

Topic	Light
Pre-school	<ul style="list-style-type: none"> <li>• Comment and ask questions about aspects of their familiar world such as the place where they live or the natural world.</li> <li>• Talk about some of the things they have observed such as plants, animals, natural and found objects. (The World 30-50)</li> <li>• Explore colour and how colours can be changed. (Media and Materials 30-50)</li> </ul>
Reception	<ul style="list-style-type: none"> <li>• Look closely at similarities, differences, patterns and change. (The World 40-60)</li> <li>• Explore what happens when they mix colours. (Media and Materials 40-60)</li> <li>• Children follow instructions involving several ideas or actions. They answer 'how' and 'why' questions about their experiences and in response to stories or events. (Understanding ELG)</li> </ul>
Year 1	
Year 2	
Year 3	<ul style="list-style-type: none"> <li>• Can they recognise that they need light in order to see things?</li> <li>• Can they recognise that dark is the absence of light?</li> <li>• Can they notice that light is reflected from surfaces?</li> <li>• Can they recognise that light from the sun can be dangerous and that there are ways to protect their eyes?</li> <li>• Can they recognise that shadows are formed when the light from a light source is blocked by a solid object?</li> <li>• Can they find patterns in the way that the size of shadows change?</li> </ul> <p><b>Challenge</b></p> <ul style="list-style-type: none"> <li>• <b>Can they explain why lights need to be bright or dimmer according to need?</b></li> <li>• <b>Can they explain the difference between transparent, translucent and opaque?</b></li> <li>• <b>Can they explain why lights need to be bright or dimmer according to need?</b></li> <li>• <b>Can they make a bulb go on and off?</b></li> <li>• <b>Can they say what happens to the electricity when more batteries are added?</b></li> <li>• <b>Can they explain why their shadow changes when the light source is moved closer or further from the object?</b></li> </ul>
Year 4	
Year 5	
Year 6	<ul style="list-style-type: none"> <li>• Can they recognise that light appears to travel in straight lines?</li> <li>• Can they 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>• Can they 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>• Can they use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them?</li> </ul> <p><b>Challenge</b></p> <ul style="list-style-type: none"> <li>• <b>Can they explain how different colours of light can be created?</b></li> </ul>

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|  | <ul style="list-style-type: none"><li>• Can they use and explain how simple optical instruments work? (periscope, telescope, binoculars, mirror, magnifying glass, Newton's first reflecting telescope)</li><li>• Can they explore a range of phenomena, including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters.</li></ul> |
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