Electricity
Year 4

Physics

Review:

What should I already know?

- To make something electrical work we need a source of power

Essential knowledge

- Identify and name common appliances that run on electricity.

- Construct a simple electrical circuit
- Identify and name the basic parts of an electrical circuit, including, cells, wires, bulbs, switches and buzzers

- Be able to identify whether or not a lamp will light in a simple circuit based upon knowledge of what a simple circuit needs.

- A conductor of electricity is a material that will allow electricity to flow through it.
- An insulator does not allow electricity to flow through it.

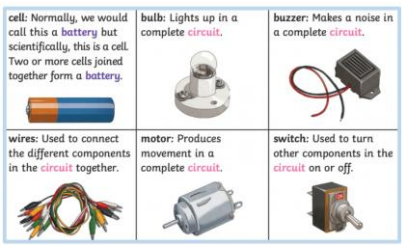
Vocabulary

Physics	is all about earth and space and how they work.
Working Scientifically	Is all about working like a scientist to answer scientific questions.

Appliance	A device or piece of equipment that has been made to perform a specific task.
Battery	A small item used to power small appliances.
Circuit	A pathway that electricity can flow around.
Conductor	A material which energy (in this case, electricity) can flow through.
Insulator	A material which energy (in this case, electricity) cannot flow through easily.

Etymology

Appliance	comes from the idea of something being "applied" or used for a special job.



Working Scientifically

Our enquiry focus:				
Observing Changes Over Time	**Pattern Seeking**	Identifying, Grouping & Classifying	Fair Testing	Research

Skills I will need:

- I will set up several circuits using switches, bulbs and buzzers.
- I will test and observe multiple objects in a circuit and classify and group objects on whether they are conductors or insulators.
- I will ask questions and find patterns between electrical appliances powered by battery or the mains.

States of Matter
Year 4

Chemistry

Review:

What should I already know?

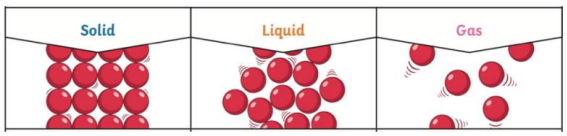
- What temperature is and that a thermometer can be used to show it.
- That materials have different properties and how this influences the suitability of a material.

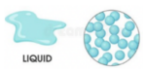
Vocabulary

Chemistry ..	Chemistry is all about materials and how they change
Working Scientifically	Is all about working like a scientist to answer scientific questions.

Essential knowledge

- There are three states of matter.



State of Matter	Feature	
Solid	Are rigid and hold their shape.	
Liquid	Do not hold their shape and form a pool not a pile.	
Gases	Do not hold their shape and can escape from an unsealed container	

Some materials change state when they are heated or cooled. .

- Freezing is when liquids turn to a solid.
- Melting is when solids change to a liquid.
- Evaporation is when liquids change to a gas.
- Condensation is when gases change to liquid.

Material	Material What things are made from.
Solid	Has a clear shape and is hard or firm.
Liquid	Does not have a clear shape and can be poured.
Gas	Does not have a clear shape and can escape.
State	A way that a material exists. Evaporation Liquid changing to gas because of the temperature.
Condensation	Gas changing to liquid because of the temperature.
Water cycle	The process of water being recycled over and over again

Etymology

Condensation	comes from the Latin word condensare, which means "to make dense" or "to make thick"

Working Scientifically

Our enquiry focus:				
Observing Changes Over Time	**Pattern Seeking**	Identifying, Grouping & Classifying	Fair Testing	Research

Skills I will need:

- I will I will compare and group materials together based on their state.
- I will ask questions about the different states of matter.
- I will observe the difference between states of matter.
- I will observe evaporation over a period of time and investigate the effects of temperature.