Science – Electricity

Component (parts) vocabulary

cell: Normally, we would call this a **battery** but scientifically, this is a cell. Two or more cells joined together form a **battery**.

bulb: Lights up in a complete **circuit**.

buzzer: Makes a noise in a complete **circuit**.

wires: Used to connect the different components in the **circuit** together.

motor: Produces movement in a complete **circuit**.

switch: Used to turn other components in the **circuit** on or off.

Electrical appliances

Appliances

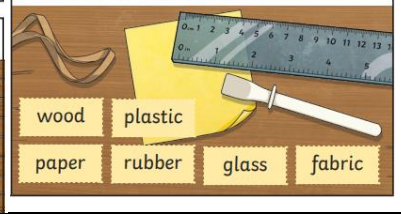
Many everyday **appliances** rely on **electricity** for them to work. Some **appliances** use **mains electricity** (are plugged into a socket) and others have a **battery** to make them work. Examples of **mains**-powered **appliances** include toasters and televisions. **Battery**-powered **appliances** can include mobile phones and torches.

mains-powered

battery-powered

Examples of **Electrical Conductors**

Examples of **Electrical Insulators**

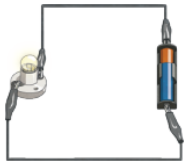


Electrical circuits

Series Circuit

A **circuit** where the components are connected in a loop. **Electricity** flows through each component in a single pathway.

Complete Circuit



Electricity can flow. The components will work.

Incomplete Circuit

There is a break in the **circuit** that prevents the **electricity** from flowing. The components will not work.

Switches can be used to open or close a **circuit**. When off, a switch 'breaks' the **circuit** to stop the flow of **electricity**. When on, a switch 'completes' the **circuit** and allows the **electricity** to flow.

push button switch

slide switch

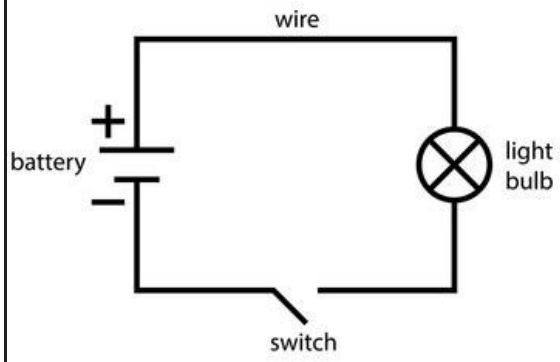
Key Vocabulary

Electricity	The flow of an electric current though a material e.g. from a power source through wires to an appliance.
Appliances	A piece of equipment or a device designed to perform a particular job, such as a washing machine or mobile phone.
Battery	A device that stores electrical energy as a chemical.
Circuit	A pathway that electricity can flow around. It is based around wires and a power supply. Examples of components (parts) you can add in to a circuit are bulbs, switches, buzzers and motors.
Mains electricity	Electricity supplied through wires to a building.
Electrical conductor	A conductor of electricity is a material that will allow electricity to flow through it.
Electrical insulator	Materials that are electrical insulators do not allow electricity to flow through them.

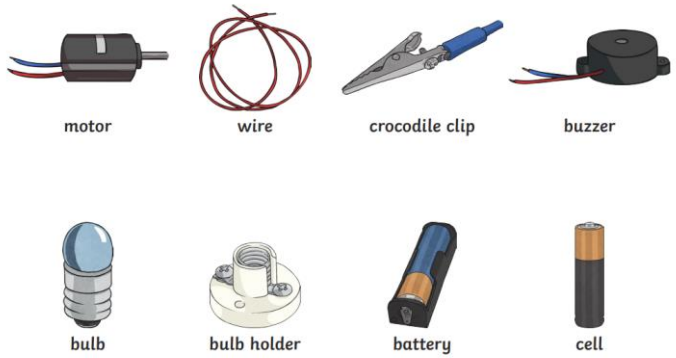
Electricity – Skills – Working Scientifically

National Curriculum
Using straightforward scientific evidence to answer questions or to support their findings.
Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
Asking relevant questions and using different types of scientific enquiries to answer them.
Setting up simple practical enquiries, comparative and fair tests.

Circuit Diagram



Circuit Components



Key Vocabulary	
classify	To arrange a group of people/organisms or things into classes or categories.
compare	Note similarities and differences between different things e.g. compare different types of materials
diagram	A drawn and annotated representation of how an experiment has been set up.
observation	Spotting patterns and changes over time.
data	Information that has been collected.
fair test	A test that controls all but one variable when attempting to answer a scientific question.