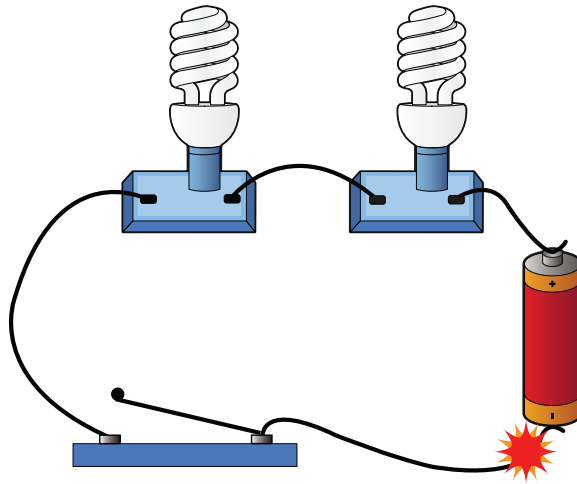
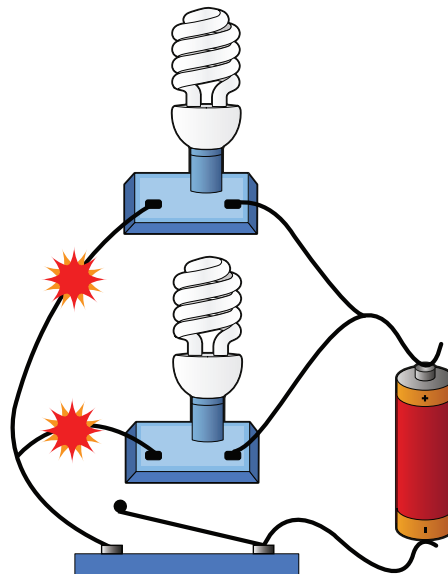


CIRCUITS

Electricity only flows when it can complete a circle back to where it started from. This is called a circuit. There are two different types of circuits based on how they are connected:



A **series circuit** allows current to flow through one globe to another. The more globes connected the less electricity each globe receives. If one of the globes blows, the current cannot flow to the other globes in the circuit. It's a bit like getting a strike when your ten pin bowling, all it takes is one pin to take all the others down.



A **parallel circuit** allows current to pass through each globe at the same time so the same amount of electricity is available to each globe. A parallel circuit is different to a series circuit because if one globe blows, the current will continue on another path to the rest of the globes.

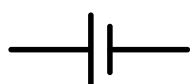
CIRCUIT SYMBOLS

An electric circuit is made up of three main parts:

- An electrical source, such as a battery or mains power;
- An output device, such as a speaker, light or power point; and
- A connector, such as a wire to connect the source and output device

Electricians and scientists use symbols to represent the different parts of a circuit. It makes reading electrical designs for new homes much easier to follow.

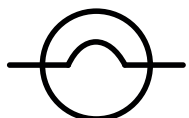
Some common symbols used in electrical circuits include:



Battery – supplies electrical energy



Connecting wire – connects the different parts of a circuit together allowing current to flow through



Light bulb – output device for light energy



Switch – allows us to control when current flows



Speaker – output device for sound energy



Ammeter – used to measure the current



Electric motor – used to convert electrical energy into kinetic energy



Voltmeter – used to measure the voltage



Resistor – restricts the flow of the current