



The Tithe Farm Way:
Resilient pupils who have a life-long love of learning and are ready, respectful and safe in their choices.



Knowledge Organiser Light and Electricity

WHAT I SHOULD ALREADY KNOW

Certain things produce light, usually by burning (e.g. the Sun) or electricity (e.g. street lights). Shiny materials do not make light but do reflect it. Shadows are caused when certain materials block light. Light travels in straight lines. When light is blocked by an opaque object, a dark shadow is formed. Sources of light and sound may need electricity to work. Where electricity comes from. Which appliances need electricity. What a circuit is, the components of a circuit and how it works. What electrical conductors and insulators are.

WHAT I WILL KNOW BY THE END OF THE TOPIC

To be able to recognise the light travels in straight lines.

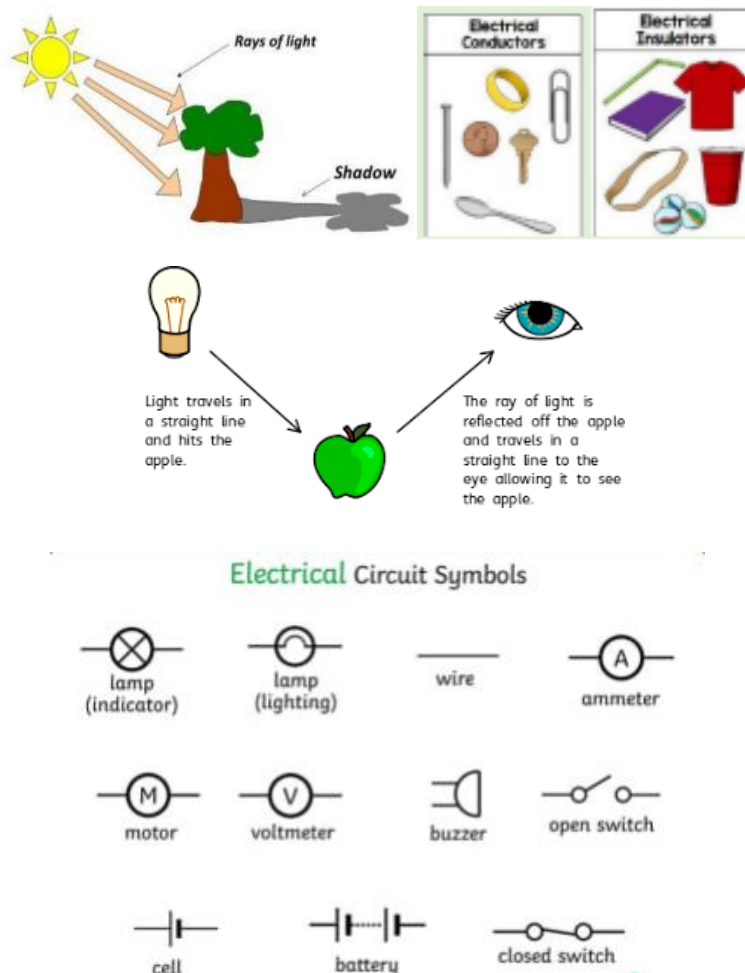
To understand that objects are seen because they give out or reflect light into the eye.

To identify a range of light sources and understand how shadows are formed.

Use recognised symbols to create a circuit diagram.

Compare simple circuits including how extra components will change the brightness of the bulb, loudness of the buzzer and the voltage used in the cell and how this affects the circuit.

DIAGRAMS



KEY VOCABULARY

Light source	Something that provides light whether it is natural or a man made source of light (e.g. torch)
Reflection	The throwing back of a body or surface of light, heat or sound without absorbing it.
Refraction	The bending of light as it passes from one substance to another
Shadow	A dark area or shape produced by a body coming between rays of light and a surface.
Battery	A container or one or more cells that is used to generate a current.
Switch	A device used for making and breaking the connection in an electrical circuit.
Voltage	The force of an electrical current that makes electricity move through a wire.
Circuit	circuit a closed loop for electricity to travel around.

SCIENTIFIC SKILLS

Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.
To plan and carry out experiments to create simple circuits and observe how they change when using more than one battery, bulb, switch etc.

Future Learning: in Year 7 children will move on to learn about static electricity and the separation of positive and negative charges.