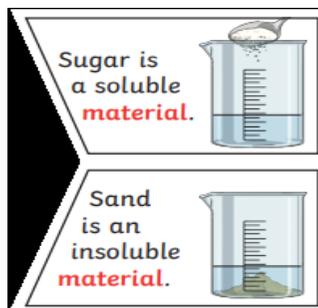
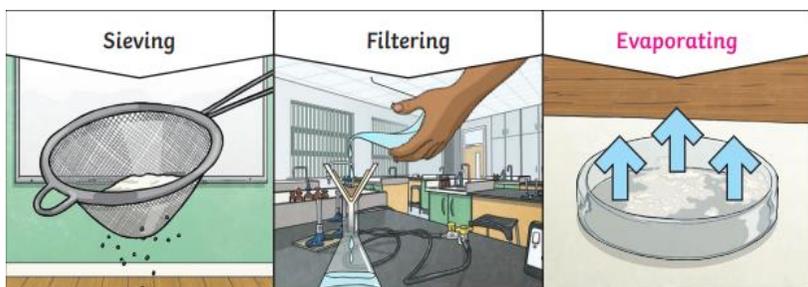
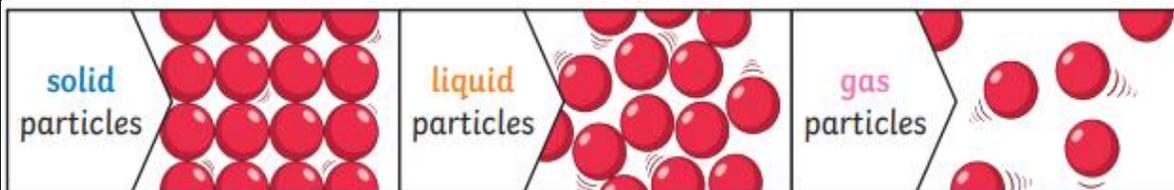


**What I should already be able to do**

- Identify and compare the suitability of a variety of everyday materials
  - Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
  - 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.

**Important Diagrams**



**Scientific Knowledge and Conceptual Understanding**

- 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
- compare and group together everyday materials on the basis of their properties

**Key Vocabulary**

properties	Something about an object that we can measure, see or feel
hardness	How hard an object is
solubility	How well a <b>material</b> can be <b>dissolved</b>
transparency	How much light can travel through an object
conductor (electrical or heat)	<b>Material</b> that allows electricity or heat to flow through it
magnetic	Objects that are attracted towards a magnet.
solids	These keep their shape unless a force is applied
liquids	Take the shape of the container they are in
gases	Spread out to completely fill the container they are
dissolve	When a material mixes with <b>liquid</b> to make a <b>solution</b>
solution	A <b>transparent liquid</b> made when something has <b>dissolved</b> .
separate	Turning a solution into at least 2 products
reversible changes	<b>Changes</b> that can be turned back
dissolving	Mixing a <b>solid</b> with a <b>liquid</b> to make a <b>solution</b>
mixing	Mixing at least two materials together
evaporation	<i>To evaporate</i> (verb) Turning a <b>liquid</b> into a <b>gas</b> through heating
filtering	<i>To filter</i> (verb) To pass <b>liquid</b> through a filter to remove unwanted <b>material</b>
sieving	<i>To sieve</i> (verb) To separate <b>materials</b> of different sizes using a sieve
melting	<i>To melt</i> (verb) To increase the temperature of a <b>solid</b> to turn it into a <b>liquid</b>
irreversible changes	<b>Changes</b> that cannot be turned back. New materials are always made
burning	An example of an <b>irreversible change</b>
rusting	An example of an <b>irreversible change</b>

<p><b>Investigative Skills – Enquiry</b></p> <p>At Year 5, the expectation is that pupils are developing independence in selecting the most appropriate ways to answer science questions.</p> <ul style="list-style-type: none"> <li>• use their science experiences to raise different kinds of questions within scientific topics</li> </ul> <p>plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p>	<p><b>Investigative Skills – Collecting Data</b></p> <p>take measurements independently, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p>
<p><b>Investigative Skills – Recording</b></p> <p>record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables (including more complex Venn and Carroll diagrams), scatter graphs (e.g. for height and weight comparisons), bar and line graphs</p>	<p><b>Investigative Skills – Concluding</b></p> <p>At Year 5, pupils should be gaining independence in drawing conclusions based on their data and observations, using evidence to justify their ideas and using their scientific knowledge to explain their findings.</p> <ul style="list-style-type: none"> <li>• use test results to make predictions to set up further comparative and follow-up tests</li> <li>• report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations</li> <li>• identifying scientific evidence that has been used to support or refute ideas or arguments (including showing how thinking about science has changed over time).</li> </ul>