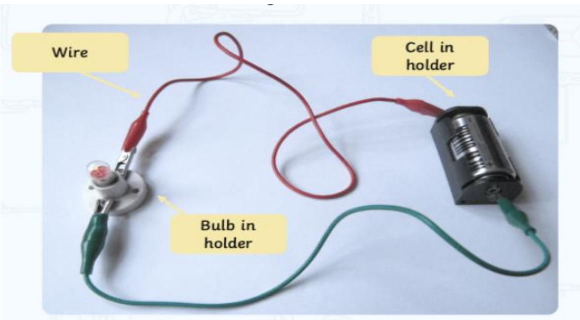
LKS2 Science – Electricity

Electricity can be generated using coal, gas, nuclear fuels, the wind or sunlight. Electricity is normally generated in big buildings called **power stations**. It's important only to use electricity when we need to, and to save what we can.

Using coal and gas in power stations causes pollution.

A circuit must have a **power supply** (battery) with **wires** connecting to both ends (positive and negative). The wires then need to go into a bulb, motor or buzzer and then travel back to the power supply. This is a **simple circuit**.



Key Vocabulary	
cell	An electrical cell is a power supply in a circuit. It's usually a battery in a small circuit
bulbs	The part of the circuit that lights up as electricity passes through it
wires	The electricity flows through these from the cell to the bulb or buzzer
buzzer	The part of the circuit that makes a buzzing noise as the electricity flows through it
circuit	The cell, wires and bulb or buzzer is a simple circuit
complete circuit	When the electricity flows around the circuit and the bulb comes on
incomplete circuit	When there is a gap in the circuit and the electricity doesn't flow through. The bulb or buzzer won't work in an incomplete circuit.
conductor	A material that lets electricity flow through it, such as metal
insulator	A material that doesn't let electricity flow through it, like plastic
power station	Where electricity is generated (produced)
switch	A switch in a circuit makes a break in the circuit when it's off (an incomplete circuit) but makes a complete circuit when it's on

Thomas Edison was a famous American inventor. He is best known for inventing lightbulbs to go in houses, and the electric power system that allows them to work. He came up with over 1000 successful inventions in his lifetime.

Some materials allow electricity to pass through them. These are **conductors**. Metal is a conductor and that's why wires are made from metal. **Insulators** are materials that don't let electricity pass through them, for example, plastic, rubber, wood. This is why metal wires are covered in plastic so the electricity can't hurt us

You need a **complete circuit** for the bulb to light up. This is when the electricity travels all the way around and there's no gaps. If there is a gap, the electricity won't flow and the bulb won't light up. This is an **incomplete circuit**.