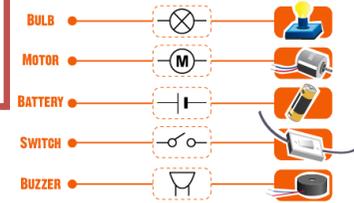




How do electrical circuits work?



1. How do we draw electrical circuits?
2. Can you create a circuit that has at least one of these features: switch; buzzer; motor and draw with the correct symbols?
3. How do traffic lights work?
4. What do you understand about: cells and volts and how it impacts on how components work?
5. Where does electricity come from?
6. How do we work safely with electricity?

We learn the following scientific knowledge and skills...

- 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.
- identify and name the basic parts of a simple electric series circuit (cells, wires, bulbs, switches, buzzers, motors)
- explain where electricity comes from
- identify the effect of changing one component at a time in a circuit

We learn the following technology knowledge and skills...

- To research the life of Thomas Edison

Hook for Learning:

* time to investigate a range of electrical circuits

Maths - *Can you calculate the average number of light bulbs in a house? Can you compare the answer for the mean, mode and median?

*Can you find out which batteries are the best value for money?

As Thinkers can we...?

*take account of others viewpoints when considering success

*plan a complex task, anticipating blocks and find ways to overcome them.

As Talkers can we...?

*provide an explanation including scientific terminology

*evaluate our work using WWW and EBI

We learn the following vocabulary:

*electricity	*bulb	*circuit
*switch	*buzzer	*motor
*cells	*volts	*brightness
*short circuit	*wires	*fuse
*pylons	*series	*components
*parallel	*dangers	*turbines
*battery	*voltage	*flow
*plug	*products	*current
*conductor	*insulator	*socket
*generator	*Thomas Edison	

We learn the following design knowledge and skills...

*use research to develop a design specification

*formulate a step-by-step plan to guide making, listing tools, equipment, materials and components

*competently select and assemble materials and securely connect electrical components

*continually evaluate and modify the product

We learn the following English knowledge and skills...

- To write a set of instructions for using an electrical appliance using the book 'Until I met Dudley'