



# Science- Year 6

## Spring 1– Danger! Low Voltage!

In Science, I have learnt:

To make a simple circuit to light a bulb, sound a buzzer and make a motor turn.  
The symbols for a cell, wires, buzzer, bulb and motor and to use these to draw a circuit diagram.  
What an electrical conductor and electrical insulator are and how to test for these.  
That there are different types of switches and how to make these.  
To design my own fair test experiment to solve a problem (see Year 5 working scientifically targets)

Electricity, electrical, mains, plugged in, battery, power, rechargeable, cell, wire, bulb, bulb holder, buzzer, motor, component, circuit, complete circuit, short circuit, flow, break, connect, disconnect, terminal, positive, negative, switch, property, electrical conductor, electrical insulator, electron.

**I can associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.**

**I can 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.**

**I can use recognised symbols when representing a simple circuit in a diagram.**

### Working Scientifically

**I can design my own experiments to solve a problem:**

- My prediction says what I think will happen and why. I have used a range of scientific vocabulary, diagrams and have drawn on my prior experiences, including previous experiments in this topic.
- I select appropriate equipment to use considering accuracy and precision.
- I can identify if the experiment is a ‘fair test’ experiment. If so, I can identify what needs to be changed, stay the same and measured.
- I can decide how to record my results. I can identify whether I need to repeat part of the experiment to get accurate data.
- I can draw a conclusion based on my results and say whether this supports my prediction. I can explain patterns and relationships I find in my results.
- I can evaluate my experiment and suggest improvements.

### Scientific enquiry type:

Grouping and classifying

Fair test

### New Science words:

cell, battery, lamp, wire, buzzer, motor, **complete circuit**, **short circuit**, **break in the circuit**, **current**, electrical insulator, electrical conductor, mains electricity, terminal, **electrons**, types of switches including: toggle, push, slide, tilt, plunger, trembler and pressure, **resistance**, **resistor**, **voltage**.

