

# Science— Electricity

## Key Vocabulary

<b>electricity</b>	The flow of electrons through a material from a power source to an appliance.
<b>circuit</b>	A pathway that electricity can flow around which includes wires, a power supply and sometimes bulbs, switches, buzzers and motors.
<b>electrons</b>	A tiny particle, smaller than an atom that has a negative charge.
<b>cell</b>	A cell holds an electrical charge. It has a positive end and a negative end and it pushes the electrical current around the circuit.
<b>battery</b>	Two or more cells together make a battery.
<b>lamp</b>	A component that gives out light when electricity passes through it.
<b>wire</b>	A long thin piece of metal that is used to carry electric current.
<b>crocodile clip</b>	A metal clip attached to each end of a wire to secure it to the components or another length of wire.
<b>appliance</b>	A piece of equipment or device, designed to do a particular job. Some appliances need electricity to work.
<b>switch</b>	A simple switch is made of a metal lever that can join up with a metal contact to complete a circuit.
<b>series circuit</b>	The components are connected end-to-end, one after the other. They make a simple loop for the current to flow round.
<b>conductor</b>	A material or substance that heat or electricity can pass through or along
<b>insulator</b>	A material or substance that does not allow heat or electricity to pass through it.

## Key Facts

A conductor of electricity is a material that is made up of free electrons which can be made to move in one direction, creating an electric current. Metals are good conductors.

Lightning and static electricity are examples of electricity that occurs naturally. The electricity we use to power appliances needs to be made.

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

Mains electricity comes from power stations that send an electric charge through wires, to transformers to pylons. Then, underground wires carry the electricity to homes.

Switches can be used to open and close a circuit. When off, a switch 'breaks' the circuit to stop the flow of electrons. When the switch is on, the circuit is complete and the electrons flow around the circuit.

Batteries have chemicals in them which produce electrical current.

## Appliances

### Mains powered



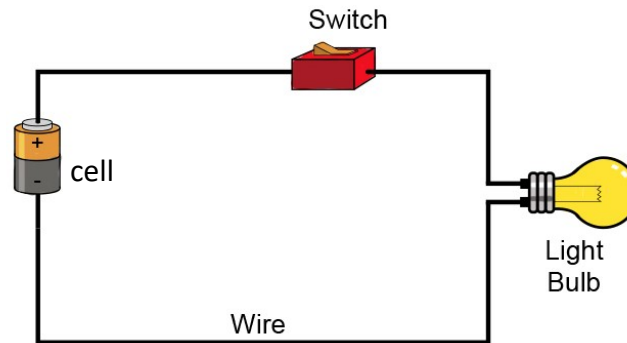
Washing machine    Computer    Iron

### Battery powered



Mobile phone    Car    Torch

## Circuit



## Energy Sources



Fossil fuels



Nuclear power stations

## Renewable energy



Wind turbines



Hydro-electric dam



Solar panels

## Tier 2 Vocabulary

sequence

To put something in the correct order.