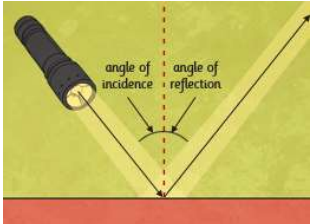




Light

Vocabulary to revise from previous years		Key Vocabulary New to Year 6	
Light	A form of energy that travels in a wave from a source	Shadow	An area of darkness where light has been blocked.
Light source	An object that makes its own light.	Opaque	Describes objects that do not let any light pass through them.
Reflect	To bounce off.	Translucent	The law of reflection
Reflection	The process where light hits the surface of an object and bounces back into our eyes.		
Pupil	The black part of the eye which lets light in.	Transparent	Refraction
Retina	A layer at the very back of the eye. The retina take the light the eye receives. It then changes it into nerve signals to send to the brain.		
			This is when light bends as it passes from one medium to another e.g. air to water. A prism is a solid 3D shape with flat sides. The two ends are an equal shape and size. A transparent prism separates out visible light into all colours of the spectrum.

Key Knowledge

How do we see?	We need light to be able to see things. Light waves travel out from sources of light in straight lines (beams or rays): <ul style="list-style-type: none"> • Rays of light travel from a light source and hit objects around us. • The rays of light reflect, or bounce, off an object, and then travel into our eyes. • This reflection of light allows us to see the object. 	How Is Light Reflected?	The law of reflection: The angle of incidence always equals the angle of reflection. <ul style="list-style-type: none"> • The angle of incidence is the angle between the normal line and the incident ray of light. • The angle of reflection is the angle between the normal line and the reflected ray of light. 	
What Colour Is Light?	In 1666, Newton made a discovery about light that led him to develop his Theory of Colour, a theory that still informs our understanding of light today.	What is refraction?	Light waves travel at a different speed when they go through other transparent materials, such as water or glass. This causes the rays of light to change direction and bend. This is known as refraction. Refraction creates illusions. Because light bends when it travels between air and water or glass, objects seen through these materials look bent or distorted.	

<p>How does a prism affect a ray of light?</p>	<p>When light travels from air through a transparent material, it refracts, or bends.</p> 	<p>What is an optical filter?</p>	<p>An optical filter is a device that lets some colours of light through, but not others.</p>	<p>Why do shadows have the same shape as the object that casts them?</p>	<p>A shadow can change size depending on the distance the object casting it is from the light source. Shadows can also be elongated or shortened depending on the angle of the light source. A shadow is always the same shape as the object that casts because when an object is in the path of light travelling from a light source, it will block the light while the rest continues travelling.</p>
<p>Prior Learning</p>			<p>Next Steps</p>		
<p>Children understand what a light source is Children understand the terms opaque, translucent and transparent</p>			<p>At KS3, the children will learn about:</p> <ul style="list-style-type: none"> - Light waves - Colour 		