

✓ O C A B U L A R Y

electricity

components

cell

battery

complete circuit

incomplete circuit

function

bulb

buzzer

motor

switch

brightness

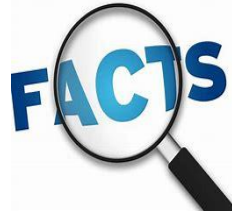
loudness

symbols

voltage

By the end of this unit, you will be able to draw circuits using the correct symbols and be able to discuss each circuit using the appropriate scientific vocabulary. You will be able to investigate how the number of components within a circuit may affect the effectiveness of the bulbs/buzzers etc.

Important information

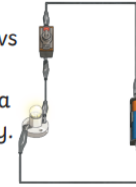


Prior learning

Series Circuit

A **circuit** where the components are connected in a loop.

Electricity flows through each component in a single pathway.



Complete Circuit

Electricity can flow. The components will work.



Incomplete Circuit

There is a break in the **circuit** that prevents the **electricity** from flowing. The components will not work.



In your previous learning, you have created simple circuits using a range of components. Furthermore, you will have tested materials to identify whether they are electrical conductors or insulators earlier this year.

This term, you will investigate the efficiency of some of these components within different types of circuits. To work safely with circuit components in the classroom:

- None of the equipment needs to use mains power, so do not put any of it in or near plugs.
- Report any damaged or broken equipment to your teacher. Do not use it.
- Only use equipment as instructed.
- Connect equipment correctly.
- Disconnect equipment after use and put it away neatly.

Components (Parts) Vocabulary

cell: Normally, we would call this a **battery** but scientifically, this is a cell. Two or more cells joined together form a **battery**.



bulb: Lights up in a complete **circuit**.



buzzer: Makes a noise in a complete **circuit**.



wires: Used to connect the different components in the **circuit** together.



motor: Produces movement in a complete **circuit**.



switch: Used to turn other components in the **circuit** on or off.



Summer 1 - Science – Electricity**Year Five and Six**

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	Learning objective/Learning question	What you will learn	Learning Review
1	Short session - I can recall how to make a complete series circuit What components did you use in your simple circuit?	You will revisit your prior learning and be able to create a simple circuit using the correct symbols.	
2	I can recognise and draw scientific circuit symbols Can you draw two different symbols for a bulb within the learning review box?	In pairs, you will play a memory card game where you match the scientific symbols. After that, you will label some circuit diagrams with their components. When shown a picture of a circuit, you will be able to draw it using the correct scientific circuit symbols.	
3 and 4	I can investigate the function of different components in a circuit How does adding an extra bulb to a simple circuit affect the brightness of the light emitted from the bulbs?	In a series of experiments, your group will test how altering the components within a circuit can affect their function. You will apply your learning on diagrams to draw the circuit, make a prediction and record your observations of the comparative testing	
5	I can investigate some STEM careers that are linked to electricity Can you name 3 different careers that are related to electricity?	Using the information on the NUSTEM careers website, you will answer some questions about each of the careers listed.	
6	I can research a scientist that has been influential in the area of electricity Can you name the scientist you researched and one key fact about their discoveries or inventions?	In pairs, you will be given a scientist to research. You will be able to say what discoveries or inventions they have been responsible for that are related to the area of electricity. Using the information you find, you will create a PowerPoint that can be shared with the class.	