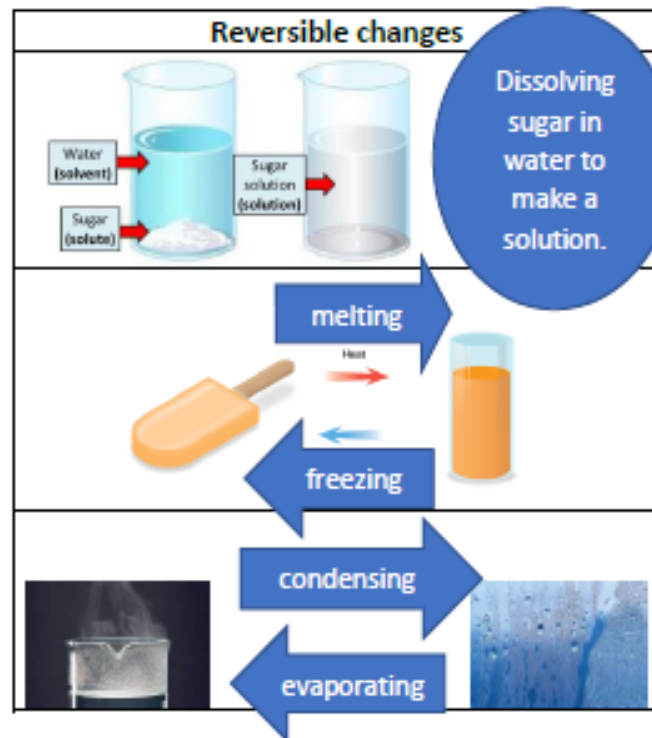





Key vocabulary	
thermal insulator	Does not allow heat to pass through it easily.
thermal conductor	Allows heat to pass through it easily.
electrical insulator	Does not allow electricity to pass through it.
electrical conductor	Allows electricity to pass through it.
dissolve	A solid that completely mixes in with a liquid and cannot be seen.
solution	A mixture of a liquid with a dissolved solid or gas.
soluble	Solids and gases that dissolve in liquids.
insoluble	Solids that do not dissolve in a liquid.
sieve	Separates solids of different sizes.
filter	Separates an insoluble solid that is mixed in a liquid.
evaporation	Separates a soluble solid and a liquid.
reversible change	Changes that can be switched back and are not permanent. E.g. dissolving, melting, freezing
non-reversible change	Changes that can not be reversed back to their original state. E.g. burning, rusting



Materials can be grouped together based on their properties. For example:
<ul style="list-style-type: none"> <li>• hardness</li> <li>• solubility</li> <li>• transparency</li> <li>• thermal conductivity</li> <li>• electrical conductivity</li> <li>• response to magnets</li> </ul>

# Properties and changes of materials – Year 5

Significant scientists
Stephanie Kwolek (1923-2014) was a Polish-American chemist. She is known for the invention of Kevlar in 1965. Kevlar is a material which is used in protective vests by soldiers and police. The properties of this material have helped to save many lives.

Separating materials	
Sieving separates the stones and twigs from the soil.	
Filtering separates the sand from the mixture.	
Evaporating separates the dissolved salt from the water.	

Non-reversible changes - these result in the formation of new materials	
Burning	
Mixing vinegar and bicarbonate of soda	
Rusting	