



LIGHT (PHYSICS)

National Curriculum Statements in red are from other linked topics.

Progression in Scientific knowledge, concepts & skills	EYFS (Early Learning Goals)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	KS3
<p><u>Concepts</u> Cause and effect</p>	<p>Children know about similarities and difference in relation to places, objects, materials and living things.</p> <p>Children talk about features of their own immediate environment and how environments might vary from one another.</p> <p>Children make observations of animals</p>	<p>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (Y1 - Animals, including humans)</p> <p>Describe the simple physical properties of a variety of everyday materials. (Y1 - Materials)</p>		<p>Recognise that they need light in order to see and dark things and that dark is the absence of light.</p> <p>Notice that light is reflected from surfaces.</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p> <p>Recognise that</p>		<p>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. (Y5 - Properties and changes of materials)</p>	<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</p>	<p>The similarities and differences between light waves and waves in matter.</p> <p>Light waves travelling through a vacuum; speed of light.</p> <p>The transmission of light through materials: absorption, diffuse scattering and specular reflection at a surface.</p> <p>Use of ray model to</p>



	and plants and explain why some things occur and talk about changes.			shadows are formed when the light from a light source is blocked by a solid object. Find patterns that determine the size of shadows.			travels in straight lines to explain why shadows have the same shape as the objects that cast them.	explain imaging in mirrors, the pinhole camera, the refraction of light and action of convex lens in focusing (qualitative); the human eye. Light transferring energy from source to absorber leading to chemical and electrical effects; photo-sensitive material in the retina and in cameras. Colours and the different frequencies of light, white light and prisms (qualitative only); differential colour effects in absorption
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