

Name: _____ Date: _____

Answer Key: Why Does My Shadow Move? 1st Grade Light Detective Quiz

Engage young investigators with scenarios requiring analysis of light paths and material transparency for a science station or formative assessment.

1. A magician wants to hide a rabbit behind a screen. Which material should the magician choose so the audience CANNOT see the rabbit at all?

Answer: C) A heavy wooden board

To hide something completely, you need an opaque material like wood that blocks all light from passing through.

2. If you shine a flashlight at a _____, the light will bounce off and hit the wall behind you.

Answer: B) Shiny metal tray

Smooth, shiny surfaces like metal trays cause light to reflect (bounce) in a specific direction.

3. True or False: A shadow will get smaller if you move an object closer to the light source.

Answer: B) False

When an object moves closer to the light, it blocks more of the light beams, making the shadow larger, not smaller.

4. You are playing hide-and-seek. You hide behind a frosted glass shower door. The seeker can see a blurry shape but not your face. This door is:

Answer: B) Translucent

Translucent materials allow some light to pass through but scatter it, so objects on the other side are not clear.

5. To stay cool on a very hot, sunny day, you should wear a _____ shirt because it reflects more sunlight away from your body.

Answer: C) Bright white

White and light colors reflect most of the light that hits them, while dark colors absorb it and turn it into heat.

6. True or False: Light always travels in a straight line unless it hits something.

Name: _____ **Date:** _____

Answer: A) True

Light moves in straight paths called rays; it only changes direction or bends when it interacts with an object or material.

7. Look at a spoon. Your reflection looks upside down on one side but right-side up on the other. Why does the spoon change how you look?

Answer: B) The spoon's surface is curved

Curved reflective surfaces change the direction light bounces, which can flip or stretch an image.

8. If you are standing outside at noon when the sun is directly above your head, your shadow will be ____.

Answer: B) Very short

When the light source is directly overhead, the object blocks very little area on the ground, creating a short shadow.

9. True or False: You can see a book in a completely dark room if you wait for your eyes to adjust.

Answer: B) False

To see an object, light must reflect off that object and enter your eyes. Without a light source, there is no light to reflect.

10. Which of these objects would be best for sending a signal using light to a friend across a field?

Answer: C) A small hand mirror

A mirror is highly reflective and can be used to redirect sunlight toward a specific person or place.