

SCIENCE: ELECTRICITY

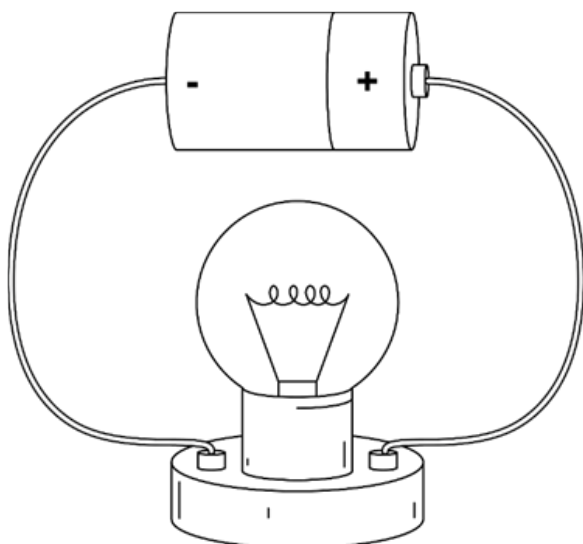
Key Vocabulary

Flow, diagram, standard symbols
battery, cell, circuit, connection
points, electrical component,
electrical conductor, electrical
insulator, electricity, switch
comparative test, dependent variable,
diagram, evidence, independent
variable cell, circuit, electrical
component, lux, refute, support cell,
circuit, voltage, volts

Working Scientifically

- Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- Recording data and results of increasing complexity using scientific diagrams and labels,
- Using test results to make predictions to set up further comparative [and fair] tests.

Diagram: **Electrical circuit**



Must - know knowledge

Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit

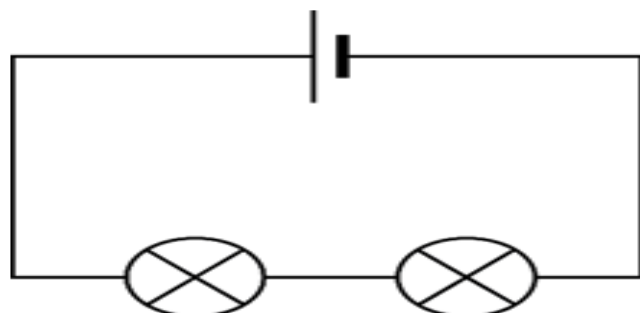
A lamp gets brighter if the voltage in the circuit is increased. The lamp gets dimmer if thinner wires are used. If the voltage is increased in a circuit, a buzzer makes a louder sound and a motor turns more quickly.

Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches

Use recognised symbols when representing a simple circuit in a diagram.

When comparing two circuits it is possible to predict which circuit will have the brighter lamp by considering the voltage and the number of lamps.

Diagram: The scientific convention for circuit diagrams always shows wires as straight lines with right-angled turns.



Experiments: How can we predict which circuit will have the brighter lamp?