

# Y6 – Light

<b>Inspiration</b> Creativity – problem solving		<b>Partnership with parents</b> Community	
<b>Key Questions</b> <ul style="list-style-type: none"> <li>- How does light travel?</li> <li>- How are objects seen by the human eye?</li> <li>- Why are shadows shaped the way they are?</li> </ul>	<b>Working Scientifically</b> <ul style="list-style-type: none"> <li>- plan enquiries, including recognising and controlling variables where necessary.</li> <li>- use appropriate techniques, apparatus and materials during fieldwork and laboratory work.</li> <li>- take measurements using a wide range of scientific equipment, with increasing accuracy and precision.</li> <li>- report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships and conclusions.</li> </ul>		Also covered in: Y3 - Light
	<b>By the end of this unit children will be able to:</b> <ul style="list-style-type: none"> <li>- know that light appears to travel in straight lines</li> <li>- 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 by explaining how a periscope works</li> <li>- 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</li> <li>- use the idea that light travels in straight lines to explain why shadows have the same shape</li> <li>- ask their own questions about light, and select the most appropriate ways to answer these questions</li> <li>- draw conclusions, explain and evaluate their methods and findings, communicating these in a variety of ways</li> </ul>		
<b>Knowledge</b> <ul style="list-style-type: none"> <li>- Light travels in straight lines</li> <li>- We can see things when light is reflected from objects and some of the reflected light enters our eyes.</li> <li>- When light from a source cannot travel through a material then a shadow is formed.</li> <li>- The size of the shadow changes depending on the distance between the light source and the object causing the shadow.</li> <li>- When you are further away from the light source, less light is blocked and the shadow is smaller</li> <li>- When you are closer to the light source, more light is blocked and the shadow is larger.</li> <li>- Shadows are the same shape as the object blocking the light</li> </ul>			
<b>Topic Specific Vocabulary</b> Light source, shadow, reflection, opaque, transparent, translucent, dark, bounce, travels, straight line, distance		<b>NC Subject content</b> <ul style="list-style-type: none"> <li>- Recognise that light appears to travel in straight lines</li> <li>- 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</li> <li>- 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</li> <li>- Use the idea that light travels in straight lines to explain why shadows have the same shape</li> </ul>	
<b>Subject Specific/Academic Vocabulary</b> This vocabulary should be explicitly taught in context. Other tier 2 words should also be explored as they are encountered.			
<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
Benefit, impact, issues, occur, process, sequence, source, variables	Appropriate, consequences, identified, procedure, range, relevant, significant, specific, theory, transfer	Factors, affect, analyse, contribute, demonstrate, outcome, react, volume,	Component, exclude, function, imply, initial, justify, sufficient.
<b>We are scientists</b> Linked to war unit in History (links to Blitz). Making periscopes.			

