Electricity

We will learn…

Electricity is generated using energy from natural sources such as the sun, oil, water and wind. These can also be called fuel sources. Some appliances use batteries and some use mains electricity. Batteries come in different sizes depending on how much and for how long the appliance is used.

A complete circuit is a loop that allows electrical current to flow through wires. A circuit contains a battery (cell), wires and an appliance that requires electricity to work (such as a bulb, motor or buzzer). The electrical current flows through the wires from the battery (cell) to the bulb, motor or buzzer). A switch can break or reconnect a circuit. A switch controls the flow of the electrical current around the circuit. When the switch is off, the current cannot flow. This is not the same as an incomplete circuit. An incomplete circuit has a part missing.

When objects are placed in the circuits, they may or may not allow electricity to pass through. Objects that are made from materials that allow electricity to pass through create a complete circuit are called electrical conductors. Objects that are made from materials that do not allow electricity to pass through and do not complete a circuit are called electrical insulators.

Key vocabulary:

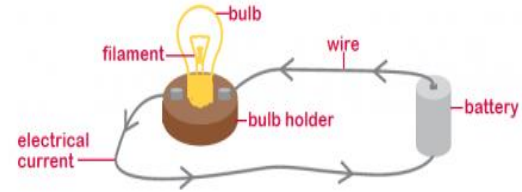
battery	Small devices that give the power for electrical items such as torches.
bulb	The glass part of an electric lamp, which gives out light when electricity passes through it.
cell	Another word (synonym) for a battery.
circuit	A complete route which an electric current can flow around.
conductors	A substance that heat or electricity can pass through or along.
current	A flow of electricity through a wire or circuit.
insulator	A non-conductor of electricity or heat.
switch	A small control for an electrical device which you use to turn the device on or off.

Investigate:

- Research how to work safely with electricity
- Make different circuits. Which circuits work? Why?
- Which materials are conductors and insulators?

Inspirational Scientist

Peter Rawlinson - working on the development of electric vehicles.



Working scientifically –

In this topic we develop the following practical skills:

- ✓ setting up simple practical enquiries, comparative and fair tests
- ✓ using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions