Your notes

GCSE Design and Technology: revision notes

Investigating design contexts

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Primary and secondary research

- **Primary research** is collected first-hand: interviews, questionnaires, focus groups, observing users, visiting shops and analysing existing products.
- **Secondary research** uses information others have collected: books, websites, magazines and published data.
- Research helps designers understand the problem, the users and existing solutions.

Understanding users

- **Ergonomics** is designing products to be comfortable, safe and efficient to use, such as the grip of a tool.
- **Anthropometrics** is the study of human body measurements. Designers usually design for the 5th to the 95th **percentile**, which covers 90% of people.
- Example: a door handle height should suit people from the 5th to the 95th **percentile** of standing elbow height.

Product analysis, briefs and specifications

- **Product analysis** looks at existing products: function, materials, manufacture, cost, aesthetics and sustainability. ACCESS FM (aesthetics, cost, customer, environment, safety, size, function, materials) is a useful checklist.
- A **design brief** is a short statement of the problem, the user and what the product must do.
- A **design specification** is a list of measurable requirements the final product must meet, such as "must be under 300 mm long".
- Designers also consider environmental, social and economic challenges, such as designing for a circular economy or for people on low incomes.

Key terms

Primary research	Information collected first-hand, such as interviews.
Secondary research	Information collected by others, such as books and websites.
Ergonomics	Designing products to be comfortable, safe and efficient to use.
Anthropometrics	The study of human body measurements.
Percentile	The percentage of people at or below a measurement.
Design brief	A short statement of the design problem and the user's needs.
Design specification	A list of measurable requirements a product must meet.
Product analysis	Examining an existing product to learn from it.

Quick questions

Cover the answers and test yourself: remembering is what makes it stick.

1. Which is primary research?
2. What is anthropometrics?
3. Which percentile range do designers usually design for?
4. What is ergonomics?
5. What is a design specification?
6. What is a design brief?
7. What does product analysis involve?
8. Which is secondary research?

Answers

1. Interviewing potential users
2. The study of human body measurements
3. 5th to 95th
4. Designing products to be comfortable, safe and efficient to use
5. A list of measurable requirements the product must meet
6. A short statement of the problem and the user's needs
7. Examining existing products to learn from them
8. Reading published data online

What to do next

Practise 10 questions on this topic

Try 5 exam questions, with mark schemes

Read the lesson, one step at a time

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