

# Design & Technology

## AQA GCSE

# The six Rs

### Materials required for questions

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- Pencil
- Rubber
- Calculator

### Instructions

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- 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

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- 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 does "refuse" mean in sustainability?

- A**      Accepting free promotional items
- B**      Saying no to single-use plastics
- C**      Throwing away broken items

**Q2.** Which "R" encourages fixing items instead of throwing them away?

- A**      Recycle
- B**      Repair
- C**      Rethink

**Q3.** What is an example of "re-use"?

- A**      Melting plastic to make new products
- B**      Composting food scraps
- C**      Using a glass jar for storage instead of buying new containers

**Q4.** Which "R" is most effective in reducing waste at the source?

- A**      Refuse
- B**      Repair
- C**      Rethink

**Q5.** Before a consumer makes a product purchase, they should consider the six Rs shown in Table 6. Analyse and evaluate how the six Rs may help a consumer make an informed decision whether to purchase or not. **(8 marks)**

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## Answers

Q1. B

Q2. B

Q3. C

Q4. A

Q5.

Reduce:

- saving materials and/or energy in production
- efficient manufacturing
- use of sustainable materials, eg consumer may look for FSC mark on a timber product
- reducing product parts or variety of materials used.

Refuse:

- the customer needs to reflect and decide if they really need the product, eg latest phone, or will an upgrade do
- use of chemical products harmful to the environment, eg biological detergents
- reject the use of unsustainable materials or products that are unethical, eg high CO2 emission vehicles.

Reuse:

- can a product be reused or repurposed, eg bags for life, rechargeable batteries, refillable bottles and containers
- visiting charity shops to purchase clothing which may have had little use or have been an unwanted gift
- upcycling of furniture, ie 'shabby chic'.

Repair:

- rather than disposing of a worn or broken product, can it be repaired
- purchasing a reconditioned vacuum cleaner creates a satellite industry and job opportunities for people in society possible working from home
- also meets a need of a consumer if they do not have the disposable income to buy new all the time
- buying simple products that are repairable to ensure they will have an extended life and not require new materials and resources to be consumed.

Recycle:

- manufacturers should be clear how products can be recycled (labels, stickers, instructions) at the end of their useful life if they cannot be reused etc

- by EU law electronic manufacturers have to abide by the WEEE directive of 2006
- are materials used that can be recycled, eg Marks and Spencer removed glitter from all Christmas cards in 2019 as they were virtually impossible to recycle in this condition
- purchase products made from limited materials and not requiring extensive and complex separation.

Rethink:

- consider how a product can be made in a more sustainable way and promote this/highlight this to customers, eg two hour charge time of the Tesla and 200 miles plus range
- rethink the ways we travel and commute
- are materials sourced locally
- sustainable production
- is the product sustainable itself, eg does it use solar power.