

**Woodworking
Tools**

Table Saws



Teacher's Guide

SHOPWARE

Introduction

This Teacher's Guide provides information to help you get the most out of *Table Saws*, part of the *Woodworking Tools* series. The contents in this guide will allow you to prepare your students before they use the program, assist them as they navigate through the content, and present follow-up activities to reinforce the material's key learning points.

Woodworking Tools is a 16-part series of programs that address the safe operation of the most popular and useful types of woodworking tools. Each program delves into a different tool, including its purpose and associated parts. It teaches students how to choose the proper blade or bit for the task and perform the various woodworking operations that can be accomplished with a particular tool. The 16 videos in this series enable and encourage students to safely and creatively use power tools to their maximum proficiency.

Table Saws is a 22-minute video targeted to teenagers and young adults. Its content is appropriate to such curriculum areas as Technology Education, Trade, and Industrial Education. In addition, the information presented in *Woodworking Tools* could also be presented in vocational/technical schools or adult education courses that focus on shop, carpentry, woodworking, or construction education and research.

Learning Objectives

After watching each video program in the series, students will be able to:

- Identify which tools are best for which job in the wood shop.
- Understand how to safely operate a variety of woodworking tools.
- Demonstrate how to safely clean, maintain, and sharpen a variety of woodworking tools.
- Explain how to change and adjust bits, blades, and other elements of a variety of woodworking tools.

Educational Standards

The *Table Saws* video program correlates with the following standards:

- The competency standards for Core Curriculum and Carpentry from the National Center for Construction Education & Research;
 - The State Standards of Essential Knowledge and Skills for Trade and Industrial Education (Construction-Maintenance Systems, High School) for the State of Texas;
 - The Technology Education Standards (Tools, Resources, and Technological Processes) for the State of New York.
- 2.0 Career Cluster: Architecture and Construction Careers in designing, planning, managing, building and maintaining the built environment. (*Competency Standards for Core Curriculum and Carpentry from the National Center for Construction Education & Research.*)
 - The student knows the function and application of the tools, equipment, technologies, and materials used in construction carpentry. The student is expected to safely use hand and

power tools and equipment commonly employed in carpentry. The student demonstrates knowledge of new and emerging technologies that may affect construction carpentry. (*Texas State Standards on Building Carpentry: Essential Knowledge and Skills for Trade and Industrial Education—Construction-Maintenance Systems, High School*)

- The student knows the function and application of the tools, equipment, technologies, and materials used in mill and cabinetmaking. The student is expected to safely use hand and power tools and equipment commonly employed in mill and cabinetmaking; properly handle and dispose of humanly and/or environmentally hazardous materials used in mill and cabinetmaking; utilize the proper procedures in sawing, planing, shaping, turning, boring, mortising, and sanding various types of woods; demonstrate knowledge of numerically-controlled and computer-controlled production devices; and demonstrate knowledge of new and emerging technologies that may affect mill and cabinetmaking. (*Texas State Standards on Mill and Cabinetmaking: Essential Knowledge and Skills for Trade and Industrial Education—Construction-Maintenance Systems, High School*)
- The student applies technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs. The student uses a variety of materials and energy sources to construct things; understands the importance of safety and ease of use in selecting tools and resources for a specific purpose; and develops basic skills in the use of hand tools. (*New York State Standards on Technology Education—Tools, Resources, and Technological Processes*)

Program Summary

Regardless of whether a student wants to gain an overall understanding of the myriad of wood-working tools available in today's wood shops, or just focus on one specific tool's features and capabilities, the *Woodworking Tools* series will be an invaluable visual learning aid. By emphasizing safety issues, the series allows students to understand not only which tools are best for each kind of job in the wood shop, but also how to operate, clean, maintain, and sharpen the wood-working tools for maximum efficiency and safety.

The *Woodworking Tools* video program series consists of sixteen titles:

- Table Saws
- Cutoff Saws
- Radial Arm Saws
- Band Saws and Scroll Saws
- Routers
- Jointers
- Planers
- Lathes
- Power Nailers
- Drill Presses
- Drills and Drivers
- Stationary Sanders

- Circular Saws
- Jigsaws and Reciprocating Saws
- Rotary Tools, Bench Grinders, and Sharpeners
- Building a Workcenter

Table Saws presents a comprehensive review of the basic operation, control systems, safety features and guidelines, blade types, and techniques for safely maintaining the three types of table saws.

Main Topics

Topic 1: Introduction

The program's host, Pete Bilotta, introduces what many woodworkers argue is the hardest-working tool in their shop—the table saw—and its three basic models: the stationary or cabinet saw, the contractor's or jobsite saw, and the portable or benchtop table saw.

Topic 2: Overview

The similarities and differences of the various table saw designs are discussed in this section, including how the blades are driven, what types of motors are employed, and what the intended uses and general attributes are of each type of saw.

Topic 3: Controls

Although table saws come in different sizes and shapes to accommodate the various needs of woodworkers, they all share the same basic controls, which the host explores in this section.

Topic 4: Safety Features

Pete reviews the safety features associated with table saws, including oversize ON/OFF switches, blade guards and splitters, and dust collection ports.

Topic 5: Safe Operating Techniques

While the table saw is perhaps the most versatile tool in a woodworking shop, it is arguably the most dangerous. The host offers helpful safe operating techniques to help prevent accidents.

Topic 6: Blades

This section highlights the blade classification, grinds, and number of recommended teeth for various table saw tasks, and touches upon how stacked and wobble-type dado head styles and table inserts can help cut wide kerfs for joinery.

Topic 7: Maintenance and Adjustments

The host details four common maintenance procedures, namely, checking blade alignment, checking fence alignment, checking 90- and 45-degree blade stops, and replacing a blade.

Topic 8: Table Saw Tips

Students learn several tips to assist in making difficult cuts a lot easier and safer, including how to rip narrow stock, how to cut thin strips of wood, and how to cut a straight edge on any bowed or wavy board.

Topic 9: Key Points

The program concludes with an overview of the key points that have been discussed.

Fast Facts

- Woodworking was one of humankind's first skills. From the wood clubs and spears at the start of civilization, the use of wood was extended to dugout canoes, farm plows, and simple three-legged stools, to the ornate cabinetry and intricate structures of modern times.
- Table saws enable the operator to move the wood into a cut shape, rather than move a saw in the direction of a shape.
- Cabinet saws offer the following advantages over contractor saws: heavier construction for lower vibration and increased durability; a cabinet-mounted trunnion (which is easier to adjust than table-mounted trunnions); improved dust collection due to the totally enclosed cabinet and common incorporation of a dust collection port.
- Because it's rare that a workshop floor is perfectly flat, a table saw can wobble, causing accuracy and safety issues. For a quick job, a wooden shim can be secured under one of the legs. For a contractor's style table left in place in the workshop, the bolts securing the legs together can be loosened and re-tightened, allowing the table saw's stand to adjust for the imperfections in the floor. Some table saws also have adjustable feet that can be twisted to adjust for variations in the floor.
- Excessive table saw vibrations can result in inaccurate cuts as well as wear to the saw and blades. While larger cabinet saws have heavy cast-iron table tops and bases to help combat this problem, many light portable saws do not. One quick solution is to add weight to the base to help control much of the vibration caused by the saw's lightweight aluminum construction. An even better solution is to weigh down the base with solid concrete blocks, which can be easily stacked and unstacked when the table needs to be moved.
- The higher the blade is above the workpiece, the greater the risk of kickback.
- The fence of a table saw should never be used as a stop when crosscutting narrow stock, since the cutoff material may bind between the blade and fence and could be thrown back towards the operator.
- To set the cutting angle, table saws are equipped with a tilt control wheel located on the side of the machine which allows the saw to make bevel cuts up to 45 degrees. Tilt settings are indicated on the scale at the front of the unit. It should be remembered that the saw's maximum cutting depth at 90 degrees decreases as the cutting angle is increased.
- For the cleanest crosscuts, blades with 60 or more teeth are the best choice because they have more teeth in contact with the wood. For ripping, a blade with fewer teeth should be used because ripping creates more dust and places greater stress on the motor. Twenty-four

teeth on a 10-inch diameter blade is ideal for ripping. In order to perform both ripping and crosscutting efficiently without spending time changing blades, a 50-tooth combination blade is recommended.

- Since a table saw's miter gauge is narrow, it can be difficult to support the workpiece, especially when cutting at an angle. That is why it is a good idea to attach a wooden extension to the gauge. (Most gauges have pre-drilled holes specifically for this reason.) With the extension attached, the workpiece can be safely supported with both hands, or it can be secured with a clamp on one end.

Vocabulary Terms

alternate top bevel grind: Each pair of teeth is angled in opposite directions, making it the best choice for crosscutting.

anti-kickback lever: For added safety, some splitters come with this spring-loaded lever to move freely in one direction and lock in the other. Under normal conditions, the anti-kickback lever moves upward as the wood is fed through the saw. However, if the material binds, the teeth bite into the wood, preventing it from being hurled toward the operator.

belt and pulley system: A system in which power transmission is achieved by specially designed belts and pulleys.

belt-drive system: A system in which power is transmitted by a continuous flexible belt.

benchtop table saw: Also called a portable table saw, this type of saw is lightweight and designed to operate while sitting on a table or other support. It commonly has direct drive from a universal type motor and can be lifted by one person to be carried to the job location. It often has parts made of steel, aluminum, and plastic and is designed to be compact and light.

bevel: Two surfaces meeting at an angle other than 90°.

blade guard: This metal or plastic safety feature helps shield the user from the rotating blade and flying debris. It is designed to ride on top of the material as it is fed through the saw.

blade guard: A spring-loaded guard that completely covers the blade when it is in the "up" position but rotates out of the way when the handle is lowered.

box wrench (box end wrench): A wrench with a closed loop (a socket) that fits over a nut or bolt head. It comes with the saw to remove the blade hold-down nut.

carbon brushes: Although they could be more accurately called carbon blocks, carbon brushes are brushes that conduct current between stationary wires and moving parts (most commonly in a rotating shaft). In an electric motor, alternator, or electric generator, two metal slip rings are affixed to the shaft, and springs press the carbon blocks to conduct the current.

combination square: A tool used for measuring angles, determining flatness, approximating level surfaces, and measuring the center of a circular bar or dowel. It is composed of a rule and a head.

contractor table saw (jobsite saw): Contractor table saws are heavy, large, and have an attached stand or base, often with wheels. The motor hinges off the rear of the saw and drives the blade via a single belt using a 1 to 2 hp induction-type motor.

crossover blade: A blade that can be used on multiple tools.

dado head: When it comes to cutting the wide kerfs required for joinery, the table saw can be fitted with either a stacked or wobble-type dado head. Both dado head styles are adjustable, allowing you to make cuts from three-sixteenths of an inch up to thirteen-sixteenths wide. A stacked dado head consists of various thickness chippers sandwiched between a pair of circular saw blades. A wobble-type dado head is typically a single circular saw blade flanked by a pair of beveled washers.

dado joint: A kind of woodworking joint in which a rectangular groove is cut into a board so that another piece can fit into it.

detent (built-in stop): A hinged catch that fits into a notch of a ratchet to move a wheel forward or prevent it from moving backward.

direct drive system: A system that draws the power coming from a motor without any reductions (e.g., a gearbox), so the blade is attached to the motor shaft.

dust collection port: A port that allows the machine to be connected to a shop vac or central collection system in order to reduce flying sawdust, keep the air cleaner, and provide the operator with a better view of the work for improved safety.

fence: A piece of lath or scrap fixed to the bench surface to prevent movement of the work.

induction motor: Designed for heavy-duty use, induction motors are relatively quiet due to their brushless design.

kerf: A groove or notch made by a cutting tool, such as a saw or ax.

kickback: Kickback occurs when the wood contacts the back half of the blade. Under this condition, the material can be thrown backwards towards the operator with considerable force. For example, when cutting moisture-laden material, the saw kerf may actually close up after being cut, pinching the back of the blade in the process. As a result, the spinning blade will propel the material back at the operator, resulting in a potentially serious injury.

miter gauge: The gauge moves parallel to the blade along a slot machined into the saw table in order to crosscut material from 90° to 45°.

miter joint: A joint made by beveling each of two surfaces to be joined, usually at a 45° angle, to form a corner, usually a 90° angle.

mortise: A recessed cavity in a piece of wood that's used to receive hardware or another piece of wood.

outfeed support stand: A stand, such as a hinged extension leaf resting on a fold-down leg support that reaches the floor, which supports the waste of the workpiece while making the cut.

pushbutton switch: Cabinet saws typically have individual pushbutton switches for the ON and OFF functions.

push shoe: When ripping narrow stock, a push shoe makes it easier to handle the workpiece. One places the heel against the workpiece and rides the fence as the material is moved past the spinning blade.

push stick: An essential safety tool that allows the operator to keep fingers away from a table-saw or router's blades, especially when ripping narrow stock.

rabbet joint: Also known as *rebate*, it is a recess or groove cut into the edge of a piece of machineable material, usually wood. When viewed in cross-section, a rabbet is two-sided and open to the edge or end of the surface into which it is cut.

rail: A metal bar that makes a track along which the woodworking tool can roll.

rip cut: To split or saw (wood) along the grain.

rip fence: Every table saw is equipped with this to control the cutting width. The fence is mounted to the right of the blade and moves laterally along a fractional scale.

rocker or paddle-type switch: Most benchtop and jobsite saws use this type of ON/OFF switch.

safety glasses: Safety glasses are usually made with shatter-resistant plastic lenses to protect the eyes from flying debris. Although safety lenses may be constructed from a variety of materials that vary in impact resistance, standards suggest that they maintain a minimum 1 mm thickness at the thinnest point, regardless of material.

saw blades: Blades that are generally classified according to the material used for the blade teeth, which is either steel or carbide.

saw blade gullet: The open area between the teeth.

spacer block: Used when crosscutting narrow pieces of stock on a table saw, it is clamped to the fence, positioned several inches behind the front of the blade.

speed square: An abbreviated or simplified steel square that is a 12- or 7-inch isosceles triangle in shape, made of steel, aluminum, or plastic. At the intersection of the two sides of the triangle there is a squared pivot point, which is placed on the edge of the board.

splitter: A safety feature that helps minimize kickback by keeping the saw kerf open.

square grind: On a square ground blade, all of the teeth have a flat top. This grind is designed primarily for ripping.

stationary or cabinet saw: This type of table saw is heavy (using large amounts of cast iron and steel) to minimize vibration and increase accuracy, and is characterized by having a closed base (cabinet). Cabinet saws usually have induction motors in the 3 to 5 hp range. The motor is enclosed within the cabinet and drives the blade with three parallel v-belts.

tenon joint: A projection on the end of a piece of wood shaped for insertion into a mortise to make a joint.

tilt control wheel: Located on the side of the table saw, this feature allows the operator to set the cutting angle and make bevel cuts up to 45°. Tilt settings are indicated on the scale at the front of the unit.

triple chip grind: A blade with a triple chip grind consisting of flat-top teeth alternately spaced by three-sided teeth. This design is used for making splinter-free cuts in hardwoods and plastics.

trunnion: The mechanism that incorporates the sawblade mount and allows for height and tilt adjustment.

universal motor: A motor that can run on either AC or DC voltage, which saves space and reduces bulk for portability.

woodworking: The forming or shaping of wood to create, restore, or repair useful or decorative objects. Carpentry, joinery, and cabinetmaking are specialized woodworking crafts, providing a range of products from wooden structures and furniture to wooden toys.

Pre-Program Discussion Questions

1. Can you name three types of table saws? What are some of their primary differences? Put the three types in order from lightest to heaviest.
2. What kinds of cuts and joints can a table saw make?
3. Why are table saws so dangerous? What potential dangers present themselves when operating table saws?

Post-Program Discussion Questions

1. How do the ON/OFF controls differ for each type of table saw?
2. What safety features do table saws have? Explain.
3. What additional safety guidelines should you follow when using a table saw?
4. Describe the various blade types and grinds. For what purposes are they best suited?
5. What is the proper way to cut a wide board? How about a very long board?

Individual Student Projects

- Have each student take a turn getting the feel of the table saws and practice various cutting depths, cutting angles, and crosscutting angles.

Group Activities

- Ask your students to explain what kickback is, how it can occur, and how it should be prevented. Then, demonstrate the proper techniques to employ when using a wet piece of wood as your cutting material on a table saw.

- Break your class into small groups and assign them one of the following maintenance or replacement activities:

- Check blade alignment
- Check fence alignment
- Change the blade
- Check the 90/45-degree blade stops

Have each group create a poster of the step-by-step procedure, practice the steps and safety considerations, then present the procedure, start to finish, to the rest of the class.

- Break your class into two groups and demonstrate two problems that occur when cutting thin strips of wood on your table saw:
 - The blade guard does not move the fence close enough to the blade.
 - The strip is too thin for a push shoe.

Have each group discuss the problem and come up with the proper solution. Then have each group demonstrate their findings to the other group.

Internet Activities

- Have your students research possible projects on the Web sites listed under “Additional Resources” in this guide, locating steps in the project that call for the use of table saws. This will provide practical applications for the procedures that are shown in the video.

Assessment Questions

- Q1: Which table saw tends to have the quietest operation? Which tends to have the loudest?
- Q2: What are the three most common grinds of table saw blades, and for what are they best used?
- Q3: True or False: A table saw can do each and every one of the following: rip, bevel, crosscut, and miter; and produce rabbets, dadoes, and tenons.
- Q4: What kind of motors do table saws use to drive their blades?
- Q5: What controls the maximum cutting depth at 90° on table saws?
- Q6: True or False: A table saw's maximum cutting depth at 90° increases as the cutting angle is increased.
- Q7: The lower the blade is above the workpiece, the _____ the risk of kickback.
- Q8: Which type of blades last longer and are more expensive?
- Q9: For ripping, ____ teeth on a 10-inch diameter blade is ideal. For the cleanest cross-cuts, blades with ____ or more teeth are the best choice. For both ripping and cross-cutting efficiently without changing blades, use a ____ -tooth combination blade.
a) 24; 60; 50 b) 50; 24; 50 c) 60; 50; 60
- Q10: Place the following steps in the proper order for checking fence alignment:
- On most saws, the alignment can be corrected by adjusting the fence's locking mechanism.
 - Position the fence a short distance from the miter gauge groove on the right side of the table.
 - Using an engraved ruler for best accuracy, measure the distance between the fence and one edge of the groove at the front and rear.
 - Recheck the front and rear dimensions. The fence is aligned properly when both measurements are the same.
 - Move the opposite end of the fence to the right or left as needed.
 - Loosen the appropriate screws, lift up the handle, and hold the fence bracket firmly against the front of the table.
 - With the fence repositioned, tighten the screws and then lock the handle.

Assessment Questions Answer Key

Q1: Which table saw tends to have the quietest operation? Which tends to have the loudest?

A1: Stationary saws and many jobsite saws are relatively quiet due to the brushless design of their motors, while benchtop models and some low-cost jobsite saws have motors that rely on brushes to transmit current internally, causing them to be noisy.

Q2: What are the three most common grinds of table saw blades, and for what are they best used?

A2: On a square ground blade, all of the teeth have a flat top. This grind is designed primarily for ripping. On blades with an alternate top bevel, each pair of teeth is angled in opposite directions. This grind is best for crosscutting. And a blade with a triple chip grind consists of flat-top teeth alternately spaced by three-sided teeth. This design is used for making splinter-free cuts in hardwoods and plastics.

Q3: True or False: A table saw can do each and every one of the following: rip, bevel, crosscut, and miter; and produce rabbets, dados, and tenons.

A3: True. That's why the table saw is considered the woodshop workhorse.

Q4: What kind of motors do table saws use to drive their blades?

A4: A benchtop model and some low-cost jobsite saws have blades driven directly by a universal motor. On stationary saws and many jobsite saws, the blade is driven by an induction motor along with a belt and pulley system. And cabinet saws have an induction motor that is housed within the boxy enclosure along with all its other working components.

Q5: What controls the maximum cutting depth at 90° on table saws?

A5: This is controlled by the height adjustment wheel, located on the front of the machine, and is one of the most important considerations when choosing a table saw.

Q6: True or False: A table saw's maximum cutting depth at 90° increases as the cutting angle is increased.

A6: False. A table saw's maximum cutting depth at 90° decreases as the cutting angle is increased.

Q7: The lower the blade is above the workpiece, the _____ the risk of kickback.

A7: The lower the blade is above the workpiece, the **lesser** the risk of kickback.

Q8: Which type of blades last longer and are more expensive?

A8: Steel blades are inexpensive but dull relatively quickly, while carbide blades, which have a higher cost, cut cleaner and last far longer, effectively justifying their higher cost.

Q9: For ripping, _____ teeth on a 10-inch diameter blade is ideal. For the cleanest cross-cuts, blades with _____ or more teeth are the best choice. And for both ripping and crosscutting efficiently without spending time changing blades, use a _____ -tooth combination blade.

a) 24; 60; 50

b) 50; 24; 50

c) 60; 50; 60

A9: (a) For ripping, **24** teeth on a 10-inch diameter blade is ideal. For the cleanest crosscuts, blades with **60** or more teeth are the best choice. And for both ripping and crosscutting efficiently without spending time changing blades, use a **50**-tooth combination blade.

Q10: Place the following steps in the proper order for checking fence alignment:

- a. On most saws, the alignment can be corrected by adjusting the fence's locking mechanism.
- b. Position the fence a short distance from the miter gauge groove on the right side of the table.
- c. Using an engraved ruler for best accuracy, measure the distance between the fence and one edge of the groove at the front and rear.
- d. Recheck the front and rear dimensions. The fence is aligned properly when both measurements are the same.
- e. Move the opposite end of the fence to the right or left as needed.
- f. Loosen the appropriate screws, lift up the handle, and hold the fence bracket firmly against the front of the table.
- g. With the fence repositioned, tighten the screws and then lock the handle.

A10: These are the correct procedural steps:

1. b. Position the fence a short distance from the miter gauge groove on the right side of the table.
2. c. Using an engraved ruler for best accuracy, measure the distance between the fence and one edge of the groove at the front and rear.
3. a. On most saws, the alignment can be corrected by adjusting the fence's locking mechanism.
4. f. Loosen the appropriate screws, lift up the handle, and hold the fence bracket firmly against the front of the table.
5. e. Move the opposite end of the fence to the right or left as needed.
6. g. With the fence repositioned, tighten the screws and then lock the handle.
7. d. Recheck the front and rear dimensions. The fence is aligned properly when both measurements are the same.

Additional Resources

About.com: Woodworking

<http://woodworking.about.com>

Encarta Encyclopedia: Woodworking

http://encarta.msn.com/encyclopedia_761570306/Woodworking.html

Inside Woodworking: Free Online Woodworking Magazine

<http://www.inside-woodworking.com/tools/PowerTools.html>

WoodNet.net: The Woodworker's Online Resource

<http://www.woodnet.net/tips/index>

Woodworker's Information and Plans for Woodworkers: WOOD Magazine

<http://www.woodmagazine.com>

Woodworking Shop Safety Tips

http://www.wood-worker.com/articles/shop_safety.htm

Woodzone.com

<http://www.woodzone.com/tips.htm>

Available from Films Media Group • www.filmsmediagroup.com • 1-800-257-5126

Multimedia Woodshop Safety

- Windows/Macintosh CD-ROM #20466

Multimedia Woodshop Safety uses video and animation sequences, along with still photos, to provide an overview of shop practices including stationary woodworking equipment, portable power and hand tools, as well as material storage and handling. In addition to the usual shop safety practices, the user is also reminded of the hazards of horseplay, loose clothing, and lack of concentration on the job. As the viewer moves into the arenas of stationary woodworking equipment and power tools, he is guided through an inspection for evidence of loose fittings, bad wiring and/or grounding, and poor tool use of lathe, drill press, and band and bench saws. The program segment dealing with materials storage offers ideas which facilitate safety and accessibility. Issues of wood stacking, container labeling, chemical mixing, hazardous materials handling, and lighting are addressed. Part of the Series *Shop Safety*. A Shopware Production. ©1996.

Portable Power Woodworking Tools

- VHS/DVD-R #26093
- 9-part series

This series features the most popular and useful types of woodworking tools. Students learn the safe operation of each tool, the different models and their purpose, the parts, choosing the proper blade or bit for the task, and the various woodworking operations that can be accomplished

with each tool. A Meridian Production. The series includes: Biscuit Joiner | Circular Saws | Drills | Jigsaws | Power Plane | Reciprocating Saw | Router Bit Magic | Routers | Sanders. (14-20 minutes each)

Safety First: Woodworking Safety

- VHS/DVD-R #14464
- Closed captioned

Covers the most common hand tools and their proper applications. The importance of a clean working environment, preventive maintenance on machinery, and using the correct tool for each job is covered in detail. Also covered are how to check power cords for defects, sharpening and replacing saw blades, and correct body position when using equipment. Part of the series *Safety First: Shop Safety*. A Cambridge Educational Production. (30 minutes) ©1995.

Woodworking

- VHS/DVD-R #26839
- 19-part series

This comprehensive library of low-cost woodworking videos provides all of the information your students need in the world of woodworking, from types of wood, to cutting techniques, to workshop safety. Each video covers a specific topic clearly and comprehensively, giving enormous flexibility in the classroom. Use videos to complement your lesson plans, to introduce new material, to review safety procedures, or as a handy reference for students who need additional help. A Meridian Production. The series includes: Cabinet Doors and Hinges | Cabinet Drawers | Chamfers and Bevels | Crosscutting | Cutting Curves and Circles | Dados and Rabbets | Gluing and Clamping | How to Safely Build with Pressure Treated Wood | Joinery | Measuring Hardwoods | Miter Joints | Outdoor Uses of Pressure Treated Wood | Preparing Hardwood to Use | Rippling | Safety in the Workshop | Smoothing Wood | Uses of Hardwood | Using Veneers | What Is Hardwood. (8-14 minutes each)

Woodworking Equipment Safety

- VHS/DVD-R #20422
- 15-part series
- Closed captioned

This series of fifteen live-action videotapes shows students the proper safety procedures for the set-up and use of stationary and portable woodworking equipment. Viewers are guided through the step-by-step procedures for using safety guards, clamping devices, protective equipment, and more. An excellent series for introducing new students to the joys of safe woodworking and also as a refresher course for experienced craftsmen. A Shopware Production. The series includes: Router Safety | Portable Drill Safety | Saber Saw Safety | Portable Circular Saw Safety | Portable Sander Safety | Drill Press Safety | Scroll Saw Safety | Shaper Safety | Wood Lathe Safety | Jointer Safety | Thickness Planer Safety | Band Saw Safety | Radial Arm Saw Safety | Table Saw Safety | Disk/Belt Sander Safety. (13-33 minutes each)

Woodworking Power Tools

- VHS/DVD-R #26837
- 5-part series
- Closed captioned

This series of live-action videotapes details both basic and advanced operational techniques for each of the five most important and useful woodworking power tools. Clear, sharp, color video graphically portrays the proper operation of each machine, and the correct use of its associated accessories. Close-ups detail how each machine performs cutting, forming, or shaping operations. Shaping procedures and considerations are stressed throughout, emphasizing the proper use of each machine's safety guards. Personal safety procedures and equipment are also thoroughly covered, along with proper housekeeping methods which can help assure that accidents do not occur. This series is recommended for all woodworking students as well as the home craftsman. A Meridian Production. The series includes: Band Saw: Operation & Safety | Jointer/Surfacer & Accessories: Operation & Safety | Radial Arm Saw: Operation & Safety | Table Saw & Accessories: Operation & Safety | Wood Lathe & Accessories: Operation & Safety. (14 minutes each)

Woodworking Tools

- VHS/DVD-R #26836
- 7-part series

This series explains the basic operation of each woodworking tool, how each is adjusted, how blades are changed, and how each is used for specialty operations. Safety is stressed throughout. A Meridian Production. The series includes: Band Saw | Drill Press | Jointer | Planer | Shaper | Table Saw: Safety and Basic Operation | Table Saw: Specialty Operations. (7-26 minutes each)



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