AQA GCSE CHEMISTRY

Year 10 – Autumn Term

CONTENT:

C4 – Chemical calculations

Chemists use quantitative analysis to determine the formulae of compounds and the equations for reactions. Given this information, analysts can then use quantitative methods to determine the purity of chemical samples and to monitor the yield from chemical reactions. Chemical reactions can be classified in various ways. Identifying different types of chemical reaction allows chemists to make sense of how different chemicals react together, to establish patterns and to make predictions about the behaviour of other chemicals. Chemical equations provide a means of representing chemical reactions and are a key way for chemists to communicate chemical ideas.

4.1 Relative masses and moles; 4.2 Equations and calculations; 4.3 From masses to balanced equations; 4.4 The yield of chemical reactions; 4.5 Atom economy 4.6 Expressing concentrations; 4.7 Titrations; 4.8 Titration calculations; 4.9 Volumes of gases.

C5 Chemical Changes

Understanding of chemical changes began when people began experimenting with chemical reactions in a systematic way and organising their results logically. Knowing about these different chemical changes meant that scientists could begin to predict exactly what new substances would be formed and use this knowledge to develop a wide range of different materials and processes. It also helped biochemists to understand the complex reactions that take place in living organisms. The extraction of important resources from the Earth makes use of the way that some elements and compounds react with each other and how easily they can be 'pulled apart'.

5.1 The reactivity series; 5.2 Displacement reactions; 5.3 Extracting metals; 5.4 Salts from metals; 5.5 Salts from insoluble bases; 5.6 Making more salts; 5.7 Neutralisation and the pH scale; 5.8 Strong and weak acids.

Recommended online resources:

Kerboodle- Digital Textbook – w:kerboodle.com u:initialsurname p:initialsurname inst.code:yh7 – the individual lesson breakdown is here.

BBC Bitesize: KS4 Science AQA – then find the relevant topics

YOUTUBE: 'GCSESCIENCELESSONS' then search for the topic of interest

Oak National Academy: Lessons available linked to above topics.

Google Classroom: class code details will be released using Class Charts