

# Science Year 4 - Spring 2: Electricity

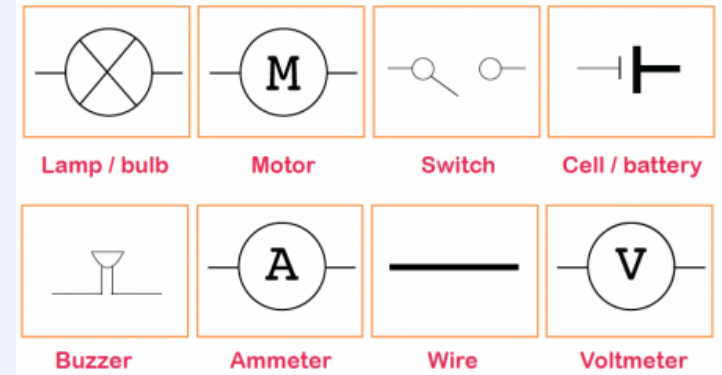
Key vocabulary to learn and use in your learning.

Word	Definition
cells	A cell pushes the electric current from the positive terminal round to the negative
wires	Distribute the electricity within the circuit.
bulbs	The light source within a circuit.
switches	A device for making and breaking the connection in an electric circuit.
buzzers	An electrical device used for signalling.
series circuits	A closed circuit in which electricity follows one path.
conductor	A substance which allows for easy movement of electrical charge carriers.
insulator	A material which allows for very little flow of electrical current.
terminals	All electric cells have 2 terminals.



Michael Faraday (September 1791-August 1867). He was an English scientist (chemist) who contributed to the study of electromagnetism and electrochemistry. In 1831, Faraday discovered electromagnetic induction, the principle behind the electric generator. Electric generators are important as they supply energy in the event of a power cut.

Key for how some electrical components are represented within circuit diagrams.



Key knowledge to know and use.

Lightning and static electricity are examples of electricity occurring naturally but for us to use electricity to power appliances, we need to make it.

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.

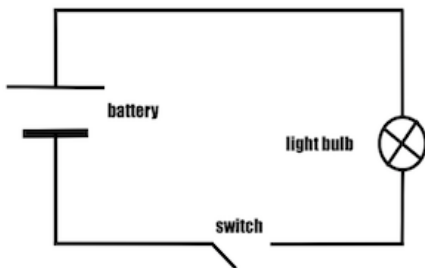
Electricity can only flow around a complete circuit that has no gaps. There must be wires connected to both the positive and negative end of the power supply/ battery.

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.

A conductor of electricity is a material that will allow electricity to flow through it. Metals are good conductors. Materials that are electrical insulators do not allow electricity to flow through them. Wood, plastic and glass are good insulators.

## Series Circuit

### Simple Electric Circuit



In a type of electric circuit called a series circuit, all of the current flows through each part of the circuit.