PHYSICS YEAR 11 - MODULE 3 - LESSON 13

Evidence That Sound Is a Wave

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

We do not call sound a wave just because it is convenient. We call it a wave because it shows the behaviours waves show: reflection, refraction, diffraction, interference, and standing waves. The job in this lesson is to evaluate that evidence clearly.

- The five key wave behaviors shown by sound
- Why reflection, refraction, diffraction, interference, and standing waves support the wave model

2. Success Criteria

By the end, you should be able to:

- The five key wave behaviors shown by sound
- Examples of each behavior in real contexts
- That sound is mechanical and light is electromagnetic

3. Key Terms

Evidence That Sound
a Wave | HSC Physics Year 11 Module 3 | HSCScience

job in this lesson
to evaluate that evidence clearly

sound
invisible, how can we be confident it behaves as a wave rather than some completely different kind of disturbance?

That sound
mechanical and light is electromagnetic

Work and energy
completely different concepts

Work
the transfer of energy; they share the same unit (joules) and are fundamentally linked

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. 7. Explain how echoes provide evidence that sound behaves as a wave.

BAND 3 3 MARKS

2. 8. Describe one piece of evidence for sound diffraction and explain why it supports the wave model.

BAND 4 3 MARKS

3. 9. Evaluate the claim "sound is basically the same as light because both are waves." Include one similarity and one important difference.

BAND 5 4 MARKS

6. Extend: Apply the Idea

BAND 5/6 5 MARKS

A student gives a memorised answer about Evidence That Sound Is a Wave 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 Evidence That Sound Is a Wave?

☐ 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 Evidence That Sound Is a Wave?

☐ 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 key wave behaviors shown by sound

BAND 3 2 MARKS

SUCCESS CRITERION 2

Prove that you can: Examples of each behavior in real contexts

BAND 4 3 MARKS

SUCCESS CRITERION 3

Prove that you can: That sound is mechanical and light is electromagnetic

BAND 5 4 MARKS

One thing I still need help with: