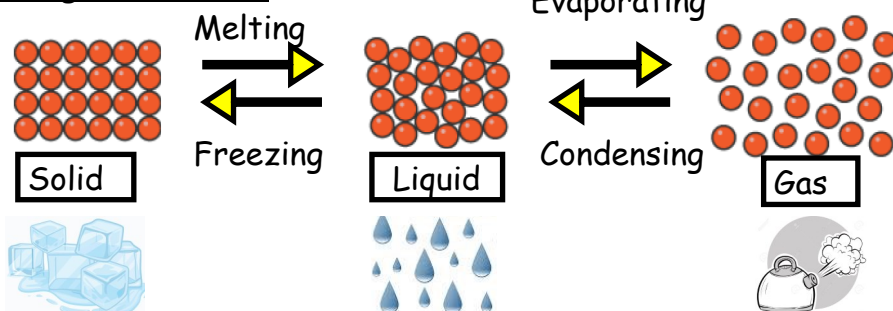


## Year 5:

# Properties and Changes of Materials

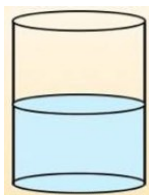
## Key Learning

### Changes of state:

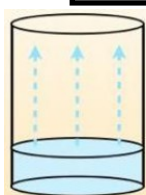


There is a limit to the amount of something that can be dissolved in a given amount of water. When the limit is reached we say the water is saturated.

The rate/speed at which a solid can dissolve in water can be affected by a changing number of variables; the temperature of the water, the frequency of stirring or the amount of solid used.



Sugar dissolves in the water making a sugar solution. You cannot see the sugar but it is still there in tiny particles.



The water evaporates. This means that it becomes water vapour. The process will be quicker if the water is heated.



Once all the water has evaporated, the sugar is left at the bottom. This is because sugar cannot evaporate.

### Properties of materials:

Property	Description
Soluble	Can be dissolved.
Insoluble	Cannot be dissolved.
Transparent	Something that is see through.
Opaque	Something that is not see through.
Electrical conductor	Lets electricity pass through easily.
Electrical insulator	Does not let electricity flow through.
Thermal conductor	Lets heat pass through easily.
Thermal insulator	Does not let heat pass through easily.
Magnetic	Is attracted to a magnet.
Non magnetic	Is not attracted to a magnet.

## Sticky Vocabulary

dissolve	When a solid becomes incorporated into a liquid to form a solution. It looks like it has 'disappeared' but it is just part of the liquid.
soluble	Solids that will dissolve in a liquid are described as soluble. Solids that will not dissolve are insoluble.
solution	The name given to a liquid into which a solid has dissolved - 'salt solution' or 'sugar solution'.
Change of state	The process of turning a solid into a gas or a liquid.
sieve	A device used to separate harder or larger particles from liquid.
filtering	The solid particles will get caught in the filter paper but the liquid will be able to get through.
burning	To burn something with fire or strong heat
rusting	Metal can rust when exposed to air and dampness.
reversible changes	A change that can be changed back to what it was previously. E.g. water can turn to ice when frozen, but can be turned back to water when heated.
irreversible changes	A change that cannot be changed back to what it was previously. E.g. burning wood turns it into ash. You cannot turn the ash back into a piece of wood.