# **SUBJECT:** Year 7 Technology

**UNIT:** Year 7 Resistant Materials



# **MATERIALS**

**MDF** – is a manufactured board made from fibres that have been compressed in a resin. It is a cheap alternative, easy to work with however

not very good quality.

PLYWOOD – is a manufactured board made by gluing thin sheets of wood

together. It is very strong and durable but can splinter.

**ACRYLIC** – is a thermoforming plastic – it comes in a range of colours and

sheet sizes. It has a colourful shiny finish but can shatter when being cut.

#### **PROCESSES**

**HAND CUTTING** – refers to cutting and shaping of materials using hand

tolls such as saws and files.

**VACUUM FORMING** – is the process of heating a sheet of hips and forming

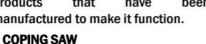
it over a made product or mould. Examples are plastic cereal bowls. **CAD/CAM** – stands for Computer Aided Design & Computer Aided Manufacture. This refers to products that are design on a computer and a machine is used to manufacture them.

## **BELT SANDER**

The BELT SANDER is a used to quickly sand and smooth larger sections of wood and timber after is has been cut.

### **PILLAR DRILL**

The PILLAR DRILL is a machine that will be used to safely create holes in products that have been manufactured to make it function.



The COPING SAW is a wasting tool used to cut and shape materials. It has a large frame and thin blade which is ideal for cutting curves and detail.

#### **FLAT FILE SAW**

The FLAT FILE is part of a group of files that are used flatten and smooth cut edges.

#### **TENON SAW**

The TENON SAW is a used to cut straight line in materials - its large thick



#### **Design Influences**

Product Analysis

ou can understand a great deal about how a designer has worked by fully analysing one of their products. This will not only tell you about the design decisions that they have made, but it will help you to understand the fashion and trends at the time the product was created

When you look at the key design features (e.g. colours and form) of products such as upright vacuum cleaners, similarities with contemporary products can be identified. Nearly 30% of all new cars sold in the UK in 2017 were grey or silver, making these metallic

tones a safe bet for domestic machines such as vacuums and washing machines esthetics is there a theme? Describe the shape, colour, texture. Consumer Who is the product aimed at? How can you tell? OST Does the product laok cheap/expensive to make Value for money?

> Environment Environmentally friendly - re-usable/recycle is the product very Sustainable Safety is the product safe to use. Any loase parts or sharp edges?

Is it an appropriate size for the job or the intended pers

Function How well would it do its job? Why do you think this? How do the separate parts help the overall function? Materials What materials or processes have been used?



## Marking tools

The measuring tools associated with timber are used to measure lengths and angles. The most common tools are:

- •ruler for measuring shorter lengths, widths and thicknesses
- tape measure for measuring long distances, particularly in the building trade
- •try square for marking out angles that are 90 degrees to an edge
- •mitre square for marking out angles that are 45 degrees to an edge

