Name: _____ **Date:** _____

Bending Beams and Magic Mirrors for 2nd Grade

Path prediction, material testing, and shadow engineering provide the hands-on logic needed to master light behavior in this advanced optics challenge.

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1. If you are designing a secret clubhouse and want to see around a corner using only two flat mirrors, how should you position the second mirror?

A. Facing away from the first mirror
B. At an angle that catches the light from the first mirror
C. Lying flat on the floor
D. Covered with a dark cloth

2. An engineer chooses a piece of frosted glass for a bathroom window because it is _____, meaning it lets light through but blurs the shapes.

A. Transparent
B. Opaque
C. Translucent
D. Reflective

3. If you move a flashlight closer to an object, the shadow on the wall behind the object will get smaller.

A. True
B. False

4. You look through a glass of water at a drawing of an arrow pointing right, but the arrow now looks like it points left. Why does this happen?

A. The water acts like a mirror
B. Light bends as it moves through the water
C. The paper is getting wet
D. The room is too dark

5. A scientist wants to block all light from entering a darkroom. They should cover the windows with an _____ material like heavy cardboard.

A. Opaque
B. Refractive
C. Clear
D. Transparent

6. White light is actually made up of many different colors mixed together.

A. True
B. False

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7. Why does a shiny metal spoon show your reflection, but a piece of brown construction paper does not?

A. The paper absorbs all the light
B. The spoon is colder than the paper
C. The spoon's surface is smooth enough to bounce light back evenly
D. The paper is too thin

8. If you want to make a tiny bug look much larger, you should use a _____ lens that curves outward.

A. Flat
B. Square
C. Magnifying
D. Opaque

9. Light travels in a wavy, zigzag line whenever it moves through the air.

A. True
B. False

10. You are standing in a dark room with a red ball. If there is absolutely no light, what color is the ball?

A. Red
B. White
C. Black (No color)
D. Glowing