















Key vocabulary		
	Circuit	a complete path which allows electricity to flow
	Battery	a source of energy in an electrical circuit
	Electricity	a form of energy
	Resistor	a component that reduces electric current flow
	Variable resistor	a component which varies the amount of electric current flow
	Dimmer switch	a light control which allows you to change the brightness of a light
	Output	the amount of something produced (e.g., brightness of a bulb)
	Systematically	working in a methodical way
	Synchronised	operating at the same time or rate
	Signal	an electrical impulse transmitted or received
	Conductor	materials which allow electricity to flow through them easily
	Insulator	materials that do not let electricity pass through them easily


### Circuit Symbols




Lamp




Ammeter




Switch




Voltmeter



Motor



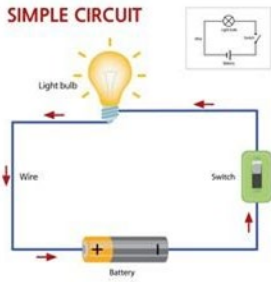
Battery



Buzzer

Wires are always drawn with a **straight line** using a **ruler** in scientific diagrams.

SIMPLE CIRCUIT

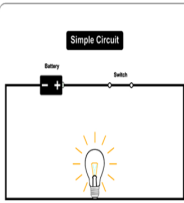


The **current** flows from negative to positive. There are no gaps - it is a **complete** circuit and the bulb lights up.

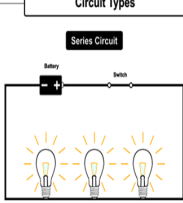
### Different Circuits

Circuit Types

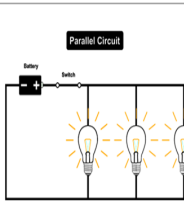
Simple Circuit

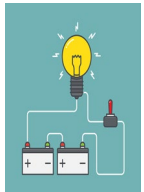


Series Circuit



Parallel Circuit

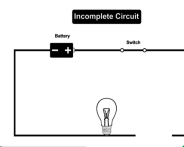




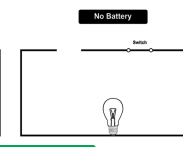
Adding more cells (batteries) to a circuit will make bulbs **brighter**, buzzers **louder** and motors **faster**.

Incomplete and Complete Circuit

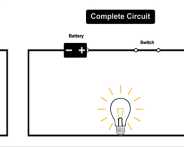
Incomplete Circuit



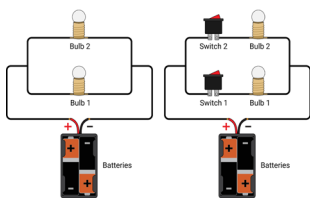
No Battery




Complete Circuit




2 Bulbs in Parallel





Switch (closed)



Switch (open)

Switches can be placed in a **parallel circuit**, so that 1 light can be turned on while another is off (just like in a house).