

Title: Light and Electricity	Project overview The aim of the project is to develop an awareness of how light can be manipulated to suit a design or purpose.	Hook Lighthouse “escape room”	Text(s) The torch (quest); Mirror signal (instructions); The Indian in the cupboard (Whole class guided reading text)	Maths overview Geometry (position and direction) Fractions
Year group 6 term 2				
<p>Driving question</p> <p>How can light be manipulated?</p>	<p>Key Vocabulary</p> <p>Opaque, translucent, transparent shadow, pupil, iris, lens, eyelid, reflection, refraction, convex, concave, kaleidoscope, Periscope, Rainbow, Prism, Source, cell, battery, switch, bulb, motor, buzzer, series, parallel, circuit, crocodile, clips, wire, complete circuit, symbol, circuit, diagram, fuse, wire, bright, dim, filament, electromagnet, conductor, insulator, plug, mains, electricity</p>	<p>Intended outcome</p> <p>By the end of the project, we want the children to have a greater understanding of light both scientifically and spiritually.</p>	<p>Resources</p> <p>Torches, electricity kits, tissue paper, willow canes, glue guns</p>	<p>Areas of learning</p> <p>Science D&T RE- following scheme + Celebration of light in other cultures</p>

How does learning build on prior understanding? Other year groups and other learning?	Content What will we learn?	Creativity How will we show our learning in different ways?	Ethos How does the project embed our values?	How will this project prepare for future learning?
<p>Poisonous Plastics - year 5 (science - materials)</p> <p>Fairground Forces - year 5 (science - mechanisms)</p> <p>Year 4 - electricity</p> <p>Polar Explorers - year 3 (science - light)</p>	<p>D&T- creating a structure to suit a purpose Understanding how joins work and creating joins for a structure</p> <p>Art-: Explore colour mixing and blending techniques with coloured pencils. -Mix colour, shades and tones with confidence building on previous knowledge. Understanding which works well in their work and why. -Purposely control the types of marks made and experiment with different effects and textures inc. blocking in colour, washes, thickened paint creating textural effects. Work in a sustained and independent way to develop their own style of painting. This style may be through the development of colour, tone and shade. -context: light on glass study chiaroscuro- light/dark</p> <p>Science</p>	<p>D&T- designing and evaluating a structure Creating lanterns</p> <p>Music-how artists/musicians use light to enhance performance -A light that reacts to sound</p> <p>-Exploration of what can/can't you do in the absence of light? What would it have been like before the lightbulb was invented?</p> <p>Art- the effect of light on atmosphere/composition of a painting Chiaroscuro- light/dark</p>	<p>Wilder world skills: Creative thinking skills; application of scientific knowledge and skills; group work, leadership and cooperation; project management.</p> <p>Understanding other cultures</p>	<p>Nations - year 6 (DT and Art - designing and creating a flag)</p> <p>Stone Age - year 6 (DT and Art - designing and creating an outfit)</p> <p>Nations and Japan - year 6 (science - electricity, circuits, investigations)</p>

	<p>Comparative/Fair testing</p> <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.- associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit- compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches- use recognised symbols when representing a simple circuit in a diagram <p>RE Light as symbolic in other</p>			
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