

**Materials**



- Timber
  - Hardwoods
  - Softwoods
  - Manufactured boards
- Material finishes
  - Paints
  - Wood finishes
  - Other finishes
- Adhesives
- Paper and board
  - Paper and board types
- Plastics
  - Thermosetting plastics
  - Thermoplastics

**Timber**



Timber is the general name for wood there are three main types:

**1.) Softwoods**

Softwoods come from coniferous trees which have needles instead of leaves. Softwoods grow faster than hardwoods and so are cheaper and are easier to work with as they are softer than hardwoods. These are supplied in standard sections sawn and planned smooth. Softwood sizes are confusing because they are smaller once they are planned.



Scots Pine



Pine needles

- Evergreen trees are special because they don't lose their leaves.
- Softwoods grow faster than hardwoods so are cheaper.
- Often used as building material.
- Trees grow tall and straight so giving long planks of wood.

**2.) Hardwoods**

Hardwoods come from deciduous or broad-leaved trees. They are generally slow growing which tends to make them harder but more expensive. Please note though that not all hardwoods are hard, Balsa which is very soft and is often used for model planes is in fact a balsa wood! Hardwoods are sold by the cubic metre then this is sawn to the size the customer requires. Some timber is machined into many sections called mouldings for example, dowel, beading, etc.



Beech tree



Oak Leaf

- Hardwoods usually have a broad leaf shape.
- Hardwoods are deciduous which means they lose their leaves.
- You can distinguish hardwoods by the structure of the wood grain.
- More expensive than softwoods because they take longer to grow.

**3.) Manufactured Boards**

Manufactured boards are timber sheets which are produced by gluing wood layers or wood fibres together. Manufactured boards have been developed mainly for industrial production as they can be made in very large sheets of consistent quality. Boards are available in many thicknesses.



Plywood

**Useful web links**



**The wood picker site**

Use the Wood Picker to identify between woods, enter your criteria to find the most suitable wood.

[View the wood picker page >>](#)

**BBC Bitesize**

Revise more about timbers at the BBC bitesize site.

[View the bitesize timbers page >>](#)



Blockboard

- Man made boards often made use of waste wood materials.
- Saw dust is used to make MDF and hardboard.
- The saw dust is held together with glue.
- Man made boards are cheap so are often used as instead of real woods.
- Man made boards do however do not look as good as real woods look.
- Man made boards are often covered with a thin layer of real wood which is called veneer this improves their appearance.

#### Timber conclusion points

- Different woods have different grain patterns these are the rings marks that are on present on the wood.
- Different woods come in different colours and textures as all trees are different.
- Some woods are easier to work than others such as softwoods over hardwoods.
- Different woods are used for different purposes as all woods have different characteristics such as strength, resistant to moisture, etc.



#### Quiz time!

Mr DT says 'Read the text above and then answer these questions below'. Write your answers on a sheet of paper, don't forget to write your name on the sheet!:-

- 1). What trees do softwoods come from?
- 2). What trees do hardwoods come from?
- 3). What is special about evergreen trees?
- 4). Why is softwood cheaper than hardwood?
- 5). What shape of leaf do hardwood trees have?
- 6). What is a manufactured board?
- 7). How are man made boards made?
- 8). Why are man made boards veneered?



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