Holy Family Catholic Primary School Cronton

Year 4: Science Summer Term | **Unit:3** Switched on | **Theme:** Electricity

What I should already know:

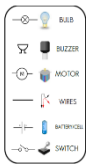
* Electricity is a form of energy.
* It can be used for, and to power devices.
* Sources of light and sound may need electricity to work.

Fact File

Which appliances run on electricity?

*Common appliances that use electricity are: toasters, lamps, kettles, laptops, games consoles, phones, torches, TVs, washing machines and irons. Some appliances use batteries and some use mains electricity. Batteries can vary greatly in size, shape and power.

How does a circuit work?



In a series circuit all the components are joined together and the electricity can only flow in one direction - You must learn the different symbols for the different components. Switches can be used to open and close circuits.

What I will know by the end of the unit:

*identify common appliances that run on electricity;

*construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers;

*identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery;

*recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit;

*recognise some common conductors and insulators, and associate metals with being good conductors.

Key Scientist

Michael Faraday (born September 22, 1791, Newington, Surrey, England—died August 25, 1867) He invented the **electric motor,** and helped massively change the world around him.

The electric motor has come a long way in the last 200 years and lots of the things you love to use today might not be here without it.

Vocabulary

Appliances	A machine in your home that you use to do a job such as cooking or cleaning. These are often electrical.
Battery	Provides power for electrical items e.g. mobile phone, torch.
Circuit	A full journey which an electric current flow around.
Electricity	A form of energy which can be carried by wires to provide power to different things.
Electrons	Small pieces of matter and energy flowing around a circuit.
Generate	To produce or create electricity.
Non-renewable	An energy source which only exists in limited amounts and cannot be replaced once it has been used e.g. coal, oil, timber, natural gas and nuclear power.
Renewable	Energy source which does not run out when it is used e.g wind and solar power.