



Preston Primary School Knowledge Organiser

Communication	Critical-Thinking
Collaboration	Creativity

Topic: Science	Term: Summer 2	Year: 5/6	Duration: 6 weeks
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The Powerful Knowledge we will take away from this Learning Enquiry (what I will be learning):

Question: Why are objects made out of different materials?

- I can compare and group together everyday materials on the basis of their properties.
- I can understand that some materials will dissolve in liquid to form a solution, and I can describe how to recover a substance from a solution.
- I can use knowledge of solids, liquids, and gases to decide how mixtures might be separated.
- I can give reasons, based on evidence from comparative and fair tests, for the particular use of everyday materials, including metals, wood, and plastic.
- I can demonstrate that dissolving, mixing and changes of state are reversible changes.
- I can explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

Our Key Vocabulary:

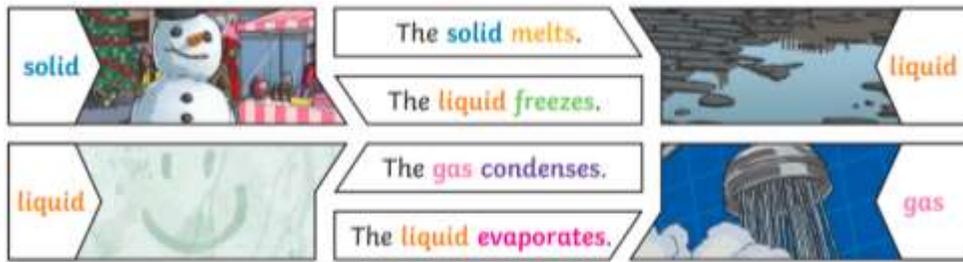
Word	Meaning
solid	having a firm shape or form that can be measured in length, width, and height; not like a liquid or a gas.
transparent	If an object is transparent, you can see through it.
soluble	Able to be dissolved.
dissolves	When a substance is mixed with a liquid.
conductor	A substance that heat, or electricity can pass through or along.
thermal	Relating to or caused by heat or by changes in temperature.
filtering	A device used to remove dirt or other solids from liquids or gases. A filter can be made of paper, char-coal, or other material with tiny holes in it.
evaporation	To turn from liquid into gas; pass away in the form of vapour.

What I Already Know:

In Unit 3, we learnt to:

- Compare and group materials together, according to whether they are solids, liquids, or gases.
- Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Changes of state:



Dissolving:

Dissolving a solution is made when solid particles are mixed with liquid particles. Materials that will dissolve are known as soluble. Materials that won't dissolve are known as insoluble. A suspension is when the particles don't dissolve.

For example:

Sugar is a soluble material.

Sand is an insoluble material.

Key information

Different materials are used for particular jobs based on their properties: electrical conductivity, flexibility, hardness, insulators, magnetism, solubility, thermal conductivity, transparency.

Reversible changes, such as mixing and dissolving solids and liquids together, can be reversed by:

- **Sieving**- Smaller materials can fall through the holes in the sieve, separating them from larger particles.
- **Filtering**- The solid particles will get caught in the filter paper, but the liquid will be able to get through.
- **Evaporating**- The liquid changes into a gas, leaving the solid particles behind.