

**What I should already know:**

- 1 That a complete circuit is required for a bulb to light.
- 2 That batteries produce electricity.
- 3 That an electric current passes through a circuit.
- 4 That a switch opens or closes a circuit.
- 5 That some devices run off mains and some off batteries.
- 6 That metals are good conductors.

**What I will Learn:**

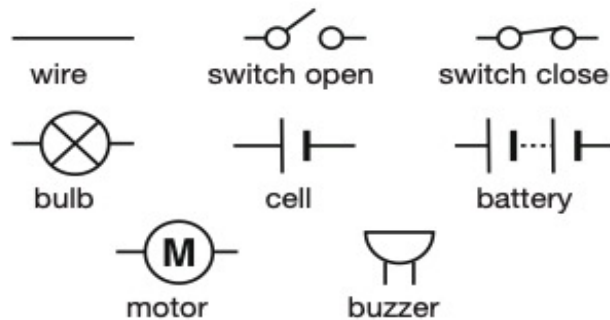
- 1 That the brightness of a lamp or the volume of a buzzer is associated with the number and voltage of cells used in the circuit.
- 2 To give scientific reasons for variations in how components function, including the brightness of bulbs and the loudness of buzzers.
- 3 To use recognised symbols when representing a simple circuit in a diagram.

**Working scientifically skills:**

- 1 **Plan** different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- 2 **Record** data and results using scientific diagrams and labels.
- 3 **Report** and **present** findings from enquiries, including conclusions and explanations
- 4 **Gather** and **record data** to help in answering questions.

**Scientists/Inventors:****Nikola Tesla**

Electrical & Mechanical Engineer who developed the AC electrical system and made important advances in technologies such as x-rays, neon lights and Robotics.

**Key Vocabulary:**

|   |           |  |
|---|-----------|--|
| 1 | cell      | a single battery that provides power to a circuit.   |
| 2 | component | something that makes up part of a circuit such as a bulb or wire.  |
| 3 | circuit   | a path that an electrical <b>current</b> can flow around.  |
| 4 | current   | the flow of <b>electrons</b> , measured in <b>amps</b> .   |
| 5 | Voltage   | the force that makes the electric <b>current</b> move through the wires. The greater the <b>voltage</b> , the more <b>current</b> will flow. |
| 6 | amps      | how electric <b>current</b> is measured.   |
| 7 | electrons | very small particles that travel around an electrical <b>circuit</b> .   |