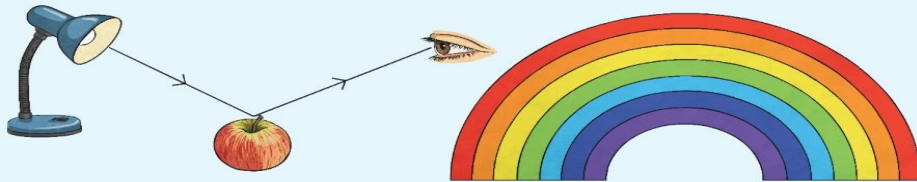


# Year 6: Let It Shine Light

## What is light?

Light travels in straight lines. It travels from the light source either directly into our eyes, or reflecting off objects at 670 million mph which is how we can see things. Because light travels in straight lines, when it hits an object, it is blocked. It can't bend around the object so it casts a shadow.

We usually see light as being white, but it actually contains all the colours of the **spectrum**.



## What is refraction?

Light waves travel at a different speed when they go through other transparent materials, such as water or glass. This causes the rays of light to change direction and bend. This is known as refraction.



## Seeing Reflections

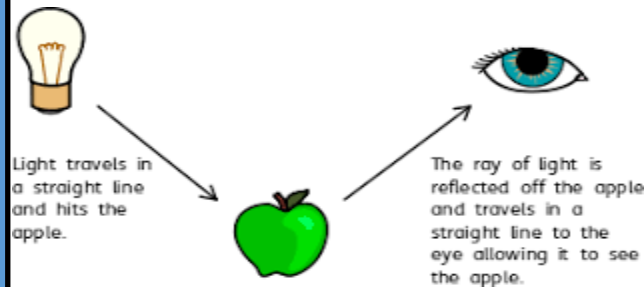
The law of reflection is what allows us to see an object reflected in a mirror:

1. Light from the bulb hits the boy's face and bounces off.
2. The light reflected from the boy's face hits the mirror.
3. The light reflected from the mirror travels to the boy's eyes, so he can see the image of his face reflected in the mirror.



## How is light reflected?

We see objects because light rays enter our eyes after bouncing off rough surfaces. When light rays hit a smooth surface, the light is reflected.

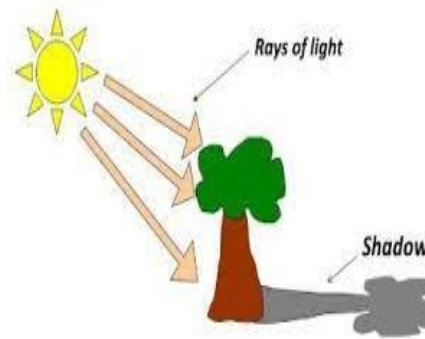


## How do we see?

Light travels in straight lines. When light hits an object, it is reflected (bounces off) and enters our eyes. This is how we see the object. Rays of light travel from a light source and hit objects around us. The rays of light reflect, or bounce, off an object, and then travel into our eyes. This reflection of light allows us to see the object.

## What are shadows?

When an object passes in front of a beam of light, the light can be blocked, making a shadow.



## KEY VOCABULARY



**Light:** is a type of energy that makes it possible for us to see the world around us



**Reflection:** occurs when a light ray hits a surface and bounces off.



**Refraction** - is the deflecting of light as it passes from one substance to another



**Visible spectrum:** The range of colours we can see with our eyes



**Prism:** a three-dimensional shape with identical ends



**Shadow:** a dark area or a shape produced by an object coming between rays of light and a surface



**Opaque:** material does not let light through. It does not reflect light



**Translucent:** is material that lets light pass through, but objects on the other side can't be seen clearly



**Transparent:** materials allow you to see clearly through them



**Source of light:** The Sun and other stars, fires, torches and lamps all make their own light