

Welcome! Get warmed up for the start of this challenging and interesting and A-Level by completing the three tasks below.

Task 1: Analysis

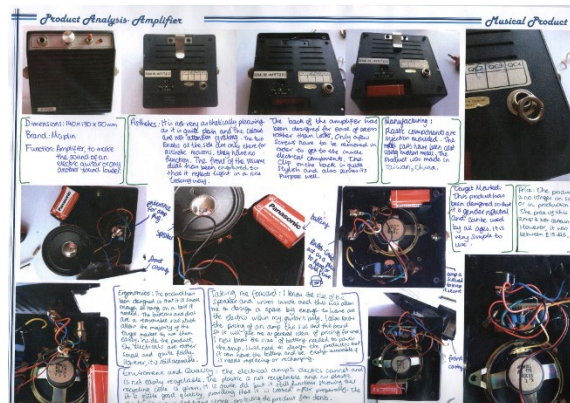
Analysis is key to understanding how products work, their place in society and user interaction.

Conduct a detailed analysis of a product, garment or structure you find inspiring. Present your analysis on one A3 document (hardcopy or softcopy).

Many designers use the mnemonic "ACCESSFM" to help them remember the key areas of product analysis and evaluation. On our course, because we love detail, we use an even longer mnemonic: AACCEESSSFM (😊). These letters stand for...

- **Aesthetics** How the product looks, its shape and form, colour, texture, pattern and finish
- **Assembly** What joints have been used? How has it been put together?
- **Cost** What is the retail price? How does this relate to target market?
- **Consumer / Client** Who is the "user" or "target market"? What could their needs / wants be?
- **Environment (site)** Where will it be used? Indoors or outdoors? Private / public spaces?
- **Environmental issues** How is environmentally friendly is the product? Use the 6 Rs of sustainable design to explore this.
- **Ergonomics** How comfortable is the product? How easy is it to use?
- **Safety** What safety considerations are there? Does it have any safety features?
- **Size** Is the product for one person or more? Is it adjustable? One size fits all?
- **Scale** Is the product full size or has it been scaled up or down? e.g. architectural models are often made at a scale factor of 1:120
- **Function** What will or what does the product do? How does it work?
- **Materials** What materials have been used? What properties do they have?
- **Manufacturing** How has the product been made?

Use the points above as prompts when investigating an analysing your chosen product. Where possible, take the product apart and use photos, close-ups and drawings to show details of construction. An example of student work has been included below.



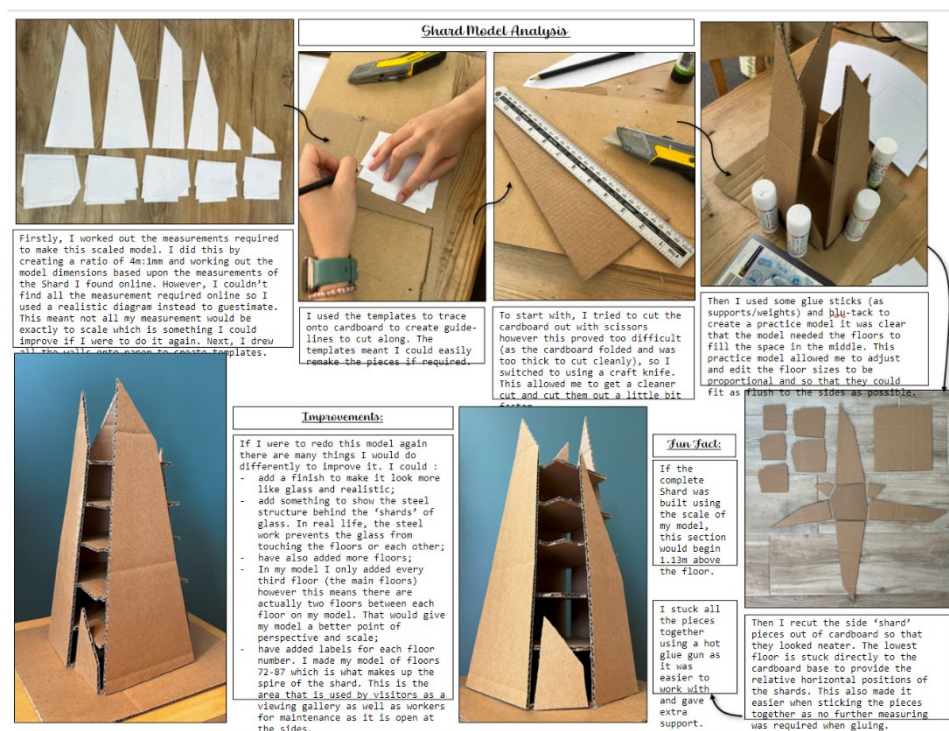
Task 2: Design communication

Conveying concepts through models and drawings is essential to any design process to describe ideas to clients and colleagues and collaborators.

Create a model of the product from Task 1. Document this model on one A3 sheet (hardcopy or softcopy) with annotations (labels) and notes to describe how you created it.

Use any materials you can find - raid the recycling bin - be creative! Photograph your model from several angles. Model must be no more than are no bigger than 300 x 300 x 150mm in size. You will need to bring the physical model in to college for your first DT lesson so think about how you will transport it safely.

An example of student work has been included below:



Extension: Is there anything that you've noticed through your analysis or during modelling that could be improved? Create some sketches to explore and explain possible improvements to the design.

Task 3: Theory questions

Exams count for 50% of your A-Level grade in DT. We will have at least one theory lesson a week throughout the course that explore design processes, the design industry, sustainable design, materials and manufacturing, maths skills, social issues, H&S, standards and legislation and much more. With this in mind, complete the following past paper questions. You may need to do some research in order to help you – if so, reference your sources.

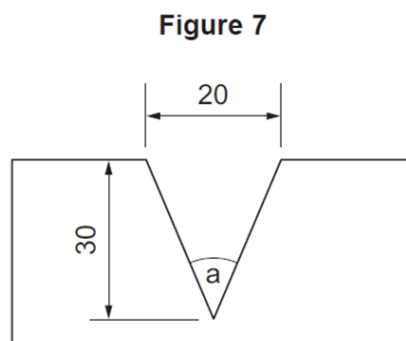
01.

Analyse and evaluate the environmental impact of single-use plastic products.

[12 marks]

02.

A student wishes to route a symmetrical V shaped channel in a piece of timber to the dimensions provided in Figure 7.



Not drawn to scale
Cross section of timber
All dimensions in mm

Calculate cutter angle a .

Show your workings.

[4 marks]

03.

Outline how designers make use of market research strategies when developing design concepts.

[4 marks]