

Science Knowledge Organiser Y5/6 – Electricity



Key Vocabulary	
Battery	A container consisting of one or more cells where chemical energy is converted into electricity and used as a source of power
Bulb	A glass bulb which provides light by passing an electrical current through a filament
Buzzer	An electrical device that makes a buzzing noise and is used for signalling
Cell	A device containing electrodes that is used for generating current
Circuit	A complete and closed path around which a circulating electric current can flow
Conductor	A material or device which allows heat or electricity to carry through
Current	A flow of electricity which results from the ordered directional movement of electrically charged particles
Electricity	A form of energy resulting from the existence of charged particles
Filament	A conducting wire or thread with a high melting point that forms part of an electric bulb
Motor	A machine powered by electricity that supplies motive power for a vehicle or other moveable device
Switch	A device for making and breaking the connection in an electric circuit
Voltage	An electrical force that makes electricity move through a wire, measured in volts

Bulb		
Motor		
Buzzer		
Wire		
Switch		
Battery		

	Series	Parallel
Description	Components are connected one after another on the same loop	Components are connected on separate loops
Diagram		
Voltage	The voltage is shared between components	Every component has the same value
Current	Every component has the same value	The current is shared between each loop.

Different appliances run on different amounts of electrical charge. An ammeter can be used to measure amps (the size of the charge).



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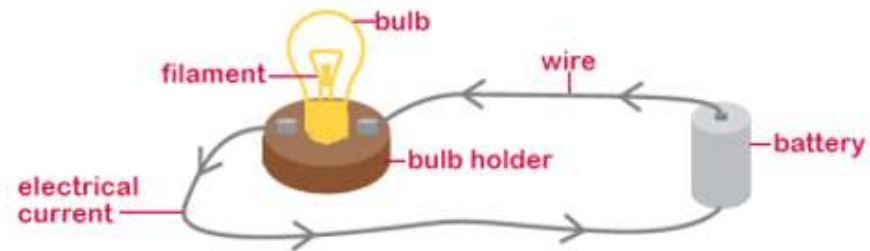
By changing the components in a circuit we can vary:



The brightness of a bulb
(brighter / dimmer)



The volume of a buzzer
(louder / quieter)



Key Knowledge

- To explain the importance of the major discoveries in electricity
- To identify the main circuit symbols and use these to draw circuit diagrams
- To investigate the effect of differing volts in a circuit on the brightness of a bulb or volume of a buzzer
- To explore the relationship between wire length and the brightness of bulbs or loudness of buzzers
- To describe the difference between series and parallel circuits

Electrical conductors and insulators

A conductor is a material that allows charges to flow easily throughout the material. Metals are often good conductors. Examples include: silver, gold, copper, steel and salt water.

An insulator is a material that does not allow charges to flow easily throughout the material. Examples include: rubber, glass, oil, diamond and dry wood.



silver



gold



copper



steel



sea water



rubber



glass



oil



diamond



dry wood