

Topic Vocabulary

Circuit - In relation to electricity, a circuit is a closed loop or path around which an electrical current can flow.

Current - An electrical current is a flow of electricity.

Electrical insulator - Something that does not allow an electrical current to pass through it.

Electrical conductor - something that allows an electrical current to pass through it.

Cell - In relation to electricity, a cell is a single unit that produces chemical energy which is converted into electrical power. It has a positive and a negative terminal.

Battery - A device that contains one or more cells and produces chemical energy which is converted into electrical power.

Bulb - In relation to electricity, a bulb is a glass container that converts electricity into light; it has a piece of metal inside that lights up when an electrical current passes through it.

Wire - A thin, flexible, string-like thread.

Buzzer - A glass container that converts electricity into light; it has a piece of metal inside that lights up when an electrical current passes through it.

Motor - A machine that is powered by electricity and supplies power to a device with moving parts.

Switch - An electrical component that can be open or closed to interrupt or allow the flow of electricity through a circuit.

Spring Term Science Learning Grid for Year 5 Electricity



Home Learning Challenge Ideas

Go around your house and make a list of all the electronic items you can see. What components do you know they include? E.g. bulbs, buzzers, motors.

Research what the circuit symbols are for different electronic components. Can you create a leaflet or PowerPoint presentation to show these?

Make a poster about safety when working with electricity.

Create a list of as many different materials as you can e.g. wood, brass, plastic. Use books or the internet to find out whether they are electrical conductors or insulators.

Draw your own circuit for a new toy or game.

Science Facts to learn

Electricity is a flow of electrons and this flow produces an electric current.

A single battery is called a cell. Batteries are formed when a number of cells are grouped together.

Once all the chemicals in a cell have reacted together, then no more extra electrons can be produced and the cell is 'dead'.

Electrons keep flowing through the circuit and they are not used up in the creating of light, movement or heat.

The contents of a cell vary depending on the type of cell. Cells, switches, lamps, buzzers, motors, etc., are called components of circuits.

It is possible to construct a circuit and light a lamp using only one piece of wire, a cell and a lamp.

Voltage is measured in volts. The force of an electrical current. It is measured in volts.

Matching the voltage of cells and components in circuits is essential to avoid 'blown' lamps and 'burned out' motors.

Resistance is the measure of the difficulty electrons have in flowing through a material. Resistance is measured in ohms.

Useful Weblinks

<https://www.bbc.co.uk/bitesize/topics/zj44jxs>

<https://www.dkfindout.com/uk/science/electricity/>