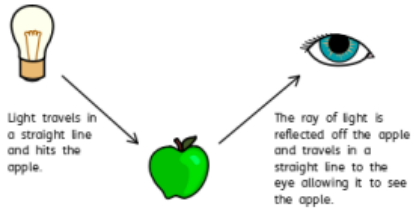
Year 6: Science – Physics – Light

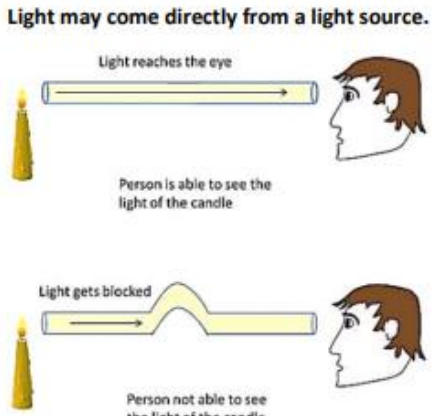
Glossary

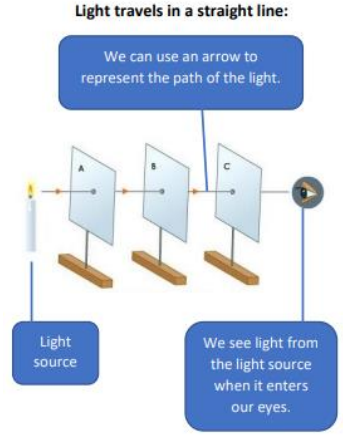
Angle	the direction from which you look at something
Eyes	globular organs of sight in the head of humans and vertebrate animals.
Filter	a device to remove unwanted material (liquid, gas, light or sound).
Light	the natural agent that stimulates sight and makes things visible.
Light Source	something that provides light, whether it be a natural or artificial source of light (e.g. the sun, a torch).
Opaque	an object which does not allow light to pass through (e.g. wood).
Transparent	an object which allows light to pass through it so that objects behind it can be easily seen (glass).
Translucent	an object which allows some light to pass through it. It may be possible to see some unclear images through the object (tissue paper).
Periscope	An apparatus consisting of a tube of attached to a set of mirrors or prisms through which an observer can see things that are otherwise out of sight.
Prism	when light passes through a different object and its direction changes.
Rainbow	an arch of colours visible in the sky, caused by the refraction and dispersion of the sun's light by rain or other water droplets in the atmosphere.
Ray	a beam of light given off by a light source.
Reflection	the throwing back by a body or surface of light, heat or sound without absorbing it.
Refraction	the bending of light as it passes from one substance to another with the bending caused by the difference in density between two substances.
Shadow	a dark area or shape produced by a body coming between rays of light and a surface.
Spectrum	a band of colours, as seen in rainbows, produced by separation of the components of light by their different degrees of refraction.

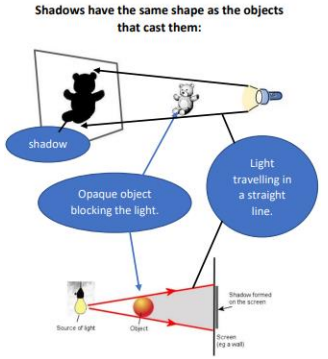
Key Information

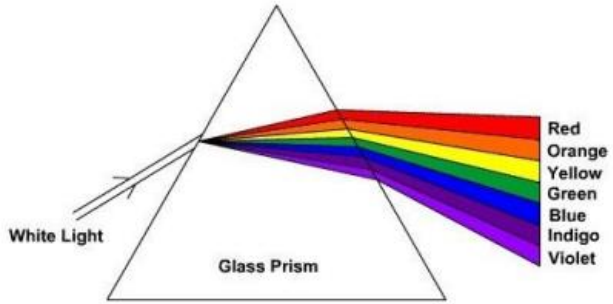
How do we see?











Curricular Goals

How do we see?
We see through our eyes, which are organs that take in light and images and turn them into impulses that our brain can understand. Light rays bounce off objects and into our eyes, allowing us to see. The amount of light reflected from an object depends on the surface and the colour of the object (smooth, shiny and light colour reflect light best).

What is reflection?
When light from an object is reflected by a surface, it changes direction. It bounces off the surface at the same angle as it hits it. Smooth, shiny surfaces such as mirrors and polished metals reflect light well. Dull and dark surfaces such as dark fabrics do not reflect light well.

What is refraction?
Light normally travels in straight lines (rays) but when passing through transparent materials such as water and glass, light bends or turns – known as refraction. This is because different materials have different qualities and cause the wavelength of light to change.

What is the spectrum of light?
Light is made of many different colours (white light), known as the spectrum. When light hits an object, some of the colours are absorbed by the object and some are reflected. The enables us to see objects in different colours.

What is the relationship between light sources and shadows?
Because light travels in straight lines, when there is an opaque object blocking the light, a shadow is formed. ¤ These shadows have the same shape as the objects that cast them.