

Year 4 – Electricity

ALP Trust Science 2020

Language for Learning

Through the activities in this topic, pupils should **understand and use key scientific words precisely** - spelling these words correctly. This includes - words with precise scientific meanings (e.g. weight and mass), words with different meanings in scientific and everyday contexts (e.g. drag) and words relating to scientific enquiry (e.g. variable).

Key Scientific Words

Key Word	Definition (Meaning)
Electricity	One way of providing energy to our homes
Appliance	A machine or device
Component	Something in a circuit, like a bulb, switch or motor
Circuit	A loop of components that allows electricity to flow
Cell	A component that provides a circuit with electricity/energy
Wire	A long, thin component that links other components in a circuit
Bulb	A component that lights-up when it is part of a complete circuit
Switch	Closes or opens a gap in a circuit
Buzzer	A component that makes a noise when it is part of a complete circuit
Complete	A complete loop with a cell that electricity flows around
Electrical Conductor	A material that lets electricity flow through it
Electrical Insulator	A material that does not let electricity flow through it
Metal	A shiny material that is an Electrical Conductor

Key Concepts

Electricity provides our homes with energy.

An **appliance** is a machine or device in our homes. Some of our most common appliances run on electricity. Some appliances **do not** run electricity.

Runs on Electricity: Television, Remote Control, Solar Powered Calculator

Does not run on Electricity: Wind-up Watch, Petrol Lawn Mower, Gas Oven

Some materials allow electricity to **flow** through them and some do not. Materials that allow electricity to flow through them are called **Electrical Conductors**. Materials that do not allow electricity to flow through them are called **Electrical Insulators**.

Electrical Conductors	Electrical Insulators
Copper	Plastic
Iron	Wood
Aluminium	Rubber

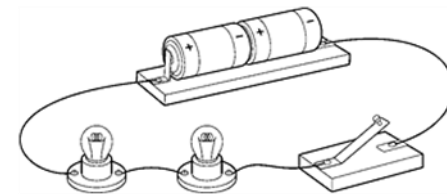
Metals are good Electrical Conductors.

A **circuit** is a loop that electricity can flow through. A **complete circuit** and a **Cell** is needed for electricity to flow [in your investigations].

Different **components** can be added to a circuit. These include **Cells, Wires, Bulbs Switches** and **Buzzers**.

If a **complete circuit** contains a **Bulb** – the bulb will **light-up**.

A **switch opens** and **closes** a circuit.



Open: If the switch is open the bulbs will not light-up.

Closed: If the switch is closed the bulbs will light-up.