CHEMISTRY YEAR 11 - MODULE 3 - LESSON 1

Physical & Chemical Change

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

Every firework burst is a cascade of chemical changes — the same elements recombining into new substances, releasing light and energy in the process. Red from strontium, green from barium, blue from copper. The chemistry of change is happening all around you, every moment.

- The five observable indicators of chemical change
- Why new substance formation defines chemical change

2. Success Criteria

By the end, you should be able to:

- The five observable indicators of chemical change
- Examples of physical and chemical changes
- The Law of Conservation of Mass

3. Key Terms

Physical change
A change that alters the form or state of a substance without producing any new substance.

Chemical change
A change that produces one or more new substances with different chemical properties.

Law of Conservation of Mass
The principle that total mass of reactants equals total mass of products in a chemical reaction.

Reversible reaction
A reaction that can proceed in both forward and reverse directions under the same conditions.

Irreversible reaction
A reaction that proceeds essentially to completion in one direction only.

Synthesis reaction
A reaction where two or more reactants combine to form a single product.

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: "The five observable indicators of chemical change". Use one specific example from the lesson.

BAND 3 2 MARKS

2. Apply this idea to a new example: "Examples of physical and chemical changes". Show your reasoning clearly.

BAND 4 3 MARKS

3. Analyse why this idea matters for understanding Physical & Chemical Change: "The Law of Conservation of Mass".

BAND 5 4 MARKS

6. Extend: Apply the Idea

BAND 5/6 5 MARKS

A student gives a memorised answer about Physical & Chemical Change but does not use evidence or reasoning.

Improve the answer by writing a stronger response that uses accurate terminology, a relevant example and a clear explanation.

7. Multiple Choice

1. What is the best first step when answering a question about Physical & Chemical Change?

☐ 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 Physical & Chemical Change?

☐ 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: The five observable indicators of chemical change

BAND 3 2 MARKS

SUCCESS CRITERION 2

Prove that you can: Examples of physical and chemical changes

BAND 4 3 MARKS

SUCCESS CRITERION 3

Prove that you can: The Law of Conservation of Mass

BAND 5 4 MARKS

One thing I still need help with: