

Term: Spring 2 Key Stage 2

Learning Challenge Question:

Why is electricity important?

WOW – What lights the bulb? Investigating different ways of making a bulb light.

Week 1: What is electricity?

WOW –What lights the bulb?

Knowledge Organiser – What do we know/what do we want to find out about electricity?

Sorting appliances according to use of electricity.

Week 2: What makes the bulb light – the circuit?

Identifying need for complete circuit. Learning about batteries as a power source and voltage as a measure of power. Drawing simple circuit with symbols for wires, battery, bulb.

Week 3: What makes the bulb light – conductive materials?

Learning about conductivity. Conducting a fair test to find which materials conduct electricity and recording results and conclusions. Drawing simple circuit with symbols for wires, battery, bulb, buzzer.

Week 4: Can you change the brightness of a bulb?

Designing a fair test to investigate a specific criteria that they predict will affect the brightness of a bulb. Recording results and conclusions.

Week 5: What can a make that uses electricity?

Designing, making and evaluating a game using an electrical circuit.

Week 6: Reflection week

Create a double page spread or writing quiz for others about what you have learned.

ENGLISH

Class Text: The Boy Who Harnessed the Wind by William Kamkwamba

Week 1 - 2 Narrative adventure – continued from last half term

Week 3 - 6 Explanation – how does a circuit work?

Science

Knowledge Electricity

Children will:

- 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.
- use recognised symbols when representing a simple circuit in a diagram.
- 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.
- 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

Skills

Children will be:

- raising their own and other relevant questions about world around them.
- using scientific knowledge and experience to raise new questions.
- selecting and planning most appropriate type of scientific enquiry to answer scientific questions.
- using criteria for grouping sorting and classifying and making careful observations.
- recording results using scientific diagrams.
- looking for relationships in the collected data and using scientific language to communicate relationships.

Design Technology

Knowledge

Children will:

- understand and use electrical systems in their products

Skills

Children will be:

- developing a design specification
- generating ideas for an item, considering its purpose and the users.
- making labelled drawings from different views showing specific features.
- developing a clear idea of what has to be done and modifying their design as they go along to create a quality product.
- evaluating their work both during and at the end of the assignment against original criteria..

RE FOCUS – Why are festivals important to religious communities?

Homework:

Present information about electricity, eg electrical safety, uses of electricity, saving electricity and green energy.