

Year 7: Problem solving.



USER CENTRED DESIGN

Understanding user needs

Human centred design and having a deep understanding of user needs has many advantages, from maximising financial success to the importance of social and moral sensitivity.

Task: Describe one example where user centred design has been applied successfully in a real-world product.

Form, Function and Accessibility

Analysing form focuses on the look and feel of a product. This includes 2D and 3D shape, colour, texture, materials, how parts or components are assembled and so on. A product's form may be influenced by aesthetics, considering styles and trends, and/or by the function of the product.

Function focuses on what the product is designed to do; the problem it is designed to solve. A key term to introduce here is unique selling point (USP). If a product has a USP, it does something that nothing else can, then this adds to its value and may indicate an emerging user need.

Accessibility is to do with who can "access" the product. Some products are designed to be used by one user group and not another e.g. braille is only designed for the blind; bottles for medicines and cleaning products are often tamper-proof and designed for adults only; some products are prohibitively expensive, and their exclusivity adds to their value in the minds of users.

Task: Identify an object where function takes precedence over form. Explain why this is the case.

Vocabulary associated with this unit:

User, client, target market, form, function, accessibility, unique selling point (USP), design brief, specification, iterative design, personalisation, ergonomics, design development, constructive criticism, consumer group, focus group, product analysis, disability, empathy, altruism, prototype.



SPECIFICATION

A **specification** is a document, based on research, that details information about what a product should do.

We use **ACCESS FM** to help us write a specification - a list of requirements for a design - and to help us analyse and describe an already existing product.



ACCESS FM



Task: Define the term 'ACCESSFM' in design technology and explain

SCAMPER refers to a series of thought sparkers which help you to innovate on an existing product, service or situation by looking through different lenses.



FORM V FUNCTION



SCAMPER



Task: Select a common household item and SCAMPER it.

Making a model allows designers to visualise and test how a product looks and performs in 3D and is a great way of checking a product's viability.

Task: Discuss the importance for a model to accurately represent the final product in design technology projects.



MAKING MODELS

Task: define these words using [this website](#) to help you.