

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Light



Light is a form of energy that allows us to see the world around us. It travels in straight lines called rays and moves incredibly fast—about 300,000 kilometres per second! This speed enables light to reach us from distant stars and the Sun.

**Travel of Light:** When light travels, it moves in straight lines until it encounters an object. If the object is transparent, like glass, light passes through it. If the object is opaque, like wood, light cannot pass through, creating a shadow.

**Difference from Sound:** Light and sound are both forms of energy, but they behave very differently. Sound travels as vibrations through air, water, or solids, while light travels through space, air, and transparent materials.

**Sources of Light:** Light comes from many sources, including natural sources like the Sun, stars, and fire, as well as artificial sources like light bulbs and flashlights. These sources emit light waves that travel through space or air until they reach our eyes.

**Shadows:** When an object blocks light, it creates a shadow—a dark area where light cannot reach. The size and shape of a shadow change depending on the position of the light source and the object casting the shadow.

### Absorption, Reflection, and Refraction:

- Absorption:** When light hits an object and is absorbed, the object takes in the light energy and may heat up.
- Reflection:** When light hits a smooth, shiny surface like a mirror, it bounces off at the same angle, allowing us to see reflections.
- Refraction:** Light bends or changes direction when it passes through different materials, like water or glass, creating effects like bending a pencil in water.

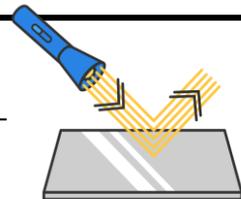
1. How does light travel, and what is its speed? \_\_\_\_\_

2. How is light different from sound in terms of how it travels? \_\_\_\_\_

3. Name two natural sources and two artificial sources of light. \_\_\_\_\_

4. Explain how shadows are formed and how their size can change. \_\_\_\_\_

5. What is refraction? \_\_\_\_\_



**1.How does light travel, and what is its speed?** Light travels in straight lines called rays and moves incredibly fast, about 300,000 kilometres per second in a vacuum.

**2.How is light different from sound in terms of how it travels?** Light travels through space, air, and transparent materials as waves, while sound travels as vibrations through air, water, or solids.

**3.Name two natural sources and two artificial sources of light.** Natural sources: The Sun and stars. Artificial sources: Light bulbs and flashlights.

**4.Explain how shadows are formed and how their size can change.** Shadows are formed when an object blocks light, creating a dark area where light cannot reach. The size and shape of a shadow change based on the position of the light source and the object casting the shadow.

**5.What is refraction?** Refraction is the bending of light as it passes through different materials, like water or glass.