PHYSICS YEAR 11 - MODULE 3 - LESSON 14

Reflection of Light and Mirrors

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

The law of reflection still applies to light, but mirrors let us go further. Plane mirrors create upright virtual images, concave mirrors can focus light and form real images, and convex mirrors trade magnification for a wider field of view.

- The law of reflection for light
- Why a plane-mirror image appears behind the mirror

2. Success Criteria

By the end, you should be able to:

- The law of reflection for light
- How plane mirrors form images
- The difference between concave and convex mirrors

3. Key Terms

even though the mirror
still reflecting light according to the usual reflection law?

Angles
measured from the normal

Energy
conserved; machines can only transform energy, never create it (efficiency ≤ 100%)

rate at which work
done or energy is transferred; P = W/t

mirror as the object
in front — a result that follows directly from the law of reflection applied to a flat surface

The image
virtual because the reflected rays do not actually meet there

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 why a plane-mirror image is described as virtual.

BAND 3 3 MARKS

2. 8. State two image characteristics of a convex mirror and explain why this mirror is used in rear-view mirrors.

BAND 4 3 MARKS

3. 9. A concave mirror has focal length 12 cm and object distance 18 cm. Find the image distance using the mirror equation and describe the image type.

BAND 5 4 MARKS

6. Extend: Apply the Idea

BAND 5/6 5 MARKS

A student gives a memorised answer about Reflection of Light and Mirrors 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 Reflection of Light and Mirrors?

☐ 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 Reflection of Light and Mirrors?

☐ 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 law of reflection for light

BAND 3 2 MARKS

SUCCESS CRITERION 2

Prove that you can: How plane mirrors form images

BAND 4 3 MARKS

SUCCESS CRITERION 3

Prove that you can: The difference between concave and convex mirrors

BAND 5 4 MARKS

One thing I still need help with: