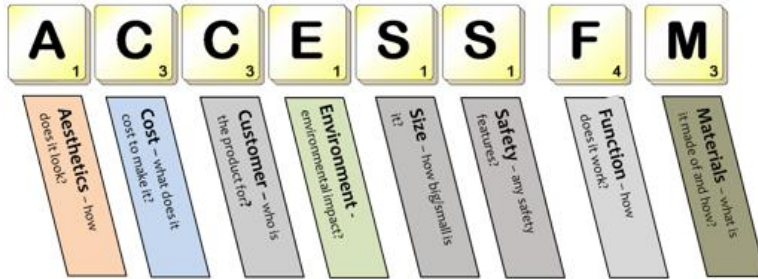


# Year 8 Papers & Boards- Activity Pack Knowledge Organiser

## Product Analysis

One of the best ways to help you get started in a design project is to research other designers' work. Studying the work of others can help inform and inspire our own ideas. Often the first thing designers do when given a new design task, is identify a product or a number of products which do more or less the same thing as the product they have been asked to design. They examine them carefully, noting how they function, how they look, the materials and processes that have been used, how much they cost etc.

A good 'template' for product analysis is the acronym 'ACCESS FM'.



## The Design Process

Design Brief	A statement outlining what is to be designed and made
Specification	A list of design criteria
Research	Sourcing information and inspiration to help with design work
Design Ideas	A range of potential solutions to the problem
Development	Further improving an idea
Final Idea	A presentation drawing of chosen idea
Manufacture	Making the final outcome
Evaluation	Reviewing strengths and weaknesses of a final product and design work

## Computer Aided Design (CAD)

CAD software is used by designers to create drawings or technical illustrations

## Computer Aided Manufacture (CAM)

CAM is the outcome of the computer aided design process.

## 2D design tools

Icon	Meaning
	Used to draw straight lines
	Used to draw freeform curves
	Used to draw circles
	Used to add text
	Used to 'bound fill' an area
	Used to draw rectangles

## The 6 R's

**Recycle-** Take an existing product that has become waste and re-process the material for use in a new product.  
**Reuse-** Take an existing product that's become waste and use the material or parts for another purpose, without processing it.  
**Reduce-** Minimise the amount of material and energy used during the whole of a products life cycle.  
**Refuse-** Don't accept a product at all if you don't need it or if its environmentally or socially unsustainable.  
**Rethink-** Our current lifestyles and the way we design and make.  
**Repair-** When a product breaks down or doesn't function properly, fix it.

**Thermoplastics-** can be re-heated and re-shaped in various ways. They become mouldable after reheating as they do not undergo significant chemical change. Reheating and shaping can be repeated. The bond between the molecules is weak and becomes weaker when reheated, allowing reshaping. These types of plastics can be recycled.

**Common Thermoplastics: Acrylic, PVC, HIPS, PET**



## Die Cutting

Die Cutting is the process that is used to cut and crease printed material. It is done by inserting sharp blades (press knives) into a sheet of thick plywood (press forme). This is then placed on top of the printed material and pressed down to stamp it out. Creasing is done by using rounded blades instead of sharp ones.

