

Year 6: LIGHT

Key Question: Can I investigate the properties of light?

Key Vocabulary

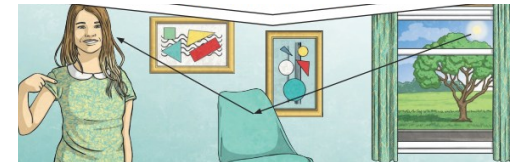
	Light	A form of energy that travels in a wave form a light source.
	Light Source	An object that makes its own light.
	Reflection	Reflection is when light bounces off a surface, changing the direction of a ray of light.
	Reflected ray	A ray of light that has bounced back after hitting a surface.
	Refraction	This is when light bends as it passes from one medium to another. E.g. light bends when it moves from air into water.
	Visible Spectrum	Light that is visible to the human eye. It is made up of a colour spectrum.
	Prism	A prism is a solid 3D shape. A transparent prism refracts visible light into all the colours of the spectrum.
	Shadow	An area of darkness where light has been blocked.
	Transparent	Describes objects that let light travel through them easily, meaning you can see through the object.
	Translucent	Describes objects that lets some light through, but scatters the light so we can't see through them properly.
	Opaque	Describes objects that do not let any light pass through them.

Working Scientifically

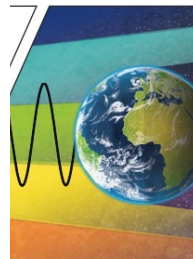
-  Observing and measuring.
-  Making predictions.
-  Setting up tests.
-  Asking questions.
-  Identifying, grouping and classifying
-  Interpreting and communicating results.

Key Knowledge

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.



Light from the sun travels in a straight line and hits the chair. The light ray is reflected off the chair and travels in a straight line to the girl's eye, enabling her to see the chair.



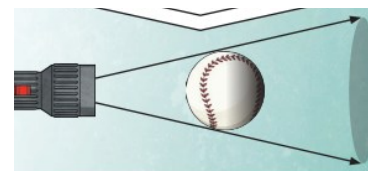
Light travels as a wave. But unlike waves of water or sound waves, it does not need a medium to travel through. This means light can travel through a vacuum - a completely airless space.

Issac Newton shone a light through a transparent prism, separating out light into the colours of the rainbow - the colour spectrum. All the colours together merge and make visible light.



The spoon in the water looks as if it is bent. This is because light bends when it moves from air to water. When light bends in this way, it is called refraction.

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.

