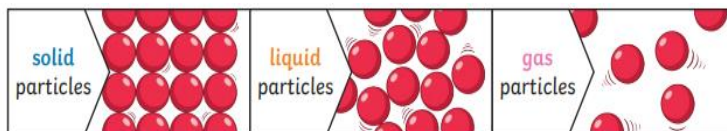


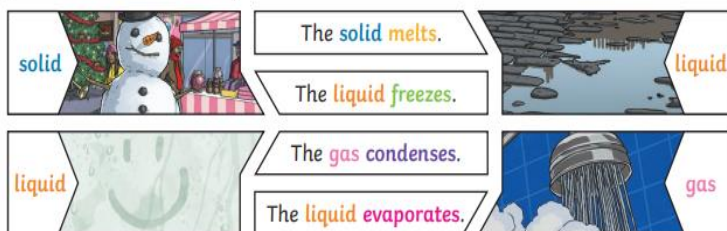
Key Vocabulary	
materials	The substance that something is made out of, e.g. wood, plastic, metal.
solids	One of the three states of matter. Solid particles are very close together, meaning solids , such as wood and glass, hold their shape.
liquids	This state of matter can flow and take the shape of the container because the particles are more loosely packed than solids and can move around each other. Examples of liquids include water and milk.
gases	One of the three states of matter. Gas particles are further apart than solid or liquid particles and they are free to move around. Examples of gases are oxygen and helium.
melting	The process of heating a solid until it changes into a liquid .
freezing	When a liquid cools and turns into a solid .
evaporating	When a liquid turns into a gas or vapour.
condensing	When a gas , such as water vapour, cools and turns into a liquid .

Key Vocabulary

conductor	A conductor is a material that heat or electricity can easily travel through. Most metals are both thermal conductors (they conduct heat) and electrical conductors (they conduct electricity).
insulator	An insulator is a material that does not let heat or electricity travel through them. Wood and plastic are both thermal and electrical insulators .
transparency	A transparent object lets light through so the object can be looked through, for example glass or some plastics.



Changes of State



Year 5 – Properties of materials

National Curriculum Expectations:

Science

- compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
 - know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution
 - use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
 - give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- Demonstrate that dissolving, mixing and changes of state are reversible changes explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible.

Useful Websites:

<https://www.bbc.co.uk/bitesize/topics/z4339j6/articles/zx8hhv4>

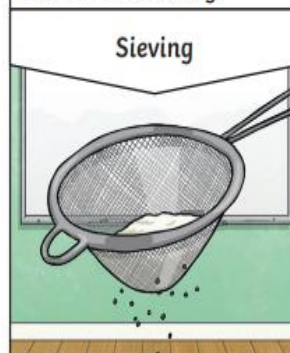
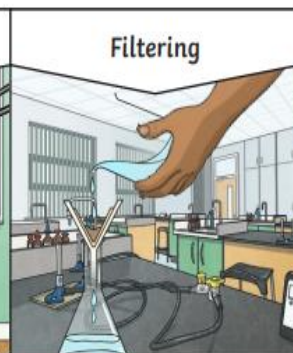
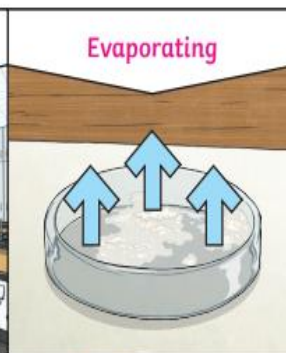
<https://www.bbc.co.uk/bitesize/topics/zcvv4wx>

<https://www.bbc.co.uk/bitesize/topics/zkkg87h>

<https://www.youtube.com/watch?v=tGfLhPsIEJQ>

Key Knowledge

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

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