

Knowledge Organiser



Year 4, Summer 1: Electricity
 Science Strand: Physics
 Whole School Topic: Why is the Earth so angry?

Key Vocabulary

battery	small devices that provide the power for electrical items (a collection of cells)
cell	converts energy into electricity
circuit	a complete route which an electric current can flow around
component	a part that combines with others to form a circuit
conductor	material that allows electricity to pass through
electricity	a form of energy used for lighting, heating, making sound and making machines work
insulator	material that does not allow
mains	where the supply of water, gas or electricity enters a building
switch	a small control for an electrical device which you can use to turn the device on or off

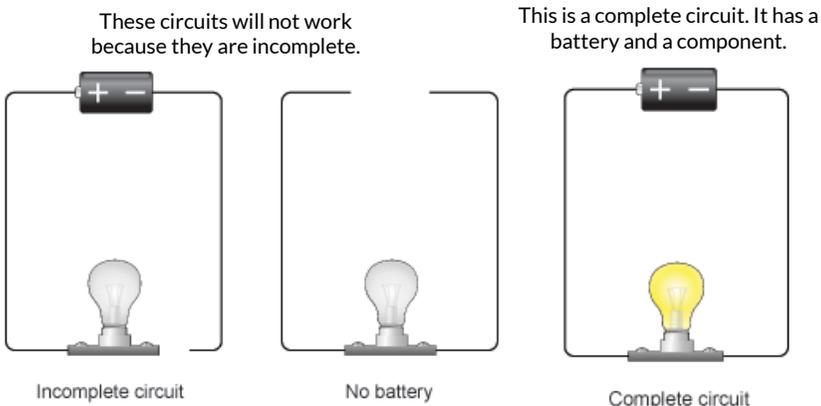
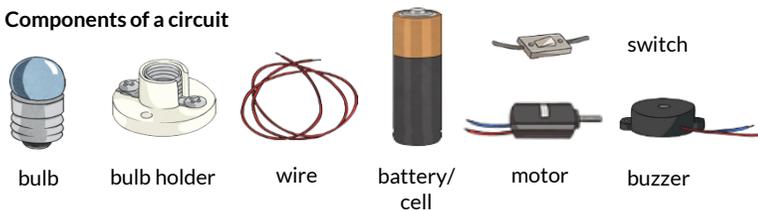
Scientific Enquiry Approaches that we can use this term:



What will I know about electricity by the end of this topic?

- Many household devices and appliances run on electricity. Name some of these devices.
- An electrical circuit consists of a cell or battery connected to a component using wires.
- Be able to construct a simple series electrical circuit naming the basic parts.
- If there is a break in the circuit or a loose connection, the component will not work. Be able to identify whether a lamp will light or not.
- A switch can be added to turn the component on or off.
- Metals are good conductors. Not metallic solids are insulators.
- Water (if not entirely pure) is also a conductor.

Components of a circuit



Appliances and devices that use electricity



There are two types of electrical current that we use to power appliances



Some materials let electricity pass through them. These are known as electrical **conductors**. Many metals are good electrical conductors.



Some materials **do not** let electricity pass through them. These are known as electrical **insulators**. Plastic, wood, glass and rubber are good electrical insulators.

