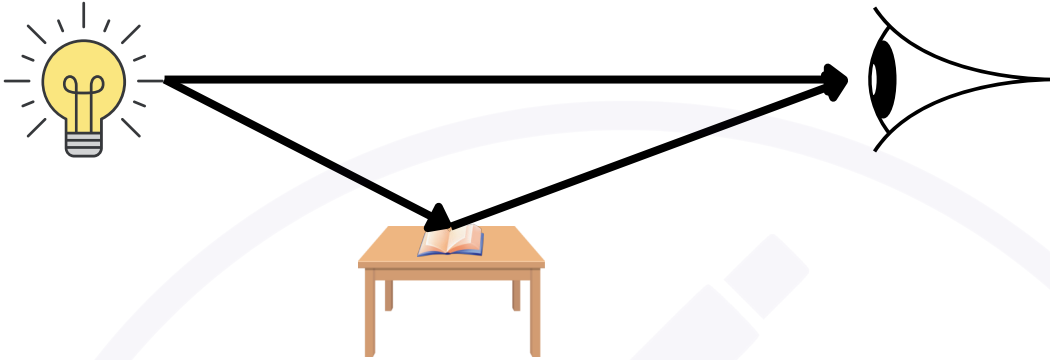


LIGHT AND SHADOWS

Key Concepts

- Light travels in straight lines and is a type of energy.
- Shadows are formed when an object blocks light.



Key Facts to Remember

- Light is a form of electromagnetic radiation that travels at 300,000 km/s.
- Transparent objects let light pass through; translucent objects scatter light; opaque objects block light.
- Shadows are darkest where light is completely blocked (umbra) and lighter where light is partially blocked (penumbra).
- Reflection occurs when light bounces off a surface.
- Refraction happens when light changes direction as it passes from one medium to another.
- White light is made up of all the colors of the spectrum.
- The angle of incidence equals the angle of reflection (Law of Reflection).
- The Sun is our main natural light source, while candles and bulbs are artificial sources.

Quick Questions

1. How fast does light travel?
2. Name one transparent, one translucent, and one opaque material.
3. What is an umbra?
4. What happens during reflection?
5. What is refraction?
6. What is white light made of?
7. State the Law of Reflection.
8. Give one natural and one artificial light source.

Fun Fact

A light year is the distance light travels in a year—about 9.5 trillion kilometres!