



Light

Science
Year 6
Spring Term

Overview

During this topic, we will be exploring how light travels and how shadows are formed. We will also be finding out what happens when light is reflected and refracted.



Knowledge & Understanding

In this unit, the pupils will:

- 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.

Enquiry Skills & Concepts

In this unit, the pupils will be:

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements 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.
- identifying scientific evidence that has been used to support or refute ideas or arguments.

Home – School link project

During this topic pupils can choose to:

- Create a poster identifying sources of natural and artificial light
- Conduct your own shadow experiment and present it in a creative way

Topic Vocabulary

opaque – allowing no light to pass through a medium so that objects behind can not be seen

prism – a translucent 3D triangular prism that when light is passed through separates light into a spectrum of colours

reflect – to throw back light of a surface changing its direction without absorbing the light

refract – to bend (change direction) rays of light when they enter a medium such as water, air or glass

translucent – allowing some light to pass through a medium so that objects behind can be partially seen

transparent – allowing light to pass through a medium so that objects behind can be seen

visible spectrum – a band of colours with different wave lengths visible to the human eye

Working Scientifically

analyse – explore why something happened the way it did

comparative test – a test that compare one event to another and identify different outcomes

controlled variable – a variable that is kept the same in an experiment

dependent variable – a variable being tested or measure in an experiment

evaluation – examining how your test could be improved / changed in the future

fair test – a test that controls all but one variable when attempting to answer a scientific question

independent variable – a variable that is changed in an experiment