

Design & Technology

AQA GCSE

How to write a design brief and produce a design and manufacturing specification

Materials required for questions

- Pencil
- Rubber
- Calculator

Instructions

- Use black ink or ball-point pen
- Try answer all questions
- Use the space provided to answer questions
- Calculators can be used if necessary
- For the multiple choice questions, circle your answer

Advice

- Marks for each question are in brackets
- Read each question fully
- Try to answer every question
- Don't spend too much time on one question

Good luck!

Q1. What is the main purpose of a design brief?

- A** To list all the tools needed for manufacturing
- B** To clearly explain the problem and what needs to be designed
- C** To decide the final selling price of the product

Q2. Which of these should be included in a design brief?

- A** A detailed list of every material to be used
- B** The target users (e.g., elderly gardeners)
- C** The names of all the workers in the factory

Q3. What is a "success metric" in a design brief?

- A** A way to measure if the design meets its goals
- B** The total cost of making the product
- C** The number of people who will buy the product

Q4. What is the main purpose of a manufacturing specification?

- A** To advertise the product to customers
- B** To give exact details on how the product should be made
- C** To list all the competitors' products

Q5. Give five detailed specification points to help with the designing of a toy for use by a child between 3 and 5 years of age **(5 marks)**

1.

2.

3.

4.

5.

Q6. Explain why having a design specification is important to designers and how this helps to ensure a successful outcome **(3 marks)**

Answers

Q1. B

Q2. B

Q3. A

Q4. B

Q5.

- It must amuse/entertain the child
- Bright and colourful to engage the interest of the child
- It must not contain any small parts that could be easily swallowed
- There should be no sharp edges that could cause cuts to the child
- There should be no pointed pieces that could stab/puncture the skin
- Any finish (paint) applied must not be toxic/harmful if chewed/ingested
- If the toy contains a battery it should be secured and not possible for a child to remove – battery directive (labelling bit)
- There must be no gaps where a child could put a finger and trap it
- Materials that are tough and durable need to be used to ensure it does not break if dropped or thrown
- Materials need to be easy to clean (sanitise) because the child may chew it, drop food on it.

A credit worthy point must not be vague.

Zero mark responses would be:

- It must be strong
- It must not be too big
- It must be made from cheap materials
- Easy and simple to use

Q6.

A design specification is important because:

- It allows a designer to summarise any research
- It provides a clear criteria from which to work
- It provides a point of agreement between the designer and the client
- It provides a clear focus for the designer in terms of what they want to achieve

A design specification helps to ensure a successful outcome because:

- It allows a designer to modify their design as part of the iterative design process

- It provides a criteria against which to test iterations of the prototype
- It allows a designer to evaluate the success of their final outcome