

CHEMISTRY AS 90934

Demonstrate understanding of aspects of chemical reactions

GLOSSARY

- ☐ aqueous (aq) - dissolved in water
- ☐ catalyst - substance that alters the speed of a reaction but is still there at the end of the reaction
- ☐ chemical change - a process of change in which chemical bonds are broken or created; a new substance(s) is made with different chemical properties and the change is not reversible (except in some cases by another chemical change)
- ☐ classification - sorting things into groups
- ☐ combination reaction - where two elements combine to make a single compound with no other product
- ☐ combustion - burning; chemical reaction that occurs between oxygen and other substances
- ☐ decompose - break down a substance into other simpler substances
- ☐ decomposition reaction - a more complex substance breaks down into its more simple parts
- ☐ displace – take the place of, replace, push out
- ☐ displacement reaction - $AX + Y \rightarrow YX + A$ (this is just one type of displacement reaction however)
- ☐ dissolve - when a solid splits up and mixes into water, or another solvent, forming a solution
- ☐ enzyme - biological catalyst
- ☐ equation – representation of the chemical change occurring in words or symbols
- ☐ exchange – swap place
- ☐ gas (g) – a phase of matter in which particles are free to move; large spaces between particles
- ☐ insoluble - does not dissolve in a particular liquid / solvent
- ☐ ion – charged particle formed when atom/group of atoms have lost or gained electrons
- ☐ ionic equation - equations used for reactions that occur in aqueous solutions, showing the participating species only.
- ☐ liquid (l) - a phase of matter in which particles are free to move, but are still loosely held to one another
- ☐ observations - something you see, feel, hear, smell or taste (although tasting is rarely used in scientific observation because it can be dangerous)
- ☐ oxidation - the addition of oxygen to a compound (in other instances the loss of electrons)
- ☐ physical change - a process of change in which chemical bonds are not broken or created; no new substance is made and the change is normally reversible
- ☐ precipitate - the process by which atoms dissolved in a solution come together and form a solid; represented by (s), solid in a precipitation equation

- ☐ precipitation reaction - a chemical reaction in a solution, in which an insoluble solid is produced
- ☐ product - a substance formed in a chemical reaction
- ☐ reactant - chemical that is used up in a reaction; the starting chemicals in a reaction
- ☐ reaction - occurs when existing chemicals are changed into new substances
- ☐ reactive – reacts strongly with other chemicals
- ☐ reactivity - how strongly a chemical reacts with others
- ☐ solid (s) - a phase of matter in which all particles are closely bonded together; state of matter that has a fixed shape and volume
- ☐ soluble - a substance that can be dissolved
- ☐ solution - result when a solid is dissolved in a liquid
- ☐ spectator ion – ion that remains in solution and are not part of the reaction
- ☐ thermal – involving heat

The AS refers to demonstrating understanding as typically involving the following: An *example* of what this *might* involve is given below.

- **analysing the classification of chemical reaction** – discussing why a reaction is grouped or classified in a particular way and not in another
- **classifying** – labelling a reaction as a particular type e.g. precipitation or combination
- **comparing and contrasting** – how are two reactions similar and how are they different
- **describing** – saying what something looks like or does, observations
- **drawing** – a diagram
- **elaborating** – going into much greater depth or detail about something
- **evaluating** – judging (the worth of) the evidence
- **explaining** – using chemical ideas to describe what is happening or why
- **explaining the classification of chemical reaction** – explaining why a reaction is grouped or classified in a particular way; probably a simple definition
- **giving an account of** – describing what happens in a reaction, either something you would see – or what is happening in this reaction
- **identifying** – picks out, chooses, names something
- **justifying** – backing up an explanation with observations and equations or explaining why a reaction is classified as a particular type and not another; eliminates other possibilities
- **naming** – give the chemical name of a substance reacting or formed
- **relating** – linking a colour change *of a solution* from blue to colourless to the conversion of $\text{Cu}^{2+}(\text{aq})$ to copper, $\text{Cu}(\text{s})$