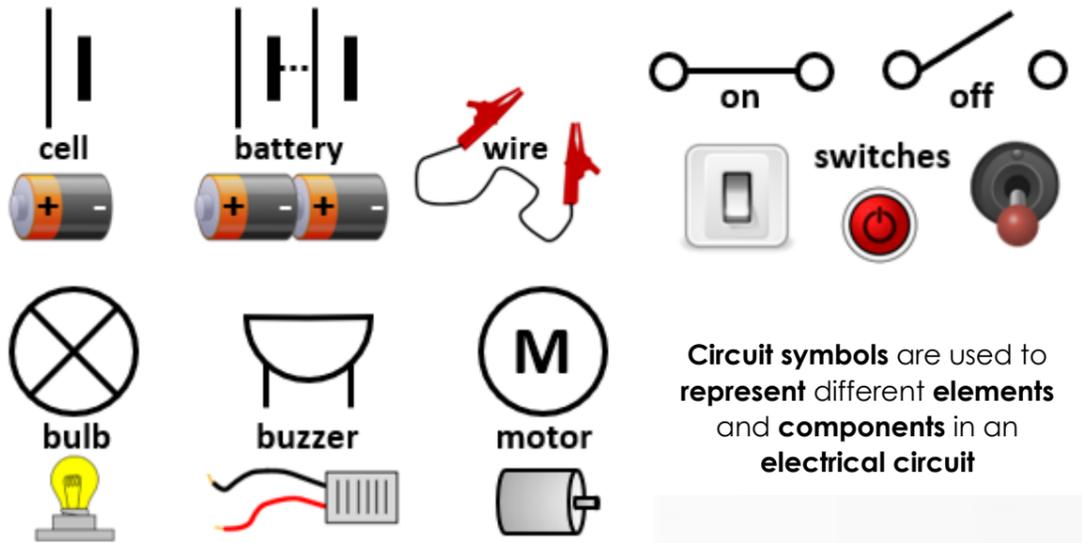


# Year 6 - Electricity



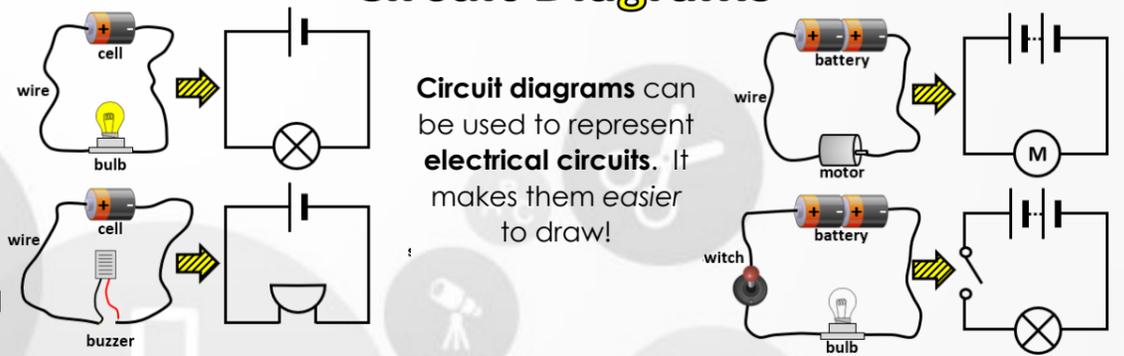
| Key vocabulary        |  |
|-----------------------|--|
| <b>Series circuit</b> | a closed <i>circuit</i> in which the current follows one path  |
| <b>Cell</b>           | a single electrical energy source which uses chemical reactions to produce a current   |
| <b>Wires</b>          | a long thin piece of metal that is used to fasten things or to carry electric current  |
| <b>Bulbs</b>          | the glass part of an electric lamp, which gives out light when electricity passes through.   |
| <b>Motors</b>         | a machine, vehicle, or boat is the part that uses electricity or fuel to produce movement, so that the machine, vehicle, or boat can work.                                       |
| <b>Switches</b>       | a device for making and breaking the connection in an electric circuit.  |
| <b>Buzzers</b>        | an electronic device that makes a buzzing sound.   |
| <b>Voltage</b>        | the pressure from an electrical circuit's power source that pushes charged electrons (current) through a conducting loop, enabling them to do work such as illuminating a light. |
| <b>Current</b>        | the flow of electrical charge carriers like electrons.   |
| <b>Mains</b>          | a main distribution network for water, gas, or electricity   |
| <b>Terminal</b>       | a point of connection for closing an electric circuit.   |
| <b>Resistance</b>     | the degree to which a substance prevents the flow of an electric current through it.   |
| <b>Resistor</b>       | an electrical component that limits or regulates the flow of electrical current in an electronic circuit.  |
| <b>Grid</b>           | a network of wires and cables by which sources of power, such as electricity, are distributed throughout a country or area.  |
| <b>Pylons</b>         | a tall tower-like structure used for carrying electricity cables high above the ground.  |
| <b>Transformer</b>    | an electrical device for changing the voltage of alternating current.  |
| <b>Wind Turbine</b>   | a power generating device that is driven by the kinetic energy of the wind.  |
| <b>Solar Panel</b>    | devices which are used to absorb the sun's rays and convert them into electricity  |
| <b>Hydro Electric</b> | The use of flowing water to power a turbine to produce electrical energy.  |
| <b>Generator</b>      | a machine which produces electricity.  |

## Circuit Symbols



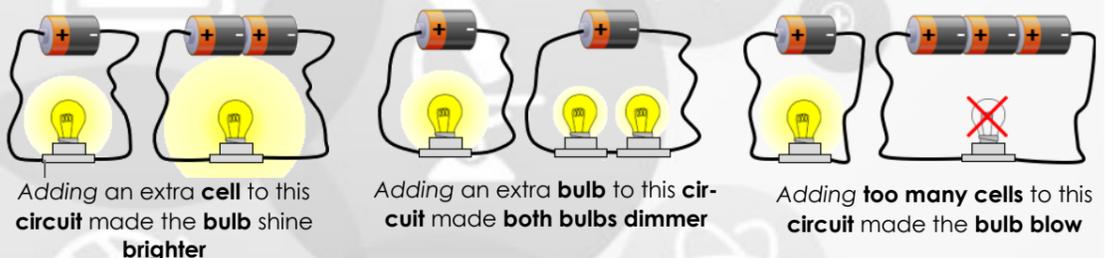
Circuit symbols are used to represent different elements and components in an electrical circuit

## Circuit Diagrams



Circuit diagrams can be used to represent electrical circuits. It makes them easier to draw!

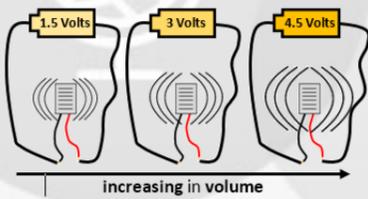
## Changing Circuits



There are several ways a **circuit** can be **changed** (adding or taking away components **OR** changing cell voltage)

## Voltage

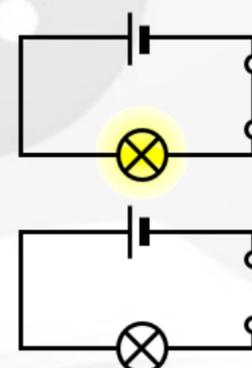
Increasing or decreasing the **voltage** of the cell used in a **circuit** will also **change** how it functions



**WARNING:** The **voltage** in mains electricity is **dangerously high**. **NEVER** fiddle with, or attempt to repair, an **electrical appliance** when it is **plugged in**

## Switches

Switches are a very simple way of **controlling** the **flow** of **electricity** around a **circuit**



**closing the switch** will **complete the circuit** and turn the **bulb on**

**opening the switch** will **break the circuit** and turn the **bulb off**

## Circuits in use.

All **appliances** that run on **electricity** will have a **circuit inside** of them



## Scientists

### Nikola Tesla

A Serbian-American inventor, electrical engineer, mechanical engineer and physicist. He is best known for his contributions to the design of the modern alternating current (AC) electricity supply system



### Thomas Edison

He is best known for inventing '**domestic**' **lightbulbs** to go in houses, and the electric power system that allows them to work

