

Name: _____ Date: _____

Shadows or Echoes? First Grade Light and Sound Challenge

Examine 10 high-level scenarios to predict how light and sound change when they hit different barriers and materials.

1. If you are hiding behind a thick wooden door, why can your friend still hear you talk but cannot see you?

- A. Sound can move through the door, but light is blocked.
- B. Light moves through wood, but sound gets stuck.
- C. The door is made of glass.
- D. Sound waves stop when they hit wood.

2. True or False: If you vibrate a rubber band very slowly, the sound it makes will have a very high pitch.

- A. True
- B. False

3. A mirror helps you see your face because the light _____ off the shiny surface and back to your eyes.

- A. disappears
- B. bounces
- C. breaks
- D. hides

4. You are in a large, empty gym and shout 'Hello!' Why do you hear your own voice a second time?

- A. A friend is hiding and repeating you.
- B. The light is making the sound louder.
- C. Sound waves bounced off the wall and came back.
- D. Your ears are playing a trick on you.

5. To make a drum sound much _____, you should hit it with more force to make bigger vibrations.

- A. quieter
- B. higher
- C. louder
- D. softer

6. True or False: In a completely dark room with no windows and no lamps, you can eventually see your toys once your eyes get used to it.

- A. True
- B. False

7. If you place a flashlight behind a piece of clear plastic wrap, what will happen to the light?

- A. The light will stop and make a dark shadow.

Name: _____ Date: _____

- B. The light will turn into a rainbow.
- C. The light will pass through to the other side.
- D. The light will disappear completely.

8. When you put a heavy blanket over a radio, the music sounds different because the blanket _____ the sound vibrations.

- A. traps/soaks up
- B. speeds up
- C. sharpens
- D. creates

9. Why does a straw in a glass of water sometimes look like it is broken or bent?

- A. The water is actually breaking the straw.
- B. Light changes direction when it moves through water.
- C. The straw is made of magic material.
- D. Sound is pushing the straw to the side.

10. True or False: Sound can travel through water, which is how whales talk to each other from far away.

- A. True
- B. False