



### What should I already know?

- compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
- describe in simple terms how fossils are formed when things that have lived are trapped within rock
- recognise that soils are made from rocks and organic matter.

### What will I know by the end of the unit?

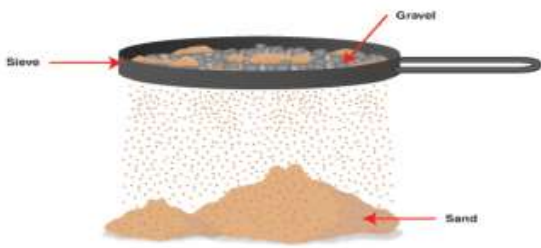



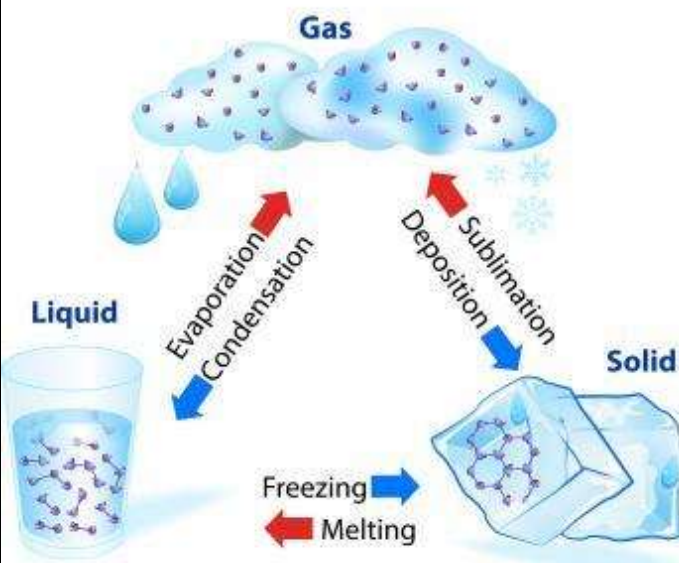
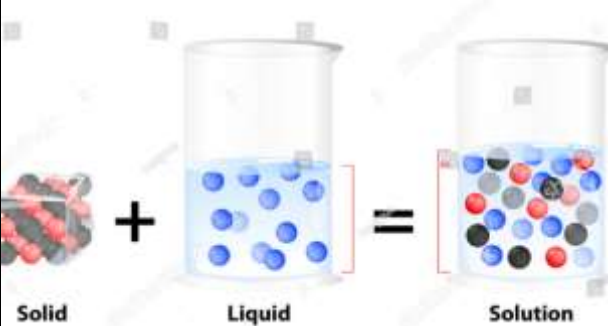
- compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
- know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through
- , 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, including changes associated with burning and the action of acid on bicarbonate of soda.

### Vocabulary

Electrical conductor	Lets electricity pass through easily, like copper wire.
Electrical insulator	Do not let electricity flow through easily, like plastic or rubber.
Evaporating	When a liquid turns to a gas due to an increase in temperature
Freezing	Liquid cools and turns into solid.
Gas	One of the 3 states of matter. The particles in a gas are far apart and move randomly.
Irreversible change	Generally means a new product is formed and can't be turned back to original components eg cooking a cake.
Thermal conductor	Let heat pass through easily, like a metal.
Thermal insulator	Does not let heat pass through easily, like a wood pan handle
liquids	Liquids can flow or be poured easily. They are not easy to hold.
Magnetic	Is attracted to a magnet, like a steel spoon. Note: Not all metals attract magnets.
melting	Turns from a solid to a liquid.
Mixture	combination of different things in which the component elements are individually distinct. E.g. peas and carrots
Non-magnetic	Is not attracted to a magnet, like a wooden spoon
Reversible change	A final substance can be converted back to the original substance without creating any new material. Freezing, melting, dissolving, boiling, evaporating and condensing are reversible changes.
solute	Soluble solid
solution	Some substances dissolve in a liquid. When this happens the liquid is called a solution. For example, when gravy granules dissolve in water, this is a solution.
Soluble	Can be dissolved, like coffee granules
Solvent	Liquid which solid will dissolve in e.g. water.



Translucent	Some light is transmitted by material and some is absorbed e.g. the bathroom window.
Transparent	allowing light to pass through so that objects behind can be distinctly seen. Eg glass
Opaque	not able to be seen through eg wood

Key information	Key information
<p><b>Sieving</b> A mixture made of solid particles of different sizes, for example sand and gravel, can be separated by sieving.</p>  <p><b>Filtering</b> A mixture of water and an insoluble substance like sand can be separated by filtering. The mixture of sand and water is poured into the filter funnel, which is lined with filter paper. The water can pass through the paper to collect in the beaker. The sand particles cannot pass through the filter paper and collect in the filter funnel.</p>  <p><b>Evaporating</b> By dissolving salt in water we make a solution. The salt dissolves (seems to disappear) into the water. We can separate the salt from the water by boiling a solution. The water will evaporate until it is all gone. The salt will be left behind.</p> 	 <h2 style="text-align: center;">STATE OF MATTER</h2>  

### Useful Websites

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

<https://www.educationquizzes.com/ks2/science/properties-of-materials/>