

Light on the Move

Read closely to track what light does with different materials.

SC.3.P.10.4 "Demonstrate that light can be reflected, refracted, and absorbed."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline one sentence about light bouncing, circle one sentence about light changing direction, and number one sentence about light being taken in. Use 1, 2, and 3 to show the three different ways light acts.

Maya's Light Tests

- ① At recess, Maya aimed a flashlight at a smooth metal lunch box. A bright patch appeared on the wall behind her. Light traveled from the flashlight to the metal and bounced in a new direction. This bouncing is called reflection. A shiny, smooth surface, such as a mirror or calm water, can reflect light. The reflected light lets people see objects and images.
- ② Later, Maya put a pencil in a clear cup of water. The part under the water looked bent, although the pencil was straight. Light from the pencil moved through water and then into air before reaching Maya's eyes. Light changed direction as it moved between water and air. This change in direction is called refraction. Clear glass can also refract light.
- ③ Maya also set a black lunch bag and a white lunch bag in sunlight. After a few minutes, the black bag felt warmer. Both bags received light, but the black surface absorbed more of it. Absorbed light does not bounce away or pass through. Instead, the surface takes in the light's energy and can warm up. Dark surfaces often absorb more light than light-colored surfaces.

2 ANSWER WITH EVIDENCE Use the passage

1 What did the light do when it reached the metal lunch box?

2 What two materials did light move between when the pencil looked bent?

3 Why did the pencil look bent even though it was straight?

4 Which lunch bag absorbed more light, and what happened to it?

3 YOUR TURN Your own words

Draw three panels that show light reflecting, refracting, and being absorbed. In each panel, draw arrows for the light, label the arrows, and write a caption that explains what happens.



PART 1 • READ AND MARK

Underline one sentence about light bouncing, circle one sentence about light changing direction, and number one sentence about light being taken in. Use 1, 2, and 3 to show the three different ways light acts. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What did the light do when it reached the metal lunch box?	It bounced in a new direction, or reflected.
2	What two materials did light move between when the pencil looked bent?	Light moved between water and air.
3	Why did the pencil look bent even though it was straight?	The pencil looked bent because light changed direction as it moved between water and air. This is refraction.
4	Which lunch bag absorbed more light, and what happened to it?	The black lunch bag absorbed more light, and it felt warmer.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Panel 1: A flashlight beam hits a mirror and bounces toward a cat. Arrow label: bounces. Caption: The mirror reflects the light. Panel 2: Light travels from a coin under water into the air. Arrow label: changes direction. Caption: The light refracts, so the coin looks different. Panel 3: Sunlight reaches a dark sidewalk. Arrow label: taken in. Caption: The sidewalk absorbs light and gets warm.

Accept descriptions of reflection as bouncing, refraction as light changing direction between materials, and absorption as light being taken in. For the open task, accept any accurate three-panel situation with arrows, labels, and captions for all three light behaviors.