Your notes

GCSE Design and Technology: revision notes

Ecological and social footprint

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Ecological issues

- Getting materials can damage the environment: **deforestation** for timber, mining for metal ores, drilling for oil (for polymers), and farming for cotton, which uses a lot of water and pesticides.
- Products travel long distances (**product miles**), which burns fuel and adds to their **carbon footprint**.
- The **carbon footprint** is the total amount of greenhouse gases produced by making, using and disposing of a product.

The 6 Rs

- Reduce: use less material and energy.
- Refuse: don't use materials or products that are bad for the environment.
- Reuse: use a product again, for the same or a new purpose.
- Repair: fix products instead of throwing them away.
- Recycle: reprocess materials to make new products.
- Rethink: design products in a new way to be more sustainable.

Social footprint

- Working conditions: some products are made in factories with long hours, low pay and unsafe conditions.
- Fair trade and **ethical sourcing** help workers get fair pay and safe conditions.
- Products can affect communities, such as a new factory bringing jobs but also pollution.

Key terms

Carbon footprint	The total greenhouse gases produced by a product over its life.

Product miles	The distance a product travels from materials to consumer.
Deforestation	Cutting down forests without replanting.
6 Rs	Reduce, refuse, reuse, repair, recycle and rethink.
Social footprint	A product's impact on people and communities.
Ethical sourcing	Getting materials in a way that treats people and the environment fairly.

Quick questions

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

1. What is a carbon footprint?
2. Which of the 6 Rs means fixing a product instead of throwing it away?
3. What does "refuse" mean in the 6 Rs?
4. What are product miles?
5. What environmental damage does mining cause?
6. Why does cotton farming have an environmental impact?
7. What does "rethink" mean in the 6 Rs?
8. What is a social footprint issue?

Answers

1. The total greenhouse gases produced by a product over its life
2. Repair
3. Don't use materials or products that harm the environment
4. The distance a product travels to reach the consumer
5. It destroys habitats and can pollute land and water
6. It uses a lot of water and pesticides
7. Design products in a new, more sustainable way
8. Poor working conditions in factories

What to do next

Practise 10 questions on this topic

Try 4 exam questions, with mark schemes

Read the lesson, one step at a time

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