



Year 4 Knowledge Organiser

Science

SPIES

Learning about codes, electricity and the powers of observation.

Project Question: How could we send a secret message using an electrical circuit?

Exciting Books and Useful Links:

Books: Spyology

How to be a spy in 7 days or less

Spy Science

Spy Dog

The Secret Seven

Links: <https://www.theschoolrun.com/what-is-electricity#:~:text=In%20Year%204%20children%20will,identify%20some%20conductors%20and%20insulators.>

What I should already know:

- To know what a code is.
- Understand materials that objects are made from and be able to sort them into categories.
- To know what objects are magnetic and non-magnetic.

What I need to know:

- How to create a full working electric circuit.
- What items are conductors and insulators.
- To be able to label an electrical circuit and its components.
- To create codes and decode them.
- To learn about the lives of historical spies.

Key Vocabulary:

Espionage - the practice of spying or of using spies.

Surveillance – keeping a close watch over something or someone.

Cipher – a code.

Cryptogram – a message written in code.

Decode – to translated an encoded message into ordinary language.

Observe – to watch something.

Voltage - is the difference in electrical energy between two parts of a circuit.

Current - this is the amount of electricity flowing through the circuit.

Renewable - A source of electricity that will not run out. These include solar, nuclear, geothermal, hydro and wind.

Generate – To make or produce.

Circuit - A pathway that electricity can flow around. It includes wires and a power supply and may include bulbs, switches or buzzers.

Appliance - A piece of equipment or a device designed to perform a particular job.

Battery - A device that stores electrical energy as a chemical.