Year 4 – Electricity

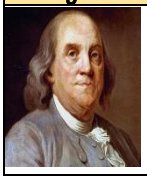
What does a lightbulb need to light up?

Prior learning	Future learning
In Year 2, you have identified objects, which use electricity, and those that do not.	In Year 6, you will recognise symbols in an electrical diagram.

In this unit you will:

- 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

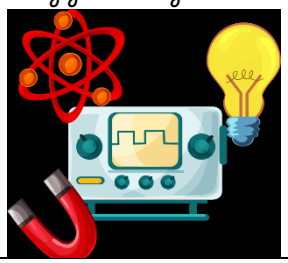
Key Scientist: Benjamin Franklin



Benjamin Franklin was an American inventor. Although he invented many things, he is most famous for inventing the lightning rod which is used to ground a lightning bolt.

Science discipline: Physics

Physics is a science that studies matter and its motion as well as how it interacts with energy and forces.



Scientific diagram

Light	
Cell	
Battery	
Open switch	
Closed switch	
Motor	
Buzzer	
Voltmeter	

Vocabulary:

- **Circuit:** A complete path around which electricity can flow.
- **Switches:** A component within an electrical circuit, which enables the flow of electricity to be turned on and off.
- **Conductors:** Made of materials that electricity can flow through easily.
- **Insulators:** A material, which does not easily allow heat and/or electricity to pass through it.
- **Component:** A part that combines with other parts to form something bigger.