

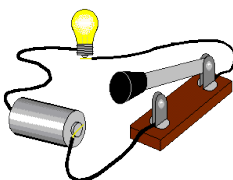


# Electricity

Science  
Year 4  
Spring Term

## Overview

During this topic, we will be investigating electricity and electrical circuits. We will be completing different experiments to find out how to complete a circuit and the different components. We will also look at different insulators and conductors.



## Knowledge & Understanding

In this unit, the pupils will:

- identify common appliances that run on electricity
- construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
- recognise some common conductors and insulators, and associate metals with being good conductors.

## Enquiry Skills & Concepts

In this unit, the pupils will be:

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making observations and taking accurate measurements
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
  - recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
  - using results to draw simple conclusions, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas
- using straightforward scientific evidence to answer questions or to support their findings.

## Topic Vocabulary

**battery** – an electrical cell or cells providing an electrical current

**circuit** – the complete path around which electricity can flow

**conductor** – a substance or material that will allow electricity or heat to pass through

**electricity** – a type of energy either found naturally or man – made

**insulator** – a substance or material that won't allow electricity or heat to pass through

**cell** – an electrical cell providing an electrical current

**current** – the flow of electrical charge

## Working Scientifically

**classification** – to sort things into different groups by their characteristics or features.

**conclusion** – an opinion reached after careful thinking and observation

**data** – facts or figures that can be used to give information about a subject.

**evidence** – findings and results that answer a question

**fair test** – testing without showing favour or allowing an advantage

**observation** – to look closely and make detailed thoughts / opinions about something

**prediction** – to use prior knowledge to state the outcome

**variable** – something that can change or has no fixed value.

## Home – School link project

During this topic pupils can choose to:

- Create a model of an electrical circuit
- Research famous electrical inventions.