

Key Knowledge - light travels in straight lines



Year Six Science Light



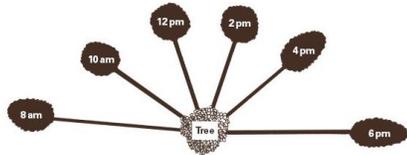
Things that give off light are **primary light sources**. Objects that reflect light are secondary light sources. Objects can be seen because they either give out light or reflect it. Objects are seen when light enters the eye.

The moon is not a light source

The moon is a reflector not a light source. We can see the moon because the sun's light travels in straight lines to the moon and is reflected off it into our eyes.

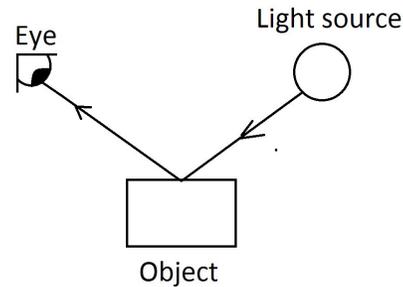
Why shadows change during the day

The earth turns once every day. This makes the sun appear in different places in the sky. When the sun is low, it creates long shadows. When it is high, shadows are shorter.



How we see an object

light travels in straight lines from a light source and is reflected off an object into our eyes.



We cannot see our hand in front of our face when it's completely dark.

In order to see, there must be a light source such as the sun or an electric light. The light is reflected off an object and travels in a straight line to our eyes. In darkness there is no possibility of light being able to travel to our eyes enabling us to see.

Significant person:

Sir Isaac Newton.

It was Sir Isaac Newton who discovered that sunlight falling upon a prism could split into its component colours. This process is known as dispersion. Newton named the component colours: red, orange, yellow, green, blue, indigo and violet



Key vocabulary

light	Light is what we need to see things. Light travels in to our eyes in straight lines.
light sources	Light comes from lots of different sources. The sun, a torch, electrical lights in your home and candles are all primary sources of light.
shadow	When an opaque object blocks the light a shadow is formed.
opaque	Light cannot travel through opaque material. Objects made from wood, stone or metal for example, will create dark shadows
translucent	Some light can travel through translucent objects. (eg tissue paper / frosted glass)
transparent	Light passes through transparent material (eg clean water / glass)
Dispersion or diffraction	White light is separated in to its component colours (we can see this in a rainbow, or through a prism)