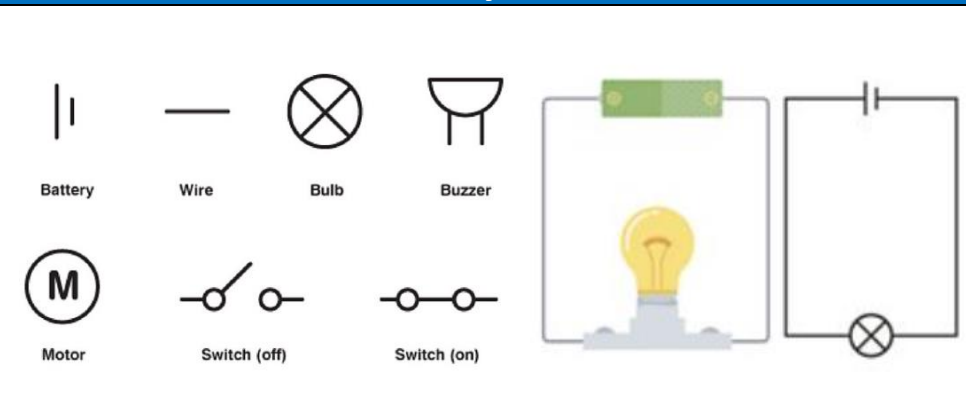


## Year 4/5 Science: Electricity



### Why are we learning about electricity?

We are **building on all our previous learning** in KS1 about materials. We will be able to distinguish between electrical conductors and insulators.

**This new learning is important because** electricity is a huge part of our lives and it is important that we understand what it is and how it is generated so we can use it safely and responsibly. By knowing where the electricity that is delivered to our homes comes from, we are empowered to make informed choices about our energy consumption.

**This will help us get ready for future learning about** electricity in Y6 where we will learn how to construct more complex circuits and build on our knowledge of electricity.

### Important questions to answer:

- How is electricity used in our everyday lives?
- What are the components of an electrical circuit?
- How do circuits light a light bulb?
- How does a switch in a circuit work?
- Which materials make good conductors and why?

### Experiences we will have:

- Build our own electrical circuits.
- Investigate effectiveness of different materials as electrical conductors and insulators.

### Things we need to know:

- To know that many household appliances run on electricity and that these can be mains or battery operated.
- To know that an electrical circuit can contain cells, wires, bulbs, switches, and buzzers.
- To know that a lamp will light up if a circuit is complete and contains a power source.
- To know that switches break the circuit to switch off the light.
- To know that metals are the best electrical conductors due to their free electrons.

### Skills we need to learn:

- I can identify common appliances that run off electricity
- I can build a simple series electrical circuit, identifying and naming the component parts.
- I can explain how I know if a simple series circuit will light a lamp.
- I can recognise that a switch will open and close a circuit.
- I can name common electrical conductors and insulators and describe what makes a good electrical conductor.

### Subject Specific Vocabulary:

appliance	conductor	motor
battery	electrical charge	negative
buzzer	electrons	positive
cell	generate	switch
circuit	insulator	wires