

Year 4 – Electricity – Switched On

What it looked like last year (EYFS)

- Children know about similarities and differences in relation to places, objects, materials and living things.
- They talk about the features of their own immediate environment and how environments might vary from one another.

What it looks like next year (Year 6)

- Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.
- Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.
- Use recognised symbols when representing a simple circuit in a diagram.

Vocabulary (definitions)

component - one of the parts or units of a combination, mixture, or system.

conductor – an object that allows electricity to pass through

insulator – an object that does not allow electricity to pass through.

cell	bulb	symbol
electrical appliance	battery	switch
mains	positive	buzzer
plug	negative	motor
electrical circuit	connect	crocodile kit

Sequence of Learning

1. To understand that electrical items can be powered by mains electricity or batteries.
2. Explore making circuits with different components.
3. Use a model to explain how a simple circuit works.
4. To identify correct and incorrect circuits and problem solve correcting them.
5. Make a switch to control a circuit.
6. Identify common conductors and insulators, group them accordingly and describe how they are used.

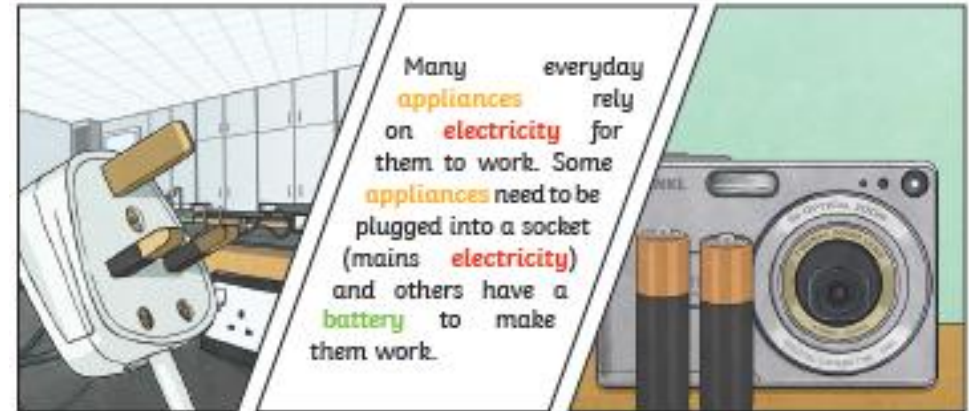
Cultural Capital

- To be able to identify common appliances that run on electricity.
- To be able to construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.
- To be able to 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.
- To be able to recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in simple series circuit.
- To be able to recognise some common conductors and insulators, and associate metals with being good conductors.
- The real life knowledge that links is: exploration, grouping & classifying,
- The jobs it can be used in are: Electrician, Engineer, Appliance Designer

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Principles of Teaching Science.

- E**xploring – when we look at how things work in the world
- Q**uestioning – when we question what will happen
- U**nderstanding – when we use scientific language to explain
- I**nvestigating – when we can explore and are hands on
- P**redicting – when we use our previous knowledge to say what we think will happen.



An electrical conductor lets electricity pass through. They are often metals but it also includes water.

An electrical insulator does not let electricity pass through.

