Knowledge Organiser: Year 6 Light

Careers connected to Light: Photonics, Lighting technician, Optometrist, Photographic Processor

Lesson Sequence

1. Explore how light travels

2. Explore reflection

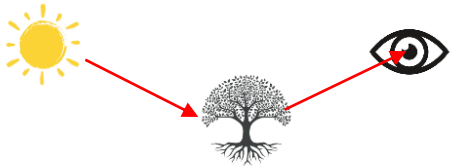
3. Explore reflection and explain how it can be used to help see things

4. Investigate how shadows can change

5. Investigate how we can show why shadows have the same shape as the object that cast them

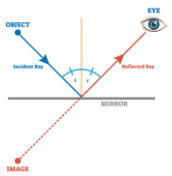
6. Explore light phenomena

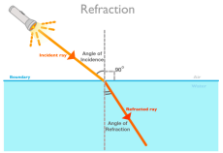
How We See



Light travels in **straight lines**.
The light **rays** from a light source **reflect** off the object we are looking at. The light travels in a **straight line** and enters the eye through our **pupil**.

Bending Light





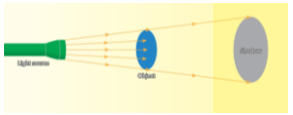
Reflection

Light reflects off shiny, bright or light surfaces. That is why you can see your reflection when you look in a mirror.

Refraction

Water and bent shiny surfaces cause light rays to be reflected at different angles, meaning the reflection of the image is distorted.

Shadows



Opaque objects block the light rays so they can only travel around the edges of the object in straight lines. That is why a shadow is the same shape as the object.

The **closer** an object is to the light source, the **bigger** the shadow.

The **further away** the object is from the shadow, the **smaller** the shadow.

Colours

White light is made up of the colours of the rainbow. When light is refracted through a transparent object, a rainbow is formed.

Absorption and reflection of light