

Y3/4 Year A Autumn Term

Topic: Let's We Forget

Subject: Science - Electricity

National Curriculum Objectives

Key Knowledge and **Vocabulary**

Y3/4

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes

Y4

- 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.

Identify the purpose of different **components** in a **circuit**.

Know that a **complete circuit** is needed for a **device** to work.

Know and explain why some circuits will work and others will not, depending on how the components have been put together.

Understand that working with **electricity** can be dangerous.

Name and identify devices that are powered by **mains electricity** and devices that are powered by **batteries**.

Know that it is safe to carry out experiments with batteries but not with mains electricity.

Understand how to construct a circuit to test which **materials** allow electricity to pass through.

Know and explain that with some materials the **bulb** will not light because the circuit is not complete.

Know and name some materials which are **conductors** and some which are **insulators**.

Know that metals are good conductors.

Know and explain how **appliances** and devices use plastic as an insulator.

Know that insulators are used as a safety measure.

Know how a **switch** works.

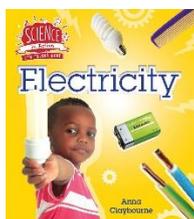
Know that a switch can be used to make or **break a circuit** to turn a device on or off.

Know how to change the **brightness** of a bulb.

Links to our school values

Thankfulness (for the vast range of electrical appliances that make our lives so easy)

Texts to support learning



(in school library)