

Knowledge Organiser Year 6 Science: Electricity

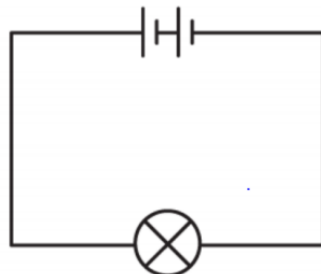
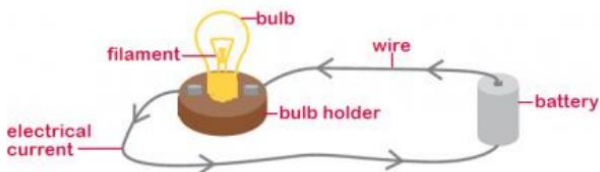
Concept: Energy

Key Vocabulary	Things we already know
electricity	a form of energy resulting from the existence of charged particles
energy	how things change and move
conductors	materials which allow electricity to flow through them easily; <i>for example, metals</i>
insulators	materials which do not allow electricity to travel through it easily; <i>for example, plastics</i>
current	a flow of electricity which results from the ordered directional movement of electrically charged particles
amps	measure the number of electrons (current) that can flow through a material ; e.g. a wire in a circuit
voltage	an electrical force that makes electricity move through a wire, measured in volts
circuit	a complete and closed path around which a circulating current can flow
component	a part of a circuit; e.g. bulb, buzzer
cell	a device containing electrodes that is used for generating current
battery	a container consisting of one or more cells where chemical energy is converted into electricity and used as a source of power

A complete, simple **circuit**

In order for electricity to flow, a circuit needs three things:

1. A source of electricity (cells/ battery)
2. No gaps in the circuit (closed)
3. Conductors (metal wires)



- Electricity is a form of **energy**.
- Electricity can flow through wires/ cables and be stored in **batteries** (or cells).
- Some materials **conduct** electricity (conductors) and some do not (insulators)



How do we make **electricity**?

FOSSIL FUELS



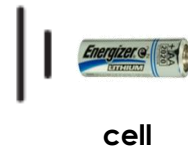
RENEWABLE ENERGY SOURCES



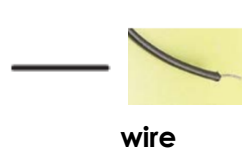
OTHER



Main components of a **circuit**



cell



wire



lamp/ bulb



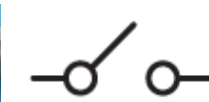
buzzer



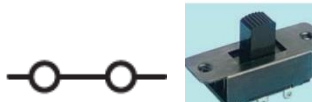
battery



motor

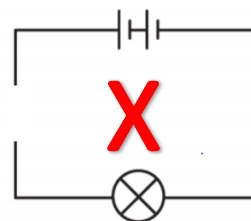


switch (off)

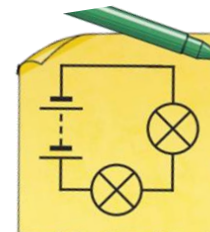


switch (on)

For a circuit to work, it must be 'complete'. If there is a break in the circuit, it is incomplete and the current cannot flow through it.



An **ammeter** can be used to measure the size of the electrical current flowing through a circuit.



The brightness of a bulb or the volume of a buzzer relies on the number and voltage of cells used in the circuit.

