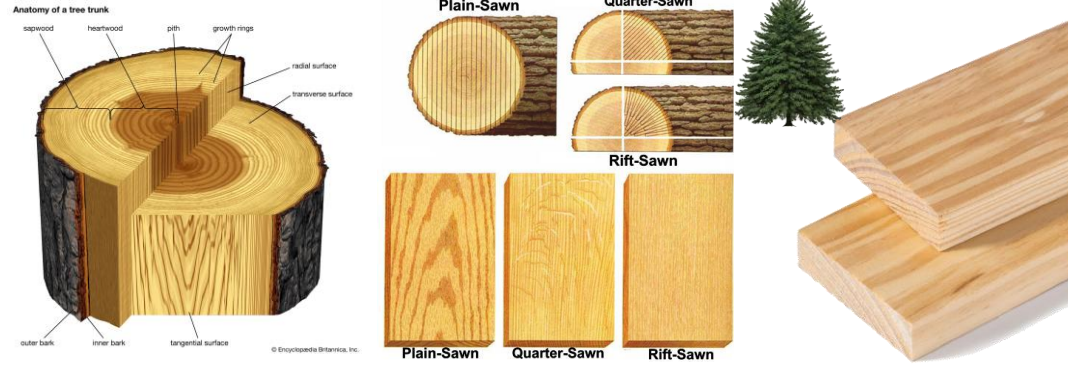


# Year 7- Skills

## What is pine wood?

**Pine wood** is the wood that comes from pine trees, which are a type of evergreen tree. It is light in color, usually pale yellow or light brown, and is known for being soft and easy to work with. Pine wood is commonly used in construction, furniture making, and other woodworking projects because it's relatively affordable and easy to shape. It also has a pleasant, natural scent.



## What finishes can be used on timber?

Timber finishes are coatings or treatments applied to wood to protect it, enhance its appearance, and extend its lifespan. These finishes can be clear or colored and serve different purposes, such as protecting the wood from moisture, dirt, and wear. Common types of timber finishes include:

**Varnish** – A clear, glossy finish that provides a hard protective layer. It's often used for furniture or wooden floors.

**Lacquer** – A smooth, high-gloss finish that dries quickly and creates a hard, durable surface. It's commonly used for furniture and cabinetry.

**Oil** – Natural oils, like tung or linseed oil, soak into the wood to nourish and protect it while enhancing the wood's natural grain. It gives a more natural, matte look.

**Stain** – A coloured finish that changes the wood's appearance without covering its grain. It helps to darken or change the wood's color while still allowing the texture to show.

**Gloss or Satin Paint** – These types of paints create a shiny or semi-shiny finish on wood, providing a sleek, smooth surface. They are often used for indoor furniture, doors, and trim.

**Matte or Flat Paint** – This type of paint creates a non-reflective finish and is often used when a more natural or understated look is desired.

## KEY WORDS

Mechanism	A device that transforms input forces and movement into a desired set of output forces and movement
Pine Wood	The timber from pine tree
Drill Bit	Used to create holes and power them for cutting through the workpiece, typically by rotation
Fineliner	A class of fine fibre or plastic tip pens that are typically used for graphic, drawing or sketching purposes
End User	The person who actually uses a particular product
Laser Cutter	A laser used to cut different materials including artistic applications such as etching
Scale	A size or extent of an object
Computer Aided Design	The use of computers to aid in the creation of a design
Computer Aided Manufacture	The manufacturing of goods controlled and automated by computer and robot
Designer	A person who plans the look or workings of something prior to it being made, by preparing drawings or plans.



### Untreated wood

Beech Oak Walnut



### What type of drill bit will I be using?

An **HSS (High-Speed Steel) drill bit** is a type of drill bit made from high-speed steel, which is a durable and heat-resistant material. HSS drill bits are commonly used for drilling into a variety of materials, including wood, metal, plastic.

#### **Key Features of HSS Drill Bits:**

**Durability:** HSS is designed to withstand high temperatures and wear, making these drill bits long-lasting, even during high-speed drilling.

**Heat Resistance:** HSS drill bits can retain their hardness and cutting ability even when subjected to high temperatures, which can occur during drilling at high speeds.

**Adaptability:** HSS bits can be used for drilling into a wide range of materials, especially metals (such as mild steel, aluminum, and brass), as well as plastics and wood.

There are a range of HSS drill bits, for your pencil holder you will be using the standard HSS bit. Standard HSS drill bits are general-purpose bits suitable for light to medium-duty drilling tasks, such as drilling into soft metals or wood.



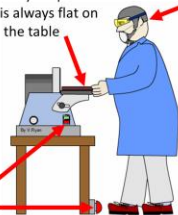
### **Belt sander**



Make sure your piece of work is always flat on the table

Goggles!

Know where the stop button is!



**Pillar drill**

### What is a pillar drill?

A **pillar drill** is a free-standing machine tool that uses a high-powered motor to rotate drill bits at variable speeds to make holes in materials like wood, metal and plastic.

#### **Health and safety precaution when using a pillar drill:**

- Do not use pillar drill unless correctly inducted by your class teacher and your teacher is present to supervise you
- Remember to wear your personal protective equipment (PPE) (goggles and apron/labcoat), hair must be tied up, ties must be tucked in
- Ensure you have completed marking out on your work
- Use a vice to secure your timber before turning on the drill
- Only one person should stand in yellow box when using pillar drill
- Press emergency stop (red button) in case of an emergency.
- Turn off pillar drill after use



### What is a belt sander?

A **belt sander** is a power tool used for smoothing or shaping surfaces. It works by using a continuous loop of sandpaper (the belt) that rotates around two drums. The user guides the sander over the surface to remove material, typically to smooth wood, metal, or plastic. Belt sanders are effective for quickly removing material.

#### **Health and safety precaution when using a belt sander:**

- Do not use pillar drill unless correctly inducted by your class teacher and your teacher is present to supervise you
- Remember to wear your personal protective equipment (PPE) (goggles and apron/labcoat), hair must be tied up, ties must be tucked in
- Ensure extraction units are switched on
- Piece of work must be place flat onto the belt sander bed before sanding
- Only one person should stand in yellow box when using pillar drill
- Press emergency stop (red button) in case of an emergency.
- Turn off belt sander after use

### What is a coping saw?

A **coping saw** is used for cutting intricate or curved shapes in wood, plastic, or thin materials. I has a thin, narrow blade held under tension in a C-shaped frame, which allows for good movement compared to a regular saw. The blade is typically fine-toothed, making it ideal for detailed work like cutting mouldings, joints, or patterns.

Large arched frame allows you to cut out shapes easily



Thin saw blade.  
These can be replaced.