



Electricity

Year 4

Knowing More, Remembering More

Remembering previous learning

This is the first time that the children have explored electricity.

In this unit children 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, associate metals with being good conductors.

Working Scientifically:

- 4.1 Ask relevant questions and use different types of scientific enquiry to answer them.
- 4.8 Gather, record and classify data in a variety of ways to help in answering questions.
- 4.9 Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
- 4.12 Use straight-forward scientific evidence to answer questions or to support their findings.
- 4.13 Use results to draw simple conclusions.

Key Learning Steps

1. Common appliances that use electricity
2. Build and draw series circuits.
3. What has gone wrong?
Conductors and insulators
4. Conductivity within a circuit.

Key Vocabulary:

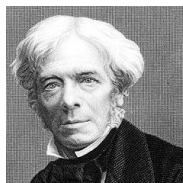
- appliances
- plug
- socket
- cell
- electrocuted
- circuit
- switch
- battery
- buzzer
- conductor
- insulator
- metal
- material

Key Scientists:



Classic

Allesandro Volta
(1745-1827)
Invented the first electrical battery.



Classic

Michael Faraday
(1791-1867)
Invented the first electrical generator.



Contemporary

Henry Snaith
Working on making solar cells more efficient.

Knowing More, Remembering More

Knowing more in Y4

What is electricity? Electricity is a way of moving energy to power appliances.

What are some of the dangers of electricity? Liquid and wet hands should be kept away from electrical appliances and circuits.

What is a circuit? A circuit is a closed path that energy can flow through. It can include bulbs, wires, switches, buzzers and cells connected in one loop. It must have a cell or battery.

How does a switch affect the circuit? A switch controls a circuit by opening and closing.

What is a conductor? A material that allows energy to flow through it, such as metals.

What is an insulator? A material that does not allow energy to flow through it, such as rubber, plastic or wood.