# 23

### Irvine Royal Academy—Technical Department

# S1/S2 Design & Manufacture

## **Manufactured Boards**

When we make items from wood, we have a choice of what kind of wood to use. Sometimes this choice will be based on **cost**, at other times it will be based on what **colour** we would like the wood to be. Sometimes we need large flat pieces of wood that are stable, to make things like kitchen units, floors, or worktops. These tend to be **manufactured boards**.

Manufactured boards come in a variety of types. They all take parts of a tree and reform it into wide flat boards by gluing it back together. The benefits of manufactured boards are that they are **stable**, that is, they don't warp or bend so easily. They can be **waterproof** and therefor don't rot so readily. They are **environmental** as more of a tree is used, there being less waste, They can be made into **wide sheets**, which would be very expensive with real timber. The main manufactured boards we should know at this stage are:

#### **Plywood**

This is made by gluing thin layers (or plys) of wood together. Different thicknesses can be created, depending on how many layers are used. Usually, the inside layers of plywood are cheap wood, as they are no seen, whereas the outside layer is often a better quality wood, with nice grain (lines on wood) or a more interesting colour.





#### Hardboard

Hardboard is made by mixing up fine fibres of wood with a glue and rolling it out into thin sheets. The board is usually thin (e.g. 3 or 5 mm). Hardboard does not have any woodgrain on it. It is very cheap.

#### Chipboard

This is made by taking chips of wood and gluing them back into wide sheets. It is a cheap wood, but is not as strong as plywood. It is often used for floors, or if it is covered with an attractive waterproof finish, such as formica, it can be used for kitchen units and worktops.



# MDF (Medium Density Fibreboard)

This is made by mixing a plastic resin with wood fibres. It is a very stable board and it is easy to paint. Sometimes it can have a decorative surface on it like plywood.

https://www.youtube.com/watch?v=Lpz4nX1KZGg https://www.youtube.com/watch?v=eF5LVBW1vl8