

Science - Year 6 - Physics

Electricity



Key Vocabulary



circuit
symbol
cell/battery
current
amps
voltage
resistance
electrons

Key Facts



- Electricity is a type of energy.
- Power is the rate at which energy is transferred.
- Voltage is the difference in potential energy between the positive and negative terminal.

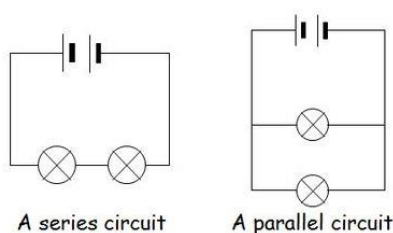
Series Circuits

- A circuit that has only one route for the current to take is called a series circuit.
- When one component is removed or broken, all components stop working because the circuit is broken.
- Batteries last longer in a series circuit. The current is reduced because of the resistance encountered in each of the components.
- If two bulbs in a series have the same resistance, they will have the same brightness. If one has a higher resistance, it will glow brighter.

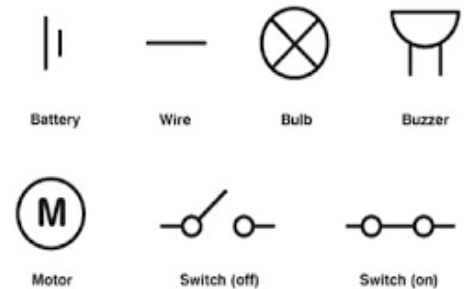
Parallel Circuits

- In a parallel circuit, there are several paths that the electricity can take.
- Components in a parallel circuit can be removed without affecting the other components. This is because the electricity can flow through either pathway so if one part of the circuit is broken, the other part is still complete.
- The battery will run out quicker as there is more than one pathway for the current to flow through.
- If one bulb has a higher resistance, the one with lower resistance will glow more brightly.

Circuit Diagrams



Circuit Symbols



Science GOLDEN WORDS:

prediction
measurements
conclusion
explain
classify

Electric Safety

<https://www.alliantenergykids.com/StayingSafeAroundEnergy/ElectricSafety>

Our 'Electricity' knowledge journey:

Y4:

Identify appliances that run on electricity.
Construct a simple series circuit.
Recognise that a switch opens and closes a circuit.
Recognise some common conductors and insulators.

Working Scientifically:

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- using test results to make predictions to set up further comparative and fair tests