

Design & Technology AQA GCSE

Carry out investigations in order to identify problems and needs

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. Why do designers carry out investigations before starting a project?

- A** To copy what competitors are doing
- B** To identify problems and understand user needs
- C** To decide how much profit they will make

Q2. What is one way a designer can gather useful information?

- A** Guessing what users might want
- B** Asking potential users for feedback
- C** Only looking at old designs

Q3. Why might a designer need to change the original brief?

- A** Because they found new problems or better solutions
- B** Because they don't like the first idea anymore
- C** Because the budget was spent too quickly

Q4. What is a good reason to alter a design brief?

- A** User feedback shows the original idea won't work well
- B** The designer wants to make the project easier
- C** The materials are too expensive, so they give up

Q5. The product below is a GPS Sports Watch worn by adult runners to monitor activity and aid training.



Specification

- Lightweight
- Waterproof (face and strap)
- Rechargeable battery
- Battery lasts up to 3 weeks (10 hours in GPS mode)
- Watch features include; time, date, calendar, alarm, touchscreen and GPS for recording sporting data.

You have been asked to redesign the watch for a child aged between 9 and 11 years old. In order to make the watch more appealing to children it should allow for activities other than running.

Give **four** changes or additions to the original design specification and explain how each would make the watch suitable for the new target market.

You should **not** refer to the colour of the watch in your answer

Answers

Q1. B

Q2. B

Q3. A

Q4. A

Q5.

1 mark for each change or addition to the specification.

1 mark for explanation of why it is important.

Indicative content:

- The product must be smaller in size so that it fits on the wrist of a child aged between 9 and 11 and is not too bulky for them.
- The product should be simple to operate with simple features that are easily accessible to children.
- The product should contain cyber safety features to ensure the child is not put at risk by using it.
- The product should be interesting and engaging for children to encourage them to use it; e.g. by containing logos / images on the strap.
- The product must have tracking feature so parents can track children's whereabouts.
- The product could have mini-games to provide entertainment for children.
- Greater range of strap adjustment because children likely to grow significantly between ages of 9 and 11.