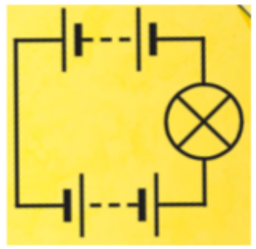
Electricity

KNOWLEDGE ORGANISER

Knowledge - What Effects a Circuit

What will make a bulb brighter or a buzzer louder?

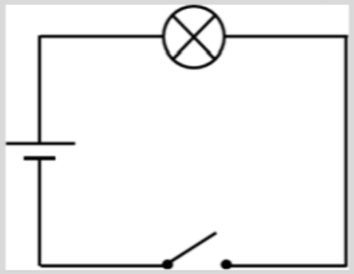
1. More batteries or a higher voltage create more power to flow through the circuit.
2. Shortening the wires means the electrons have less resistance to flow through.



What will make a bulb dimmer or a buzzer quieter?

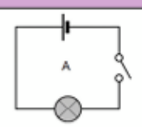
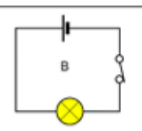
1. Fewer batteries or a lower voltage give less power to the circuit.
2. More buzzers or bulbs mean the power is shared by more components.
3. Lengthening the wires means the electrons have to travel through more resistance.

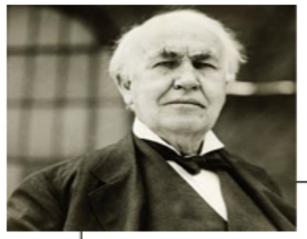
A scientific diagram of an open circuit:

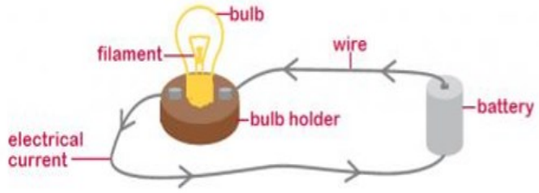


The light bulb will not light in this circuit until the switch is closed.

Switches

1. When a switch is open (off) there is a gap in the circuit. 2. Electricity cannot flow around the circuit.	
1. When a switch is closed (on) it makes the circuit complete. 2. Electricity can flow around the circuit.	



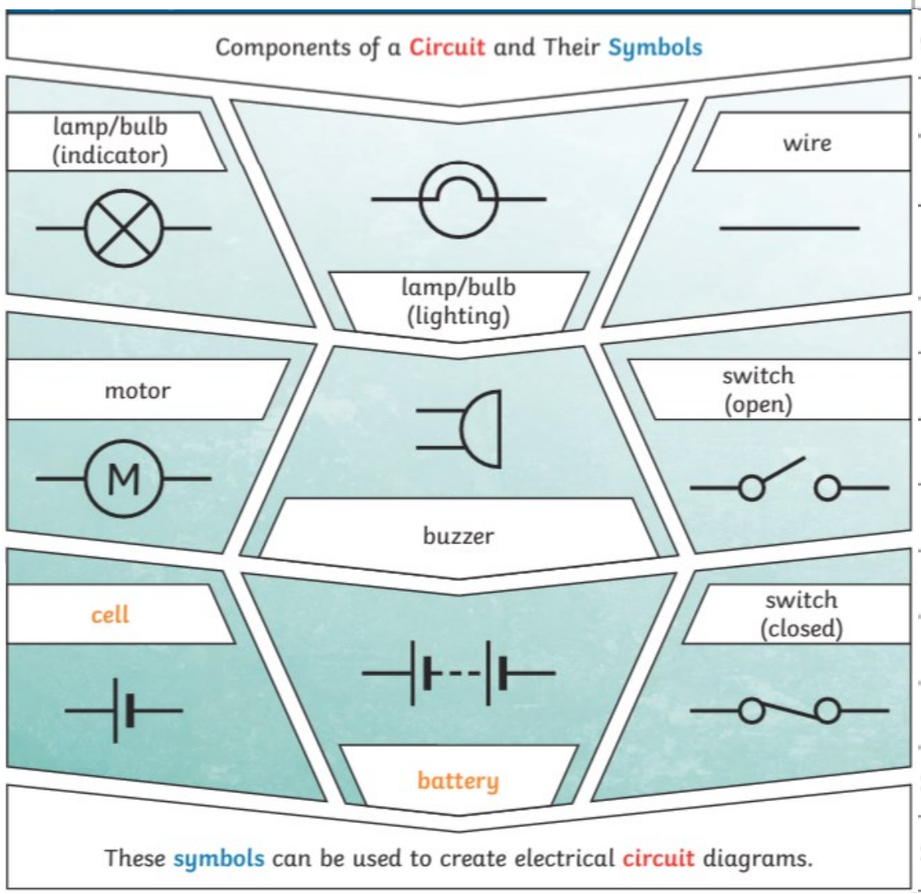


Thomas Edison (1847 – 1931)

Thomas Edison was born in 1847 and died in 1931. He lived in the state of New Jersey in the United States of America (USA).

He is known as one of the greatest inventors in history.

He invented the light bulb, the phonograph (which could record and play sound) and an early video camera called the Kinetograph. The films were then watched on a Kinetoscope, which he also invented.



Vocabulary	
1. Ammeter	Measures the current in a circuit.
2. Appliances	A device or machine in your home that you use to do a job such as cleaning or cooking. Appliances are often electrical.
3. Battery	Made up of one or more cells.
4. Electron	Particle with a charge of negative electricity, found in all atoms and acting as the primary carrier of electricity in solids.
5. Proton	A particle occurring in all atomic nuclei, with a positive electric charge.
6. Cell	A synonym for a single battery.
7. Circuit	A complete route which an electric current can flow around.
8. Component	The parts of which something is made.
9. Conductor	A substance that heat or electricity can pass through or along.
10. Current	A flow of electricity through a wire or circuit.
11. Device	An object that has been invented for a particular purpose.
12. Electricity	A form of energy that can be carried by wires and is used for heating and lighting, and to provide power for devices.
13. Insulator	A non-conductor of electricity or heat.
14. Mains	Where the supply of water, electricity, or gas enters a building.
15. Motor	A device that uses electricity or fuel to produce movement.
16. Resistance	A force which slows down a moving object or vehicle.
17. Resistor	A part of an electric circuit that provides resistance to some of the current.
18. Switch	A small control for an electrical device which you use to turn the device on or off.
19. Voltage	The force of an electric current as measured in volts.
20. Series Circuit	A series circuit is a closed circuit in which the current follows one path.
21. Parallel Circuit	Closed circuit in which the current divides in two or more paths before rejoining.