Our Intent is: To develop inquisitive children who are excited about investigating with curiosity, "How can scientific enquiry explain the world?" Exploring answers by gathering and analysing evidence.

Forton Primary School
Science

Clougha Class
Autumn 1
Year B

Etymology – **circuit** – from Latin circuitus 'a going round'.

Step into Science Electricity
By Peter Riley

Key Concept: Electricity

Key Question: Can we control electricity?

Has electricity impacted our world positively?

N.C. LINKS: Electricity -
Pupils should be taught to:

- 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.

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Unit Overview:	Vocabulary:
Identify common appliances that run on electricity. Simple circuits, including switches. Correct vocabulary wires, cells, switches etc. 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. Recognise some common conductors and insulators, and associate metals as being good conductors.	Electricity, appliance, battery, circuit, series circuit, complete circuit, mains electricity, electrical conductor, electrical insulator.
New Knowledge Progression: • 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.	**Building on Prior learning KS1:** • Identify common appliances that run on electricity. • Staying safe with electrical appliances

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- 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.
- Electricity can be dangerous.
- Electricity sources can be mains or battery.
- Batteries 'push' electricity round a circuit and can make bulbs, buzzers and motors work.
- Faults in circuits can be found by methodically testing connections.
- Drawings, photographs and diagrams can be used to represent circuits (although standard symbols need not be introduced until UKS2).

Key Skills (Disciplinary)

- Suggest their own ideas on a concept and compare these with what they observe / find out.
- Use observations to suggest what to do next.
- Discuss ideas and develop descriptions from their observations using relevant scientific language and vocabulary.
- Observe and record relationships between structure and function or between different parts of a processes.
- Record similarities as well as differences and / or changes related to simple scientific ideas or processes or more complex groups of objects / living things / events
- *(e.g. evaporation and condensation, different food chains, different electrical circuits).*
- Ask questions such as 'What will happen if…?" or 'What if we changed…? .
- Choose / select a relevant question that can be answered [by research or experiment / test].
- Make a visual representation or a model of something to represent something they have seen or a process that is difficult to see.
- Make some decisions about an idea within a group *(e.g. I think we should find out by testing…)*

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Sequence of Lessons:

1. LO – To identify common appliances that run on electricity.
2. LO – To identify circuit components and build working circuits.
3. LO – To investigate whether circuits are complete or incomplete.
4. LO – To investigate which materials are electrical conductors or insulators.
5. LO – To explain how a switch works in a circuit.
6. LO – To discuss and solve problems about electricity using reasoning skills.

Enhancements: Heysham Power Station	End of Unit Outcome: Electricity fact poster. Children will create a poster all about electricity including facts about what they have learnt.