



Year 6
Autumn Term

Science

How Can We See Things?

How Does Light Travel?

Background Information.

Pupils will work scientifically to explore the way light behaves, including light sources and shadows. They will then learn how to construct a circuit to light a bulb and explore varying the strength of the light and other components.



Light source

In this unit, the children will:

- Identify light sources
- Explore transparent, translucent and opaque
- Explore light travelling in straight lines
- Explore relationship between light and object
- Construct simple circuits and try different components
- Represent circuits in diagrams

Key Skills:

- Make predictions and then carry out investigations
- Extend their experience by exploring a phenomena
- Construct simple series circuits
- Systematically identify the effects of changing one component

Important Investigations:

- Investigate relationship between light sources, objects and shadows
- Construct circuits and investigate impact of changing components

Key Content:

- Sources of light
- Explain we see things because light travels in straight lines
- Explain why shadows have the same shape as object which casts them
- Explore the Aurora Borealis
- Construct a simple circuit and represent it using standardised symbols
- Compare brightness of a lamp with the number of cells used in a circuit

Key Vocabulary:

Light: the natural agent that stimulates sight and makes things visible

Shadow: a dark area or shape produced when light is blocked by an opaque object

Opaque: an object that does not let light through

Translucent: allows some light through

Transparent: allows light through

Component: a part of an electrical circuit

Circuit: a closed path along which electrical current can flow

Current: the flow of electrical charge around a circuit

Volt: a unit of measurement that shows the rate at which energy is drawn from a source that produces the flow of electricity in a circuit

Insulator: a material that does not allow electricity to flow through it

Conductor: a material that does allow electricity to flow through it

Battery: a container containing cells which is used as a power source

Impact on Our Lives:

Can they imagine life without electricity?

What sources of light are artificial?

Important Scientists:

Thomas Eddison

Joseph Swan

Pierre Gassendi