Newall Green Primary: Knowledge Organiser for Science **Year Group 4** **Summer 1**

Electricity

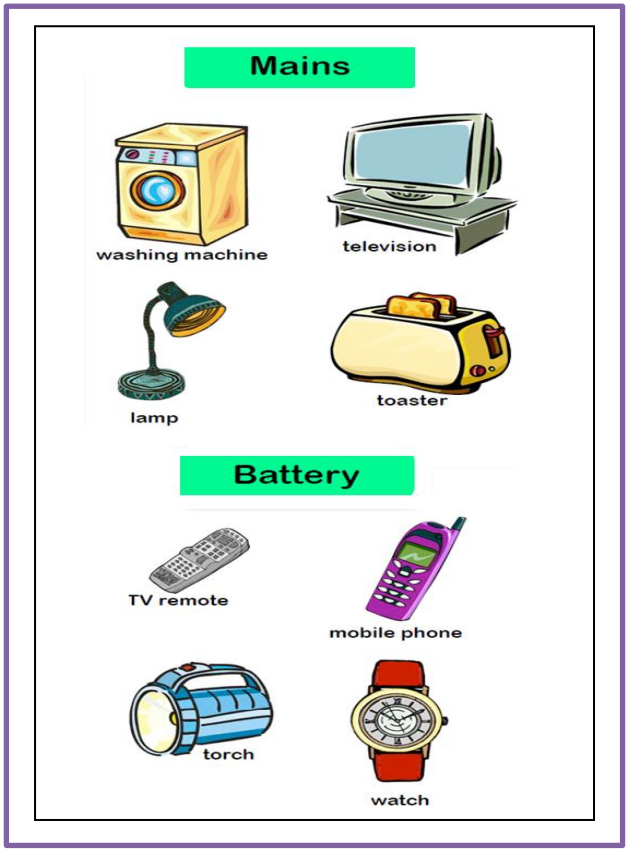
What I should already know

I know that lights use electricity.

I know that electricity travels through wires.

I know that electricity powers appliances.

I know that electricity can be dangerous.



Key Knowledge

Identify the purpose of different components in a circuit.

Know that a complete circuit is needed for a device to work.

Explain why some circuits will work and others will not depending on how the components have been put together.

Understand that working with electricity can be dangerous.

Identify devices that are powered by mains electricity and devices that are powered by batteries.

Know that it is safe to carry out experiments with batteries but not with mains electricity.

Construct a circuit to test which materials allow electricity to pass through.

Make generalisations about which materials are conductors and which are insulators.

Make predictions about how to alter the brightness of a bulb.

Plan and carry out an experiment, changing one factor at a time.

Draw conclusions from an investigation.

Key Vocabulary

Electricity – a form of energy which can build up in one place (static electricity) or flow to another (current electricity).

Circuit – a complete route which an electrical current can flow around.

Battery – a small device that provides power for electrical items.

Wire – a long, thin piece of metal that carries an electrical current.

Bulb – uses electricity to create light.

Appliances - piece of equipment or a device designed to perform a particular job, such as a washing machine or mobile phone.

Conductor – a material or device that allows electricity to pass through it.

Insulator – a material or device that does not allow electricity to pass through it.