

Week	Marking Period 1 or 3		
1	Course Intro, General Safety, Hand Tools and Special Safety		
2	Introduction to Measurement, Problem Solving, Design		
3	Design Drawing Plans & Specs. / Bill of Materials		
4	Table Saw		
5	Band Saw		
6	Wood Selection / Measurement / Cutting		
7	Sanding Machines		
8	Drill Press		
9	Portable Power Tools		
Week	Marking Period 2 or 4		
10	Assembly		
11	Biscuit Joiner / Gluing		
12	Pre-Finish - Sanding		
13	Staining / Finishing		
14	Compound Miter Saw		
15	Lathe		
16	Manufacturing with Wood		
17	Construction with Wood		
18	Final Exam		

<b>Week/Month</b>	One / September or January						
<b>Topic</b>	Course Intro, General Safety, Hand Tools and Special Safety						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>• Provide an over view of the course requirements and the procedures for general safety within a shop.</li> <li>• How to properly identify the proper hand tool to be used for a specific function to be performed safely.</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>• What are the teacher's expectations for the class?</li> <li>• What are the teacher's expectations on safety?</li> <li>• What are the emergency procedures for the Wood Shop?</li> <li>• What types of hand tools are going to be used?</li> <li>• What skills are necessary to use them?</li> <li>• What are their use and purpose?</li> <li>• How do I develop the necessary skills to use them?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>• Student Safety</li> <li>• Student responsibilities &amp; behavior expectations</li> <li>• Teacher responsibilities</li> <li>• Proficiency Statement</li> </ul>							
<b>NJCCCS</b>	<b>WORK.912.9.1.12; TEC.912.8.2.12</b>						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>• Classroom decorum</li> <li>• General Safety for a shop environment</li> <li>• Identification of the various hand tools</li> <li>• Safety procedures in their use</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>• General Safety Film and Lecture</li> <li>• Facilities tour</li> <li>• Lecture and demonstration on hand tool use</li> <li>• Question and Answer period for students</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>• Woodworking pretest for departmental purposes.</li> <li>• General Safety Test</li> <li>• Hand tool identification test</li> <li>• Hand tool safety test</li> </ul>							
<b>21st Century Skills</b>							
	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	Two / September or February						
<b>Topic</b>	Introduction to Measurement, Problem Solving, Design						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>• To understand how to properly use the American Standards of measurement in the design of a project and for its layout.</li> <li>• Learn the process of problem solving for project design and overcoming obstacles along the way.</li> <li>• To create a design that will incorporate three keys: <ul style="list-style-type: none"> <li>▪ it must function as well as possible</li> <li>▪ it must have an attractive appearance</li> <li>▪ it must be structurally sound</li> </ul> </li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>• Where and how are measurements used, problem solving required, and good design principles used?</li> <li>• What are the different types and uses?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>• Identifying units of linear and angular measure</li> <li>• Identifying measuring system accuracy</li> <li>• Use and understand the brainstorming process.</li> </ul>							
<b>NJCCCS</b>	<b>WORK.912.9.1.12; TEC.912.8.2.12</b>						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>• Measuring accurately to the 1/16<sup>th</sup> of an inch.</li> <li>• Measuring angles with protractor and digital Tbevel.</li> <li>• Identifying standard units of measure.</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>• How to divide one inch into segments of: ½, ¼, 1/8, 1/16, 1/32, 1/64.</li> <li>• How to divide a 360 degree circle into common angles of 180, 90, 60, 45, 30, 15 degrees.</li> <li>• Question and Answer period for students.</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>• Measuring rule exercise.</li> <li>• Protractor angular degree exercise.</li> <li>• Making parts to proper length.</li> <li>• Making shapes to proper angles.</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	Three / September or February						
<b>Topic</b>	Design Drawing Plans & Specs. / Bill of Materials						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>• Design drawing plans and their associated specs. and lists are necessary for efficient and accurate construction of a project.</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>• What elements are required?</li> <li>• What skills are necessary?</li> <li>• How much stock is required?</li> <li>• What are the specific components needed to construct project?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>• Understanding wood objects involving line, shape, mass, color, tones and texture.</li> <li>• Orthographic projection drawings show front, side, and top views of the project design.</li> </ul>							
<b>NJCCCS</b>	<b>WORK.912.9.1.12; TEC.912.8.2.12</b>						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>• Design drawing plans can show a project orthographically or pictorially.</li> <li>• Bills of Materials explain, at least, the part names, quantities, and cut sizes of wood components.</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>• Learn how to prepare a design drawing.</li> <li>• Learn how to make a bill of materials.</li> <li>• Question and answer period for students.</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>• Approval of design drawing plans</li> <li>• Approval of bill of materials</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	Four / October or February						
<b>Topic</b>	Table Saw						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>Learn how to safely use the table saw.</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>What are the teacher's expectations for safety?</li> <li>What are the student's requirements for safety?</li> <li>What types of operations can be performed?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>Student safety</li> <li>Student responsibility</li> <li>Teacher responsibility</li> <li>Identify the table saw parts</li> <li>Understand the proper adjustments required.</li> </ul>							
<b>NJCCCS</b>	WORK.912.9.1.12; TEC.912.8.2.12						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>Table saw safety</li> <li>Know how to make the proper adjustments.</li> <li>Know what operations that are allowed.</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li><b>Demonstrate the correct procedure in cutting stock:</b> <ul style="list-style-type: none"> <li>Set up</li> <li>Rip cut</li> <li>Cross cut/ miter cut</li> <li>Bevel cuts</li> <li>Dado cuts</li> </ul> </li> <li>Question and answer period for students.</li> <li>Ongoing project continuation</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>Safety Test.</li> <li>Making a piece of stock with square corners and to specified proper dimensions.</li> </ul>							
<b>21st Century Skills</b>							
	<b>Creativity</b>	x	Critical Thinking	x	Communication	x	Collaboration
<b>x</b>	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	<b>Five / October or February</b>						
<b>Topic</b>	<b>Band Saw</b>						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>• Learn how to safely use the band saw</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>• What are the teacher's expectations for safety?</li> <li>• What are the student's requirements for safety?</li> <li>• What types of operations can be performed?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>• Student safety</li> <li>• Student responsibility</li> <li>• Teacher responsibility</li> <li>• Identify the band saw parts</li> <li>• Understand the proper adjustments required</li> </ul>							
<b>NJCCCS</b>	WORK.912.9.1.12; TEC.912.8.2.12						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>• Band saw safety</li> <li>• Know how to make the proper adjustments.</li> <li>• Know what operations that are allowed.</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>• Demonstrate the correct procedure in cutting stock <ul style="list-style-type: none"> <li>○ Set up</li> <li>○ Straight cuts</li> <li>○ Nonstraight cuts</li> <li>○ Bevel cuts</li> </ul> </li> <li>• Question and answer period for students.</li> <li>• Ongoing project continuation</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>• Safety Test</li> <li>• Making a piece of stock into the curves as traced from the test piece and to the proper shape and dimensions.</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	Six / October or March						
<b>Topic</b>	Wood Selection / Measurement / Cutting						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>• How to identify the various types of wood, select the proper stock and then make correct measurements on the stock to cut it down to its proper size using hand tools.</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>• What are the various types of wood?</li> <li>• What wood would be best suited for my project?</li> <li>• How do I measure “Board Feet”?</li> <li>• What tools are required?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>• Unit of measurement</li> <li>• Layout of parts on the stock</li> <li>• Rough cutting the stock to oversize lengths.</li> </ul>							
<b>NJCCCS</b>	<b>WORK.912.9.1.12; TEC.912.8.2.12</b>						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>• Using all hand tools required</li> <li>• Knowing how to safety use the hand tools</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>• Proper wood selection</li> <li>• Project layout on the stock</li> <li>• On-going project continuation</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>• Bill of Materials dimensions vs. cut stock dimensions.</li> <li>• Hand tools use</li> <li>• Observing the proper safety while using specific tools.</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	Seven / October or March						
<b>Topic</b>	Sanding Machines						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>Learn the proper procedures for operation of stationary sanding machines and preparing for finish.</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>What are the teacher's expectation for safety</li> <li>What are the student's requirements for safety</li> <li>What types of sanding operations are there</li> <li>What are the different types of abrasives</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>Student safety</li> <li>Student responsibility</li> <li>Teacher responsibility</li> <li>Identify abrasive grades and selection</li> </ul>							
<b>NJCCCS</b>	WORK.912.9.1.12; TEC.912.8.2.12						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>Sanding safety</li> <li>Know how to make the proper adjustments.</li> <li>Know how to properly sand using various machines.</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>Sanding of the project</li> <li>Question and answer period for students.</li> <li>On-going project continuation</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>Sanding of the various project pieces.</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		



<b>Week/Month</b>	<b>Eight / October or March</b>						
<b>Topic</b>	<b>Drill Press</b>						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>Learn how to safely use the drill press.</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>What are the teacher's expectations for safety?</li> <li>What are the student's requirements for safety?</li> <li>What types of operations can be performed?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>Student safety</li> <li>Student responsibility</li> <li>Teacher responsibility</li> <li>Identify the Drill Press parts</li> <li>Understand the proper adjustments required</li> </ul>							
<b>NJCCCS</b>	<b>WORK.912.9.1.12; TEC.912.8.2.12</b>						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>Drill Press safety</li> <li>Know how to make the proper adjustments.</li> <li>Know what operations that are allowed</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>Demonstrate the correct procedure in drilling, boring, counter sinking, etc.</li> <li>Question and answer period for students</li> <li>On-going project continuation</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>Critique of the student's project</li> </ul>							
<b>21st Century Skills</b>							
	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	Nine / November or March						
<b>Topic</b>	Portable Power Tools						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>Learn to understand the uses and workings of the portable rotary tool, detail sander, drill/driver, sabre saw, router, circular saw, and edge planer. Student use of some machines is restricted.</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>What type operations can be performed?</li> <li>What are the teacher's expectations for safety?</li> <li>What are the student's requirements for safety?</li> <li>What machines cannot be operated by students?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>Student safety</li> <li>Student responsibility</li> <li>Teacher responsibility</li> <li>Identify the table saw parts</li> <li>Understand the proper adjustments required</li> </ul>							
<b>NJCCCS</b>	WORK.912.9.1.12; TEC.912.8.2.12						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>Table saw safety</li> <li>Know how to make the proper adjustments</li> <li>Know what operations that are allowed</li> <li>Know which machines students can operate and which teacher must operate.</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>Demonstrate correct procedure for <ul style="list-style-type: none"> <li>setting up each tool</li> <li>safety precautions</li> <li>practical use.</li> </ul> </li> <li>Question and answer period for students</li> <li>On-going project continuation</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>Quiz on specific tool safety and differentiation of student-use and teacher-use machines.</li> <li>Teacher observation and approval of student safe operation of their usable machines.</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	Ten / November or March						
<b>Topic</b>	Assembly						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>Learn the correct procedures in the assembly of the project</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>What are the teacher's expectation for safety?</li> <li>What are the student's requirements for safety?</li> <li>What types of tools and/or machinery do I need?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>Student safety</li> <li>Student responsibility</li> <li>Teacher's responsibility</li> <li>Location of all parts</li> <li>Parts matching</li> </ul>							
<b>NJCCCS</b>	WORK.912.9.1.12; TEC.912.8.2.12						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>Know how each part, joint, and piece fits</li> <li>Check that all parts are completed</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>Temporarily assemble the project</li> <li>Disassemble for final assembly</li> <li>Assembly with screws and glue</li> <li>Assembly with level and square.</li> <li>Clamping of parts</li> <li>Question and answer period for students</li> <li>On going project continuation</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>Critique of finished project.</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	Eleven / November or April						
<b>Topic</b>	Biscuit Joiner / Gluing						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>• Learn how to safely use the Biscuit Joiner</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>• What are the teacher's expectations for safety?</li> <li>• What are the student's requirements for safety?</li> <li>• How do I use the Biscuit Joiner?</li> <li>• What is the function of the Biscuit Joiner?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>• Student Safety</li> <li>• Student responsibility</li> <li>• Teacher responsibility</li> <li>• Identification of parts for the Biscuit Joiner</li> </ul>							
<b>NJCCCS</b>	<b>WORK.912.9.1.12; TEC.912.8.2.12</b>						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>• Biscuit Joiner Safety</li> <li>• Know how to make adjustments</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>• Correctly joint stock together edge to edge</li> <li>• Accurately square the stock to finish dimensions</li> <li>• Question and answer period for students</li> <li>• On-going project continuation</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>• How was the stock matched: color, figure, grain</li> <li>• Stock must be straight</li> <li>• Stock finished to proper dimensions</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	Twelve / November or April						
<b>Topic</b>	Pre-Finish Sanding						
<b>Big Idea</b>							

- Learn the proper procedures and techniques for final post assembly prior to final finishing.

### Essential Questions

- What are the teacher’s expectation for safety?
- What are the student’s requirements for safety?
- What types of supplies, tools and/or machinery do I need?

### Enduring Understandings

- Student Safety
- Student responsibility
- Teacher responsibility
- Student projects, in almost every case, should be finished to appear as if interior furniture.
- Paint and exterior finishes are not available for student projects.
- Common hardware such as small hinges, latches, and knobs are available for projects.

**NJCCCS**

WORK.912.9.1.12; TEC.912.8.2.12

### Key Concepts and Skills

- Pre-finishing includes filling any holes or defects in the wood assembly, finish sanding all surfaces for furniture-like appearance, and installing any hardware needed to complete the project before staining and final finishing/waxing.
- Wood filler should match wood color and blend in.
- Final sanding should be very smooth and show grain and texture of the particular wood used.

### Learning Activities

- Fill in screw/fastener holes with wooden plugs, then final sand to appropriate shape.
- Fill in blemishes and defects with wood putty, then final sand to appropriate shape.
- Use detail sanding/shaping techniques.
- Question and answer period for students
- On-going project continuation

### Assessments

- Critique of finished project.

### 21st Century Skills

x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	<b>Thirteen / December or April</b>						
<b>Topic</b>	<b>Staining / Finishing</b>						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>Learn the proper procedures for finishing projects</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>Properties of the Wood</li> <li>Characteristics of the finish</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>Student Safety</li> <li>Student responsibility</li> <li>Teacher responsibility</li> <li>Stains are permanent and need clear sealer over them.</li> <li>Hardware is usually removed for staining and clear finishing.</li> </ul>							
<b>NJCCCS</b>	<b>WORK.912.9.1.12; TEC.912.8.2.12</b>						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>Knowing how to apply stain</li> <li>Knowing how to apply sealers</li> <li>Knowing how to apply wax</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>Perform the staining operation in the Finishing Room</li> <li>Correctly apply stain</li> <li>Correctly apply clear coat</li> <li>Correctly apply wax</li> <li>Question and answer period for students</li> <li>On-going project continuation</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>Critique of finished project</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	Fourteen / December or May						
<b>Topic</b>	Compound Miter Saw						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>Learn how to safely use the compound miter saw</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>What are the teacher's expectations for safety?</li> <li>What are the student's requirements for safety?</li> <li>What types of operations can be performed?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>Student safety</li> <li>Student responsibility</li> <li>Teacher responsibility</li> <li>Identify the compound miter saw parts</li> <li>Understand the proper adjustments required</li> </ul>							
<b>NJCCCS</b>	<b>WORK.912.9.1.12; TEC.912.8.2.12</b>						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>Compound miter saw safety</li> <li>Know how to make the proper adjustments</li> <li>Know what operations that are allowed</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>Demonstrate the correct procedure in cutting stock <ul style="list-style-type: none"> <li>Set up</li> <li>Cross cut/</li> <li>Precision miter cut</li> <li>Bevel cut</li> </ul> </li> <li>Question and answer period for students</li> <li>On-going project continuation</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>Safety Test.</li> <li>Making a piece of stock with square corner and with miter cut to the proper dimension.</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	Fifteen / December or May						
<b>Topic</b>	Lathe						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>Learn how to safely use the lathe</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>What are the teacher's expectations for safety?</li> <li>What are the student's requirements for safety?</li> <li>What types of operations can be performed?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>Student safety</li> <li>Student responsibility</li> <li>Teacher responsibility</li> <li>Identify the lathe parts</li> <li>Understand the proper adjustments required</li> </ul>							
<b>NJCCCS</b>	<b>WORK.912.9.1.12; TEC.912.8.2.12</b>						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>Lathe safety</li> <li>Know how to make the proper adjustments</li> <li>Know what operations that are allowed</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>Demonstrate the correct procedure for <ul style="list-style-type: none"> <li>preparing stock for lathe work.</li> <li>safety precautions for the wood lathe.</li> <li>rough turning with the gouge tool.</li> <li>finish turning with a skew tool.</li> </ul> </li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>Safety test</li> <li>Turning square stock to round spindle with gouge and trimming with skew.</li> <li>Turning face-plate-mounted stock to bowl shape.</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		



<b>Week/Month</b>	Sixteen / January or May						
<b>Topic</b>	Manufacturing with Wood						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>Learn the processes and careers involved with the manufacturing of mass-produced wood-fabricated products.</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>What &amp; why are products made from wood?</li> <li>What products qualify for mass production vs. custom minimal quantity production?</li> <li>What are the various jobs and careers in the wood manufacturing field?</li> <li>How are various wood-made products mass-produced in manufacturing?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>Products made from wood display beauty and durability that can't always be matched with metal and plastic products.</li> <li>Wood products that are produced in large quantity call for mass production while custom madetofit products, like custom kitchen cabinets and builtins are made in single or low quantities.</li> <li>Wood product manufacturing jobs/careers differ widely from wood construction jobs/careers.</li> <li>Mass produced wood products are produced, assembled, and finished using engineered special fixtures and assembly techniques including robotics.</li> <li>Manufacturing safety.</li> </ul>							
<b>NJCCCS</b>	<b>WORK.912.9.1.12; TEC.912.8.2.12</b>						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>Explore high production machinery used in wood product manufacturing.</li> <li>Discuss and develop various company hierarchies of personnel involved in mass production.</li> <li>Determine through problem solving, how to produce identical parts in large quantities, how to create assembly techniques and fixtures for high quantity assembly &amp; finishing.</li> <li>Discuss how high quantity assembled products are to be packaged, inventoried, and distributed to consumers.</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>Research various job positions in manufacturing and report on job requirements, training, opportunities in our region, state, nation, and country.</li> <li>Plan and produce a small wood-based product via small assembly line techniques and processes.</li> <li>Determine how the production techniques would vary from small quantity (single piece) to large quantity.</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>Short research paper.</li> <li>Participatory involvement in mini-assembly line to mass-produce a sample wooden product.</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		

<b>Week/Month</b>	Seventeen / January or June						
<b>Topic</b>	Construction with Wood						
<b>Big Idea</b>							
<ul style="list-style-type: none"> <li>Learn the processes and careers involved with the construction of wood-fabricated buildings/structures.</li> </ul>							
<b>Essential Questions</b>							
<ul style="list-style-type: none"> <li>What type buildings are made from wood and why?</li> <li>What are the differences in onsite wood building construction and manufactured building construction?</li> <li>What are the various jobs and careers in the wood construction field?</li> <li>How are wood buildings designed and constructed?</li> <li>What are other trades closely involved in the construction of homes and buildings made from wood?</li> </ul>							
<b>Enduring Understandings</b>							
<ul style="list-style-type: none"> <li>Homes and buildings made from wood are typically less costly and easier to customize various styles.</li> <li>Homes and buildings made from wood are usually less durable than brick or stone and concrete or iron-based structures.</li> <li>Wood construction jobs/careers differ widely from wood product manufacturing jobs/careers.</li> <li>Wood construction techniques.</li> <li>Wood construction safety.</li> </ul>							
<b>NJCCCS</b>	<b>WORK.912.9.1.12; TEC.912.8.2.12</b>						
<b>Key Concepts and Skills</b>							
<ul style="list-style-type: none"> <li>Explore types of wood and sizes commonly used in home building.</li> <li>Discuss differences in rough carpentry and finish carpentry.</li> <li>Reading and constructing to the building plans.</li> <li>Discuss job titles and differences in the personnel employed in wooden home and building construction.</li> <li>Discuss the differences in construction techniques for onsite wood building construction and manufactured building construction?</li> </ul>							
<b>Learning Activities</b>							
<ul style="list-style-type: none"> <li>Research various job positions in wood construction and report on job requirements, training, opportunities in our region, state, nation, and country.</li> <li>Plan and produce a small model-size wood-based building using conventional carpentry techniques and processes.</li> </ul>							
<b>Assessments</b>							
<ul style="list-style-type: none"> <li>Short research paper.</li> <li>Participatory involvement in construction of small, model-size wood building.</li> </ul>							
<b>21st Century Skills</b>							
x	Creativity	x	Critical Thinking	x	Communication	x	Collaboration
x	Life & Career Skills	x	Information Literacy	x	Media Literacy		