PHYSICS YEAR 11 - MODULE 3 - LESSON 1

Wave Motion and Types of Waves

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 wave can travel across a rope, through air, or through empty space. What actually moves is not the matter itself, but a disturbance carrying energy from one place to another.

- What a wave is
- Why waves transfer energy without transporting matter overall

2. Success Criteria

By the end, you should be able to:

- What a wave is
- The difference between transverse and longitudinal waves
- The difference between mechanical and electromagnetic waves

3. Key Terms

Key idea
The central concept from Wave Motion and Types of Waves.

Evidence
Information, observations or calculations used to support an answer.

Explain
Give a reasoned answer that links cause and effect.

Apply
Use a learned idea in a new example, problem or scenario.

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: "What a wave is". Use one specific example from the lesson.

BAND 3 2 MARKS

2. Apply this idea to a new example: "The difference between transverse and longitudinal waves". Show your reasoning clearly.

BAND 4 3 MARKS

3. Analyse why this idea matters for understanding Wave Motion and Types of Waves: "The difference between mechanical and electromagnetic waves".

BAND 5 4 MARKS

6. Extend: Apply the Idea

BAND 5/6 5 MARKS

A student gives a memorised answer about Wave Motion and Types of Waves 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 Wave Motion and Types of Waves?

☐ 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 Wave Motion and Types of Waves?

☐ 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: What a wave is

BAND 3 2 MARKS

SUCCESS CRITERION 2

Prove that you can: The difference between transverse and longitudinal waves

BAND 4 3 MARKS

SUCCESS CRITERION 3

Prove that you can: The difference between mechanical and electromagnetic waves

BAND 5 4 MARKS

One thing I still need help with: