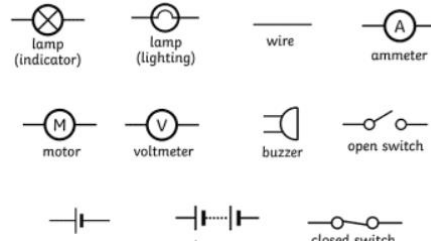




Jerry Clay Academy Subject Unit Overview

Subject: Science (Electricity) Year Group: 4 Term: Summer

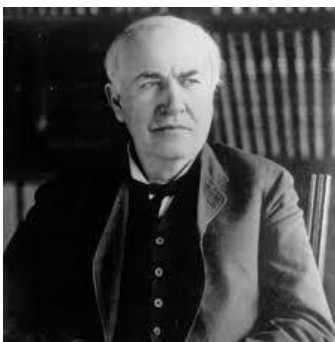


Core Learning of This Unit:

- To know that the brightness of a bulb is associated with the voltage.
- To compare and give reasons for variations in how components function.
- To use recognised symbols when representing a simple circuit in a diagram.
- To construct simple series circuits.
- To be able to answer questions about what happens when they try different components, for example, switches, bulbs, buzzers and motors.

Prior Learning:

From KS2: Children will have learnt about light in Y3 and different uses of materials in KS1.



National Curriculum Statements:

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

Key Vocabulary:

- **electricity**-the flow of an electric current through a material.
- **appliances**-a piece of equipment or device designed to perform a particular job.
- **mains powered**-items that run on mains power are plugged into a socket.
- **battery powered**-items that need a battery inserted into them.
- **circuit**-a pathway that an electric current can flow around.
- **series circuit**-a circuit where the components are connected in a loop.
- **incomplete circuit**-where there is a break in the circuit that prevents the electricity from flowing.
- **current**- A flow of electricity through a wire.
- **voltage**-an electrical force that makes electricity move through a wire.
- **battery**-a small device that provides power for electrical items.
- **cell**- a device used to generate electricity. A battery is an example of a cell.
- **conductor**- any material that electricity can pass through or along.
- **insulator**- any material that electricity cannot pass through or along.
- **components**-the individual parts that are put together to make the circuit.
- **bulb**-a glass lamp that provides light by passing an electrical current through a filament.
- **buzzer**- -an electrical device that makes a buzzing sound in a complete circuit.
- **motor**- a device that produces movement in a complete circuit.
- **switch**- a device for making or breaking the connection in a circuit
- **wires**- used to connect the different components in a circuit.

Significant People

Thomas Alva Edison was an American inventor and businessman who has been described as America's greatest inventor. He developed many devices in fields such as electric power generation, mass communication, sound recording, and motion pictures.