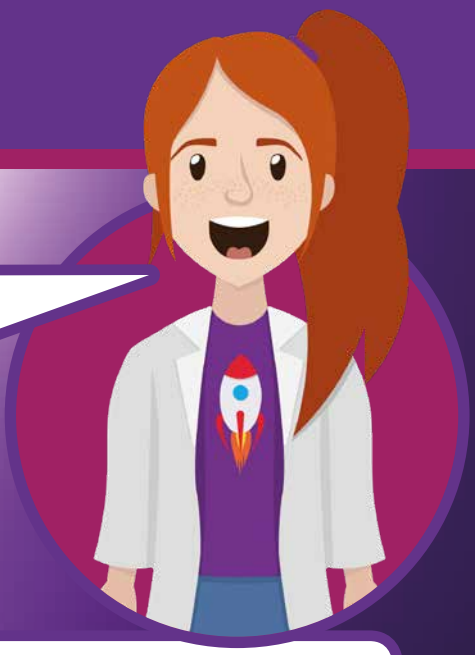
Electricity



Overview

This term will be electric! The focus of our investigations will be on what electricity actually is – ie the flow of 'electrons' and how electricity is generated and different sources such as renewable energy, nuclear power plants and fossil fuels.

Here are some key topics we'll be studying:

1. What electricity is and how it can be generated
2. Electric circuits
3. Different sources of electricity
4. How we use electricity

Key investigations

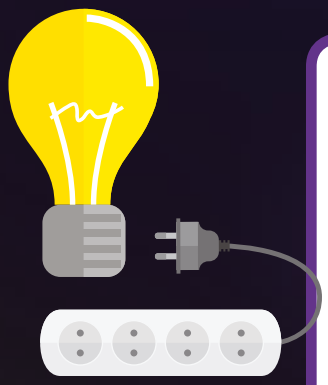
Our children love practical science and they will be involved in a number of investigations that really help them to develop their scientific skills; planning, data capture and analysis and evaluation. Here is an example of the type of investigation they'll be doing:

Electricity and Magnetism. *Pupils will walk in the footsteps of Oersted and Faraday to study the links between electricity and magnetism and how this led to the creation of the generator and electric motor.*

Exciting things

Electricity can be generated from the wind, sun, water and even animal poo! It can travel really slowly, as in the case of electricity in wires where the electrons 'drift' at the very sedate speed of around 0.00001 meters per second (m/s) or really fast – like a lightening bolt at the speed of light!

One bolt of lightning can measure up to 3 million volts, and a man named Roy Sullivan from the USA survived 7 strikes! He wasn't left unscathed though, he received burns down his legs, chest and arms, had his hair set on fire and his eyebrows burnt off and was knocked out on many of these occasions.



Things to do at home

You can be a water bender in your own home!

All you need to do is comb dry hair using a plastic comb, and immediately hold the comb about 2cm away from a tap with a thin stream of water coming out. Try running the tap faster or slower or hot and cold see if it affects your water bending.

Don't have a comb? Use a balloon! Rub the balloon on dry hair and hold near the water. The static electricity particles build up on the surface of the comb/balloon which then affect the water particles to bow towards them making the water bend.

Share your wind turbine online using the hashtag #empiriboxscience and join in the fun!