Knowledge Organiser: Year 6 Light

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



Lesson Sequence



Light travels in straight lines.



When light from an object is reflected by a surface, it chang es direction. It bounces off the surface at the same angle as it hits it.



Reflection helps us see things because when it hits an object it is reflected and enters our eyes.



The size and shape of the shadow can change. These changes are caused by the position of the light source.

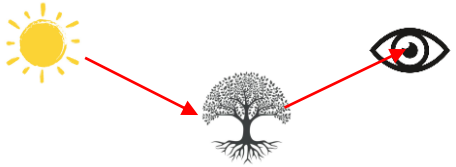


A shadow forms when an opaque, or non-transparent, object blocks light from passing through and reaching a surface on the other side. Light travels in a straight line – that's why shadows are the same shape as the object that makes them.



Light is used for many purposes, including photosynthesis, bioluminescence and identifying elements.

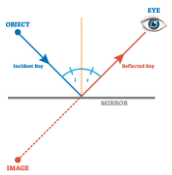
How We See



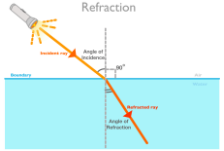
Light travels in **straight lines**.
The light **rays** from a light source **reflect** off the object we are looking at. The light travels in a **straight line** and enters the eye through our **pupil**.

Bending Light









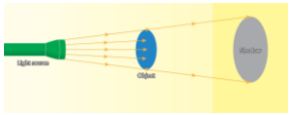
Reflection

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.

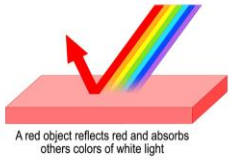
The **further away** the object is from the shadow, the **smaller** the shadow.

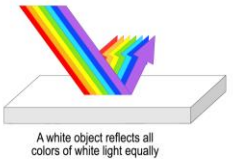
Colours



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







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