**Design & Technology**

**AQA GCSE** Logo

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**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 in 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