



St Mark's CE Primary School

Science Curriculum Map: Light

Year	National Curriculum	Sticky Knowledge	Vocab
R	Year A Spring <ul style="list-style-type: none"> Exploring light and dark - torches and different materials 	Year B Autumn <ul style="list-style-type: none"> Investigating torches and light 	
3	How do we use light to make shadows? (Summer 2)		
	<ul style="list-style-type: none"> 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 an opaque object Find patterns in the ways that the size of shadows change. 	<ul style="list-style-type: none"> Dark is the absence of light and we need light to be able to see. Light can be reflected from different surfaces. Some surfaces are poor reflectors, such as some fabrics; other surfaces are good reflectors (mirrors.) Light from the Sun is damaging for vision and skin. Protection from Sun includes sun cream, sunglasses, sun hats and staying indoors/in the shade. A shadow is formed when light from a light source, such as the Sun, is blocked by an object. Shadows are normally the same shape as the object that cast them. Shadows change shape and size when the light source moves. For example, when the light source is high above the object, the shadow is short and when the light source is low down, the object's shadow is long. Thus, shadows change during the day as the Sun appears to change position in the sky. 	Light source Reflection Surface UV Rays Damage Protection Shadow Opaque Translucent Transparent Block
6	How does light shape the way we see the world around us? (Spring 2)		
	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Light travels in straight lines. 'White' light is a term used to describe visible, ordinary daylight. White light can be split into a spectrum of colours (rainbow) by droplets of water or prisms. Light sources give out light. They can be natural or artificial. When light hits an object, it is absorbed, scattered, reflected or a combination of all three. Light from a source or reflected light enter the eye. A shadow appears when an object blocks the passage of light. Apart from some distortion or fuzziness at the edges, shadows are the same shape as the object. The distortion or fuzziness depends on the position or type of light source. 	Light Light wave Straight lines Light source Eye Pupil Iris Reflection Periscope Refraction Prism Spectrum Shadow Opaque Transparent