LIGHT (PHYSICS)

Statements in *red* are linked from other topics

Progression in Scientific knowledge, concepts & skills	EYFS (Early Learning Goals)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	KS3
Concepts Cause and effect Working Scientifically	Children know about similarities and difference in relation to places, objects, materials and living things. Children talk about features of their own immediate environment and how environments might vary from one another	*Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense (Animals including Humans)*		Recognise that we need light to see and dark is the absence of light Know that light is reflected from surfaces Know the dangers of the sun (Protecting eyes) Know that shadows are formed when			Know how light travels (straight lines) Know that objects are seen because they give out or reflect light into the eye Know why shadows have the same shape as the object that cast them	The similarities and differences between light waves and waves in matter Light waves travelling through a vacuum; speed of light The transmission of light through materials: absorption, diffuse scattering and specular reflection at a surface

	Children make observations of animals and plants and explain why some things occur and talk about changes			light from a light source is blocked by a solid object and find patterns in shadow sizes				Use of 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 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 and diffuse reflection
Possible learning questions				How far can you throw your shadow?			Why is light important to our lives?	