

C1 fact sheet for revision

1. There are 3 states of matter; solids, liquids and gases
2. The particles in a solid are lined up in a regular pattern, are fixed in position and vibrate.
3. The particles in a liquid are very close but in an irregular pattern. They can move around each other.
4. The particles in a gas are spread out and can move freely.
5. Melting is when a solid changes to a liquid.
6. Freezing is when a liquid changes to a solid.
7. Evaporating is when a liquid changes to a gas.
8. Condensing is when a gas changes to a liquid.
9. Sublimation is when a solid changes straight to a gas.
10. When a substance changes state, the temperature of the material does not change.
11. When a substance changes state the number and size of the particles stays the same.
12. The melting point of a substance is when it changes from a solid to a liquid (when heated) or a liquid to a solid (when cooled). eg pure H_2O changes from ice to water at $0^{\circ}C$.
13. The boiling point of a substance is the temperature when it changes from a liquid to a gas (when heated) or a gas to a liquid (when cooled) eg pure H_2O changes from water to water vapour at $100^{\circ}C$.
14. Different substances melt (solid to liquid) and boil (liquid to gas) at different temperatures.
15. Soluble means something can dissolve
16. A **solute** - is a soluble solid; the solid that is being dissolved eg table salt
17. A **solvent** - is a liquid that will allow a solute to dissolve in it eg water
18. A **solution** - is the mixture that is formed when the solute has dissolved in the solvent eg salt water.
19. An **acid** is a solution that has a pH of less than 7
20. An **alkali** is a solution with a pH of more than 7.
21. Different acids and alkalis have different strengths.
22. An indicator is a substance that shows if a solution is acid, alkaline or neutral.
23. Blue litmus, red litmus and universal indicator are examples of indicators.
24. Universal indicator can show the strength of an acid or alkali (the pH)
25. The pH scale (from 1-14) is used to measure the acidity or alkalinity of a substance.
26. A neutral substance has a pH of 7
27. A very strong acid has a pH of 1.
28. Weaker acids have a pH that is nearer to 7 (but still below 7)
29. A very strong alkali has a pH of 14.
30. A weaker alkali has a pH nearer to 7 (but still above 7).