



# Year 5: How do chemists create new materials?

Subject Specific Vocabulary		Interesting Books		Sticky Knowledge about Reversible and Irreversible changes
<b>solubility</b>	Is a chemical property referring to the ability for a given substance, the solute, to dissolve in a solvent.	 	<p><b>Important facts to know by the end of the reversible and irreversible changes topic:</b></p> <ul style="list-style-type: none"> <li>• Know what a reversible change means.</li> <li>• Know what an irreversible change means.</li> <li>• Give examples of reversible and irreversible changes.</li> <li>• Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.</li> <li>• Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li> </ul>	<input type="checkbox"/> Irreversible changes, like burning, cannot be undone. Reversible changes, like melting and dissolving, can be changed back again.
<b>conductivity</b>	Conductivity defines a material's ability to conduct electricity.			<input type="checkbox"/> Mixtures can be separated out by methods like filtering and evaporating. A change is called irreversible if it cannot be changed back again.
<b>transparency</b>	In general, transparency is the quality of being easily seen through.		<input type="checkbox"/> Examples of reversible changes: Melting is when a solid converts into a liquid after heating. An example of melting is turning ice into water. Freezing is when a liquid converts into a solid.	
<b>thermal evaporation</b>	Something that is thermal is hot, retains heat, or has a warming effect. Evaporation is the process of a substance in a liquid state changing to a gaseous state due to an increase in temperature and/or pressure.		<input type="checkbox"/> A cooked egg cannot be changed back to a raw egg again. Mixing substances can cause an irreversible change. For example, when vinegar and bicarbonate of soda are mixed, the mixture changes and lots of bubbles of carbon dioxide are made. Burning is an example of an irreversible change.	
<b>dissolve</b>	To dissolve is defined as to become broken up or absorbed by something or to disappear into something else.			
<b>bicarbonate of soda</b>	A white water-soluble powder, used chiefly as an antacid, a fire extinguisher, and a leavening agent in baking.			
<b>thermal</b>	Something that is thermal is hot, retains heat, or has a warming effect.			
<b>filtering</b>	To filter a substance means to pass it through a device which is designed to remove certain particles contained within.			
<b>melting</b>	Melting is a physical process that results in the transition of a substance from a solid to a liquid.			
<b>separate</b>	Separate, part, and divide mean to break into parts or to keep apart.			