2. Select the correct assembly process G2. Cut joints to assemble project</p> | <p>F: Woodshop safety</p> <p>E1-3: I can safely operate all machines and tools in the woodshop. E1-3: I can recognize unsafe machine set-up and operation. E3: I can follow all shop safety rules and respect property.</p> <p>G: Fabrication</p> <p>G1: I can prepare wood pieces for proper glue up procedure. G1: I can use clamps to glue up pieces of wood into large panels.</p> | <p>tool. CFA D1: Students use a tape measure to accurately measure and cut a board during instructor demonstrations . CSA D2: 10 point power tool identification test.</p> <p>F: Woodshop safety</p> | <p>G: Fabrication</p> <p>G. Students work with a partner or a group as they fabricate the project. G1-2: The Progress Rubric G1-2: The Product Rubric</p> <p>H: Finishes</p> |
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|  <p>H: Finishes H1. Sanding sealers H2. Varnish or polyurethane H3. Paint finishes H3 Oil finishes</p> | <p>H: Finishes</p> <p>H1-H3 Apply a finish to the project.</p> | <p>G2: I can recognize what joint works best in a certain application and prepare a piece of wood for that joint.</p> <p>H: Finishes</p> <p>H1-H3: I can choose the proper finish for my project. H1-H3: I can apply the finish in the proper order and manner.</p> | <p>CSA E1-E3: Multiple choice safety test. CFA E1-E3: Correct test and discuss answers to the safety quiz. Sign/date CFA E1-E3: Process Rubric assessment</p> <p>G: Fabrication</p> <p>CFA G1-G2: Bi-weekly working grades are given based on the Progress Rubric. CSA G1-G2: Final grade is</p> | <p>H1-3: the product rubric</p> |
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| | | | | <p>based on Product rubric CFA G1-G2: Students build a Sofa Server as an evaluative project. This project provides insight for the instructor as to the students abilities in the woodshop. This insight can be used in guiding student to final project.</p> <p>H: Finishes</p> <p>CSA H1- 3: A final grade will be given to the project based</p> | |
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October 2016

| Content | Skills | Learning Targets | Assessment | Resources & Technology |
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| <p>UEQ: <i>How are hand and power tools used in the woodshop?</i> </p> <p>D: Hand and Power tool operation</p> <ul style="list-style-type: none"> D1. Measuring tools D1. Sawing tools D1. Cutting tools D1. Drilling tools D1. Sanding tools D1. Fastening tools D2. Table saws D2. Compound mitre saws D2. Wide Belts <p>Sanders</p> <ul style="list-style-type: none"> D2. Edge Sanders D2. Routers & <p>Shapers</p> <ul style="list-style-type: none"> D2. Band saw D2. laser engraving | <p>D: Hand and Power tool operation</p> <p>D1: Identify hand tools and correct application of each tool.</p> <p>D1. Master measuring to the nearest 1/16 of an inch.</p> <p>D1. Identify fasteners and machine tooling</p> <p>D2: Identify power tools and correct application of each tool.</p> | <p>D: Hand and Power tool operation</p> <p>D1: I can accurately identify and name hand tools from the following categories: measuring tools, sawing tools, cutting tools, drilling tools, sanding tools, and fastening tools.</p> <p>D1: I can use a tape measure to accurately measure various pieces of wood to the nearest 16th of an inch.</p> <p>D2: I can accurately identify and name power</p> | <p>D: Hand and Power tool operation</p> <p>CSA D1: 10 point hand tool identification test</p> <p>CFA D1. After the instructor demonstrates the tool, a student is asked to re-demo the tool.</p> <p>CFA D1: Students use a tape measure to accurately measure and cut a board during instructor demonstrations.</p> <p>CSA D2: 10 point power tool identification test.</p> | <p>D: Hand and Power tool operation</p> <p>D1: hand tools from the woodshop</p> <p>D1: tape measures and labeled wood samples</p> <p>D2: access to the woodshop power tools</p> |

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| <p>D2. CNC router/lathe</p> <p>UEQ: <i>What safety rules should followed in a woodshop?</i> </p> <p>E: Woodshop safety</p> <p>E1. Tool operation E2. Eye and ear protection E3. Proper clothing</p> <p>UEQ: <i>How do you fabricate a woodshop project?</i> </p> <p>G: Fabrication</p> <p>G1. Gluing wood panels G2. Correct wood joints G2. Assembling cases or body of project</p> | <p>E: Woodshop safety</p> <p>E1. Recognize potential hazards E2. Demonstrate proper tool set-up E3. Follow all shop safety rules E3. Respect others and property.</p> <p>G: Fabrication</p> <p>G1. Glue top of project and panels</p> | <p>tools from the following list: Table saw, miter saw, wide-belt sander, edge sander, routers and shapers, band saws, laser engraving, and CNC router/lathe.</p> <p>F: Woodshop safety</p> <p>E1-3: I can safely operate all machines and tools in the woodshop. E1-3: I can recognize unsafe machine set-up and operation. E3: I can follow all shop safety rules and respect property.</p> | <p>F: Woodshop safety</p> <p>CSA E1-E3: Multiple choice safety test. CFA E1-E3: Correct test and discuss answers to the safety quiz. Sign/date CFA E1-E3: Process Rubric assessment</p> <p>G: Fabrication</p> <p>CFA G1-G2: Bi-weekly working grades are given</p> | <p>F: Woodshop safety</p> <p>E1: Woodshop safety test handout. E1: SMART Response Clickers E1: Process Rubric</p> <p>G: Fabrication</p> <p>G. Students work with a partner or a group as they fabricate the project. G1-2: The Progress Rubric G1-2: The Product Rubric</p> |
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| | <p>G2. Select the correct assembly process G2. Cut joints to assemble project</p> | <p>G: Fabrication</p> <p>G1: I can prepare wood pieces for proper glue up procedure. G1: I can use clamps to glue up pieces of wood into large panels. G2: I can recognize what joint works best in a certain application and prepare a piece of wood for that joint.</p> | <p>based on the Progress Rubric. CSA G1-G2: Final grade is based on Product rubric CFA G1-G2: Students build a Sofa Server as an evaluative project. This project provides insight for the instructor as to the students abilities in the woodshop. This insight can be sued in guiding student to final project.</p> | |
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November 2016

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| <p>UEO: <i>What type of finishes are applied to furniture?</i>  H: Finishes H1. Sanding sealers H2. Varnish or</p> | <p>H: Finishes</p> | <p>H: Finishes</p> | <p>H: Finishes CSA H1- 3: A final grade</p> | <p>H: Finishes</p> |

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| <p>polyurethane H3. Paint finishes H3 Oil finishes</p> | <p>H1-H3 Apply a finish to the project.</p> | <p>H1-H3: I can choose the proper finish for my project. H1-H3: I can apply the finish in the proper order and manner.</p> | <p>will be given to the project based on the product rubric.</p> | <p>H1-3: the product rubric</p> |
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