

# Year 4: Electricity

## Source of electricity

There are two types of electrical current that we use to power appliances: mains supply and batteries. Mains supply is usually about 240volts whereas batteries range between 1.5–9.0 volts.



## Conductors and Insulators

Electrical conductors: materials which allow electricity to pass through them.



Electrical insulators: materials which do not allow electricity to pass through them.



## Electrical safety

Electricity can be very dangerous. Take care where you see these signs.

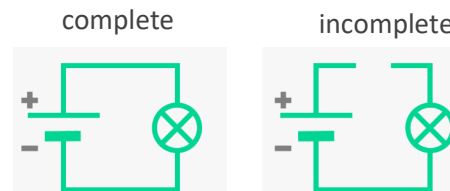


## Electrical Circuit

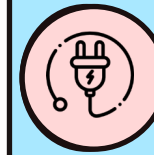
A circuit might include many things, such as wires, batteries, bulbs, buzzers, motors and switches. These are called 'components'.

For a circuit to work and electricity to flow, the circuit needs to be **complete**. This is when all the components are connected with no gaps.

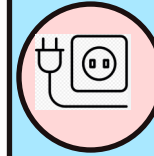
If there are gaps in the circuit, electricity will not flow. This is called an **incomplete** circuit.



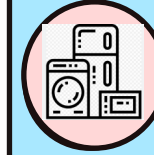
## KEY VOCABULARY:



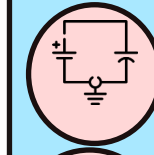
**Electricity:** a form of energy which can be used to power other things



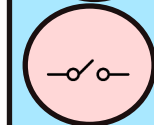
**Electrical current:** a flow of energy/charge through a material



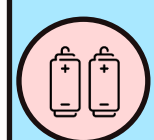
**Electrical appliance:** something that uses electricity to work



**Electrical circuit:** a pathway that carries an electrical current



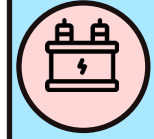
**Switch:** Used in a circuit to turn electricity off and on



**Battery:** contains chemicals that react to produce electricity



**Electrical insulator:** a material that will not allow electricity to flow through it



**Electrical conductor:** a material that will allow electricity to flow through it