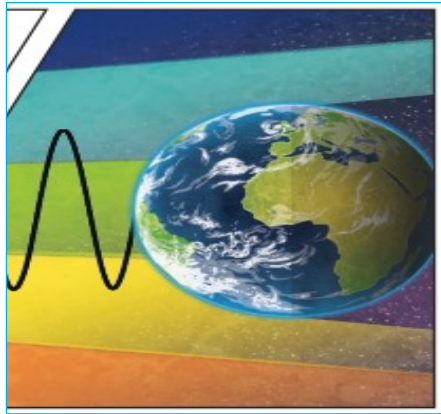


# Light - Year 6

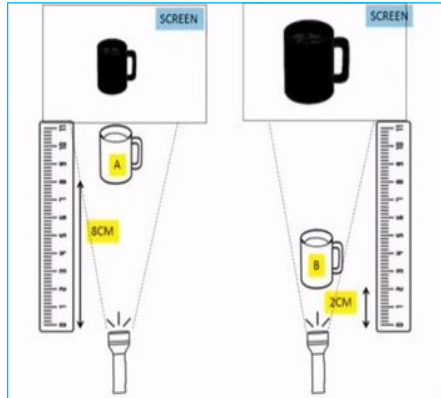
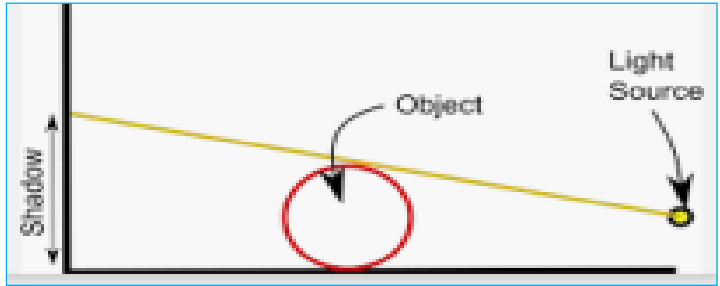
**Previous Learning:**

In EYFS you explored how things worked. In Year 3, you explored the way light behaves and recognised the need for light to see. You also recognised that the sun can be dangerous to the eyes and found patterns in the way that shadow sizes change.

Light travels as a wave. Unlike waves of water or sound waves, it does not need a medium to travel through. This means light can travel through a vacuum—a completely airless space.



We need light to be able to see things. Light waves travel out from sources of light in straight lines. These lines are often called rays or beams of light.

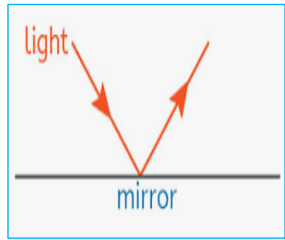


A shadow is always the same shape as the object that casts it. This is because when an opaque object is in the path of light travelling from a light source, it will block the light rays that hit it, while the rest of the light can continue travelling.

Shadows can also be elongated or shortened depending on the angle of the light source.

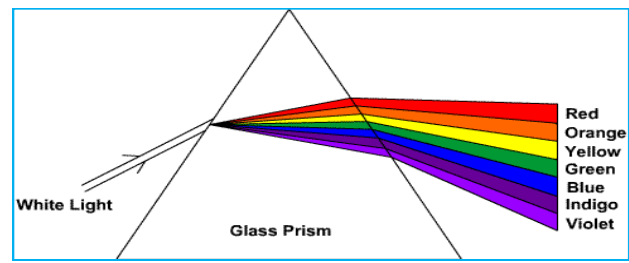
A shadow is also larger when the object is closer to the light source. This is because it blocks more of the light.

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Isaac Newton shone a light through a transparent prism, separating out light into the colours of the rainbow (red, orange, yellow, green, blue, indigo and violet) - the colours of the spectrum. All the colours together merge and make visible light.

Key vocabulary	Definitions
light	A form of energy that travels in a wave from a source.
light source	An object that makes its own light.
transparent	Will let light travel through easily. We can see through transparent objects.
translucent	Will let some light through but will scatter the light. We can not see through translucent objects properly.
opaque	Describes objects that do not let any light pass through them.
shadow	An area of darkness where light has been blocked.
reflection	When light bounces off a surface, changing the direction of a ray of light.
prism	A solid 3D shape with flat sides. A transparent prism separates out visible light into all the colours of the spectrum.
visible spectrum	Light that is visible to the human eye. It is a made of a colour spectrum.



**Future learning:**  
In secondary school, you will look at the speed of light, the transmission of light through materials, colours and the different frequencies of light.