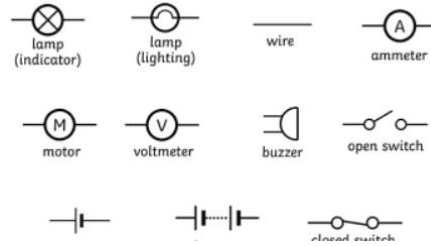




Jerry Clay Academy  
Subject Knowledge Organiser

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

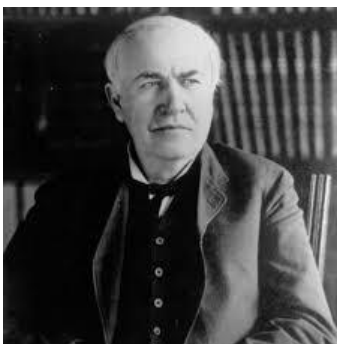


### Core Learning of This Unit:

- 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:

- Circuit - A complete route which an electric current can flow around.
- Current - A flow of electricity through a wire. Physics The study of forces including electricity and the way it effects objects.
- 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.
- Buzzer - An electrical device that makes a buzzing sound.
- Motor - A device that changes electrical energy into movement.
- Wire - A long piece of metal that carries an electrical current often covered in plastic for safety.
- Voltage - An electrical force that makes electricity move through a wire.
- Socket - A device on a wall that you can plug electrical equipment into.

### 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.