BRABIN'S ENDOWED PRIMARY SCHOOL

Class: Sycamore Year 3/4 Term: Spring 1 Cycle A

Curriculum Unit – Electricity

Key Learning Overview -

Science - Children will be able to identify common appliances that run on electricity. They will construct a simple series circuit, identify faults in their circuit may not be working and name its basic parts including cells, wires, bulbs, switches and buzzers. They will be able to recognise common conductors and insulators.

Design and Technology - Children will be able to design and create a structure that includes electrical components.

History - The Roman Republic (including culture, founding mythology, Carthage and Hannibal)

Geography - The Rhine and the Mediterranean (including cities along the Rhine and how it changes through its course, The Mediterranean Sea and the Suez Canal).

Computing – Programming: Sequencing Sounds: - Children will be introduced to a selection of motion, sound, and event blocks which they will use to create their own programs, featuring sequences. The final project is to make a representation of a piano. The unit is paced to focus on all aspects of sequences and make sure that knowledge is built in a structured manner. Learners also apply stages of program design through this unit.

PSHE - Children will be exploring communities and what it means to be part of a community.

Authentic learning opportunities - Children are making a structure and circuitry that they will show to an electrician/ engineer who will comment and give options on how to improve them.

Writing Opportunities - We will write: a fantasy story based on The Firework Maker's Daughter, write our own poems inspired by classic poetry, and short writing opportunities linked to our topic, such as an electricity fact file and a persuasive advert based around our DT work.

Class Novel, key texts and extracts -

Class Novel: The Firework Maker's Daughter.

How to Fight a Dragon's Fury, Mimi and the Mountain Dragon, Dragons at Crumbling Castle: and other stories by Terry Pratchett, A Child's Garden of Verses, Different versions of The Spider and the Fly.

Curriculum Shapers

- Be Knowledgeable: develop information processing skills through programming.
- Be Adventurous: develop problem solving skills during DT when adapting a product.
- Be Ambitious and be Positive: develop relevant attributes of learning, resilience and independence and a sense of belonging.
- Be Creative: develop creative thinking skills to overcome problems in science and DT.
- Be Collaborative: Develop empathy and negotiation skills.
- Be Reflective: develop reasoning skills and consumer awareness.

Key Questions

- Where does electricity come from?
- What appliances run on electricity?
- How does a circuit work?
- What are electrical conductors and insulators?
- What materials let electricity flow through them?
- Why can electricity be dangerous?
- What if we had no electricity?
- Can you make a simple switch to turn a light on and off?
- Why should we try not to waste electricity?
- How do I write a programme?
- How should I order commands in a programme?
- How do communities create a sense of belonging?
- What does it mean to be part of a community?
- What are different types of communities and how do people get involved with them?
- What do motors, buzzers and lights do?
- How can you make a motor/ buzzer work using electricity?
- What is good about your product and what would you improve on?
- What is computer aided design?
- Who were the Romans?
- Who was the first Roman King?
- What happened during the battles of the Roman Republic?
- How did people live during the Roamn Republic?
- How much power did the senate have in the Roman Republic?
- Why is the River Rhine important?
- How does the River Rhine change?
- What makes the Mediterranean Sea unique?
- What makes the Suez Canal so important?
- How have land and people shaped the Rhine and the Mediterranean?