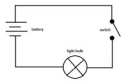
Electricity	**Science** **Knowledge organiser**	**Strand: Physics** **Class**: Year 4

Previous Knowledge

Some things are plugged in and some things ned batteries to make them work

Project Hook or 'Wow' memory

Create a light up nose on a clown face

Learning Steps	Key Knowledge (answers)
How would you group these electrical devices based on where the electricity comes from?(Identifying classifying)	Elicitation activity—mind map Lightning and static electricity occur naturally Mains electricity is created Batteries are stored electricity
Which room has the most electrical sockets in your house? (Pattern spotting)	Kitchen has the most Bathrooms have the least Use collected data to reason why and analyse
How does a light bulb work? (Research) **How long does a battery last in a torch?** (Observing over time)	A circuit is made when a complete loop is created with a battery and the bulb lights up. Create a circuit and label the parts. Different batteries last longer than others. 
Which circuits will make the lamp light? (identifying and classifying)	A circuit is complete and will make the bulb light when all the parts are connected correctly.
Which materials are conductors / insulators of electricity? (Identifying and classifying) **Which metal is the best conductor of electricity?** (Comparative testing)	Metals are good materials to use as electrical conductors Not all materials are good conductors of electricity
How does a switch work? (C)	A switch turns an electrical current off and on

The key skills we want pupils to use during this topic:

Ask relevant **questions** and use different types of scientific enquiries to answer them. Set up simple practical investigations, **compare** things and make **fair tests**. Make careful **observations** and take **accurate measurements** using the right units using a range of equipment.

Gather, record, sort and **present data** in a variety of ways to help in **answering questions**. Record findings using simple **scientific language**, drawings, labelled diagrams, keys, bar charts and tables.

Report findings by talking and writing about them, displaying or **presenting results** and **conclusions**. Use results to draw simple conclusions, make **predictions**, suggest **improvements** and ask more questions. **Identify differences, similarities or changes** . Use clear **scientific evidence** to answer questions or to support my findings.

Key vocabulary

Electricity	The flow of an electric current or charge through a material
Generate	To make or produce
Renewable	Source of electricity that will not run out—solar, nuclear, geothermal, wind, hydro
Non-renewable	Source of electricity that will run out—fossil fuels: coal, natural gas, oil
Appliances	A piece of equipment or device designed to perform a particular job—TV, dryer
Battery / cell	A device that stores electrical energy
Circuit	A pathway that electricity can flow around—wires, power supply, bulbs, switches
Electrons	Small particles with an electric charge

Statutory Requirements

Identify common appliances that run on electricity
Make a simple electrical circuit, identifying and naming its basic parts: cells, wires, bulbs, switches and buzzers.
Identify whether or not a lamp will light in a simple circuit, based on whether or not the lamp is part of a complete loop with a battery.
Recognise some common conductors and insulators, and associate with metals being good conductors

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