By the end of …	LIGHT Progression in Key Concepts …	PoS suggested year
Key Stage 1	• *Recognise that we see with our eyes* • *Recognise that light helps us see things* • *Identify a variety of sources that give out light* • *Recognise that light sources vary in colour and brightness* • *Notice that without light it is dark* • *Recognise that It is dangerous to look at the Sun* • *Recognise that the Sun gives us daylight.*	**Year 1 or 2**
Key Stage 2	• 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 sizes of shadows change.	**Year 3**
	• Recognise that light appears to travel in straight lines • 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 • 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 • Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	**Year 6**

Key Stage 3	**Light waves**
	• *Investigate* the similarities and differences between light waves and waves in matter
	• *Recognise that for* light waves travelling through a vacuum; *they travel at the* speed of light
	• *Investigate* the transmission of light through materials: absorption, diffuse scattering and specular reflection at a surface
	• *Make* use of a ray model to explain:
	  ○ imaging in mirrors,
	  ○ the pinhole camera,
	  ○ the refraction of light and action of convex lens in focusing (qualitative);
	  ○ the human eye
	• *Recognise that* light transfers energy from source to absorber leading to chemical and electrical effects; photo-sensitive material in the retina and in cameras
	• *Investigate* colours and the different frequencies of light:
	  ○ white light and prisms (qualitative only);
	  ○ differential colour effects in absorption and diffuse reflection.
		Year 7, 8 or 9