

Effective Date: 2009

Hamburg Area School District

Name of Course: Wood Technology
Department: Industrial Technology and Engineering

Grade Level: 9-12
Instructional Time: 180 days
Length of Course: 30 cycles
Period Per Cycle: 6
Length of Period: 43 minutes

Texts and Resources:

Wood Technology and Processes
Modern Woodworking
Exploring Woodworking
Modern Cabinetmaking
Fine Woodworking Magazine
Woodworking News Magazine
Woodworkers Journal Magazine
Shop Notes Magazine
American Woodworker Magazine
Workbench Magazine
Shopware 16 Tape Safety Series
Field Trips
Computer Websites
CAD software
Text CD ROM

Assessments:

Individual Projects
Group Projects
Chapter Questions
Tests and Quizzes
Self Evaluations
Rubrics
Self Evaluations
Teacher Conferences
Demonstrations
Notebooks
Shop operation and procedures
Exhibit Safe Shop Practices

**Hamburg Area School District
Course Plan
(Industrial Technology & Engineering)**

**Course Name: Wood Technology
Unit: Shop Safety**

Time Line: Six Cycles

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
General Safety	<ul style="list-style-type: none"> • Tell why safety is really attitude • Discuss common woodshop hazards and how to prevent problems. • Describe different types of personal safety gear and tell their purpose. • Describe how to set up a safe workshop. • Discuss the use of first aid for common workshop injuries. 	3.7.10 A 3.7.12 A
Fire Safety	<ul style="list-style-type: none"> • Identify possible fire hazards within the workshop • Identify and discuss how to properly use a fire extinguisher • Explain the proper steps to take in the event of an actual fire in the workshop. 	3.7.10 A 3.7.12 A
Machine Safety and Operation (Major Machines)	<ul style="list-style-type: none"> • Identify and discuss general machine safety rules • Identify and understand the safety rules and operating procedures for the planer • Identify and understand the safety rules and operating procedures for the jointer • Identify and understand the safety rules and operating procedures for the table saw • Identify and understand the safety rules and operating procedures for the radial arm saw • Identify and understand the safety rules and operating procedures for the band saw • Identify and understand the safety rules and operating procedures for the shaper 	3.7.10 A 3.7.12 A

**Hamburg Area School District
Course Plan
(Industrial Technology and Engineering)**

**Course Name: Wood Technology
Unit: Working With Wood**

Time Line: Two Cycles

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
The Woodworking Industry	<ul style="list-style-type: none"> • Discuss the commercial importance of wood • Explain how wood is harvested and processed • Describe the different classifications for wood and wood materials • Understand and apply the problem-solving process • Describe several woodworking careers • Discuss ways in which to find and keep a job 	3.7.10 A,B 3.7.12 A,B
The Wood Technology Project	<ul style="list-style-type: none"> • Understand and interpret a basic wood project working drawing • Identify and understand the basic steps involved in beginning a project • Understanding a stock cutting list • Understanding basic woodworking terminology • Understanding basic fractional measurement on a customary rule • Identify and follow a project plan • Identify different species of wood 	3.6.10 B,C 3.6.12 C

**Hamburg Area School District
Course Plan
(Industrial Technology and Engineering)**

**Course Name: Wood Technology
Unit: Basic Tools and Operations**

Time Line: ``Four cycles

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
Designing and Planning	<ul style="list-style-type: none"> • List the three keys to good design • Describe at least three basic principles of design • Name the views shown in a three-view working drawing • Correctly read drawings in order to lay out materials • Make a bill of materials • Use a formula to calculate board feet to figure lumber needs • List the main steps in designing, planning, and completing a woodworking project 	3.6.10 B,C 3.6.12 C
Measuring and Cutting	<ul style="list-style-type: none"> • Accurately read measurements on a customary rule and a metric rule • Select and use the correct measuring tool for a specific measuring task • Correctly measure and mark stock for cutting • Identify the basic types of cuts made with saws • Properly use an appropriate handsaw or portable power saw for a specific cutting task, observing all safety rules • Identify types of cuts made with saws • Understand thickness, width, and length of stock • Understand the different types of squares and how they can be used for measuring and marking 	3.7.10 B 3.7.12 B

**Hamburg Area School District
Course Plan
(Industrial Technology and Engineering)**

**Course Name: Wood Technology
Unit: Using Machines (Minor Machines)**

Time Line: Eight Cycles

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
Sliding Compound Miter Saw	<ul style="list-style-type: none"> • Identify and understand the safety rules and operating procedures for the sliding compound miter saw • Crosscut wood using the sliding compound miter saw • Correctly set the sliding compound miter saw for cutting a miter and a bevel • Cut a miter ,bevel ,and compound angle using a sliding compound miter saw 	3.7.10 A,B 3.7.12 A,B
Scroll Saw	<ul style="list-style-type: none"> • Identify and understand the safety rules and operating procedures for the scroll saw • Choose the proper scroll saw blade for the work at hand • Demonstrate cutting external and internal designs with the scroll saw • Explain how to do straight cutting on the scroll saw • Use the scroll saw to make simple inlay patterns • Describe and demonstrate how to install a scroll saw blade 	3.7.10 A,B 3.7.12 A,B

**Hamburg Area School District
Course Plan
(Industrial Technology and Engineering)**

**Course Name: Wood Technology
Unit: Using Machines (Minor Machines)**

Time Line: Eight Cycles

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
Drill Press	<ul style="list-style-type: none"> • Identify and understand the safety rules and operating procedures for the scroll saw • Identify operations performed using the drill press • Identify and make the proper adjustments correctly for the operation being performed • Select the proper tool for the process being performed on the drill press. • Operate a drill press correctly, observing all the safety rules 	3.7.10 A,B 3.7.12 A,B
Router	<ul style="list-style-type: none"> • Identify and understand the safety rules and operating procedures for the router • Install a router bit in a router • Operate a router observing all the correct procedures and adjustments • Use various types of guides as appropriate for different routing operations • Install an inlay in a workpiece 	3.7.10 A,B 3.7.12 A,B
Sanders	<ul style="list-style-type: none"> • Identify and understand the safety rules and operating procedures for using the sanders • Operate both sanders in a combination belt-and – disc sander • Set and operate a stationary belt sander correctly, observing all safety rules • Change a sanding belt on a stationary belt sander • Operate a stationary disc sander correctly, while observing all safety rules 	3.7.10 A,B 3.7.12 A,B

**Hamburg Area School District
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**Course Name: Wood Technology
Unit: Using Machines (Minor Machines)**

Time Line: Eight Cycles

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
Lathe	<ul style="list-style-type: none">• Identify and understand the safety rules and operating procedures for using the lathe• Identify common turning tools and discuss their use• Describe the two basic methods of turning on the lathe• Demonstrate both rough and finish turning methods• Explain how to cut shoulders, Vs, beads, and coves on the lathe• Outline the procedure for faceplate turning	3.7.10 A,B 3.7.12 A,B

**Hamburg Area School District
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**Course Name: Wood Technology
Unit: Joinery and Assembly**

Time Line: Eight Cycles

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
Biscuit, Butt, and Dowel Joints	<ul style="list-style-type: none"> • Identify the types of butt joints and tell how a butt joint can be strengthened • Make an edge biscuit joint • Make an edge dowel joint • List the steps in making a dowel joint on a frame 	3.6.10 B,C 3.6.12 B,C 3.7.10 A,B 3.7.12 A,B
Rabbet Joint	<ul style="list-style-type: none"> • Lay out a rabbet joint • Make a rabbet joint using hand tools • List and use power tools that can be used to cut rabbets • Make a rabbet joint using power tools • Assemble a rabbet joint 	3.6.10 B,C 3.6.12 B,C 3.7.10 A,B 3.7.12 A,B
Dado Joint	<ul style="list-style-type: none"> • Lay out and cut a dado • Make a blind dado joint • Make a rabbet and dado joint • Explain how to cut dados with power tools 	3.6.10 B,C 3.6.12 B,C 3.7.10 A,B 3.7.12 A,B
Lap joint	<ul style="list-style-type: none"> • List major types of lap joints • Lay out and make a cross lap joint • Make a half lap joint • Make a full lap joint • Make a finger lap joint 	3.6.10 B,C 3.6.12 B,C 3.7.10 A,B 3.7.12 A,B
Miter joint	<ul style="list-style-type: none"> • Explain the importance of accuracy when cutting miter joints • Lay out, cut, and assemble miter joints to create a picture frame • Describe how miters are cut with various power tools 	3.6.10 B,C 3.6.12 B,C 3.7.10 A,B 3.7.12 A,B

**Hamburg Area School District
Course Plan
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**Course Name: Wood Technology
Unit: Finishing**

Time Line: Two Cycles

Essential Content/ Essential Questions	Performance Objectives	Standards/Anchors
Preparing for finishing	<ul style="list-style-type: none"> • Choose the proper finish for a project • Correct common defects found in wood projects • Describe the use of various finishing supplies • Choose and care for brushes • Outline the basic steps in applying a fine finish 	3.6.10 B,C 3.6.12 B,C 3.7.10 A,B 3.7.12 A,B
Applying stains and clear finishes	<ul style="list-style-type: none"> • Use an oil-based or water-based stain to stain wood • Apply a wood sealer • Know when a filler is needed and how to apply it • Apply clear surface finishes • Choose from and apply a variety of penetrating finishes 	3.6.10 B,C 3.6.12 B,C 3.7.10 A,B 3.7.12 A,B