



# 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 yells in an empty gym and hears their voice come back. What is this called?

- A) Refraction of sound
- B) Echo (reflection of sound)
- C) Absorption of sound
- D) Vibration of sound

2. Which room would have the fewest echoes for a Grade 4 reading club?

- A) A tiled bathroom with hard walls.
- B) A carpeted library with cushioned chairs and curtains.
- C) An empty gym with wood floors.
- D) A concrete parking garage.

3. A magnifying glass focuses sunlight into a small bright spot on paper. Which interaction is mainly happening?

- A) Sound absorption
- B) Light reflection only
- C) Light refraction by the lens
- D) Vibration of the paper

4. A flashlight shines on a thick wooden door. What happens to the light?

- A) It passes through clearly because wood is transparent.
- B) It is mostly blocked because the door is opaque.
- C) It is refracted into a rainbow on the other side.
- D) It turns into sound waves on the door.

## Part B: Fill in the Blank

Write the correct answer on each line.

1. A bat finds bugs in the dark by sending out sound and listening for the \_\_\_\_\_ that bounce back.
2. Recording studios put foam on the walls to \_\_\_\_\_ sound and stop echoes from messing up the music.
3. A camera lens is curved so it can \_\_\_\_\_ light onto the sensor and make a clear picture.
4. When sunlight hits snow, most of the light is \_\_\_\_\_ back, which is why snow looks so bright.
5. Frosted glass is translucent because it lets some light through but \_\_\_\_\_ the image so it is blurry.

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1. A bat finds bugs in the dark by sending out sound and listening for the echoes that bounce back.
2. Recording studios put foam on the walls to absorb sound and stop echoes from messing up the music.
3. A camera lens is curved so it can refract light onto the sensor and make a clear picture.
4. When sunlight hits snow, most of the light is reflected back, which is why snow looks so bright.
5. Frosted glass is translucent because it lets some light through but scatters the image so it is blurry.