

AS Transition work- Student

Topics covered in this section:

- Product Analysis
- Reverse Engineering
- James Dyson design question
- Rapid prototyping
- Primary & Secondary research
- Ergonomics & Anthropometrics

Product Design - Name:



Before answering any questions in this booklet read through book 1 of our theory books ' Design Principles: Design and Innovation' Reading through the topics in this booklet will give you an excellent start for Product Design in year 12.

Answer all questions in this book and photograph any design ideas and card modelling created in your solutions.

Q1. Computer aided design/computer aided manufacture (CAD/CAM) is a common method of manufacturing products.

- a. Explain the cutting action used in two different CAM machine (2)
- b. Using one example of a product made by using CAM, explain why the process of manufacture is appropriate to the product (2)
- c. Explain in detail one benefit of using CAD to the designer and manufacturer (4)

Q2. Discuss James Dyson's application of **aesthetics** and consideration for the **user** in the design of the product shown (8)

Marks will be awarded for the content of the answer and the quality of written communication



Q3. James Dyson's products have a unique style and aesthetic which makes his brand stand out amongst others.

Task: Design a mobile phone in the style of James Dyson

Marks will be awarded for:

- a. A minimum of 4 initial, fully labelled design ideas (8)
- b. Comments relating to the ergonomics of your designs (4)
- c. Possible materials and manufacturing process (3)
- d. A fully labelled final design (10)
- e. A card prototype model of your final design (10)



Design Ideas



Possible materials/manufacturing processes

Final Design



Card Prototype

