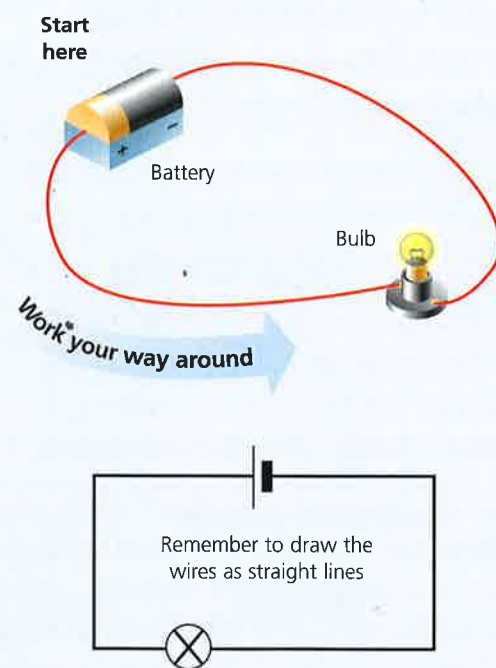


Circuit Diagrams

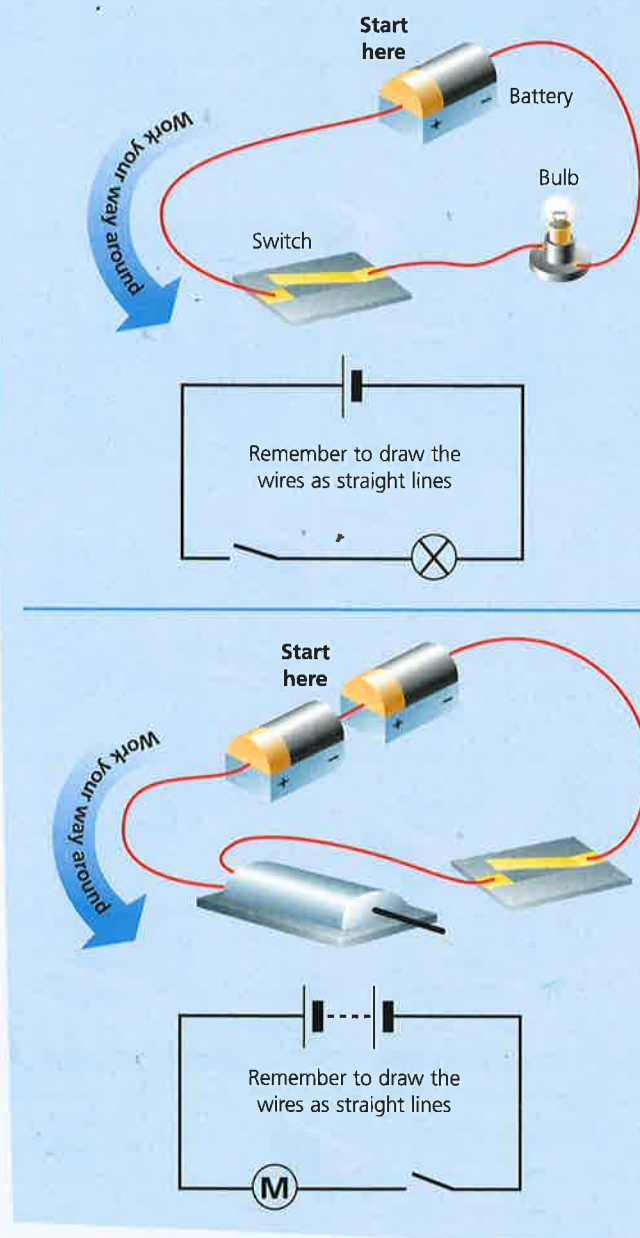
Very often you will have to draw a diagram of a circuit you have set up. This drawing is called a **circuit diagram**. All circuit diagrams are drawn using symbols. Any circuit can be easily drawn providing you follow these two simple steps:

- 1 Draw your battery first.
(This is your starting point.)
- 2 Work your way around the circuit from one end of the battery to the other end. Make sure you draw all the devices as you go along and don't forget the wires!

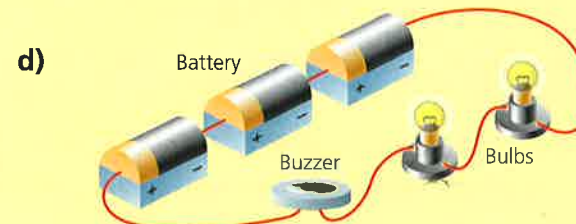
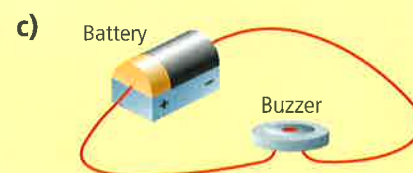
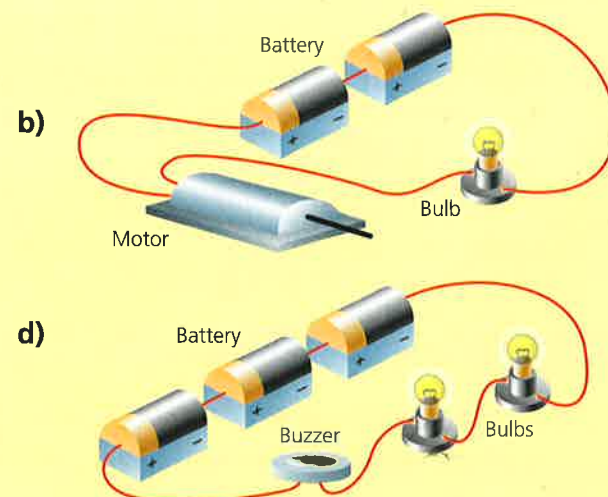
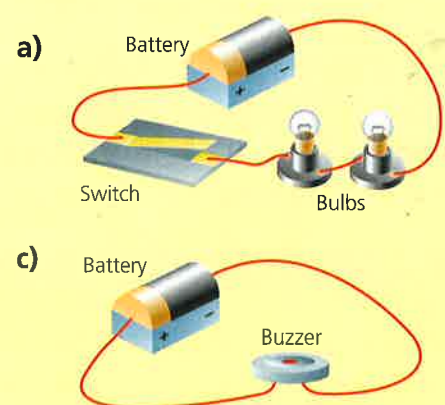
Here is a very simple circuit:



Here are some other examples:



6 Draw circuit diagrams for the following circuits:

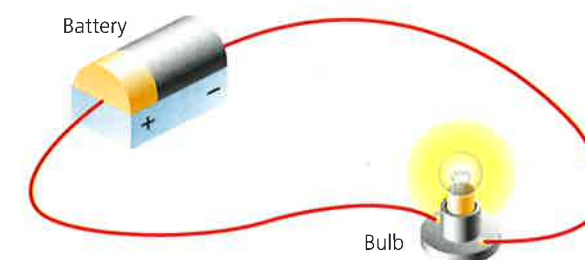


Electric Current

As we have seen, a battery is a supply of electricity. The flow of electricity in a circuit is called an **electric current**. A very simple circuit is shown opposite:

The brightness of a bulb in a circuit depends on how much current flows through the bulb.

The greater the current – the brighter the bulb



Decreasing Current & Brightness

Increase the number of bulbs

Two bulbs will cause less current to flow than one bulb.



Use a different bulb

A higher-rated bulb will reduce the current flowing.



Use a thin wire

A smaller current flows in a thin wire.



Increase the length of the thin wire

An even smaller current will flow if you increase the length of the thin wire.



Increasing Current & Brightness

Increase the 'power' of the battery

i.e. use a more powerful battery. This battery makes a greater current flow in the circuit.



Increase the number of batteries

Two batteries will double the current compared with the diagram at the top of the page.



Use a thick wire

A greater current flows in a thick wire.



- 7 In an experiment to investigate the effect of using more batteries, what must be kept the same in order to make it a **fair test**?
- 8 What effect would changing the type of wire have on the brightness of the bulb?