
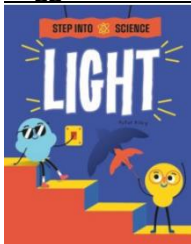


Subject: Science
 Year group: 6
 Term: Summer
 Unit name: Light
 Strand: Physics

Prior Knowledge - Certain things produce light, usually by burning (e.g. the Sun) or electricity (e.g. street lights). Shiny materials do not make light but do reflect it. Shadows are caused when certain materials block light. Light travels in straight lines. When light is blocked by an opaque object, a dark shadow is formed. The further away the light source is, the smaller the shadow is. The closer the source of the light, the bigger the shadow.

Key Vocabulary:
 Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous, refraction, medium, dense.

Key scientists:

 _Opticians



















Suggested books:


- National curriculum:**
- 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.

- Working scientifically:**
- Plan 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.
 - Use test results to make predictions to set up further comparative and fair tests
 - Report and present 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
 - Identify scientific evidence that has been used to support or refute ideas or arguments.

Compassion

Hope

Key learning objectives- Highlighted boxes = Learning Objective for that lesson. The other two are your Success Criteria.		
Knowledge	Working Scientifically	Scientific Enquiry
To recognise that light appears to travel in straight lines.	To use scientific diagrams, models and labels. 	To look for patterns in how light reflects from surfaces. 
To 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.	To use labelled diagrams to support my explanation. 	To use subject knowledge and research to make a periscope 
To 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	To make careful observations about how the eye works. 	To identify different parts of the eye and explain how each part works. 
To use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	To draw diagrams to represent concepts with accuracy 	To look for patterns in my observations. 
To 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.	To make predictions based on scientific knowledge and use tests to gather evidence to support my predictions. 	To use subject knowledge about refraction to make predictions. 
To 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	To evaluate, using scientific language, how my enquiry answers the question. 	To look for patterns in how we see things. 
Scientific Enquiry Key	Comparative / fair testing Changing one variable to see its effect on another, whilst keeping all others the same. 	Pattern-seeking Identifying patterns and looking for relationships in enquiries where variables are difficult to control. 
	Research Using secondary sources of information to answer scientific questions. 	Identifying, grouping and classifying Making observations to name, sort and organise items. 
	Observation over time Observing changes that occur over a period of time ranging from minutes to months. 	Problem-solving Applying prior scientific knowledge to find answers to problems. 
Assessment- Key indicators: Can describe with diagrams how light travels in straight lines, either from sources or reflected from other objects into our eyes. Can describe with diagrams how light travels in straight lines past translucent or opaque objects to form a shadow of the same shape.		