St John Fisher RC Primary School
Year 6 Knowledge Organiser – Two – Science - Electricity

What we will be learning

I know:

- **Week 1 -** How to tell the difference between batteries and mains electricity and understand how each one is used.
- **Week 2 & 3** - How to make a working circuit with components like lights and switches and can change parts around to see different effects.
- **Week 4 –** How to use special symbols to draw a diagram of my circuit so others can understand how it works.
- **Week 5** – How to test materials to see if they let electricity pass through and can identify them as conductors or insulators.

Electricity - Key Facts to Remember

- I can distinguish between batteries and mains electricity, explaining their uses in daily life.
- I can construct basic circuits using a range of components and alter the components to observe changes.
- I can draw accurate circuit diagrams using standard electrical symbols to represent different components.
- I can test various materials to classify them as conductors or insulators, demonstrating understanding of these properties through practical experiments.
- I understand the significance of safety when working with electricity and recognise the appropriate precautions to take.

Key Vocabulary and Glossary

- **Electricity -** A form of energy resulting from the existence of charged particles.
- **Mains Electricity -** A type of electricity supplied through wires from power stations, usually at 230 volts in the UK.
- **Battery -** A device that stores chemical energy and converts it into electrical energy.
- **Circuit -** A complete path that electricity can flow around, often including a power source, wires, and electrical components.
- **Component -** An individual part of a circuit, such as a light bulb, switch, or battery.
- **Conductor -** A material that allows electricity to flow through it, e.g., metals like copper or aluminium.
- **Insulator -** A material that does not allow electricity to flow through it, e.g., rubber or glass.
- **Switch -** A device that can open or close an electrical circuit, controlling the flow of electricity.
- **Voltage -** The measure of electrical potential difference between two points in a circuit, measured in volts (V).
- **Ammeter -** An instrument used to measure the flow of electric current in a circuit, measured in amperes (A).
- **Voltmeter -** A device used to measure the voltage across two points in a circuit.
- **Symbol -** A simple drawing or letter that represents an electrical component in a circuit diagram.

Key Knowledge: Electricity Facts

- **Electricity travels at nearly the speed of light!** In wires, the actual movement of electrons is slow, but the effect of electricity is instantaneous.
- **Thomas Edison** invented the first practical incandescent light bulb in 1879, revolutionising the use of electricity in homes.
- **Electricity is a major source of energy**, powering everything from our homes to entire cities.
- **Static electricity** is the result of electric charges accumulating on surfaces, often leading to that fun shock we experience when touching a metal doorknob after walking on a carpet!

Electrical Components

