



pennsylvania
DEPARTMENT OF EDUCATION

**Technology Education
Sample Machine Tool Test
January/2002**

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF EDUCATION**

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Sample Machine Tool Tests

Band saw.	4
Bayonet saw (Portable)	6
Scroll Saw.	8
Portable electric router.	10
Robots.	12
Radial arm saw.	14
Plastics injector.	16
Planner – surface.	18
Motorized miter box.	20
Vertical milling machine.	22
Metal lathe.	24
Laser.	26
Jointer.	28
Grinder.	30
Portable electric finishing sander.	32
Portable electric drill.	34
Drill press.	36
Disc finishing machine.	38
(CNC) computer numerical control machine.	40
Circular saw.	42
Belt finishing machine.	44
Arc welder.	46

Technology Education Safety Guide

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Sample Machine Tool Tests

Band Saw

For Safety --

- 1. Operate only with the instructor's permission and after you have received instruction.**
- 2. Remove jewelry, eliminate loose clothing, and confine long hair.**
- 3. Make sure all guards are in place and operating properly.**
- 4. Always use proper eye protection.**
5. Make sure all adjustments are tight and secure and the blade guides are properly adjusted prior to turning on the machine.
6. Upper blade guides should be positioned about 1/8" above the work piece.
7. Guide the work slowly, letting the machine do the work. Do not force the work into the blade.
8. Do not attempt to cut a smaller radius than the blade will allow.
9. Do not allow onlookers to stand to the right of the operator while the machine is running as a broken blade could leave the machine in that direction.
10. Avoid backing out of a long cut while the machine is running, the blade could be dragged off the wheels.
11. Maintain a 2" minimum margin of safety between the blade and your hands while the machine is running.
12. Place hands and fingers on either side of the cut line, never on the line. Use a scrap push block if necessary.
13. Never leave the machine until it has come to a complete stop.
14. Make sure that both the upper and lower drive wheels are covered.



Band Saw

Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

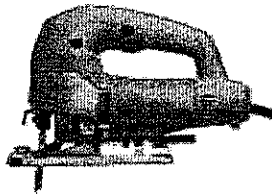
1. The lower drive wheel does not require a guard. T F
2. The upper guide should be adjusted about 1/8" above the work piece. T F
3. All normal adjustments should be made with the power turned off. T F
4. It is permissible and safe to force the material around a tight radius without making relief cuts first. T F
5. Fingers should be placed on either side of the cut line, not in line with it and the material guided through the machine. T F
6. When necessary it is possible to back slowly out of a long cut with the machine still running. T F



Bayonet Saw

For Safety --

1. Operate only with the instructor's permission and after you have received instruction.
2. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Make sure all guards are in place and operating properly.
4. Always use proper eye protection.
5. Make sure the blade is the correct type for the material and that it is tightly clamped in the chuck.
6. Be sure the switch is off before connecting to the power source.
7. Use a vise or clamps to securely hold the material to be cut.
8. Keep cutting pressure constant; do not force the blade into the work.
9. Always keeps the base tightly against the material being cut.
10. Do not store the saw on the base and blade. Store it on its side.
11. Do not set the saw down on the bench until it has stopped.
12. If the blade is in the tool be sure and lay the tool on its' side.



Bayonet Saw

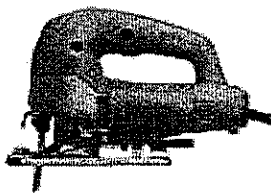
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

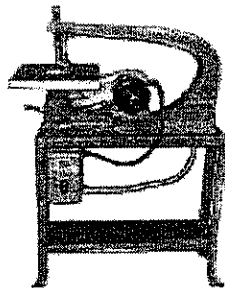
- | | | |
|--|---|---|
| 1. Any blade will safely cut any kind of material. | T | F |
| 2. Material should be held securely before starting to cut. | T | F |
| 3. Cutting pressure should be constant without forcing the blade into the work. | T | F |
| 4. The base should always be flat against the work, even when the saw is tilted. | T | F |
| 5. The saw can be stored using the blade and the rear of the base for support. | T | F |
| 6. The housing and handle should be kept free of grease, chips and dust. | T | F |



Scroll Saw

For Safety --

1. **Operate only with the instructor's permission and after you have received instruction.**
2. **Remove jewelry, eliminate loose clothing, and confine long hair.**
3. **Make sure all guards are in place and operating properly.**
4. **Always use proper eye protection.**
5. Make sure all adjustments with the power off, and then rotate the motor by hand as a final Check.
6. Be sure the hold down foot is pressing lightly on the work piece.
7. The blade should be held firmly in the chucks, be square with the table, and be properly supported by the guide.
8. Guide the material slowly through the machine with both hands, keeping fingers away from the cut line.
9. Choose the correct blade and correct speed for the material to be cut, and for the smallest radius required.



Scroll Saw

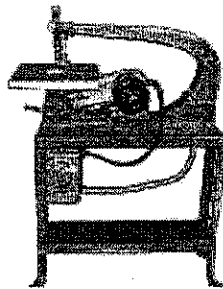
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

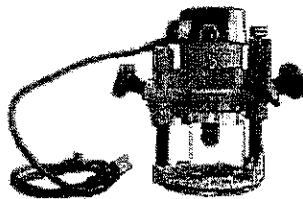
- | | | |
|---|---|---|
| 1. The blade selected needs to be matched to the material and the type of cut. | T | F |
| 2. It is necessary to have the flat side of the stock tight against the table. | T | F |
| 3. Fingers should be kept away from the cutting line. | T | F |
| 4. The hold down should be 1/16" from the work piece. | T | F |
| 5. After changing blades or making guide adjustments the machine should be rotated one full stroke by hand. | T | F |



Portable Electric Router

For Safety -- --

- 1. Operate only with the instructor's permission and after you have received instruction.**
- 2. Remove jewelry, eliminate loose clothing, and confine long hair.**
- 3. Make sure all guards are in place and operating properly.**
- 4. Always use proper eye protection.**
5. Be sure the switch is off before inserting the plug into the power source.
6. Be sure the collet chuck is tight and the bit is secure.
7. Make sure the work piece is clamped or rigidly held in place and the Area or router travel is free of obstructions.
8. Hold the router with both hands and apply constant cutting pressure. Do not force or jam the cutting bit into the work.
9. Make a trial cut in a piece of similar scrap material first.
10. Disconnect from the power source when changing bits, making adjustments, or when the router is not in use.



Portable Electric Router

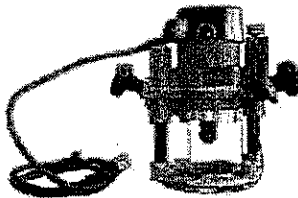
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

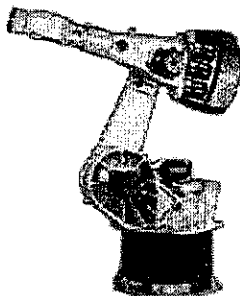
- | | | |
|---|---|---|
| 1. It is a good idea to make a trial cut in a piece of scrap wood. | T | F |
| 2. A router should always be held with both hands. | T | F |
| 3. Constant pressure is not necessary when using the router. | T | F |
| 4. It is not necessary to clamp material being routed. | T | F |
| 5. The depth of cut may be safely adjusted without unplugging the tool. | T | F |
| 6. The use of guards is optional. | T | F |



Robots

For Safety ---

- 1. Operate only with the instructor's permission and after you have received instruction.**
- 2. Remove jewelry, eliminate loose clothing, and confine long hair.**
- 3. Make sure all guards are in place and operating properly.**
- 4. Always use proper eye protection.**
5. When in the teach mode, use slow movements to jog the arm from point to point.
6. Be sure the emergency stop button is functioning properly by testing it early in the teach cycle.
7. Care should be taken that the operator's fingers and other body parts are kept out of the work envelope.
8. The operator must understand the program of the robot actions and motions prior to the use of the robot



Robot

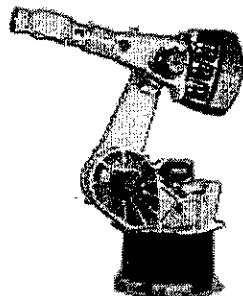
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

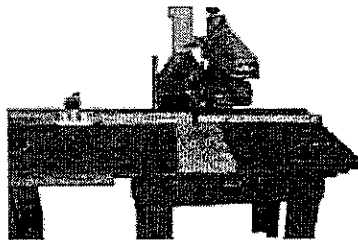
1. Move the robot arm slowly from point to point when in the teach mode. T F
2. The operator does not need to understand the program of the robot actions and motions prior to use of the robot. T F
3. Eye protection is required when operating robots in the technology lab. T F
4. The operator must stay clear of the work envelope when the robot is executing the program. T F



Radial Arm Saw

For Safety --

1. **Operate only with the instructor's permission and after you have received instruction.**
2. **Remove jewelry, eliminate loose clothing, and confine long hair.**
3. **Make sure all guards are in place and operating properly.**
4. **Always use proper eye protection.**
5. Make all adjustments with the power off.
6. Be sure the leaf guards are operating properly and the blade will not extend beyond the table edge.
7. When cross cutting hold the material securely against the fence.
8. Always pull the blade through the work and return the cutter head behind the fence before removing material or starting the next cut.
9. Make sure the blade guard and kickback fingers are properly adjusted before ripping.
10. Always rip into the blade, never in the same direction as the rotation.
11. Make sure the blade has stopped before leaving the machine.



Radial Arm Saw

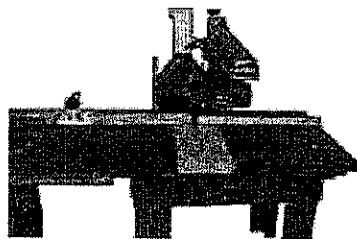
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

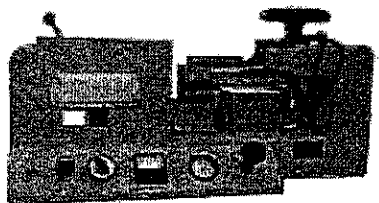
1. Eye protection is not necessary except when ripping. T F
2. The guard and kickback fingers must be in place when ripping. T F
3. The saw blade may safely extend beyond the table. T F
4. Some adjustments may be made while the machine is still running. T F
5. When ripping, one hand must hold the material and the other Hand-operate the saw. T F
6. In cross cutting, the saw should be returned to the rear of the arm upon the completion of each cut. T F



Plastics Injection Molder

For Safety --

1. Operate only with the instructor's permission and after you have received instruction.
2. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Make sure all guards are in place and operating properly.
4. Always use proper eye protection.
5. The injection molder operates with a heating unit – use with caution.
6. Do not over heat – match heat/time cycle with the material being used.
7. Observe and stay clear of pinch points.
8. Do not over pressure injection Molder Ran.
9. Make sure that the work piece has cooled before touching it.



Plastics Injection Molder

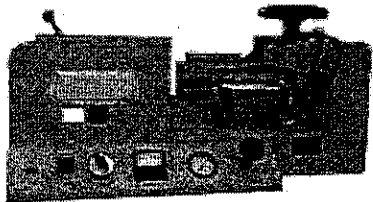
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

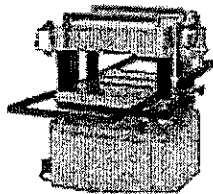
- | | | |
|---|---|---|
| 1. The injection molder cannot be over pressurized. | T | F |
| 2. The heat and time cycle should be matched with the type of material. | T | F |
| 3. There are no pinch points on this type of equipment. | T | F |
| 4. The work piece is usually too hot to touch with bare hands when formed or completed. | T | F |



Planer-Surfacers

For Safety --

- 1. Operate only with the instructor's permission and after you have received instruction.**
- 2. Remove jewelry, eliminate loose clothing, and confine long hair.**
- 3. Make sure all guards are in place and operating properly.**
- 4. Always use proper eye protection.**
5. Be sure to check all material for loose knots, nails and other foreign objects.
6. Do not force stock through the planer. Keep hands off the material & let the power feed operate.
7. Select the proper depth of cut and the rate of speed depending on the stock being planed.
8. Thin stock should be properly supported by a jig or back up board. Check with the instructor for minimum thickness and length.
9. Never look directly into the throat of a planer at table level while it is running or in operation.
10. Remove shavings or chips when the power is turned off. Keep hands away from the chip guard and the point of operation.
11. The possibility of kick back exists. Do not stand directly in front of the machine



Planer-Surfacer

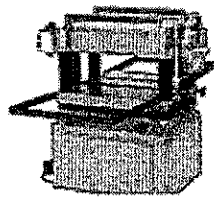
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

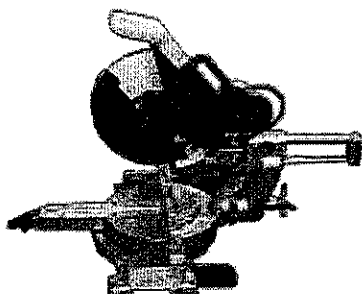
1. There is no real minimum thickness or length of stock that can be planed safely. T F
2. Stock should be pulled through the planer by hand. T F
3. You should never look into the throat area at table level. T F
4. The power should be turned off while removing chips or shavings. T F
5. A jig or other support is often needed for thin stock. T F
6. The proper depth of cut and rate of speed is related to the material being planed. T F



Motorized Miter Box

For Safety --

1. Operate only with the instructor's permission and after you have received instruction.
2. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Make sure all guards are in place and operating properly.
4. Always use proper eye protection.
5. Be sure the power is disconnected before making angle adjustments or changing blades.
6. Always hold the work firmly against the fence and table.
7. Install a new table if adequate support has been cut away.
8. Allow the motor to reach full speed before starting to cut.
9. Use the brake to stop the blade before removing scrap or chips from the work area.
10. Be sure all guards are functioning properly.



Motorized Miter Box

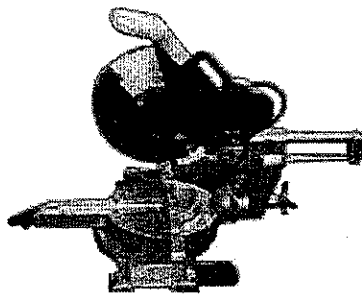
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

- | | | |
|--|---|---|
| 1. The table on this machine can be cut so often that it no longer gives safe support to the work. | T | F |
| 2. The machine should be stopped by pushing a piece of scrap against the side of the blade. | T | F |
| 3. The guards should be checked for proper operation before starting to use the machine. | T | F |
| 4. The brake button can be used to stop the blade from turning. | T | F |
| 5. Eye protection is not required when using this machine. | T | F |



Vertical Milling Machine

For Safety -- --

1. Operate only with the instructor's permission and after you have received instruction.
2. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Make sure all guards are in place and operating properly.
4. Always use proper eye protection.
5. Make all adjustments with the power off.
6. Be sure the cutter is tightly held in the collet and material is securely held by a vise, clamps, or magnetic chuck.
7. Check spindle rotation, speed, depth of cut and all power feed adjustments before starting the cut.
8. Keep hands away from the cutter. Remove chips with a brush after the machine is turned off.
9. Once a cutting pass is made do not back out or return to the starting position without proper clearance.
10. Remain with the machine for the duration of the cut.



Vertical Milling Machine

Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

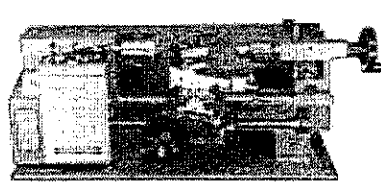
1. If a brush is used it is safe to remove chip while the machine is running. T F
2. All adjustments have to be made with the power turned off. T F
3. If machine is running slow eye protection is not necessary. T F
4. You can back out of a cut at any time without raising the quill or moving the table. T F
5. The work piece must be securely fastened to the table before beginning the cut. T F



Metal Lathe

For Safety --

- 1. Operate only with the instructor's permission and after you have received instruction.**
- 2. Remove jewelry, eliminate loose clothing, and confine long hair.**
- 3. Make sure all guards are in place and operating properly.**
- 4. Always use proper eye protection.**
5. Never leave the chuck key in the lathe chuck.
6. Rotate the spindle by hand to check the clearance before engaging the power.
7. Remove chips with the power off and with a brush, never by hand.
8. Make sure the work is secure and lathe is set at the correct speed and feed before a starting cut.
9. Handle chucks and face plates carefully. Never adjust the tool bit when the tool holder is hand held.
10. Remove the tool holder and tool post before filing or polishing.
11. Do not stop a lathe chuck by hand; allow it to coast to a stop. Keep hands away from all moving parts.



Metal Lathe

Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

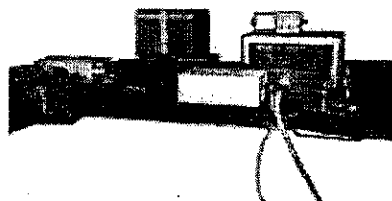
1. A brush should be used for removing chips. T F
2. Eye protection is required. T F
3. The chuck key remains in the chuck when the machine is stopped. T F
4. It is safe to turn the machine by hand before starting. T F
5. The chuck rotation can be stopped by hand. T F
6. The tool bit should be adjusted only when the tool holder is locked in the tool post. T F



LASER

For Safety --

- 1. Operate only with the instructor's permission and after you have received instruction.**
- 2. Remove jewelry, eliminate loose clothing, and confine long hair.**
- 3. Make sure all guards are in place and operating properly.**
- 4. Always use proper eye protection.**
5. Do not look into the primary beam.
6. Do not use binoculars or telescopes to view the primary beam.
7. Do not operate Lasers over a CLASS II rating.
8. Follow manufacturer's procedures and safety rules.
9. Never point the laser at another individual or at a reflective surface.



Laser

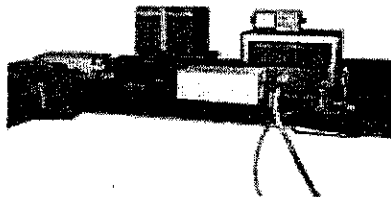
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

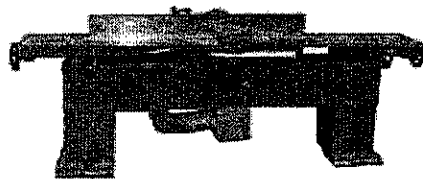
- | | | |
|--|---|---|
| 1. All safety procedures related to electrical safety need to be followed. | T | F |
| 2. Do not look directly at the LASER beam. | T | F |
| 3. Do not use binoculars or telescopes to look at the LASER beam. | T | F |
| 4. Students are permitted to use class III Lasers. | T | F |
| 5. Never point the LASER beam at a reflective surface. | T | F |



Jointer

For Safety --

- 1. Operate only with the instructor's permission and after you have received instruction.**
- 2. Remove jewelry, eliminate loose clothing, and confine long hair.**
- 3. Make sure all guards are in place and operating properly.**
- 4. Always use proper eye protection.**
5. Make all adjustments with the power turned off.
6. A push stick or push block must be used when hands would pass over or within 2" of the cutter head.
7. Do not make cuts more than 1/8" thick without your instructor's permission.
8. The absolute minimum length of material that may be jointed is twice the size of the knives – 6" jointer, 12" long, – 8" jointer, 16" long.
9. Do not adjust or move the rear or out feed table without permission.



Jointer

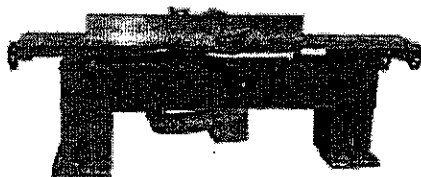
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

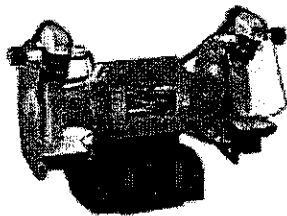
1. The jointer can be operated with a guard that sticks open. T F
2. A push stick should be used when the hands could get close to the cutter. T F
3. Eye protection is not necessary when operating a jointer. T F
4. Permission should be obtained before using the jointer. T F
5. Stock shorter than 6" may be processed on a jointer with 6" knives. T F
6. In order to remove 3/8" you should make three passes 1/8" deep. T F



Grinder

For Safety--

1. Operate only with the instructor's permission and after you have received instruction.
2. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Make sure all guards are in place and operating properly.
4. Always use proper eye protection.
5. The tool rests must be adjusted to within 1/16" of the grinding wheel.
6. Spark deflectors must be adjusted to within 1/16" of the grinding wheels.
7. Do not grind on the side of the grinding wheels.
8. Stand to one side when starting the machine.
9. Discard or report grinding wheels that are excessively small or cracked.
10. Small work pieces should be held with "vise grip" type pliers.
11. Do not leave the machine until the grinding wheels have come to a full stop.



Grinder

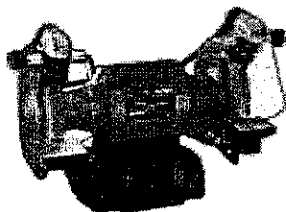
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

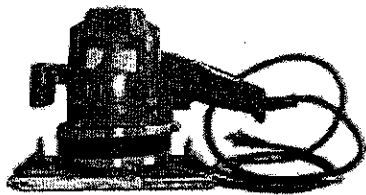
- | | | |
|--|---|---|
| 1. The tool rest should be adjusted to within ½” of the wheel. | T | F |
| 2. Eye protection is always necessary while grinding. | T | F |
| 3. Once the “off” switch is in the off position, the operator may leave. | T | F |
| 4. Wheels that are slightly cracked may be used. | T | F |
| 5. The spark arrestor is not necessary if there is a safety shield. | T | F |
| 6. When grinding a small piece of steel, “vise grips” are advised. | T | F |



Portable Electric Finishing Sander

For Safety --

1. Operate only with the instructor's permission and after you have Received instruction.
2. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Make sure all guards are in place and operating properly.
4. Always use proper eye protection.
5. Be sure the switch is in off position before connecting to the power source.
6. Make sure the abrasive sheet is in good condition and properly installed on the tool.
7. Start the tool above the work, set it down evenly and move slowly over a pattern area.
8. Lift the sander from the work before stopping the motor.
9. Do not set the sander on the workbench until it has stopped running.
10. Never lift or carry any portable electric tool by the power cord.



Portable Electric Finishing Sander

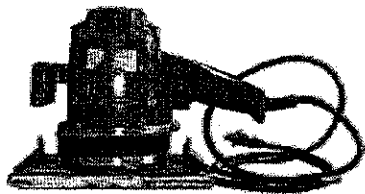
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

1. Eye protection must be worn when using the sander. T F
2. The abrasive sheet can be loosely clamped yet still be safe and efficient. T F
3. The sander should never be carried by the power cord. T F
4. The tool should be turned on only after it is placed tightly on the material to be sanded. T F
5. Lift the sander from the work before turning it off. T F



Portable Electric Drill

For Safety –

1. Operate only with the instructor's permission and after you have received instruction.
2. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Make sure all guards are in place and operating properly.
4. Always use proper eye protection.
5. Unplug the drill when changing bits.
6. Make sure the switch is off and the chuck key has been removed before connecting the drill to the power source.
7. Mark the whole location with a center punch (metal) or awl (wood) before drilling.
8. Be sure the work is tightly clamped or secure before drilling.
9. Drill with a straight even pressure.
10. Never lift or carry the drill by the electric cord.



Portable Electric Drill

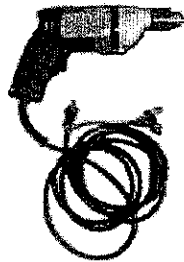
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

- | | | |
|---|---|---|
| 1. Eye protection is not really necessary when drilling wood. | T | F |
| 2. The drill should be unplugged when changing bits. | T | F |
| 3. It is all right to carry the drill by the cord. | T | F |
| 4. Even pressure should be used when drilling. | T | F |
| 5. The work should be clamped or secured while drilling. | T | F |



Drill Press

For Safety --

1. Operate only with the instructor's permission and after you have received instruction.
2. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Make sure all guards are in place and operating properly.
4. Always use proper eye protection.
5. Hold material securely with a vise or clamps.
6. Be sure the chuck key is removed from chuck.
7. Select a properly sharpened bit. For metal, center punch when hole is to be drilled.
8. Turn off the power if the work piece becomes caught in the drill. Do not stop the chuck rotation by hand.
9. Adjust the table or depth stop to avoid drilling into the table.
10. Select the correct speed, normally slower for metal – faster for wood. The larger



Drill Press

Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

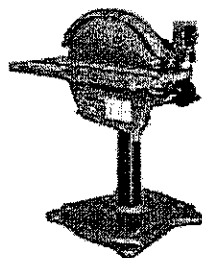
- | | | |
|--|---|---|
| 1. It is necessary to select the proper speed. | T | F |
| 2. The chuck key should be kept in the chuck at all times. | T | F |
| 3. Work should always be secured. | T | F |
| 4. Rings may be worn while operating a drill press. | T | F |
| 5. Center punching metal before drilling is not necessary. | T | F |
| 6. The drill can be operated at one speed for all kinds of work. | T | F |
| 7. The rotation of the chuck can be stopped by hand. | T | F |



Disc Finishing Machine

For Safety --

1. Operate only with the instructor's permission and after you have received instruction.
2. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Make sure all guards are in place and operating properly.
4. Always use proper eye protection.
5. Make sure adhesive is holding the abrasive disc tightly to the revolving platen.
6. The abrasive disc should not be torn or damaged.
7. Material should be held flat against the table and hands kept clear of the abrasive disc.
8. The table should be adjusted to within 1/16" of the disc.
9. Work must be done on the side of the disc rotating downward.
10. Do not leave this machine until it has coasted to a full stop or has been stopped



Disc Finishing Machine

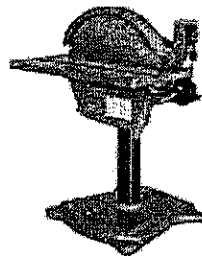
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

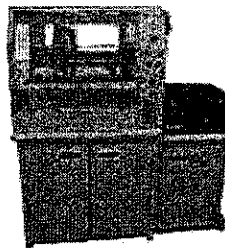
1. Sanding can be safely done on either the left or the right side of the rotating disc. T F
2. The Rim Guard is of no real value and can be removed for most operations. T F
3. The table should be adjusted to within 1/16" of the disc. T F
4. A piece of scrap lumber can be used to slow down and stop the Disc after turning off the power. T F
5. Safety glasses are required when operating this machine. T F



Computer Numerical Control (CNC)

For Safety --

- 1. Operate only with the instructor's permission and after you have received instruction.**
- 2. Remove jewelry, eliminate loose clothing, and confine long hair.**
- 3. Make sure all guards are in place and operating properly.**
- 4. Always use proper eye protection.**
5. Make certain the safety switch is off before setting up the machine or making adjustments.
6. Make sure the work piece is mounted or clamped securely.
7. Check spindle rotation, speed, depth of cut, and all power feed adjustments before starting the cut.
8. Brush away chips and shavings only when the machine is stopped.
9. Keep set up tools off machine and out of work area.
10. Remain with machine for the duration of its operation.



Computer Numerical Control

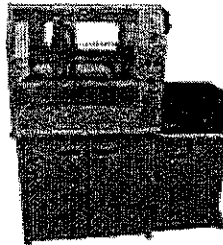
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

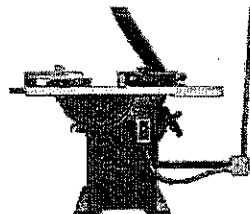
- | | | |
|--|---|---|
| 1. If a brush is used, it is safe to remove chips while the machine is running. | T | F |
| 2. All adjustments have to be made with the power turned off. | T | F |
| 3. If the machine is running slowly, you do not need not to wear safety glasses. | T | F |
| 4. The work must be securely fastened before beginning the cut. | T | F |
| 5. While on automatic or power feed it is permissible to leave the machine. | T | F |



Circular Saw

For Safety --

- 1. Operate only with the instructor's permission and after you have received instruction.**
- 2. Remove jewelry, eliminate loose clothing, and confine long hair.**
- 3. Make sure all guards are in place and operating properly.**
- 4. Always use proper eye protection.**
5. Make all adjustments and remove chips or dust with the power off.
6. Never use the miter gauge and fence together in the same operation.
7. The saw blade should extend above the work piece until the gullets of the blade clear the material.
8. Never saw free hand. Use the miter gauge when cross cutting, the fence when ripping.
9. Never reach over the saw blade.
10. Use extra care and precaution when sawing large material, or when using a dado or molding cutter head.
11. Use a push stick when ripping narrow stock or when hands would be close to the blade.
12. Do not stand in line of the cut when operating the saw.
13. Lower the blade and be sure it has come to a full stop before leaving the machine.



Circular Saw

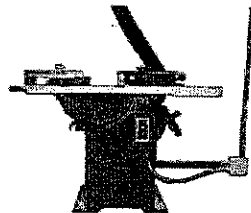
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

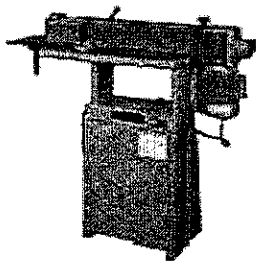
- | | | |
|--|---|---|
| 1. It is safe to saw free hand. | T | F |
| 2. The fence should be used at all times. | T | F |
| 3. The guard is not always necessary. | T | F |
| 4. When ripping, it is best to stand directly behind the blade. | T | F |
| 5. Eye protection should be worn when using a table saw. | T | F |
| 6. The saw blade should be adjusted so that the teeth clear the thickness of the material to the depth of the gullets. | T | F |
| 7. A helper or roller should be used when ripping long pieces. | T | F |
| 8. A push stick is necessary when ripping narrow stock. | T | F |



Belt Finishing Machine

For Safety -- --

- 1. Operate only with the instructor's permission and after you have received instruction.**
- 2. Remove jewelry, eliminate loose clothing, and confine long hair.**
- 3. Make sure all guards are in place and operating properly.**
- 4. Always use proper eye protection.**
5. Make all adjustments except final belt tracking with the power off.
6. Make sure there is adequate tension on the belt and that it is not torn.
7. When changing belts, make sure that the belt runs in the direction indicated by the arrows.
8. The table should be adjusted to within 1/16" of the abrasive belt.
9. Keep hands clear of the abrasive belt while operating and keep material flat on the table.
10. The belt must be adjusted so that it tracks correctly.



Belt Finishing Machine

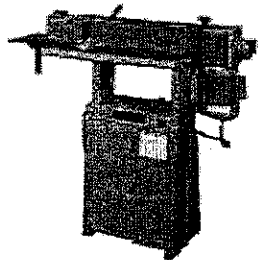
Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

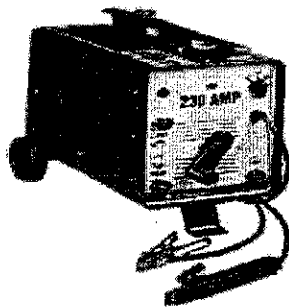
1. Loose clothing could be a problem while operating this machine. T F
2. The table should be 1/4" away from the belt for adequate clearance. T F
3. Belt tracking should be checked before using this machine. T F
4. There are directional arrows inside the belt. T F
5. The guards should not be removed from this machine. T F



Arc Welder

For Safety --

1. Operate only with the instructor's permission and after you have received instruction.
2. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Make sure all guards are in place and operating properly.
4. Always use proper eye protection.
5. A welding helmet must be worn when welding.
6. Proper ventilation must be available.
7. Goggles must be worn when chipping slag.
8. Others in the area must be warned prior to striking an arc.
9. Gloves and proper clothing must be worn when welding.
10. Closed containers should not be welded without the instructor's permission.
11. Cables, clamps and the electrode holder should be checked to make sure they are working properly.
12. Screens to protect others must be in place before welding is started.



Arc Welder

Name: _____

Class: _____

Date: _____ Grade: _____

Safety Quiz

- | | | |
|--|---|---|
| 1. You should warn anyone working near you before you start to weld. | T | F |
| 2. Goggles as well as a welding hood should be available before you start to weld. | T | F |
| 3. A closed container is dangerous to weld. | T | F |
| 4. Gloves are not necessary when welding. | T | F |
| 5. It is dangerous to weld without proper ventilation. | T | F |
| 6. No special clothes are required when welding. | T | F |

