The six Rs

Unit 4 · Common specialist technical principles · matches the "The six Rs" lesson slides (about 60 minutes)

Teacher notes for someone teaching this lesson without a Design and Technology background, including a cover or supply teacher standing in for the usual class teacher.

IF YOU ONLY DO ONE THING (RUSHED COVER LESSON)

If you only do one thing: make sure every pupil can say what "Reduce" means in their own words before the lesson ends. Use less material and energy. Ask two or three pupils to explain it back to you - do not just ask "does that make sense?".

Key facts in plain language

These are the facts this lesson depends on. They are written in plain English, not subject jargon, so you can say them in your own words while you teach.

Reduce:
Use less material and energy.

Reuse:
Use a product again, as it is or for a new purpose.

Recycle:
Break a material down to make something new.

Rethink:
Question whether the design or need could be met differently.

Refuse:
Do not use a product that is unsustainable or unnecessary.

Repair:
Fix a product to keep it in use.

Common misconceptions

Drawn from the wrong answers pupils pick in this lesson's own question bank, paired with the explanation that is already written for the right answer.

Pupils may think: "Recycle" is correct.
Why it is wrong: the correct answer is "Reuse". The jar is used again without being broken down.

Pupils may think: "Repair" is correct.
Why it is wrong: the correct answer is "Refuse". Refusing avoids the waste altogether.

Pupils may think: "Repair" is correct.
Why it is wrong: the correct answer is "Reduce". Less material is used for the same job.

Pupils may think: "Reuse" is correct.
Why it is wrong: the correct answer is "Recycle". Recycling breaks materials down, which takes energy.

Pupils may think: "Refuse" is correct.
Why it is wrong: the correct answer is "Repair". Repair keeps the product in use longer.

Talking points to follow the slide deck

The slide deck for this lesson follows the usual DT Classroom shape: a retrieval starter, then each key term below in turn, worked examples, exam-style practice, then an exit ticket. Use these lines as you reach each part - they are the same facts as above, just phrased as something you can say out loud.

When the deck reaches "Reduce": say — Use less material and energy. Ask: "can someone give me an example?"

When the deck reaches "Reuse": say — Use a product again, as it is or for a new purpose. Ask: "can someone give me an example?"

When the deck reaches "Recycle": say — Break a material down to make something new. Ask: "can someone give me an example?"

When the deck reaches "Rethink": say — Question whether the design or need could be met differently. Ask: "can someone give me an example?"

When the deck reaches "Refuse": say — Do not use a product that is unsustainable or unnecessary. Ask: "can someone give me an example?"

When the deck reaches "Repair": say — Fix a product to keep it in use. Ask: "can someone give me an example?"

Worked answers to this lesson's questions

The same question bank used for this lesson's knowledge organiser self-check and worksheet exam practice. Use this page as the answer key, or cover the right-hand explanation and hand out the questions as a silent task (see the cover lesson box below).

1. Using a jam jar as a pencil pot is…

a) Reuse, b) Recycle, c) Reduce, d) Refuse

Answer: a) Reuse. The jar is used again without being broken down.

2. Saying no to a plastic bag is…

a) Repair, b) Refuse, c) Rethink, d) Recycle

Answer: b) Refuse. Refusing avoids the waste altogether.

3. Designing a thinner bottle that uses less plastic is…

a) Repair, b) Refuse, c) Reuse, d) Reduce

Answer: d) Reduce. Less material is used for the same job.

4. Which of the six Rs uses energy to process the material?

a) Reuse, b) Repair, c) Recycle, d) Reduce

Answer: c) Recycle. Recycling breaks materials down, which takes energy.

5. Replacing a phone screen instead of buying a new phone is…

a) Refuse, b) Reduce, c) Repair, d) Recycle

Answer: c) Repair. Repair keeps the product in use longer.

READY-TO-RUN COVER LESSON

Project the existing lesson slides as normal; read the key facts and talking points above before the lesson starts.

Low-prep silent task (needs no workshop tools or machinery): write or display the numbered questions above without the "Answer:" line, and have pupils answer them in silence on paper. Mark from the answers above at the end, or next lesson.

If the lesson plan calls for tools, machinery, heat or anything hands-on, do not run that part as a non-specialist cover teacher - set the silent task above instead and leave the practical for the subject teacher. See the general workshop safety guide in the Teachers hub.