



Topic Title: Light

Year Group: 6

Academic Year: 2019/2020

Science Intent:

<p>Prior Scientific Learning/Linked Topics:</p> <p>Y3- <i>Pupils will build on the work on light in year 3, exploring the way that light behaves, including light sources, reflection and shadows.</i></p>	<p>Literacy Links (including texts/media used):</p> <p>WRITING TO INFORM: Letter to alien</p>	<p>Maths Links:</p> <p>Statistics</p>
<p>Scientific Knowledge</p>	<p>Working Scientifically</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. 	<ul style="list-style-type: none"> • planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • using test results to make predictions to set up further comparative and fair tests • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations • identifying scientific evidence that has been used to support or refute ideas or arguments 	



Content:

- The children will create a human model to explain how light travels from a light source.
- They will be able to demonstrate how light travels in straight line using a hose pipe.
- Using black tubes, the children will investigate how we see things that are not a light source.
- The children will write to an Alien explaining how humans can see light sources (the sun) and non-light sources (the moon).
- Using the knowledge of reflection, the children will create a working periscope.
- The children will use puppets to explain why shadows have the same shape as the object that casts them.
- The children will investigate how shadow size can be changes, collecting data, presenting data in a graph and using this to draw conclusions.

Key Vocabulary: At the beginning of each topic, the children have the opportunity to explore, learn and understand the key vocabulary.

Light source, travels, straight, reflect, reflection, cast, direction, block, beam, opaque, translucent, transparent