1. Key facts about electricity

a. Electricity is a form of energy used to power most of the machines we use everyday.

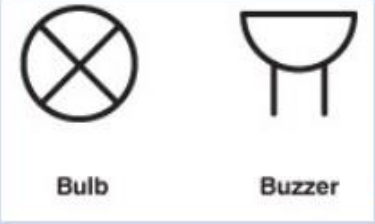
b. Electricity needs to move in a circuit. A circuit is a complete path or loop along which electric current flows from a power source and back.

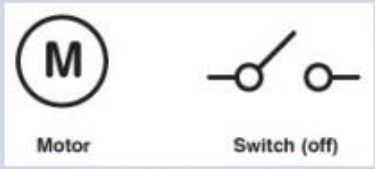
c. When two or more bulbs are added to a circuit in a line, it's called a **series** circuit.

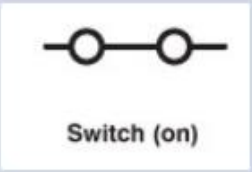
d. Electrical force is measured in volts. Greater **voltage** means a greater flow of electric current.

2. Electrical symbols

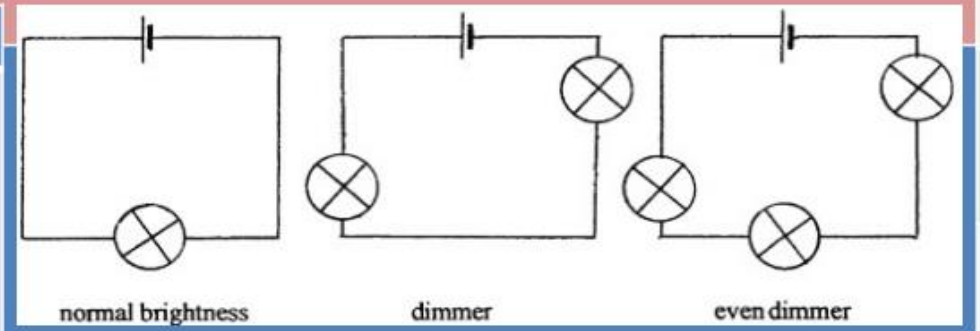








Sometimes new circuit symbols have to be created - for example when a new electrical component is invented.



We can use symbols to draw circuit diagrams. They don't show exactly where things are in a real-life circuit – just how the components are connected together. Components are part of an electric circuit such as batteries, wires or bulbs.

3. How do we change circuits?

- There is a relationship between voltage input (power generated by a battery) and power output (e.g. brightness of a bulb or volume of a buzzer).
- Devices work harder when more electricity goes through them.
- Adding a battery to a simple circuit with one bulb will increase the voltage and make electricity flow faster. This will make the bulb brighter.
- If we add a second bulb to a simple circuit with just one battery, both bulbs will light up but they will be dimmer.
- A longer or thinner wire reduces the flow of electric current in a circuit and makes a light bulb shine less brightly.

4. Key vocabulary

Battery	Two or more cells joined together in a line. The positive terminal of one cell is connected to the negative terminal of another cell.
Brightness	The amount or perceived intensity of light emitted from an object.
Cell	A store of chemical energy that is made available in an electrical form when the circuit is switched on.
Conductors	In a conductor, electric current can flow freely. Metals such as copper typify conductors.
Function	The way in which something works or operates.
Insulators	Electric current cannot flow freely in insulators . Most non-metallic solids are said to be good **insulators**, having extremely high resistance to the flow of charge through them.
Series	Circuit in which the current goes through all the components one after another.
Variations	A change or slight difference in condition, amount, or level.
Voltage	Amount of electrical force that makes electricity move through a wire.