SCIENCE YEAR 9 - UNIT 2 - LESSON 1

Why Materials Matter

Use this worksheet after reading the lesson to practise the key ideas and prove you can meet the success criteria.

Name _____

Date _____

Class _____

1. Key Ideas

A bridge cable, a saucepan, a drink bottle and a phone screen are all chosen for reasons. In Stage 5 science, materials are not just named or described. They are assessed using evidence about their physical and chemical properties, and that is the foundation for this whole unit.

- materials are chosen for reasons linked to their properties
- good material choice depends on matching properties to purpose

2. Success Criteria

By the end, you should be able to:

- materials are chosen for reasons linked to their properties
- physical and chemical properties are different kinds of evidence
- Stage 5 science expects students to assess, not just describe

3. Key Terms

Material
A substance or mixture of substances used to make an object or product.

Physical property
A property that can be observed or measured without changing the substance into a different substance. Examples: density, hardness, conductivity.

Chemical property
A property that describes how a substance behaves in a chemical change. Examples: flammability, reactivity, corrosion.

Assess
Make a judgement based on evidence and criteria, not just personal preference.

Suitability
How well a material matches the demands of a particular use.

Criterion
A feature or standard used to judge between options. Plural: criteria.

4. Activity: Build the Lesson Map

Use the lesson to complete the table. Keep answers brief but specific.

Prompt	Your answer
Main concept	
Important example	
Common mistake to avoid	
How this links to the next lesson	

5. Short Answer Questions

1. Explain this lesson goal in your own words: "materials are chosen for reasons linked to their properties". Use one specific example from the lesson.

CORE

2. Apply this idea to a new example: "physical and chemical properties are different kinds of evidence". Show your reasoning clearly.

CORE

3. Analyse why this idea matters for understanding Why Materials Matter: "Stage 5 science expects students to assess, not just describe".

REASONING

6. Extend: Apply the Idea

A student says, "I understand Why Materials Matter because I memorised the definition."

Explain why memorising a definition is not enough. Use an example from the lesson to show deeper understanding.

7. Multiple Choice

1. What is the best first step when answering a question about Why Materials Matter?

☐ A. Identify the key concept being tested

☐ B. Write every fact from memory

☐ C. Ignore the command word

☐ D. Skip examples and evidence

2. Which answer would show stronger understanding of Why Materials Matter?

☐ A. An answer with accurate terms and reasoning

☐ B. A copied definition only

☐ C. A single-word response

☐ D. An answer with no example

3. What should you do if a question asks you to explain?

☐ A. Link the idea to a reason or cause

☐ B. List unrelated facts

☐ C. Only draw a diagram

☐ D. Write the shortest possible answer

8. Success Criteria Proof

Finish with evidence that you can do each success criterion.

SUCCESS CRITERION 1

Prove that you can: materials are chosen for reasons linked to their properties

SUCCESS CRITERION 2

Prove that you can: physical and chemical properties are different kinds of evidence

SUCCESS CRITERION 3

Prove that you can: Stage 5 science expects students to assess, not just describe

One thing I still need help with: