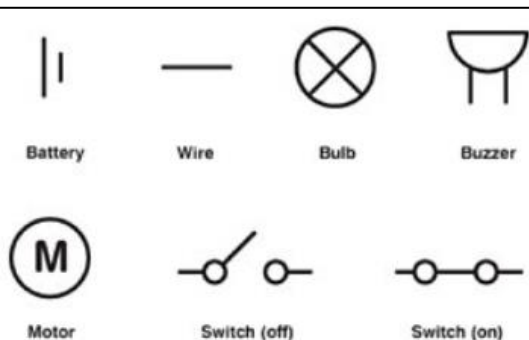


**Prior Knowledge - What should I already know?**

- which common appliances run on electricity
- how to construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- that a lamp will only light in a simple series circuit if it is part of a complete loop with a battery
- that a switch opens and closes a circuit and affects whether or not a lamp lights in a simple series circuit
- that metals are good conductors and know other materials that conduct electricity

**Key Learning - What will I know at the end of the topic?**

- how the brightness of a lamp or the volume of a buzzer is affected by the number and voltage of cells used in the circuit
- how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches
- how to use recognised symbols when representing a circuit in a diagram.
- who was responsible for the invention of the electric lightbulb



Joseph Swan      Thomas Edison



**Vocabulary**

**Prior      Required      Challenging**

- electricity** - energy used to power electrical appliances
- electrical appliance/device** - something that needs electricity to work
- mains electricity** - electricity used by plugging an appliance into a socket
- electrical circuit** - a complete path around which electricity can flow.
- electrical current** - the amount of electricity flowing through a circuit
- component** - part of a circuit powered by electricity
- series circuit** - a single path with more than one component
- cell/battery** - source of power
- switch** - used to start and stop the flow of electricity around a circuit
- crocodile clip** - a metal clip used to link parts of a circuit
- conductor** - objects that allow electricity to flow through them easily
- insulator** - objects that do not allow electricity to flow through them easily
- circuit diagram** - a drawing of a circuit using standard symbols
- circuit symbol** - standard pictures used to represent the components of a circuit
- resistance** - anything that acts against the flow of electricity such as components in a circuit
- voltage** - the measure of energy carried by the charge flowing in a circuit
- voltmeter** - an instrument for measuring electric potential in volts
- ammeter** - an instrument for measuring electric current in amperes
- short circuit** - a problem in a circuit resulting in a very high current (too high) travelling through a circuit