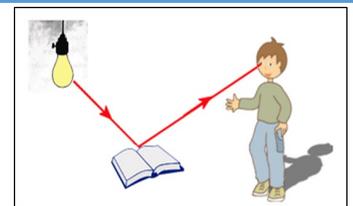
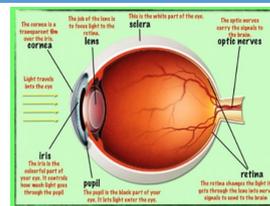


Woodley Primary School – Knowledge Organiser

Science Focus:	Light	Year 6	Summer 2
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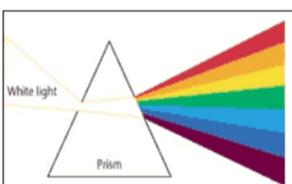
Key Vocabulary	
Spelling	Definition
Light source	Something that provides light, whether it be a natural or artificial source of light (e.g. the sun, a torch)
Reflection	The image of an object in a mirror or any reflective surface.
Refraction	The bending of light as it passes from one transparent substance into another
Shadow	A dark area or shape produced by light being blocked by an object
Pupil	The circular black area in the centre of an eye, through which light enters.
Retina	The area at the back of the eye that receives light and sends pictures of what the eye sees to the brain
Opaque	Not able to be seen through
Translucent	Allowing some light to pass through
Transparent	Allowing light to pass through

Prior Knowledge	
What I should already know ...	
EYFS:	Children know about similarities and differences in relation objects and materials. They talk about the features of their own immediate environment and how environments might vary from one another.
Year 3:	Recognise that they need light in order to see things and that dark is the absence of light Notice that light is reflected from surfaces Recognise that light from the sun can be dangerous and that there are ways to protect their eyes Recognise that shadows are formed when the light from a light source is blocked by a solid object Find patterns in the way that the size of shadows change.



What I will know at the end of the unit

Objectives for the unit:	<p>Recognise that light appears to travel in straight lines.</p> <p>Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.</p> <p>Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>
Working Scientifically:	<p>Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <p>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p> <p>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Using test results to make predictions to set up further comparative and fair tests.</p> <p>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.</p> <p>Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>
Facts:	<p>Light appears to travel in straight lines.</p> <p>We can see objects because they give out or reflect light into the eye.</p> <p>The reason we see things is because light travels from light sources to our eyes or from light sources to objects and then to our eyes.</p> <p>Shadows have the same shape as the objects that cast them because light travels in straight lines.</p> <p>The moon does not give off its own light. We can see it because light from the Sun reflects off it.</p> <p>Light sources can be natural (the Sun, stars) or man-made (headlights, lamps, Christmas lights).</p> <p>Opaque objects do not let any light through, translucent objects let some light through and transparent objects let all light through.</p> <p>The pupil in our eyes lets light enter.</p> <p>The pupil gets larger when it is dark to enable us to see better and it gets smaller in bright light.</p> <p>The retina at the back of our eyes detects light and sends messages to our brain about what we can see.</p>



When white light passes through a glass prism, it is refracted. The light changes direction and is then dispersed (spread out) as it exits the prism. Depending on the shape of the prism and the angle of the light, we can often see the spectrum of colours.

Possible Experiences

(Any visits, experiments, guest speakers, curriculum days, home / school projects etc.)