Procedural knowledge

Ask relevant questions and use different types of scientific enquiries to answer them

Make systematic and careful observations

Factual and Conceptual knowledge

Where does electricity come from?

Electricity is generated using energy from natural sources such as the Sun, oil, water and wind.

These can also be called fuel sources.

Which appliances run on electricity?

Some appliances use batteries and some use mains electricity.

Batteries come in different sizes depending on how much and for how long the appliance is used.

These common appliances use electricity.

toaster   lamp   kettle   laptop   X-box   phone   torch   headlights   television

How does a circuit work?

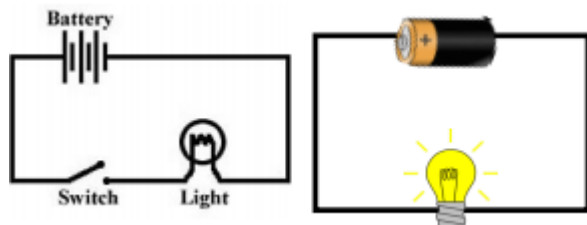A complete circuit is a loop that allows electrical current to flow through wires.

A circuit contains a battery (cell), wires and an appliance that requires electricity to work a bulb, motor or buzzer).

The electrical current flows through the wires from the battery (cell) to the bulb, motor or buzzer).
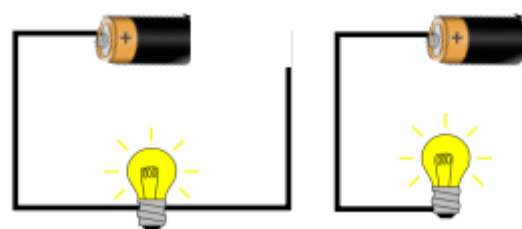
A switch can break or reconnect a circuit. It controls the flow of the electrical current around the circuit. When the switch is off, the current cannot flow. This is not the same as an incomplete circuit.

An incomplete circuit will not work as it is incomplete.

Complete circuit	**Incomplete circuit**

What are electrical conductors and insulators?

When objects are placed in the circuits, they may or may not allow electricity to pass through.

Objects that are made from materials that allow electricity to pass through and create a complete circuit are called electrical conductors. Copper, iron, steel, silver and gold are all effective electrical conductors.

Objects that are made from materials that do not allow electricity to pass through and do not complete a circuit are called electrical insulators. Rubber, wood, plastic and paper are all effective electrical insulators.

Key Vocabulary

circuit, battery, cell, conductor, insulator, buzzer, motor, wire, socket, appliances, mains, switch