Lodge Farm Primary School- Knowledge Organiser

Science Topic: Electricity (Conductors and Insulators)

Year: 4 **Term:** Summer 2

Key Knowledge/Content:

- Some materials allow electricity to flow easily and these are called conductors.
- Materials that don't allow electricity to flow easily are called insulators.

Scientist Focus:

Thomas Edison (Inventor)
Used conducting materials to invent the light bulb.

Links to:

Prior learning:

To make simple circuits to look at how electricity flows.

Future learning:

To investigate the different changes that can be made in an electrical current.

Key vocabulary with definition:

Prior vocabulary:

- Electricity- The flow of energy from a power source.
- Electrical current- The flow of electricity.
- Components- Parts in a circuit.
- Appliances- An object that uses electricity to function.
- Battery- A power source that can be moved.
- Mains- A power source that connects to a larger electrical network.
- Crocodile clips- Metal clip at the end of wires.
- Switch- Can be turned on or off.
- Buzzer- A component that makes a buzzing sound.
- Wires
- Bulb
- Battery holder

New vocabulary:

- Electrical insulator- A material that doesn't allow electricity to pass through.
- Conductor- A material that allows electricity to pass through.

By the end of this unit

All children can: **identify** which materials are conductors or electrical insulators, **testing** them in a simple circuit.
Most children can: **investigate** how changes to a circuit can affect the flow of electricity and **compare** which metals are the best conductors**.**
Some children can: **know** how electrical insulators protect us from electricity and **explain** how to stay safe around electrical devices.

Background understanding for teachers and parents:

This unit will continue to look at electricity circuits, looking more in detail at conductors and electrical insulators. Children will investigate the effects that different materials have on the flow of electricity.

Curriculum Driver (one):

Healthy Lifestyle

Evidence outcome:

Understand how to stay safe around electricity using knowledge of conductors and electrical insulators.