Prior Learning

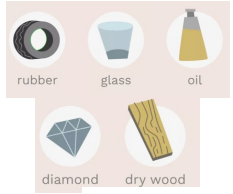
You know this

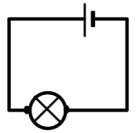
from before

Common appliances that run on electricity

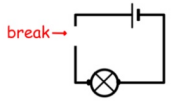
Common conductors

Common insulators





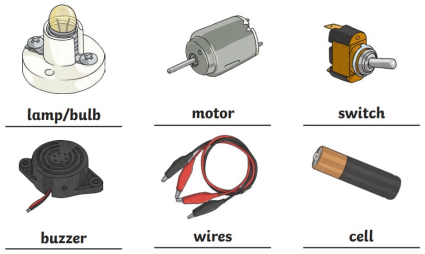
Complete circuits have no breaks in them, allowing electricity to run freely.

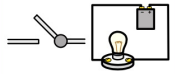


Incomplete circuits have a break in them, stopping electricity running freely.

Turning up the volume. Higher voltage = louder sound.

Basic parts of a circuit





switches open and close circuits

Vocabulary


material

attract

repel

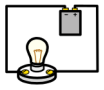

static


rub


electricity


charged


components

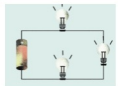

complete circuit

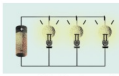

current


brighter


duller

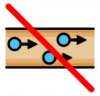

voltage


series circuit

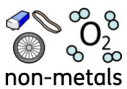

parallel circuit


appliance/device


conductor


insulator


metals



non-metals


positive

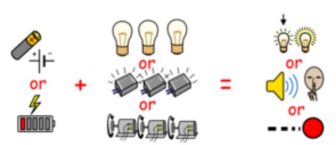

negative

resistance

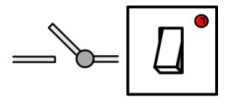

crocodile clips

Electricity

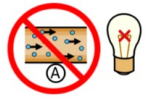
More cells, or a higher voltage cell = bulbs brighter, motors faster and buzzers louder.



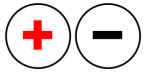
More components, or lower voltage = bulbs dimmer, motors slower and buzzers quieter.



Turning a switch off (open) breaks a circuit,

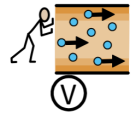


causing electrical flow to stop and components to stop working.

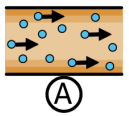


Electrons are the particles that carry the charge through the wires.

Resistance is when the electrons can't move easily through a circuit. A conductor has little resistance.



Voltage is a force that pushes the electrons and so makes electricity flow through a wire (it is measured in volts).



Current is the flow of electrical charge around a circuit (this is measured in amps).

Conductor – a material that will allow electrons to flow through easily. Most metals are electrical good conductors.

Insulator – a material that won't let electrons flow through. An example would be rubber.

bulb

motor

buzzer

open switch

closed switch

wire

battery/cell

bulb

motor

buzzer

open switch

closed switch

wire

battery/cell