

Science Unit title: Electricity

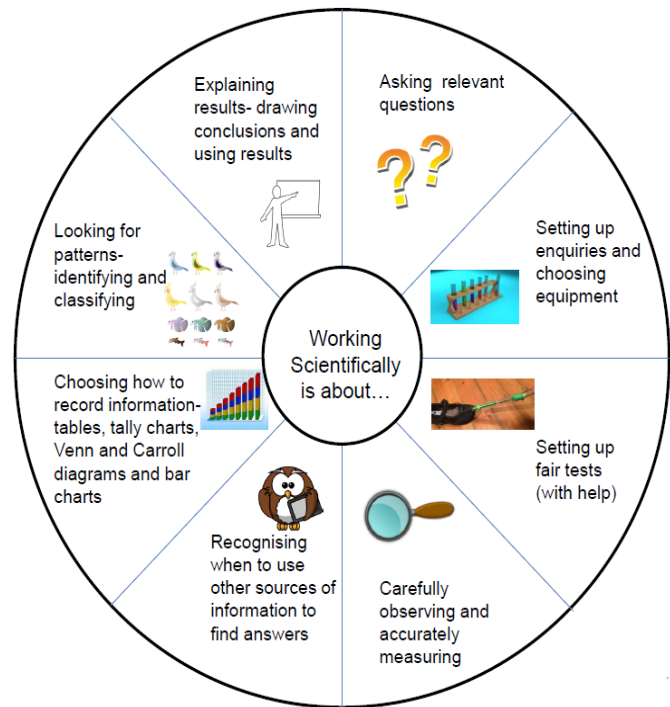
Pupils should construct simple series circuits, trying different components, for example, bulbs, buzzers and motors, and including switches, and use their circuits to create simple devices. Pupils should draw the circuit as a pictorial representation, not necessarily using conventional circuit symbols, at this stage.

Prior learning

Appliances work using electricity.
Electricity can be dangerous.

Future learning

Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.
Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.
Use conventional symbols when representing a simple circuit in a diagram.



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.

COMMON APPLIANCES THAT RUN ON ELECTRICITY

- TV
- Radio
- Freezer
- Oven
- Lights
- Computers/laptops/tablets

COMMON ELECTRICAL HAZARDS

- Exposed wires
- Damaged wall sockets
- Overloading extension sockets
- Placing metal into electrical appliances or open sockets
- Electrical appliances near water.

COMMON ELECTRICAL INSULATORS

- Paper
- Wood
- Plastic

COMMON ELECTRICAL CONDUCTORS

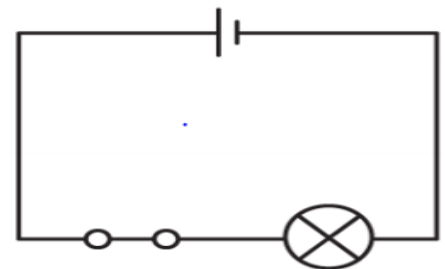
- Copper
- Stainless steel

Key vocabulary and Spellings:

- Circuit** - a complete route which an electrical current can flow around.
- Wire** - a long, thin piece of metal that carries electrical current.
- Buzzer** - an electrical device that makes a buzzing sound. **Bulb** - an electrical device that lights up.
- Motor** - a device that makes movement.
- Switch** - a component that can turn the electrical device on or off.
- Cell** - a device used to generate electricity, a battery is an example of this.
- Electrons** - carry energy around the circuit.
- Electrical Conductor** - a material/device which allows electricity to pass through.
- Electrical Insulator** - a material/device which does not allow electricity to pass through.

SIMPLE CIRCUIT DIAGRAM

This circuit works as the switch is on and connecting the Circuit.



ELECTRICAL SYMBOLS

