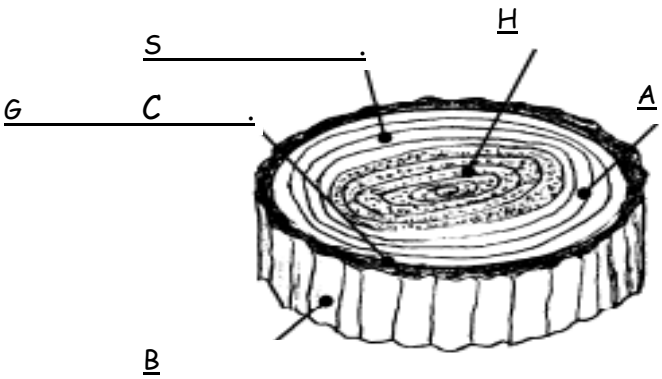
WOODEN FRAME HOMEWORK 1A

Wooden Picture Frame Unit: Wood

Each summer new growth is made from cells just beneath the bark. The cells produce new bark on the outside and new wood on the inside. One year's growth of wood is shown as a ring called an annual ring, which is often used to see how old a tree was when it was cut down.

Older wood in the middle of the trunk dies and becomes harder, darker and drier and is called Heartwood, this is the best wood in the tree. The younger wood is still used for transporting food (sap) from the leaves to the rest of the tree and is lighter in colour and a lot wetter than heartwood and is called Sapwood. The Bark is used for protecting the tree.



Softwood

Coniferous trees (trees that keep their needle-like leaves throughout the year) provide softwood. They can grow quickly with straight trunks. They are often grown in plantations and are replaced when they are cut down.

Examples: Pine, Spruce, Cedar

Hardwood

Deciduous trees (trees that lose their large leaves every winter) provide hardwood. They grow slowly and sometimes have twisted trunks. They are often not replaced when cut down.

Examples: Mahogany, Oak, Beech

Note: The difference between softwood and hardwood is a biological difference, not one of

softness and hardness. The softest wood is Balsa -it is a hardwood!

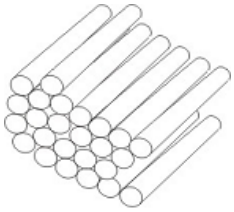
Manufactured Boards

These are made from the waste wood left over from conversion. They use thin sheets (plywood), small blocks (blockboard), wood chips (chipboard) and wood fibres (fibreboard). They are generally cheaper than solid wood and can be made into large sheets that do not warp or twist easily.

Examples: MDF, Chipboard, Plywood, Blockboard

WOODEN FRAME HOMEWORK 1B

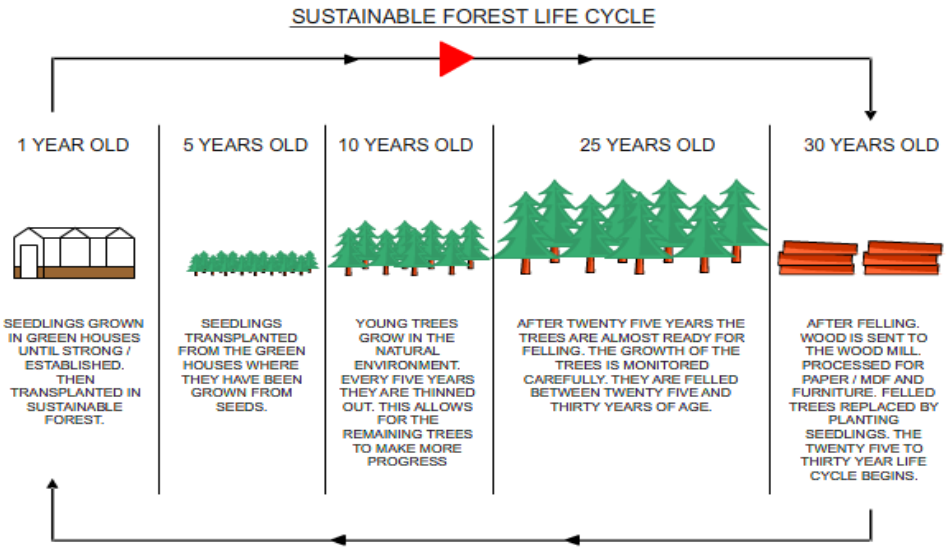
Grain



All timber is composed of cells and wood fibres packed closely together. The term "grain" refers to the arrangement or direction of the cells and fibres in the timber. Try to imagine holding a bunch of drinking straws, this is basically very similar to how the grain of wood would look like if we looked at it through a microscope.

Sustainability

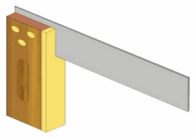
A sustainable forest is a forest that is carefully managed so that as trees are felled they are replaced with seedlings that eventually grow into mature trees. This is a carefully and skilfully managed system.



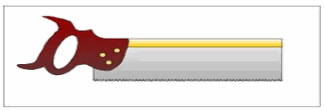
Explain in your own words below how using a softwood such as pine is more sustainable than using an exotic hardwood.

WOODEN FRAME HOMEWORK 2

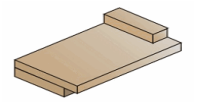
Name the Tool



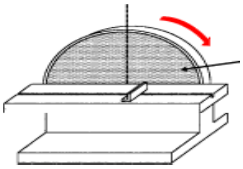
The t_____ s_____ is used to test the squareness of material and mark out lines at right angles to a given surface on wood or plastic. The stock is made from rosewood with a tool steel blade.



The T_____ S_____ is used for general sawing in wood. The fine teeth 12 - 14 per 25mm ensure a fine saw cut or KERF. The Tenon Saw has a brass or steel Stiffening Rib to strengthen the back of the blade and prevent it from being too flexible.



The use of the s_____ b_____ prevents the workbench from being damaged by continual cutting. It also allows timber to be held in a steady position whilst cutting is taking place.



D_____ S_____
A very useful machine for sanding down the end grain of wood and the edges of sheet plastic.

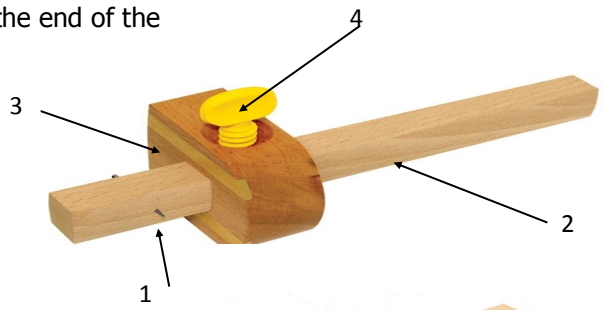
Woodworkers B_____ V_____
This vice is fixed to the bench so that the top of the wooden jaw facing the bench is level with the top of the bench, it is used for holding wood.

P __ ___ is probably the most common type of wood glue used in the school workshop. It is a white water based liquid adhesive (i.e. it is mainly made of water). It is supplied to schools in plastic containers. It is easy to apply, non-staining (although excess glue should be wiped off with a damp paper towel) strong and attains its maximum strength usually after twelve hours.

What does P ___ ____ stand for:_____

The m_____ g_____ is used to make parallel lines to the end of the wood. It has several parts to the gauge which are:

1. S_____
2. S_____
3. S_____

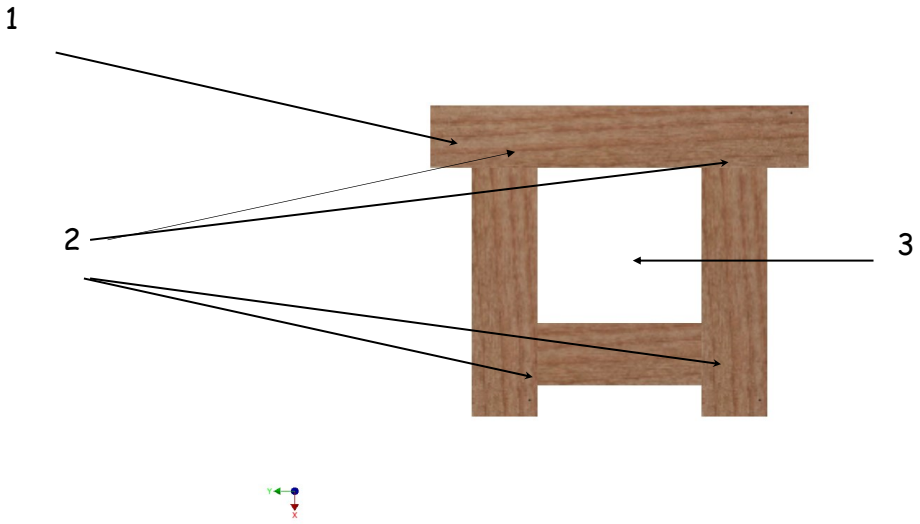


The W_____ M_____ usually used in carpentry to knock wooden pieces together, or to drive dowels or chisels.

The B_____ E_____ C_____ can get into acute angles with its bevelled edges and used for wood joints.

WOODEN FRAME HOMEWORK 3

Wooden Picture Frame—Components Part



What is the wood/joints that were used to make your wooden photo frame. Fill in the gaps below

1 Name the wood used on the frame M_____ D_____ F_____

Is it SOFTWOOD HARDWOOD MANUFACTURED BOARD

2 Name the wood joints used H_____ J_____

3. Name the wood used for the backing of the frame H_____B_____

Is it SOFTWOOD HARDWOOD MANUFACTURED BOARD

Measuring The Frame

1) What unit of measurement do you use when in the technical department. Is it:

A. Metres ☐ B Millimetres ☐ C. Kilometres ☐ D. Centimetres ☐

2) How many millimetres are there in:

Centimetre_____ Metre_____

3) Measure the following boxes and mark down your results