

# LEARN SHEET : YRS RESISTANT MATERIALS

## WHAT ARE HARDWOODS ?

Sometimes called broad-leaf trees. Lose their leaves seasonally, in winter. Hardwoods tend to be harder than softwoods (with the exception of Balsa Wood). They have a wider variety of colour and texture than softwoods. Hardwoods tend to be more expensive than softwoods and take longer to mature.



## WHAT ARE SOFTWOODS ?

Softwoods are from trees that have needles / exposed seeds, not leaves. They grow quickly, compared to most hardwoods. When sawn and planed they tend to be light/pale in colour. Softwoods also tend to be cheaper than hardwoods.

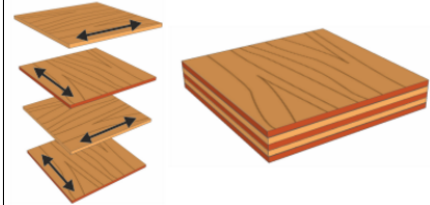
Softwoods are used by the construction industry and are used to produce paper pulp, and card products.



## MANMADE BOARDS - PLYWOOD 1

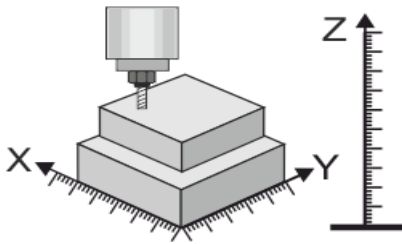
Plywood is a composite material. Composed of individual plies / veneers of wood. The plies are glued together with synthetic resin.

Plywood is less likely to warp or split, due to this construction. Supplied in a range of sizes and thicknesses.



## COMPUTER AIDED MANUFACTURE CAM

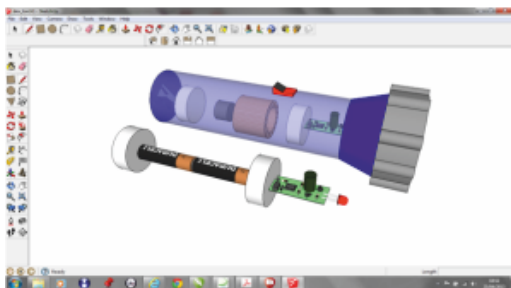
Once a prototype design has been produced, it can be manufactured on a CNC machine or Rapid Prototyping machine.



Computer Aided Manufacture (CAM) has meant that products and components can be made many times over to the same high standard. The accuracy is high and machining through CAM is much faster than machining by human control / by hand.

## COMPUTER AIDED DESIGN - CAD

3D design software such as AutoCAD or Sketch up, allow the designer to draw a product in detail.



Products can be designed and modified quickly. CAD allows for the testing of prototypes during the design process, without the need to make it.

## Isometric Drawing

Isometric drawing is a way of presenting designs/drawings in three dimensions.

