

Bretnside Knowledge Organiser - Science

Year: 4

Topic: How would we cope without electricity for the day?

National curriculum: Electricity.

What I should already know:

In year 3 children have explored the topic of light. One of those lessons will have focused on the topic of how light is created.

What I should know at the end of the topic:

Children will be able to identify common appliances that run on electricity.

Children will be able to construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.

Children will be able to 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.

Children will be able to recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.

Children will be able to recognise some common conductors and insulators, and associate metals with being good conductors.

Timeline:

Week 1– What is electricity?

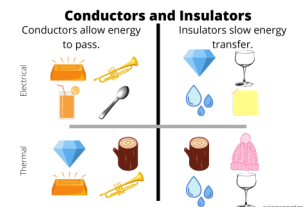
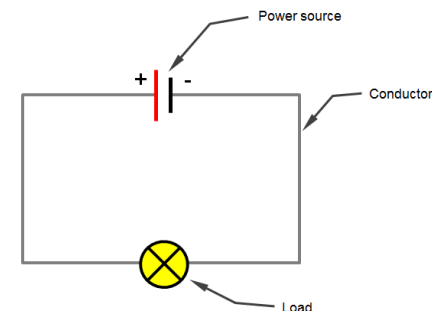
Week 2– Where does electricity come from?

Week 3 – Circuits

Week 4- Circuits continued

Week 5– Conductors and Insulators in circuits

Maps/Diagrams/Artefacts



Vocabulary

Electricity	The flow of an electric current through a material, e.g. from a power source through wires to an appliance.
Circuit	A pathway that electricity can flow around. It includes wires and a power supply and may include bulbs, switches or buzzers.
Conductors	A conductor is a material which electricity, heat or sound can flow through. An electrical conductor conducts electricity. The ability to conduct electricity is called electrical conductivity.
Insulator	An electrical insulator is a material that does not easily allow flow of electricity through an electric current. Materials typically used to insulate include rubber, plastic and glass.
Battery	A device that stores electrical energy as a chemical.
Bulbs	A light bulb produces light from electricity. In addition to lighting a dark space, they can be used to show an electronic device is on, to direct traffic, for heat, and for many other purposes. Billions are in use, some even in outer space.
Component	A component is any device in an electric circuit. that transfers electrical energy into another form.