



Waves: Light and Sound

Name: _____

Date: _____

Grade: Grade 4

Part A: Multiple Choice

Circle the best answer for each question.

1. A Grade 4 student shines a flashlight at a flat mirror. What happens to most of the light?

- A) It is absorbed and turns into heat inside the mirror.
- B) It is reflected back at an equal angle.
- C) It is refracted and bends straight downward.
- D) It disappears completely with no path.

2. Why does a black T-shirt feel hotter in the sun than a white T-shirt?

- A) Black shirts reflect more light than white shirts.
- B) Black shirts absorb more light energy and turn it into heat.
- C) Black shirts refract sunlight into rainbows.
- D) Black shirts let light pass through without changing.

3. A pencil placed in a glass of water looks bent at the water line. What is happening?

- A) The pencil really breaks when it touches water.
- B) Light is absorbed by the pencil completely.
- C) Light refracts (bends) as it passes between water and air.
- D) Sound waves push the pencil sideways.

4. Which Grade 4 example best shows light being mostly absorbed?

- A) Sunlight bouncing off a clean mirror.
- B) A beam of light bending through a magnifying glass.
- C) Sunlight hitting dark asphalt and warming it up.
- D) A flashlight shining through clear glass.

Part B: Fill in the Blank

Write the correct answer on each line.

1. When light bounces off a smooth surface and changes direction, that is called _____.
2. When a dark surface takes in light energy and warms up, that is called _____.
3. When light bends as it passes from air into water or through a lens, that is called _____.
4. Sound can also reflect off a hard wall or cliff, and the reflected sound we hear is called an _____.
5. Soft pillows and thick curtains help quiet a room because they _____ sound waves.

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Part B: Fill in the Blank

Write the correct answer on each line.

1. When light bounces off a smooth surface and changes direction, that is called reflection .
2. When a dark surface takes in light energy and warms up, that is called absorption .
3. When light bends as it passes from air into water or through a lens, that is called refraction .
4. Sound can also reflect off a hard wall or cliff, and the reflected sound we hear is called an echo .
5. Soft pillows and thick curtains help quiet a room because they absorb sound waves.