



# YEAR 6 - LIGHT

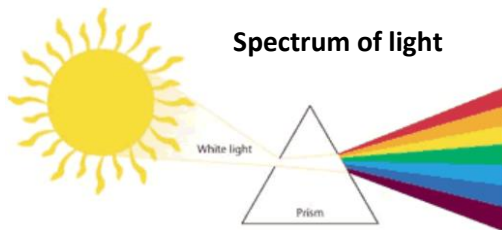
## What you should already know (year 3):

**Light** is a form of energy that makes it possible to see.

**Darkness** is the absence of light. Light can reflect off surfaces (e.g. mirrors).

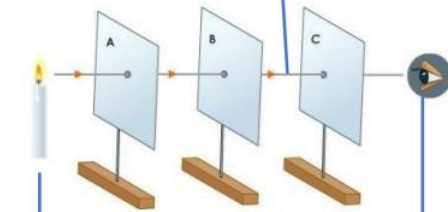
Objects can be labelled as **transparent**, **translucent**, or **opaque**, depending on the amount of light that they let through.

**Shadows** are formed when light is blocked by an opaque object.



## Light travels in a straight line:

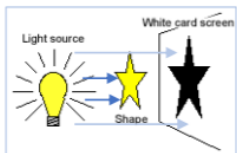
We can use an arrow to represent the path of the light.



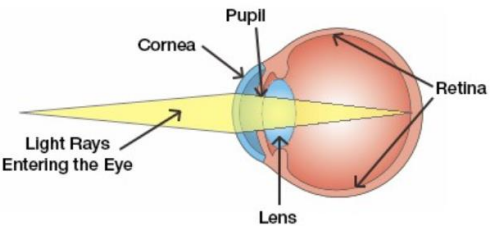
Light source

We see light from the light source when it enters our eyes.

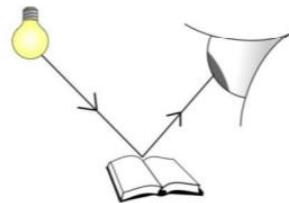
## Shadows have the same shape as the objects that cast them:



Because when an opaque object is in the path of light travelling from a light source, it will block the light rays, while the rest of the light continues travelling in a straight line.



For objects that are not a light source, light must be reflected from the object into our eye for us to see the object:



Related vocabulary	Definition
<b>eyes</b>	globular organs of sight in the head of humans and vertebrate animals.
<b>filter</b>	a device to remove unwanted material (liquid, gas, light or sound).
<b>light</b>	the natural agent that stimulates sight and makes things visible.
<b>light source</b>	something that provides light, whether it be a natural or artificial source of light (e.g. the sun, a torch).
<b>opaque</b>	an object which does not allow light to pass through (e.g. wood).
<b>translucent</b>	an object which allows some light to pass through it. It may be possible to see some unclear images through the object (tissue paper).
<b>transparent</b>	an object which allows light to pass through it so that objects behind it can be easily seen (glass)
<b>rainbow</b>	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
<b>prism</b>	when light passes through a different object and its direction changes.
<b>ray</b>	a beam of light given off by a light source
<b>reflection</b>	the throwing back by a body or surface of light, heat or sound without absorbing it.
<b>refraction</b>	the bending of light as it passes from one substance to another with the bending caused by the difference in density between two substances.
<b>shadow</b>	a dark area or shape produced by a body coming between rays of light and a surface.
<b>spectrum</b>	a band of colours, as seen in rainbows, produced by separation of the components of light by their different degrees of refraction.