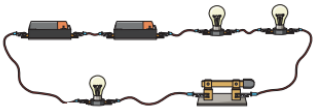
# Year 6 Science: Physics: Electricity

## Vocabulary

| Tier 1 | Tier 2 | Tier 3 |
|---|---|---|
| • series circuit – a circuit where all the components are connected in one single loop<br>• cell – a portable store of energy<br>• battery – two or more cells joined together to store more energy<br>• bulb – a component that produces light<br>• current – the flow of electricity in a circuit<br>• voltage – causes the current to flow | • voltage – causes the current to flow<br>• current – the flow of electricity in a circuit<br>• | •Dependent variable – what will be measured (the loudness of the buzzers)<br>•Controlled variable – what is kept the same (the type of cells used and the number of components in the circuit |

## Construct and draw series circuits using symbols

• A series circuit is one in which all the components are connected in one continuous loop.
• A series circuit has a cell and wires, plus components such as
a bulb, a buzzer and a switch.
• Each component in a circuit diagram is represented by a circuit symbol.
• Current is the flow of electricity in a circuit.
• Voltage causes the current to flow.



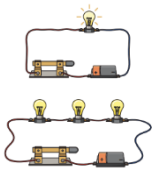
## Complete and incomplete circuits

- For a circuit to be complete, all the components, including a cell, must be connected by wires and the switch must be closed.
- An incomplete circuit may have a break in the wires, a switch may be open or the cell may be in the holder the wrong way.
- The current does not flow at all in an incomplete circuit



## Variations within circuits

- The more components there are in a circuit, the dimmer the bulbs and the quieter the buzzers.
- The more components there are in a circuit, the more difficult it is for current to flow.



## Plan – voltage experiment

Enquiry question
How does the voltage in a circuit affect the loudness of a buzzer?

## Investigate – voltage experiment

Enquiry Question
How does the voltage in a circuit affect the loudness of a buzzer?

## Evaluate – voltage experiment

Repeatability of the investigation