

PPE- Personal Protection Equipment

Items used to protect your body and health from hazards or harm.

This includes:

Safety Glasses, in ear Hearing Protection, over ear Hearing Protection,
Dust Mask, Respirator

This does **NOT** include:

Headphones and Earbuds are **not** hearing protection. Personal audio inhibits communication and reduces your awareness of your surroundings.

PPE

Personal Protective Equipment

Please see posted requirements on Fabrication Shop door entrances
and see a TS with any questions you may have.



Eye Protection:
must meet Z 87+ impact rating.



Hearing Protection:
must allow partial hearing for
communication. No music ability.



Particulate Mask:
must be worn in dusty environments.



Respirator:
must be worn in environments
with toxic vapors.

Appropriate Attire-

Proper clothing is important to personal safety..

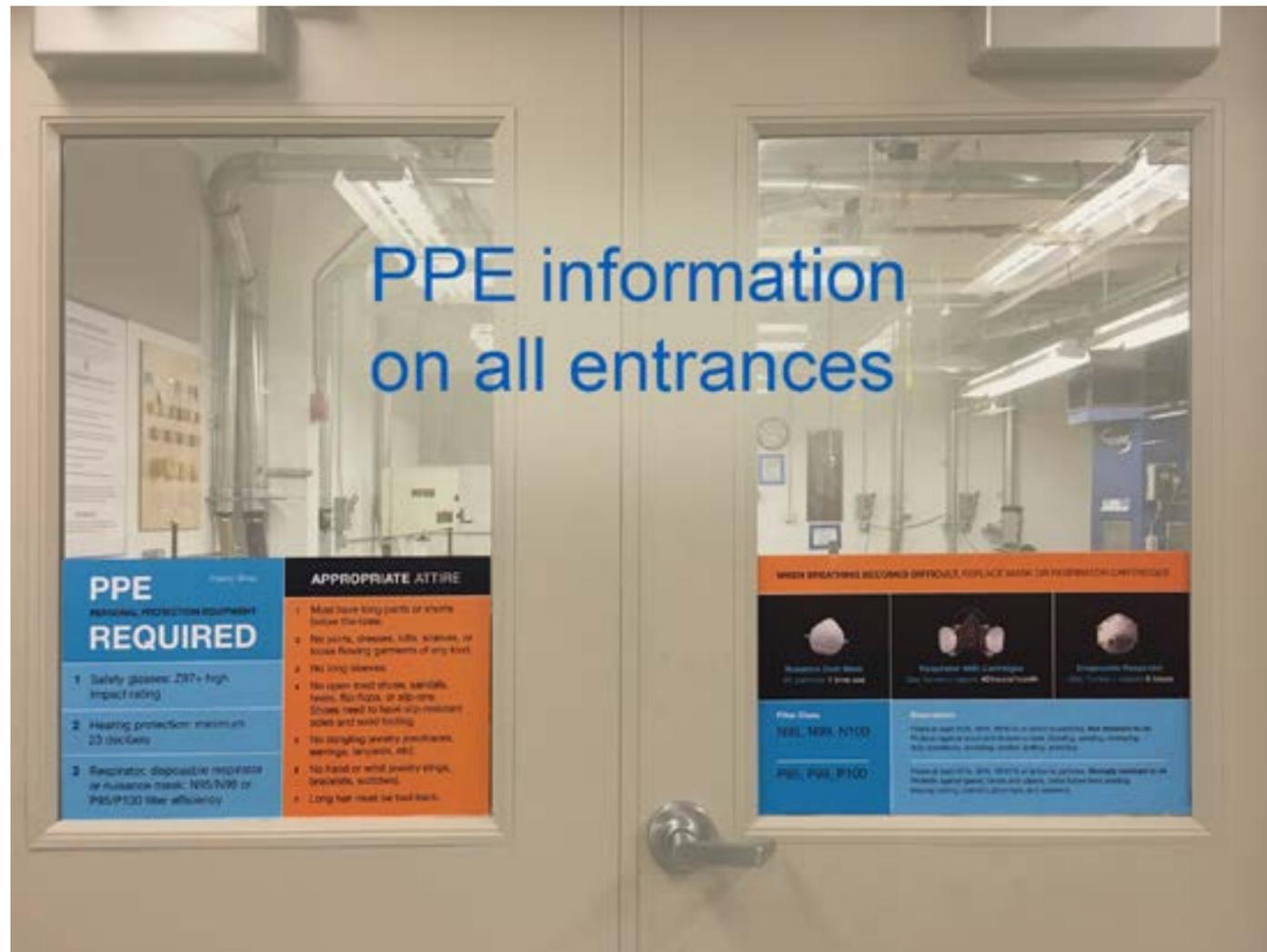
This includes:

Tight fitting Clothing, Long Pants, Shoes with full coverage and non-slip
soles, No Jewelry on wrists and fingers, Long Hair must be tied back.

Metal Shop Attire must be of cotton material or other natural materials.

Polyester, Rayon, Spandex, etc. is a synthetic material and a hazard.

PPE Signage- Signs located on the entrances, specify the required PPE and appropriate attire for each shop or room in Fabrication Studios.



Personal Safety- Sobriety, being well rested, awareness of surroundings and avoiding the need to rush is very important. Consider what you wear in the shop spaces. Loose clothing is dangerous, shorts do not protect, tie-back long hair, no jewelry on hands or wrists. Shoes should have good traction and cover your feet.

Safety Data Sheets (SDS) – Resource for information provided by the manufacturers about the materials and chemicals used in the Fabrication Studios. Students should look up provided SDS sheets on a material or chemical they intend to use for precautions and interactive compatibility.



(SDS) Safety Data Sheet location

First Aid Cabinet in Fab Studios- These are located in the Wood Shop and Metal Shop. The cabinets must remain closed when not in use. First Aid Cabinets and Eye Wash Stations can be found in other departments around the school.



Emergency Stop Button- These are red button push switches in the shops that turn off electrical power to all equipment. Students or staff should press these in case of an emergency and prevent possible injury.



Dust Collection System- collects dust and particles made by cutting with shop machinery. This improves air quality and creates a cleaner, safer working environment.



Air Revolver- This system captures harmful fumes and particulate and pulls them through filters. Fumes from cutting some plastic, for example, can be unhealthy.



FABRICATION STUDIOS

Shops and Rooms

Wood Shop Rm.218- This Shop is where all wood materials are to be worked on. It has saws, drills, sanders and other tools used in woodworking.

Plastics Shop Rm.218B- This Shop is only for plastic and foam. There is a dust collector unit and an air filtration unit that must be on while in use. There are saws, vacuum former, sanders, drills and a lathe in this room. These tools have special bits and blades suited for synthetic materials.

Machining Shop Rm.218C- This Shop is designated for use of the milling machine, the metal lathe, the Shopbot 3-axis and 5-axis CNC, and sharpening station.

Metal Shop Rm.213- This Shop is where all metal materials are to be worked on. This Shop has welding, drills, saws, forges, bending of metal rods and sheet metal, amongst other tools used in metal work.

Plaster and Stone Room Rm.214- This room can be used for plaster, stone, and concrete. There are special procedures in discarding certain material for this room.

Oil Based Clay Room Rm.215- This room uses only the provided red oil clay used by Transportation Design. You may not use any other clay in this room as it would contaminate this clay.

Spray Mount Room Rm.216- This room has a downdraft table that must be on while using spray mount adhesive. Only spray adhesives can be sprayed here. There is a large table for laminating artwork to surfaces and trimming edges.

Spray Paint Booth Rm.217- This room has exhaust ventilation fan that must be on while in use. Only use spray paint, lacquers, fixatives and finishing products in this room. NO spray adhesives.

Downdraft Table- captures, fumes, and dust right where you work. Downdraft tables pull the overspray glue particles down into the table and through a series of filters, recirculating fresh air into the room. Spray adhesive only, NO spray paint or fixative.



Spray Paint Booth- This room has an exhaust ventilation fan that must be on while in use. Only use spray paint, lacquers, fixatives and finishing products in this room. NO spray adhesives.



Flammables Cabinet- These cabinets must be used to store anything flammable, such as paints, thinners, aerosol cans, etc.



Oily Rag Safety Can- This can must be used to dispose of oily rags or rags soaked in solvent based liquids to eliminate spontaneous combustion.



Pneumatic Nailer- A pneumatic nailer is a type of hand tool used to drive nails into wood or some other kind of material by compressed air.



Cordless Drill- a hand tool fitted with a chuck that holds a variety of drill bits used to drill holes in various materials.





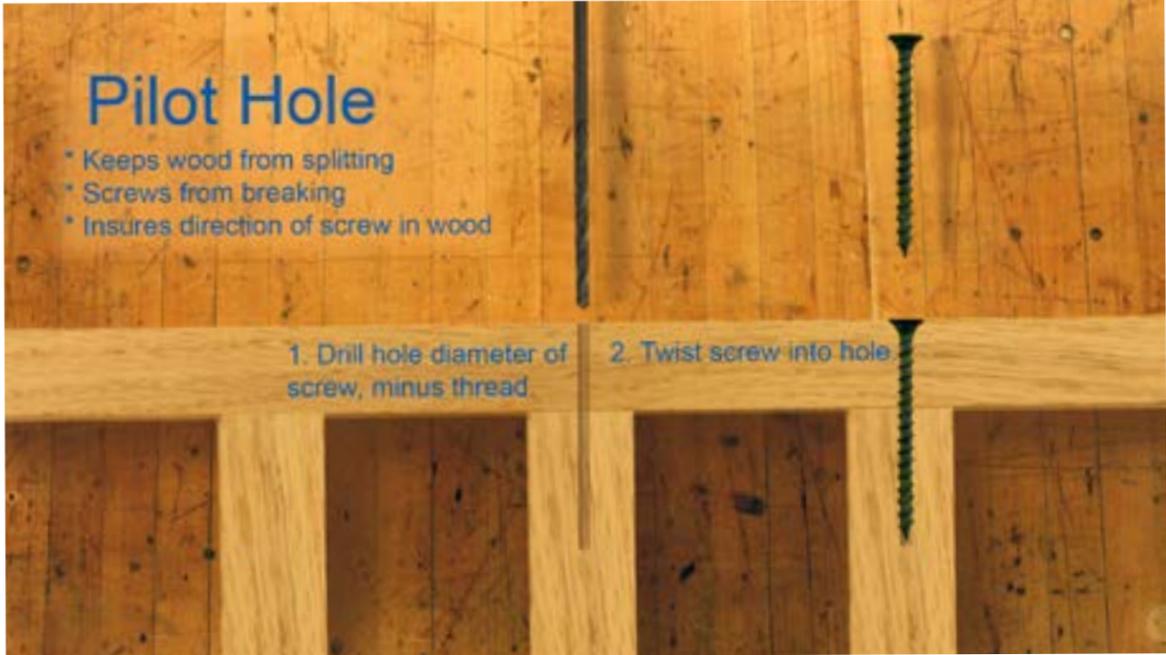
Impact Driver- This tool has significant increase in torque and much better control over a cordless drill while driving screws. It also means you are much less likely to strip screw heads and you can drive very long screws with less effort.



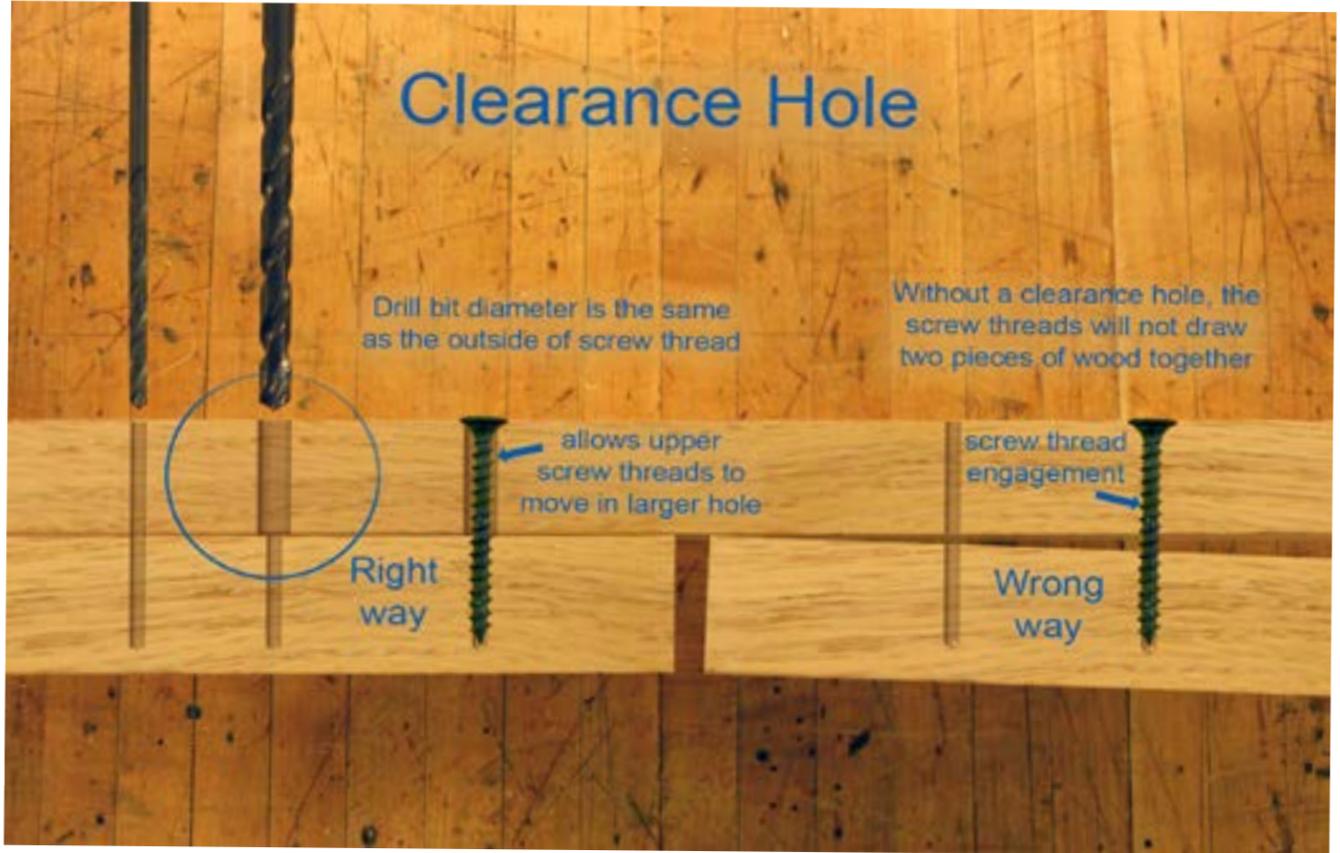
Driver Bits- used in Cordless Drills and Impact Drivers to drive screws into material. There are many different types of drivers to match same type of screws.



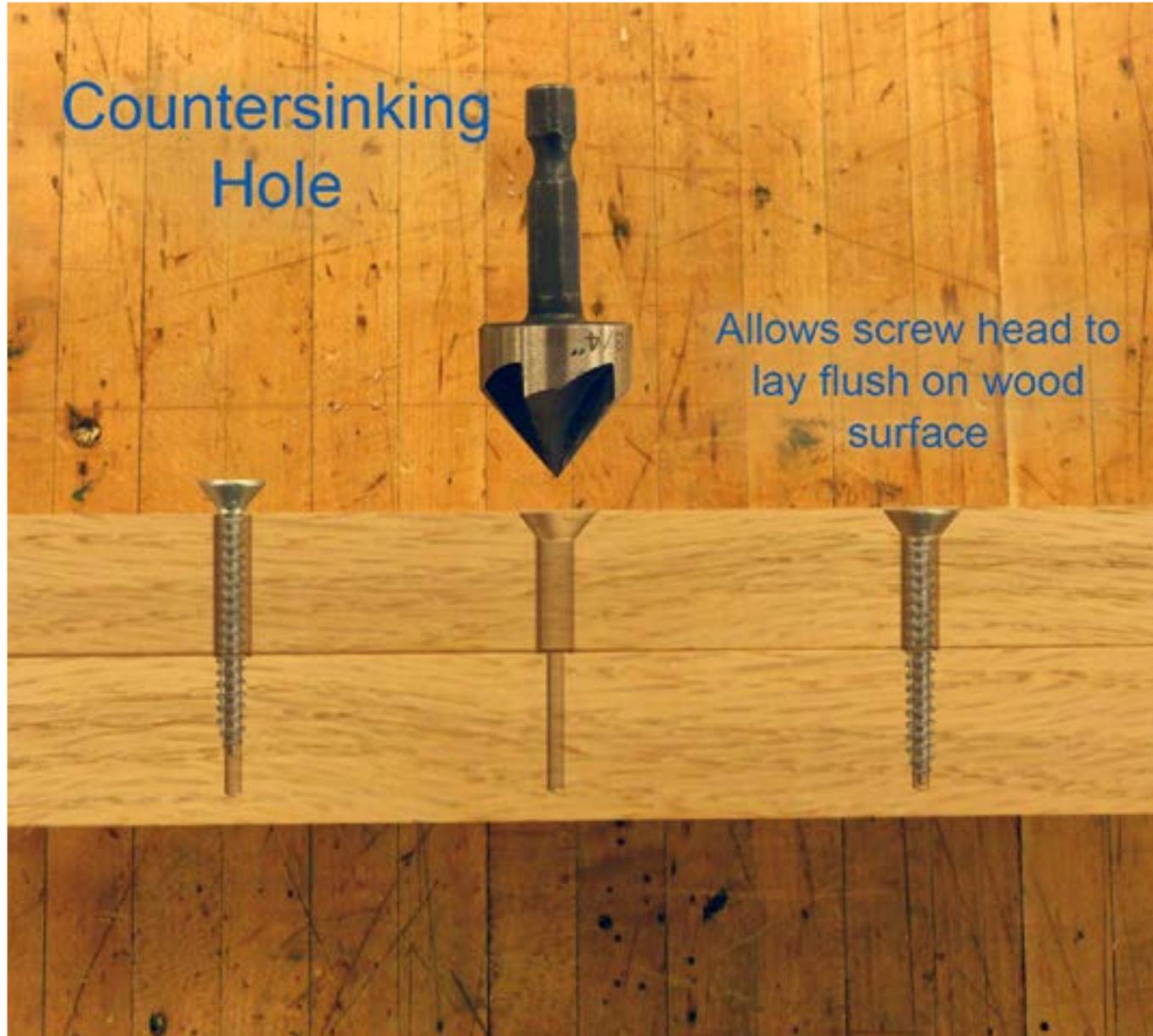
Pilot Holes- Pilot holes help to guarantee that your screw will be less likely to split your material. You will get the best results using screws when you drill correctly sized clearance and pilot holes.



Clearance Holes- Clearance holes enlarge the pilot hole in the top board to allow the screws threads to slide through. This allows the screw to pull the two boards together.



Countersink- after drilling a pilot hole, countersinking creates a recess for the screw head so that it sits flush to the surface.

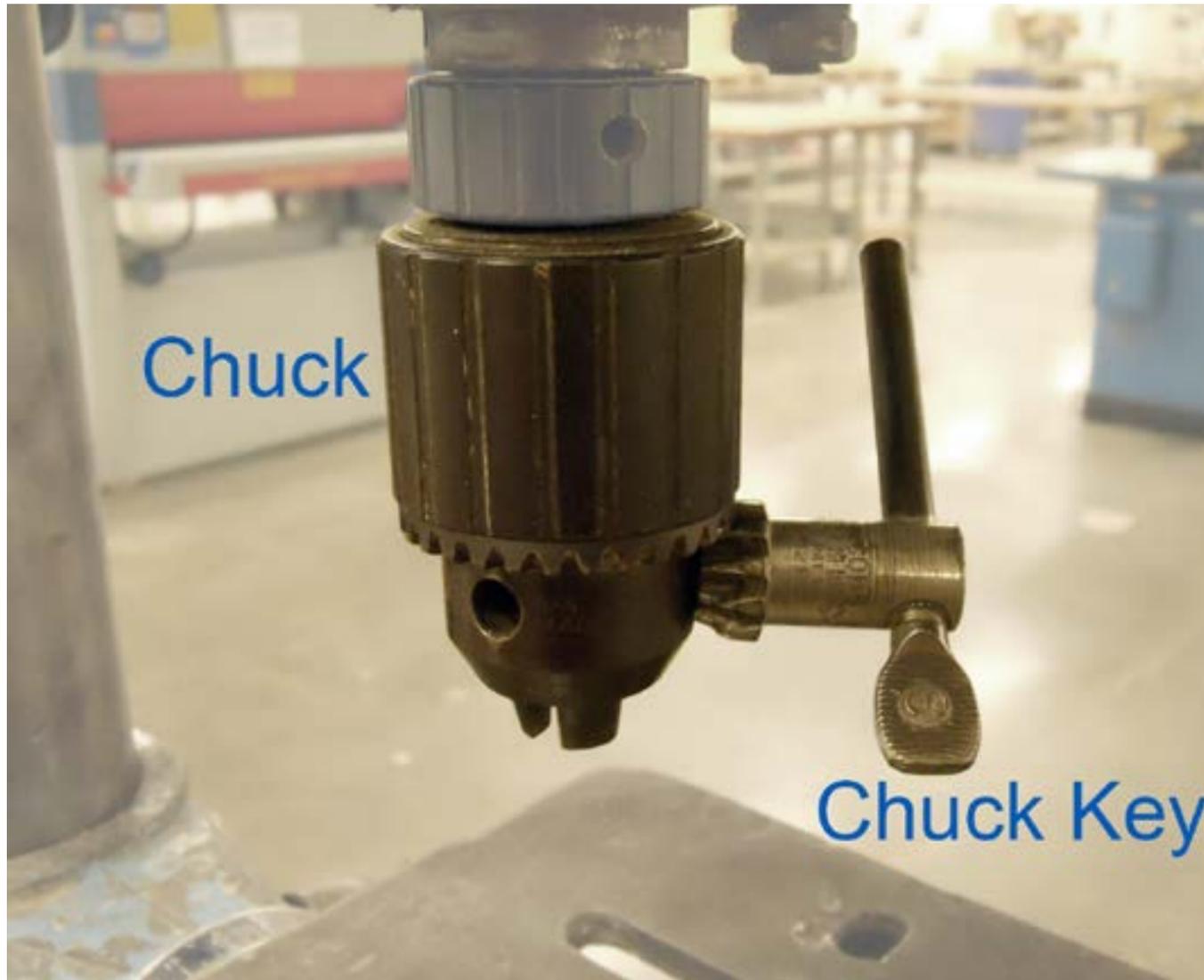


Drill Press- Drill press is a machine tool for drilling holes, on a fixed stand. It has more control and accuracy than the corded/cordless hand drills.



Chuck- A chuck is used to clamp and center a drill bit into a drill or drill press.

Chuck Key- A chuck key is a small metal tool for tightening the chuck of a drill so that it holds the bit securely.



Drill Bit- Drill bits are cutting tools used to create cylindrical holes. Drill bits come in many sizes and each type has its own advantage.

Twist Bit- the most widely used of all drill bit types; they will cut any material from wood, plastic or steel. Bits range in diameters from 1/16 to 1/2 in increments of 1/64.



Brad Point- Brad point tip provides accurate positioning for starting the hole where an exact location is required in wood or plastic, and cannot be used for metal.



Forstner Bit- A Forstner bit bores precise, flat-bottomed holes in wood.



Spade / Paddle Bit- used for rough boring in wood. The longer bradpoints aid in directing the bit for angled cuts.



Hole Saw- Hole saws are used for making relatively large holes in thin material. They remove material only from the edge of the hole, cutting out an intact disc of material.



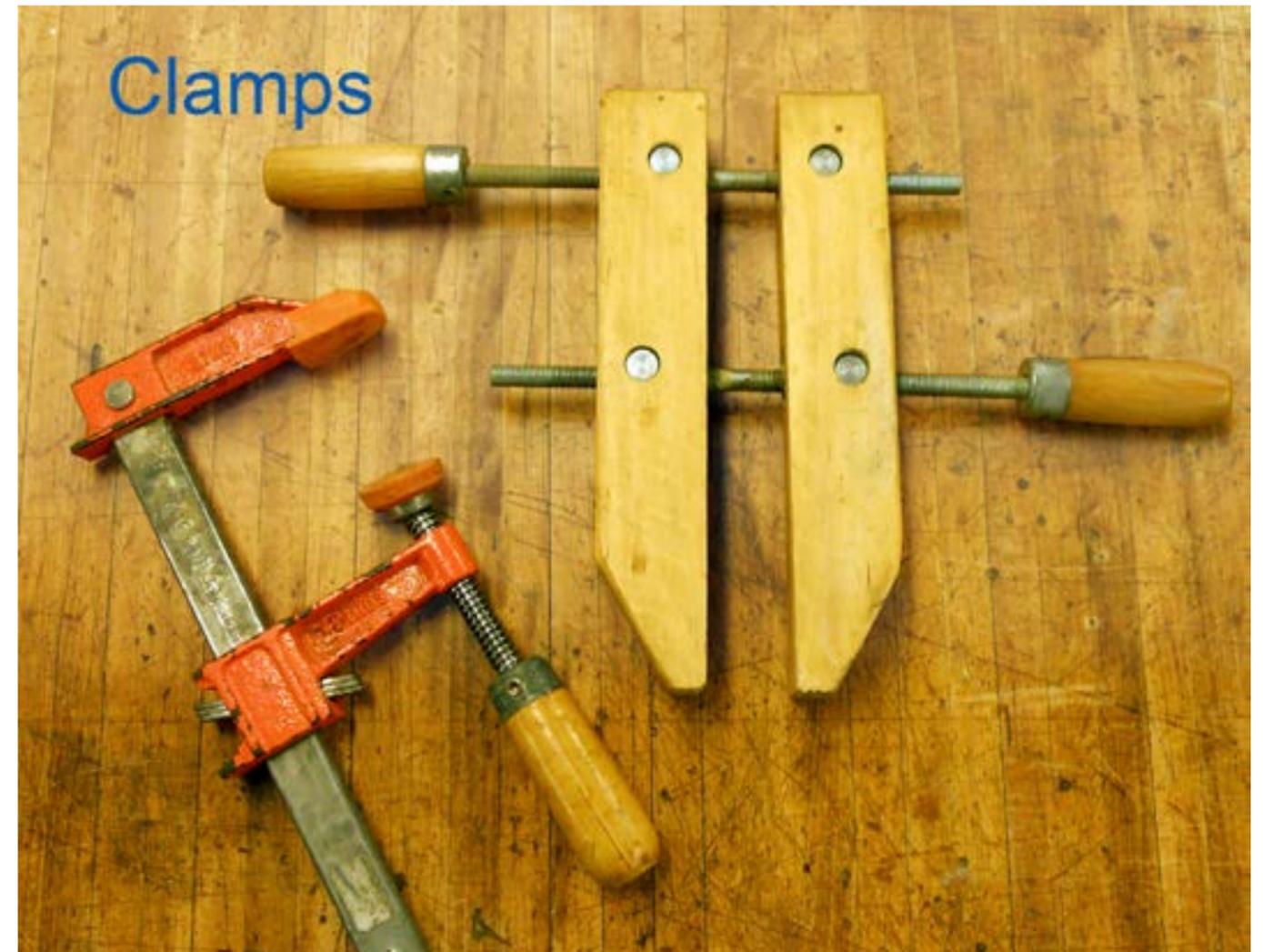
Jig Saw- is a hand tool with a reciprocating saw blade used to make curved or straight cuts into a piece of wood, metal, or other material.



Sacrificial Wood- a piece of wood, wooden fixture or jig used to improve a tools function, protect the user, safe guard the machine or insure quality of work. These are damaged in use and are replaced routinely.



Clamp- A clamp is a fastening device to hold or secure objects tightly together to prevent movement during glueing or some shop processes.



Fixture- a fixture or custom tool used to control the location or motion of another tool. It might also increase a machines capacity or capability.

Jig- a jig provides accuracy, repeatability and stability. The example shown is a “V” Block used to safely control cutting cylindrical dowels.

