









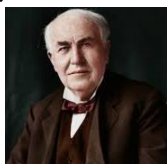


Circuit symbols

 battery	 closed switch	 open switch	 cell	 voltmeter
 buzzer	 lamp	 lamp	 motor	 wire

Thomas Edison (1847-1931)

Thomas Edison 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

Cragside – Northumberland

Cragside is a Victorian country house near the town of Rothbury in Northumberland, England. It was the home of William Armstrong. It was the first house in the world to be powered by hydroelectricity.



Year 4 - Electricity

What is electricity?

Electricity is a form of **energy** which can build up in one place (**static electricity**) or flow to another (**current electricity**).

Electricity comes from different sources. Some are **renewable** such as solar, nuclear, geothermal, hydro and wind.

Fossil fuels such as coal, oil and gas are **non-renewable**.

Some appliances need electricity to work.

Examples of appliances that use **mains electricity** are:



To use **mains electricity** you need to plug the appliance into a socket.

Examples of appliances that use **battery electricity** are:



Conductors and insulators

An **electrical conductor** is a material that allows electricity to flow through it. Some examples are copper, iron, steel, silver and gold.

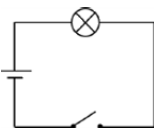
An **electrical insulator** is a material that does not allow electricity to flow through it. Some examples are rubber, wood, plastic and paper.

Switches

When a **switch** is added to a complete circuit, it adds a 'break'.

When the **switch** is open/off it stops the **flow of electrical charge**.

When the **switch** is closed/on it allows the **electrical charge** to flow around the circuit.



In this **circuit diagram**, the switch is open so the bulb won't light.

Vocabulary

Buzzer	An electrical device that makes a buzzing sound.
Circuit	A complete route which an electrical current can flow around.
Current	A flow of electricity through a wire.
Cell	A device used to generate electricity. A battery is an example.
Conductor	A material that electricity can flow through.
Insulator	A material that electricity cannot flow through.
Motor	An electrical device that creates movement.
Non-renewable	Resources will run out.
Renewable	Resources that will never run out.
Socket	A device on a wall that you can plug electrical appliances into.
Voltage	An electrical force that makes electricity move through a wire. Measured in volts (V).
Wire	A piece of metal that carries an electrical current. Wires are usually covered in plastic for safety.