

# ELECTRICITY – RED SQUIREL CLASS

## Thomas Edison (1847–1931)

He is most famous for his work in developing the electric lightbulb. He created a filament that would allow a lightbulb to run for approximately 1200 hours.



## Nikola Tesla (1856–1943)

He is most famous for developing the alternating-current (AC) system. Other notable work includes developing the technologies behind X-rays, lasers and remote controls.



## Michael Faraday (1791–1867)

He is most famous for his work in electromagnetism and for developing a generator. He also developed the Faraday Cage, which protects objects from electrostatic current.

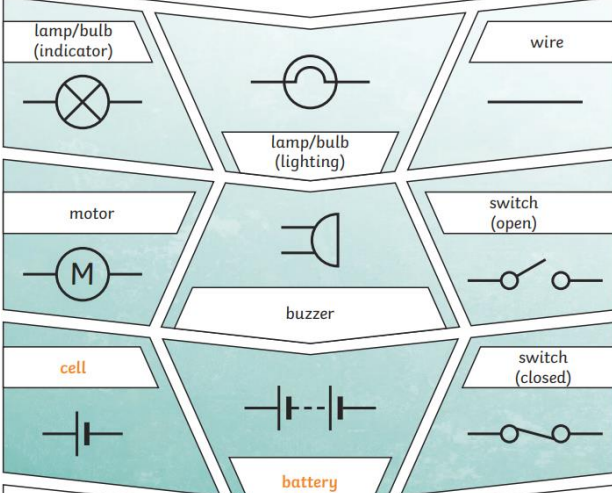


## Key Vocabulary

circuit	A path that an electrical current can flow around.
symbol	A visual picture that stands for something else.
cell/battery	A device that stores chemical energy until it is needed. A cell is a single unit. A battery is a collection of cells.
current	The flow of electrons, measured in amps.
component	A component is a piece of equipment used in a circuit.
amps	How electric current is measured.
voltage	Voltage is the electrical force that pushes electrical charge around a circuit. Voltage is provided by the cell or battery in the circuit. The greater the voltage, the more current will flow.
resistance	The difficulty that the electric current has when flowing around a circuit.
electrons	Very small particles that travel around an electrical circuit.

## Key Knowledge

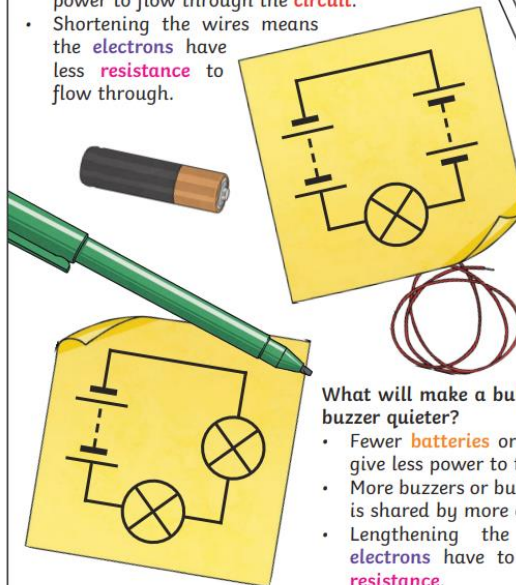
### Components of a Circuit and Their Symbols



These symbols can be used to create electrical circuit diagrams.

What will make a bulb brighter or a buzzer louder?

- More **batteries** or a higher **voltage** create more power to flow through the **circuit**.
- Shortening the wires means the **electrons** have less **resistance** to flow through.



What will make a bulb dimmer or a buzzer quieter?

- Fewer **batteries** or a lower **voltage** give less power to the **circuit**.
- More buzzers or bulbs mean the power is shared by more components.
- Lengthening the wires means the **electrons** have to travel through more **resistance**.

## Series Circuit

A **circuit** that has only one route for the **current** to take. If more bulbs or buzzers are added, the power has to be shared and so they will be dimmer or quieter. If just one part of this series **circuit** breaks, the **circuit** is broken and the flow of **current** stops.

