



**What I should already know:**

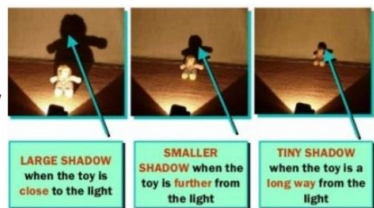
I need light in order to see things.  
 Dark is an absence of light. Light is reflected from surfaces. Light from the sun is dangerous.  
 I should protect my eyes from the sun and how to do this.  
 Shadows are formed when light is blocked by something.

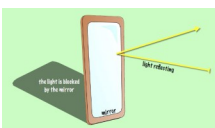
**By the end of this unit:**

Understand light and shadow and know how light travels.  
 Know how we see things through light entering the eyes.  
 Know how light can be reflected and change direction through refraction  
 Reflections can come from a variety of surfaces.  
 Know how shadows can behave in different light.  
 Know the differences between shadows and reflections.  
 Know white light is made up of many colours of light and can be split apart by a prism and how the colours can be joined together to make white again.

**Investigate:**

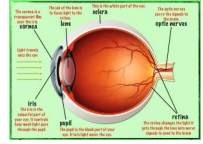
What happens to the shadow when the light source is at different distances from an opaque object?





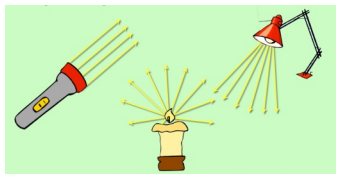
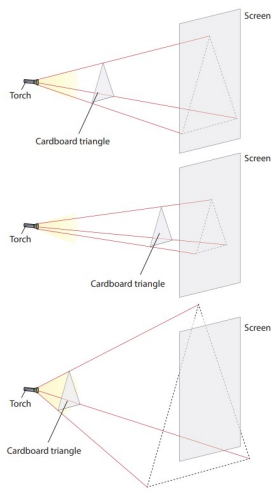
## YEAR 6: Light Up Your World

### Science: Physics



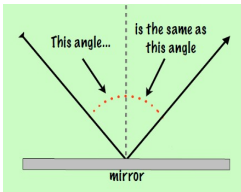
**Working Scientifically**

Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, and bar and line graphs.  
 Identifying scientific evidence that has been used to support or refute ideas or arguments.  
 Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Planning different types of enquiries to answer questions including recognising and controlling variables where necessary.  
 Using test results to make predictions to set up further comparative and fair tests.



Light travels in straight lines

Mirrors behave in predictable ways. The angle that the light lands on the mirror will affect which angle the light changes its direction. This is known as the angle of reflection.



<b>Vocabulary</b>	
Angle of reflection	The angle made by a reflected ray of light with a perpendicular to the reflecting surface.
Dispersion	The separation of white light into colours
Eye	The organ of sight
Inverted	In a mirror, the left appears as the right and vice versa
Lens	The part of the eye that focus' light to the retina.
Light source	Something that gives out light, eg: sun, fire, lamp.
Mirrors	A surface that reflects light.
Opaque	If something is opaque, it is not see through.
Periscope	A device that enables you to see through using a system of mirrors to reflect images through a tube
Ray	A beam of light
Reflect	When a ray of light hits a surface and bounces off it.
Refraction	The change of direction of light when it passes from one transparent substance into another
Retina	The retina in the back of the eye changes the light it gets through the lens into nerve signals to send to the brain.
Shadow	A dark area/shape caused when a light source is blocked by an opaque object.
Spectrum	The range of colours which is produced when light passes through a glass prism or through a drop of water
Translucent	If something is translucent, it allows some light through.
Transparent	If something is transparent, it is see through
Ultra-violet	Light which is beyond the visible spectrum at it violet end