



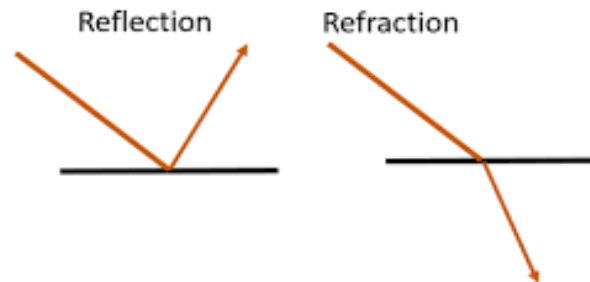
Knowledge Bank: Year 6 Science – Life-saving Light!

Key Vocabulary:

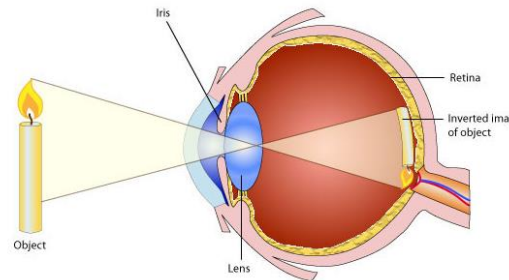
light source	An object that emits light. Natural sources include the sun and stars. Manmade sources include light bulbs and candles.
UV rays	Ultraviolet radiation is a type of energy produced by the sun.
reflect	When a beam of light hits a surface and bounces off at the same angle it hits it.
refraction	When a beam of light changes direction or bends when it moves from one material to another.
shadow	The absence of light which casts a dark shape matching the object.
transparent	A material that allows all light to pass through it.
translucent	A material that allows some light to pass through, like tracing paper or stained-glass windows.
opaque	A material that does not allow any light to pass through it.
periscope	An apparatus allowing an observer to see objects due to reflection of light.
blackout	A period when all lights were turned off to prevent them being seen in the Blitz.

Diagrams:

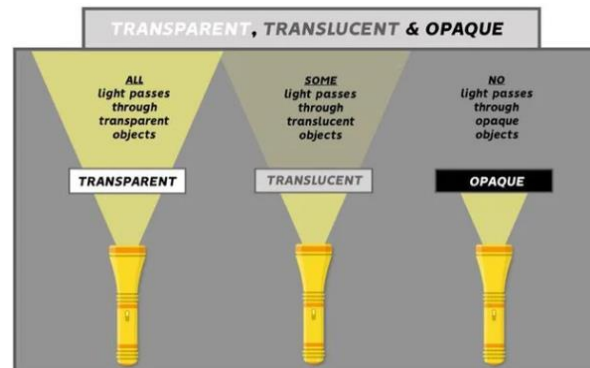
How light beams can be manipulated:



Cross section of a human eye:



Transparent, Translucent & Opaque:



Key Facts:

- Light energy is made of photons and is the only form of energy that can be seen by the human eye.
- Light travels from light sources to our eyes or from light sources to objects and then to our eyes.
- The direction of a beam of light can be manipulated by reflection or refraction.
- The refraction of light can change how we perceive objects when viewing them through water.
- Objects are seen because they give out or reflect light into the eye.
- Our optic nerves at the back of our eyeballs send signals to our brain of what we can see.
- Shadows are evidence of how light travels in a straight line.
- A shadow is cast when an object blocks light from passing through it.
- An object that is closer to a light source creates a larger shadow.