

Forestry, Daniels UoFT

Woodshop - ES1007

SAFETY WORKSHEET

GENERAL SAFETY

- All projects should be pre-approved by your instructor.
- Dress appropriately, remove or fasten any loose clothing, roll sleeves above elbows. Loose hair, and jewelry are not safe, can easily catch in revolving machine parts.
- Covered shoes must always be worn in the shop.
- Wear eye and ear protection when equipment is in operation.
- Observe rules concerning machine operator's safety zone.
- Keep the workspace clean, use a brush to clear away wood chips from any machine and work bench, keep the floor clear of scraps and litter.
- Keep tools and wood from hanging over the edge of benches whenever possible.
- Wipe up immediately any liquid spilled on the floor with a rag or paper towel.
- Keep cabinet drawers, lockers and doors closed.
- Exercise care in lifting large, heavy, and long pieces of material.
- Know the safety procedure to follow in case of fire or other extreme events.
- Report all injuries to the supervisor immediately.
- Clean the shop at the end of the working period.
- Long pants (no shorts, no skirts) must be worn in the workshop

MACHINE SAFETY

- Make sure you understand how to operate each machine before starting your project.
- Always work with a plan of procedure. List every step and think through each one ahead of time.
- Before you plug in a machine, make sure the switch is in the "off" position. Check the setup on machines before turning on the power.
- Keep all power cords away from blades and cutters while you work.
- Make sure that all students are clear of the machines when turning on the power.
- Keep all machine safety guards in correct position.
- Always keep your hands a safe distance from cutters and blades, always keep your eyes on the cutting action. Concentrate on what you are doing at all times.
- When starting a machine, remain with it until you have turned off and it has become to a complete stop. Never walk away from a machine that is in motion.
- Stay clear of machines being operated by others. Never talk to or distract a person operating a machine. If you must talk to an operator, wait until the operator notices you.
- Report to the supervisor immediately any power machines that does not seem to work properly.
- Wait for machine to come to a complete stop before adjusting.

- If unsure of the proper operation of any machine, tool or process throughout this course, ask your supervisor.
- If you are fearful of using a machine, do not hesitate to inform your supervisor.
- Never operate a power tool when alone in the shop.
- Defects in the wood can be dangerous. Check the stock carefully for knots, splits, and other defects.
- Keep the machine clean. 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 running.
- Be alert for any odors that might indicate overheating of the machine or stock.
- Keep the work area clean. Remove all debris when you are finished.
- Never work in or around water with power tools. Water increases the chances of severe electrical shock.
- Stand in a comfortable, balanced position when working with power tools. Both feet should be firmly on the floor.
- Do not use the machine until it is operating at full speed.

Table Saw Safety

- Know and follow the general safety rules for operating power tools.
- You cannot use the guard for all operations. Have your supervisor check any setup that does not include the guard. Special setups should also be checked by your supervisor. - Never cut freehand on the table saw. Use the rip fence for ripping and the miter gauge for crosscutting.
- Always maintain control of the stock between the fence and the table. Use your hand to push the stock away from the blade. Use a push stick for narrow stock. This will prevent a kickback.
- Never stand directly behind the blade.
- Never place your hands in line with the cut.
- Use a sharp blade. Dull blades are dangerous. They are more likely to cause kickbacks. Dull blades also require more pushing. This increases the chances of your hand slipping.
- The stock must lie flat on the table. Never cut warped or twisted stock on a table saw. Edges placed against the rip fence must be straight.
- Helpers should only support and hold stock. They should never pull or push the stock through the blade. The operator should always be in control.
- Never remove scrap cuttings from around the blade unless the machine has been turned off and has come to a complete stop.
- Never use the fence as guide if the distance between the blade and the fence will be greater than the length of stock against the fence.
- Clamp a clearance 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 1/8 inch (3 mm) above the surface of the stock.
- Lower the blade below the table when you finish with the saw. Do not leave the machine until the blade comes to a complete stop.

Sanding Safety

- Know and follow the general safety rules for operating power tools.
- Do not operate a sander with a torn belt or loose disc.
- Disconnect the power before changing abrasives.

Portable Sander

- Be sure the switch is off before connecting the power.
- Always clamp or hold the stock securely when using portable electric sanders.
- Keep your fingers away from the abrasive. The abrasive can quickly remove skin.
- Always let portable sanders reach full speed before setting them on the stock.
- Always lift portable sanders from the stock before turning them off.
- Wait until portable sanders come to a complete stop before setting them down.
- Use only light pressure, just enough to hold the work against the abrasive.

Stationary Disc Sander

- Do not use the disc sander until it reaches full speed.
- Always work on the side of the disc that is turning down.
- Hold the stock firmly on the table.
- Apply light pressure against the rotating disc.
- Reduce the pressure if the disc starts to slow down.

Surfacer Safety

- Know and follow the general safety rules for operating power tools.
- Remove all loose 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 12 inches (300 mm), or more.
- Never stand directly behind a board being surfaced. The stock could kick back and cause an injury.
- Never look into the surfacer while the cutterhead is rotating.
- Make sure one face is flat before you surface a board. Place the flat face against the table.
- If a board does not feed through the surfacer, turn off the power. Wait until the cutterhead stops completely. Then lower the table and remove the board.
- Keep your hands away from the areas around the feed rolls. You could easily pinch your fingers in these areas.
- Feed the stock with the grain. Otherwise, the stock can chip and break. The pieces can then be thrown from the surfacer.

Drill Press Safety

Each job on the drill press requires several preparations. You must choose the correct drill or bit and install it. You must adjust the speed according to hole size. You then need to clamp the table at the correct height and position. Finally, you must set the depth stop for the desired cutting depth. Many different drills and bits are used in the drill press. You need to select the right one for the material and type of job. For woodworking, drill

presses run at speeds from 450 to 4700 rpm/s. Set the speed according to the hole size and hardness of the wood. For large holes (1/2 inch or more) and hard wood, use the lowest speeds. Use higher speeds for small holes.

- Know and follow the general safety rules for operating power tools.
- Never leave the chuck wrench in the chuck. Remove the chuck wrench immediately after installing or removing a cutting tool.
- Clamp small pieces of stock. Also, clamp the stock when you cut large holes. The cutter could pull the stock from your hand.
- If you are not sure you can hold the stock, clamp it.
- Keep your fingers away from the rotating cutters.
- Use only straight-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 speed 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 off and step back. Wait until the machine stops completely before removing the stock. - Never leave a machine until it has come to a complete stop.

Band Saw Safety

- Know and follow the general safety rules for operating power tools.
- Adjust the upper guide so it is from 1/8 to 1/4 inch (3 to 6 mm) above the stock. - Keep your hands out of line with the blade. Keep your fingers at least 2 inches (50 mm) from the blade at all times. Planning your cuts will help you avoid unsafe positioning.
- Never stand on the right side of a band saw. If the blade breaks, this is a dangerous area.
- Do not start cutting until the machine has reached full running speed.
- Avoid backing out of long cuts and curves. Plan your cuts and make relief cuts. When you must back out of a long cut, turn off the machine. Wait until the blade stops to back out.
- If the machine is making unusual noise, turn it off. If it is not running properly, turn it off. Wait until it completely stops. Then immediately ask your supervisor for help.
- If the blade breaks, turn off the machine. Then ask your supervisor for help. - If you cut round or cylindrical stock, clamp 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 right-handed, stand slightly to the left of the table. Use your right hand to feed the stock. Use your left hand to guide it. Apply even, forward pressure.

IMPORTANT NOTE

Please make sure you read and understand the safety rules and adopt a safe attitude while working in woodshop. The instructor, supervisor and University of Toronto are not responsible nor liable for any injuries.