Name: _____ **Date:** _____

Solve Your Mystery Mirror Mission: 2nd Grade Optics Challenge

Analyze how light behaves when it hits different surfaces and evaluate why certain tools help us see things that are hidden or far away.

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1. Imagine you are building a 'Spy Periscope' to see over a tall wall. Which property of light are you using to make the light bounce into your eyes?

A. Absorption
B. Reflection
C. Shadowing
D. Heating

2. A scientist looks through a magnifying glass to make a tiny bug look huge. This happens because the glass causes the light to _____.

A. Stop completely
B. Change color
C. Bend (Refract)
D. Turn into a shadow

3. If you shine a flashlight at a piece of clear plastic wrap, most of the light will pass through because the material is transparent.

A. True
B. False

4. Why does a spoon in a glass of milk look 'broken' at the surface of the liquid?

A. The milk is too heavy for the spoon
B. The spoon is actually breaking in the liquid
C. Light slows down and bends in the liquid
D. The glass is blocking the light

5. A lighthouse uses a special curved _____ to gather light and send a powerful beam far out into the ocean.

A. Mirror
B. Shadow
C. Lens
D. Opaque wall

6. A piece of black construction paper is a great tool for reflecting light to brighten a dark room.

A. True
B. False

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7. You are designing a pair of glasses for a giant. If the lenses are curved outward like a bowl turned upside down, what will happen to the light?

A. The light will turn into a rainbow
B. The light will stay in a straight line
C. The light will spread out or come together
D. The light will disappear

8. If you want to see a very tiny speck of dust on your desk, you should use a tool that _____ the image.

A. Shrinks
B. Darkens
C. Magnifies
D. Hides

9. When you look into a flat bathroom mirror, the light bounces off the mirror at the same angle it hit the mirror.

A. True
B. False

10. Which of these scenarios shows light being refracted (bent)?

A. A laser beam hitting a disco ball
B. Sunlight passing through a glass prism
C. A shadow forming behind a tree
D. Seeing your face in a shiny spoon