Year 6

Electricity

Statutory Requirements:

- Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit
- 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
- Use recognised symbols when representing a simple circuit in a diagram

Working Scientifically:

- Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- Using test results to make predictions to set up further comparative and fair tests
- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations

Key Knowledge:

Electricity is a form of energy consisting of movement of electrons (small particles with a negative electric charge).

Circuits:

The flow of electrons in a circuit is known as a current. An electric current can only flow when the circuit is complete.

A circuit connected in series contains components attached to each other, like holding hands in a circle. Components in a parallel circuit are connected across each other.

A bulb slows down (**resists**) the flow of electricity. More bulbs, in series, will slow down the flow further so the bulbs become dimmer.

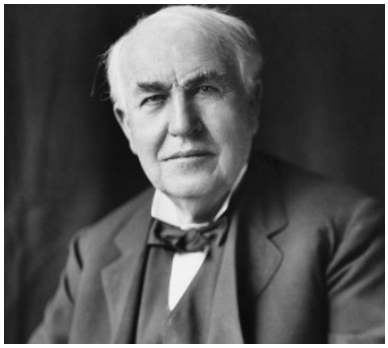
Batteries and Cells:

Batteries store chemical energy and change it to electrical energy. A cell is the basic unit that produces electricity, and a battery has two or more cells.

Key Vocabulary:

- Electricity, volts, voltage
- Series / parallel circuit
- Components: bulb (lamp), bulb (lamp) holder, buzzer, crocodile clip, leads, wires, switch
- Battery, cell
- Describing words: brighter, duller, slow, fast, quiet, loud
- Conductor, insulator
- Resistance
- Effects of electricity: light, sound, movement, heat
- Circuit diagram

Key Scientists:



Thomas Edison (1847-1931)
American investor and businessman responsible for the fuse, light bulb, phonograph and film camera.