

Boys Republic Woodshop Safety Test

Name _____ Period ____ Cottage _____
Print First and Last Name
 Date Started _____ Date Finished _____
 Date Approved By Teacher _____
 Teacher Signature/Authorization _____

Use the Safety Booklet to answer the following questions. You will need to pass this Safety Test with a score of 100% with no errors. Work carefully and accurately.

There are several advantages to working with power tools rather than hand tools. You can do most woodworking operations _____ with power tools. Power tools eliminate much of the physical effort in woodworking. Power tools are also _____ than hand tools to use accurately. However, power tools can be much more _____ to operate.

Importance of Safety

Safety is always _____. It is especially important when you work with power tools. You should not use any power tools until you _____ power tool safety. Machines turn _____ saw blades and cutters at _____ speeds. Accidents happen so quickly the operator _____ knows what happened. A board caught in a machine can be thrown from the machine with _____ force. This is _____ for everyone in the work area. This is why learning to work safely is important for _____.

Safety Attitude

_____ power tool accidents can be _____. About eight out of ten accidents are caused by workers without the right safety _____. These workers do not take safety _____. Instead of working the safe way, they work the _____ way. Instead of being safe, they put everyone in _____.

Machine safety is up to _____. Develop a safe way is the best way? _____. Learn all you can about the safe _____ of each machine _____ and _____ closely as your instructor demonstrates how to use a machine. Know all the safety _____ and the steps for operating each tool. Also, make sure you do the steps in the right _____. Doing them out of order is often as dangerous as doing them incorrectly.

Machine Know-How

To operate a machine safely, you must know more than just how to turn it on and off. You must know how to do the _____ operations. You also need to know how to make simple _____. Above all, you must know the

machine's _____. Always keep the machine at a safe, steady speed. Never use the machine for a job the machine was not _____ to do.

- You cannot expect to be an _____ on all machines right away. DO NOT _____. If you have a question, ask your _____.
- The more you know about a machine, the _____ you will be. A machine only does what its operator _____ it to do. It can only be as safe as its operator.
- As you learn to operate a machine, you will gain _____. Do not become too confident. Overconfidence leads to _____, and carelessness causes accidents. This does not mean you should be _____ of machines, however a safe attitude is one of respect- respect for what machines can do.
- _____ appropriately. Remove all ties, scarves, rings, and watches. _____ up long sleeves and _____ back long hair. Loose clothing, hair, and jewelry can easily _____ in revolving machine parts.
- Always wear _____ eye protection in the shop. Some machines require _____ eye protection over your safety glasses.
- Never operate a power tool until your _____ has shown you how. Never use a power tool without your instructor's _____.
- Never operate a power tool when _____ in the shop.
- Make sure all safety _____ are in place. Never _____ a safety guard without your instructor's permission. Have your instructor _____ each setup before you begin working.
- _____ in the wood can be dangerous. Check the stock carefully for knots, splits, and other defects.
- Keep the machine _____. Remove all tools, lumber, and unnecessary materials. Objects left on the machine can vibrate into revolving cutters. They can then be thrown from the machine with great force. Never clean a machine while it is _____.
- Always work with a plan of _____. List every step and _____ through each one ahead of time.
- Before you plug in a machine, make sure the switch is in the _____ position. You do not want the machine to start unexpectedly.
- If you use an extension cord, use the correct wire size. This is determined by the length of cord and size of motor. Using a wire size that is too _____ will cause the tool to _____.
- Keep all power cords _____ from blades and cutters while you work.
- Always keep your hands a safe _____ from cutters and blades.
- Always keep your eyes on the _____ action. Concentrate on what you are doing at all _____.
- Be alert for any _____ that might indicate _____ of the machine or stock.
- If anything unusual happens, turn off the machine _____. If the machine does not _____ right, turn it off immediately. As soon as it stops completely, check with your instructor.

- Never make an adjustment unless the power is _____. The tool must come to a complete stop. This does not include speed adjustments on variable speed tools. These adjustments must be made with the machine running.
- Never leave a machine with the power _____. The machine should be completely stopped before you _____ it.
- Keep the work area _____. Remove all debris when you are finished.
- Never _____ to or _____ anyone working with power equipment. If you must talk to an operator, wait until the operator _____ you.
- Make sure the power tool is grounded. One with a double-insulated case need not be grounded. If you are unsure about this, check with your instructor.
- Never work in or around _____ with power tools. Water increases the chances of severe electrical _____.
- Stand in a comfortable, _____ position when working with power tools. Both feet should be firmly on the floor.
- Do not try to handle large, bulky pieces by _____. Get someone to help you.
- Do not use the machine until it is operating at _____ speed.

Band Saw

Band saws are used for many different cutting operations. They are used primarily to make _____, irregular cuts. They are also ideal for resawing thick stock. Band saws are _____ generally used to make precise straight cuts. This is because greater accuracy is possible with table saws. Band saws are also used to cut materials other than wood. Abrasive belts are used on a band saw to sand curved cuts.

Band Saw Safety

- Know and follow the general safety rules for operating power tools.
- Adjust the upper guide so it is from _____ to _____ inch (3 to 6 mm) above the stock.
- Keep your hands out of line with the _____. Keep your fingers at least _____ inches (50 mm) from the blade at all times. _____ your cuts will help you avoid unsafe positioning.
- Never stand on the _____ side of a band saw. If the blade breaks, this is a dangerous area.
- Do not start cutting until the machine has reached _____ running speed.
- Avoid _____ out of long cuts and curves. Plan your cuts and make _____ cuts. When you must back out of a long cut, turn _____ the machine. Wait until the blade stops to back out.
- If the machine is making _____ noise, turn it off. If it is not running properly, turn it off. Wait until it _____ stops. Then immediately ask your instructor for help.
- If the blade breaks, turn _____ the machine. Then ask your instructor for help.
- If you cut round or cylindrical stock, _____ the stock securely. This will keep it from rotating while you cut.

- When making compound cuts, be sure the stock is properly supported on the table.
- If you are _____-handed, stand slightly to the _____ of the table. Use your right hand to feed the stock. Use your left hand to guide it. Apply even, forward pressure.

Width of Saw Blade and its Minimum Cutting Radius for a Circle

1/8"-	1/2"
3/16"-	3/4"
1/4"-	1"
3/8"-	1-1/4"
1/2"-	_____ "
5/8"-	1-3/4"

Drill Press

The drill press is used for _____ or boring a hole. The drill bit or tool rotates in the drill _____.

Setting Up the Drill Press

- Each job on the drill press requires _____ preparations. You must choose the _____ drill or bit and install it. You must _____ the speed according to the _____ size. You then need to _____ the table at the correct height and position. Finally, you must set the _____ stop for the desired cutting depth.
- Many different drills and bits are used in the drill press. You need to select the _____ one for the material and type of job.
- For woodworking, drill presses run at speeds from _____ to _____ rpm's.
- Set the speed according to the hole size and _____ of the wood. For large holes (1/2 inch or more) and hard wood, use the _____ speeds. Use higher speeds for _____ holes.

Drill Press Safety

- Know and follow the general safety rules for operating power tools.
- Never leave the chuck _____ in the chuck. Remove the chuck wrench immediately _____ installing or removing a cutting tool.
- _____ small pieces of stock. Also clamp the stock when you cut _____ holes. The cutter could _____ the stock from your hand.
- If you are not sure you can hold the stock, clamp it.
- Keep your _____ away from the rotating cutters.
- Use only _____-shanked cutters in the drill press chuck. Never use an auger bit with a tapered tang.
- When using a sanding, routing, shaping, or mortising attachment, know and follow the safety rules for the corresponding machine.

- Use the correct _____ for the job. Drilling large holes requires low speeds. Drilling in hard stock also requires low speeds.
- If a cutter catches in the wood, turn the machine _____ and step back. Wait until the machine stops completely before removing the stock.
- Never leave a machine until it has come to a complete _____.

Scroll Saw

Scroll saws are used to make _____ and _____ cuts. Scroll saws are reciprocating saws. This means that the saw blades move _____ and _____. This up-and-down sawing action is the same action used in hand sawing. Scroll saws are like large, power-operated coping saws. Saber saws are like power compass or keyhole saws.

Scroll Saw Safety

- Know and follow the general safety rules for operating power tools.
- Make all setups and adjustments with the power _____.
- Use the _____ blade for the stock (thickness) and curve (sharpness) being cut.
- Never try to turn a small radius with a wide blade. The radius should not be more than _____ times the blade width.
- Clamp the blade securely in both chucks with the teeth pointing _____.
- _____ the guides so they properly support the blade.
- Adjust the hold down so that it applies _____ pressure to the stock.
- Rotate the motor by _____ to check that all adjustments have been made properly.
- _____ cuts to avoid backing out of curves.
- Do not _____ the work into the blade. This can cause the blade to bend the break.
- Keep your fingers out of _____ with the saw.

Jointer

Jointers are machines that do the work of a hand plane. Jointers are used mainly to make edges _____ and _____. They are also used to _____ surfaces. Rabbits, tongues, chamfers, bevels, and tapers are sometimes cut on jointers.

Jointer Safety

- Know and follow the general safety rules for operating power tools.
- Never joint a board less than _____ inches (250 mm) long. Short stock can tip down into the cutterhead. Then the stock could be _____ back with tremendous force.
- Always use a _____ stick when planing a face. This protects your fingers as the end _____ the cutterhead.
- Use the _____ guard at all times.
- Never stand directly _____ the jointer. This is a dangerous position if the stock _____ back.

- Keep your fingers away from the _____ of the stock. While jointing a face, keep your fingers at least _____ inches (150 mm) from the _____ end.
- Never apply pressure with your hands _____ over the cutterhead. Always keep your hands at least _____ inches (100 mm) from the cutterhead.
- Always feed the stock _____ the _____. This reduces vibration and produces a _____ cut.
- Get you instructor's approval when making _____ setups.
- Do not leave the machine until the cutterhead has completely _____.

Sliding Miter Saw

The Sliding miter saw motor and blade moves _____ and forth on an arm. The stock stays in place while you _____ or pull the saw through it. This makes the sliding mitersaw perfect for cutting long boards to _____. The sliding miter saw is also used to make accurate _____ cuts. These boards are hard to handle on a table saw.

Sliding Miter Saw Safety

- Know and follow the general safety rules for operating power tools.
- Make all adjustments while the machine is turned _____.
- Never reach across the _____ of the blade. When the machine is running, always keep your hands at least _____ inches (150 mm) from the blade.
- Keep the safety _____ in position at all times.
- Wait until the blade is running _____ speed to start a cut.
- Never stand in _____ with the blade. If you push the blade with your _____ hand, stand to the left. If you push the blade with your _____ hand, stand to the right.
- Use one hand to _____ the saw through the stock. Use the other hand to hold the stock _____ the fence. Keep both hands away from the cutting line.
- Cut only _____ piece of wood at a time.
- Feed the blade _____.

Router

Routers are widely used for shaping the _____ and _____ of stock, and for joinery. A router is basically a motor mounted in a base. The base adjust to the desired cutting depth. A chuck on the motor holds the router bit. The router bit turns at _____ speeds to make the cut. The work is held stationery and the router is moved _____ the stock. There is a wide variety of bits available to do many different jobs.

Router Safety

- Know and follow the general safety rules for operating power tools.
- _____ the power before changing router bits.
- Clamp router bits securely in the chuck. At least _____ inch (12 mm) of the shank should be inserted.

- Make sure the router switch is in the _____ position before connecting the power.
- Do not make any router cuts unless the stock is securely _____. The router can throw loose stock with _____ force.
- Before you start cutting, make sure _____ is in the router's _____.
- Hold the router _____ when starting the motor.
- Always feed the router against the rotation of the bit. If you feed with the rotation the bit can dig into the stock. This can cause the router to kick back or throw the stock.
- After finishing a cut, wait for the router to completely stop. Then lay the router down. The bit should point away from you.

Sanding Machines

Sanding machines make sanding _____ and _____. Used properly, they can save you much time. Used improperly, they can do more damage than good.

There are many types and styles of sanders. They can be divided into two groups: _____ and portable. Stationary sanders are large shop machines designed for heavy-duty work. Belt sanders, disc sanders, belt-stroke sanders, spindle sanders, thickness sanders, and sand-grinders are some examples.

_____ sanders are small, hand-held machines. Portable belt and finishing sanders are the two most commonly used for woodworking.

Sanding Safety

- Know and follow the general safety rules for operating power tools.
- Do not operate a sander with a _____ belt or _____ disc.
- _____ the power before changing abrasives.
- On a portable sander, be sure the switch is _____ before connecting the power.
- Always _____ or _____ the stock securely when using portable electric sanders.
- Keep your fingers _____ from the abrasive. The abrasive can quickly remove _____.
- Always let portable sanders reach _____ speed before setting them on the stock.
- Always _____ portable sanders from the stock before turning them _____.
- Wait until portable sanders come to a complete _____ before setting them down.
- Use only _____ pressure, just enough to hold the work against the abrasive.

Stationary Disc Sander Safety

- Do not use the disc sander until it reaches full speed.
- Always work on the side of the disc that is turning _____.
- Hold the stock _____ on the table.
- Apply _____ pressure against the rotating disc.

- Reduce the pressure if the disc starts to slow down.

Surfacer (Planer)

Surfacers are also called thickness _____. They are used to cut boards to a desired _____. They are not used for any other purpose.

Surfacer Safety

- Know and follow the general safety rules for operating power tools.
- Remove all _____ knots from the stock before surfacing.
- Do not surface stock shorter than the distance between the centers of the infeed and outfeed rolls. This is usually about _____ inches (300 mm), or more.
- Never stand directly _____ a board being surfaced. The stock could _____ back and cause an injury.
- Never _____ into the surfacer while the cutterhead is rotating.
- Make sure one _____ is flat before you surface a board. Place the flat face against the _____.
- If a board does not _____ through the surfacer, turn off the power. Wait until the cutterhead _____ completely. Then _____ the table and remove the board.
- Keep your hands away from the areas around the feed _____. You could easily _____ your fingers in these areas.
- Feed the stock _____ the grain. Otherwise, the stock can _____ and break. The pieces can then be _____ from the surfacer.

Table Saw

Table saws are also called _____ saws. They are used for many basic operations. They are also used to cut several kinds of joints. Ripping, crosscutting, mitering, and tapering can all be done on table saws. Table saws are probably the most _____, versatile power tools used in woodworking.

Table Saw Safety

- Know and follow the general safety rules for operating power tools.
- You cannot use the _____ for all operations. Have your instructor _____ any setup that does not include the guard. Special setups should also be checked by your instructor.
- Never cut _____ on the table saw. Use the _____ fence for ripping and the _____ gauge for crosscutting.
- Always maintain _____ of the stock between the fence and the table. Never use your hand to push the stock away from the blade. Always use a _____ stick for narrow stock. This will prevent a kickback.
- Never stand directly _____ the blade.

- Never place your hands in _____ with the cut.
- Use a _____ blade. _____ blades are dangerous. They are more likely to cause kickbacks. Dull blades also require more _____. This increases the chances of your hand _____.
- The stock must lie _____ on the table. Never cut _____ or _____ stock on a table saw. Edges placed against the rip fence must be _____.
- Helpers should only _____ and hold stock. They should _____ pull or push the stock through the blade. The _____ should always be in control.
- Never remove scrap cuttings from around the blade unless the machine has been turned _____ and has come to a complete stop.
- Never use the fence as guide if the distance between the blade and the fence will be _____ than the length of stock against the fence.
- Clamp a _____ block to the fence when you use the fence as a stop for cutting short pieces to length.
- Table saw blades should project no more than _____ inch (3 mm) above the _____ of the stock.
- _____ the blade below the table when you _____ with the saw. Do not leave the machine until the blade comes to a complete _____.

Wood Lathe

The wood lathe is used for making cylindrical shapes such as spindles, legs, and bowls.

Wood Lathe Safety

- Never wear loose clothing or a tie.
- Wear goggles or a _____.
- Check the wood to make sure it has no _____ that would cause it to break when turning.
- Check all glue joints before mounting the stock. A _____ joint may come apart when revolving at high speeds. Make sure glued-up stock is completely dry before turning.
- Fasten stock _____ between centers. Make sure the tailstock is locked before turning on the power.
- Adjust the tool rest as _____ to the stock as possible. Then revolve the stock by hand to make sure it clears the rest.
- Always _____ the lathe before making any adjustments such as changing the position of the tool rest.
- Run all stock at the _____ speed until it is rounded.
- For stock over _____ in diameter, maintain slower speed; from 3" to 6", medium speed; under _____, faster speeds.
- Hold turning tools _____ in both hands.
- Keep the tool rest as _____ to the work as possible. At intervals, stop the lathe and _____.
- Make sure the stock is firmly _____ to the faceplate before turning.

- _____ the tool rest when sanding or polishing. If you don't, your fingers may get _____ between the tool rest and the stock.

Shaper

The shaper is primarily used for making decorative edges and moldings, for producing joints, and for grooving, fluting, and reeding.

Shaper Safety

- Whenever possible, install the cutter so the _____ of the stock is shaped. In this way the stock will cover most of the cutter and act as a guard.
- Make sure the cutter is _____ securely to the spindle.
- Always position the _____ fence so that it will support the work that has passed the cutters.
- Adjust the spindle for correct height and then _____ in position. Rotate the spindle by hand to make sure it clears all guards, fences, etc.
- Check the direction of _____ by snapping the switch on and off; watch as the cutters come to rest. **ALWAYS FEED _____ THE CUTTING EDGE, THAT IS, FEED THE WORK IN TO THE CUTTERS IN THE DIRECTION OPPOSITE TO CUTTER ROTATION.** Some shapers have a reversing switch so that the spindle can be rotated either clockwise or counter clockwise.
- Examine the stock carefully before cutting to make sure it is free of _____. Never cut through a loose knot or stock that is cracked or split.
- Hold the stock down and against the fence with the hands on _____ of the material, yet out of range of the cutters.
- Use all _____, jigs, and clamping devices whenever possible.
- Always use a depth collar when shaping irregular work. Put a guide pin in the table to start the cutting.
- Do not set spring hold-down clips too _____ against the work. Use just enough tension to hold the work against the fence.
- Never shape a piece shorter than _____.

IMPORTANT SAFETY NOTICE

Work procedures and shop practices described here are effective methods of performing given operations. Use special tools and equipment as recommended. Carefully follow all safety warnings and cautions. Not that these warnings are not exhaustive. Proceed with care and under proper supervision to minimize the risk of personal injury or injury to others.

Mr. Lentz hopes that after completing and passing this safety test, you will begin having a lifetime of woodworking experiences for your own pleasure and the pleasure of others receiving the benefits of your skills.