Resistant Materials.

Yr. 07. Design and make an ALESSI style clock

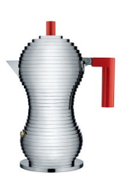
ALESSI is?

The Dream Factory
Since its establishment in 1921, Alessi has gradually evolved, becoming a leading exponent of the “Factories of Italian design”, capable of mediating between the most interesting expressions of international creativity and the public, society and the market. Its mission is to translate these creative expressions into real objects capable of fulfilling dreams and satisfying the public’s desires.

Making the ordinary extraordinary. Creating everyday objects that are interesting and desirable, where aesthetics, functionality and quality find their balance in a cultural and emotional dimension that charms and surprises.

Alberto Alessi took over the running of the company in the 1970s. He didn’t design any of the products himself, but employed designers and architects to come up with fun and creative designs which were then manufactured by his company. The key part of Alberto Alessi’s idea was to mass produce products but keep them stylish and original as possible. The designs were always distinctive and often colourful. A well known example is Phillippe Stark’s lemon/orange squeezer.



The Design and Make Process:
Brief/Concept
Research
Specification - **ACCESSFM**

A - Aesthetics
- Why does it look attractive or ugly?
- Does it make good use of colour and texture?
- Does it have a quality finish?
- Where did the designer get their inspiration?

C - Cost
- What is the estimated cost of production?
- What is the retail cost? Why does it cost this much?
- What is the relationship between the two?
- Is the product affordable? Is it good value for money?

C - Customer
- Who is the product designed for?
- How and where would they use it?
- What impact does it have on the customer’s quality of life?
- Does it add value to the client’s way of life?

E - Environment
- What is the product’s impact on the environment?
- THINK batteries, rethink, refuse, reduce, reuse, recycle, life cycle?
- THINK about its manufacture, general use, and disposal?

S - Size
- What size is it?
- Is the product comfortable to use? THINK ergonomics?
- Are its proportions appropriate for its use?

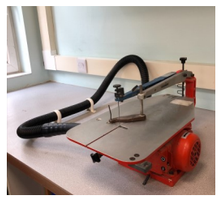
S - Safety
- How has the designer considered safety issues?
- How different parts have been joined together?
- Does the product meet recognised safety standards?

F - Function
- How well does the product work?
- Why does it work this way?
- How could it be improved?

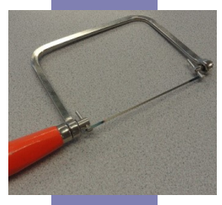
M - Material and Manufacturing
- What is the product made from?
- Would another type of material work better?
- What impact could your material choice have on the environment?

Clock Design Ideas/Concept
Chosen Clock Design Idea/Concept
Model Making
Manufacturing the Clock
Evaluating the Finished Clock

Making Processes/Skills you will be utilising:
- Marking and cutting acrylic **(PMMA)** using either the scroll saw or coping saw.
- Smoothing and shaping the edges of the acrylic using a circular sander and then a metal file.
- You can use a metal file to make minor corrections.
- To create layers you can adhere pieces of acrylic together using solvent glue **(Tensol 10)** that can be used to weld the acrylic pieces together.
- You can bend and twist the acrylic using the strip heater.







Plastics are made of POLYMERS but sometimes they just get called ‘POLYMERS’. There are 2 main types:
- **Thermoforming Plastics -** They don’t resist heat well and can be easily formed into different shapes by heating, melting and remoulded (This means they are easily recycled as they can be ground down, melted and reused).
- **Thermosetting Plastics -** They resist heat and fire, these polymers are commonly used for electrical fittings and frying pan handles. Unlike Thermoforming plastics, Thermosetting plastics undergo a chemical change when heated and moulded to make a product permanently hard and rigid. This means they are not recyclable as they can not be melted down and reshaped again.

Health and safety:
Health and Safety is an important aspect of working in Resistant materials room and we are governed by the legislation act:
- **Health and Safety at Work Act 1974**

Terminology to remember!

ALESSI “Factories of Italian design”.
ACCESSFM.
Acrylic.
Coping Saw.
Scroll Saw.
Circular Sander.
Strip Heater.
Polymers.
Thermoforming Plastics.
Thermosetting Plastics.
Moulded
Recycled.
Metal File.
Health and Safety.