

OCR Chemistry Year 12 – Overview

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Module 2: Foundations in chemistry	Module 2: Foundations in chemistry	Module 2: Foundations in chemistry	Module 3: Periodic table and energy	Module 3: Periodic table and energy	Module 3: Periodic table and energy
This module acts as an important bridge into AS and A Level Chemistry from GCSE level. It allows learners to develop important quantitative techniques involved in measuring masses, gas and solution volumes, including use of volumetric apparatus. Learners are also able to develop their mathematical skills during their study of amount of substance. 2.1 Atoms and reactions 2.1.1 Atomic structure and isotopes 2.1.2 Compounds, formulae and equations <u>Module 4: Core organic chemistry</u> This module introduces organic chemistry and its important applications to everyday life. Learners are	Module 2: Foundations in chemistry 2.1 Atoms and reactions 2.1.3 Amount of substance 2.1.4 Acids 2.1.5 Redox Module 4: Core organic chemistry 4.1 Basic concepts and hydrocarbons 4.1.2 Alkanes 4.1.3 Alkenes	Module 2: Foundations in chemistry 2.2 Electrons, bonding and structure 2.2.1 Electron structure 2.2.2 Bonding and structure Module 4: Core organic chemistry 4.1 Alcohols, haloalkanes and analysis 4.2.1 Alcohols 4.2.2 Haloalkanes	<u>Module 3: Periodic table and energy</u> This module provides learners with a knowledge and understanding of the important chemical ideas that underpin the study of inorganic and physical chemistry. It allows learners to develop important qualitative practical skills, especially observational skills required for analysis, and accurate quantitative techniques involved in determination of energy changes and reaction rates. 3.1 The periodic table 3.1.1 Periodicity 3.1.2 Group 2 3.1.3 The halogen Module 4: Core organic chemistry	Module 3: Periodic table and energy 3.1 The periodic table 3.1.4 Qualitative analysis 3.2 Physical chemistry 3.2.1 Enthalpy changes Module 4: Core organic chemistry 4.1 Alcohols, haloalkanes and analysis 4.2.4 Analytical techniques	Module 3: Periodic table and energy 3.2 Physical chemistry 3.2.2 Reaction rates Module 3: Periodic table and energy 3.2 Physical chemistry 3.2.3 Chemical equilibrium

provided an opportunity to develop important organic practical skills. 4.1 Basic concepts and hydrocarbons 4.1.1 Basic concepts of organic chemistry			4.1 Alcohols, haloalkanes and analysis 4.2.3 Organic synthesis		
	PAG 1 - Moles determination PAG 2 - Acid-base titration PAG 7 - Qualitative analysis of organic functional groups	PAG 7 - Qualitative analysis of organic functional groups	PAG 4 - Qualitative analysis of ions PAG 5 - Synthesis of an organic liquid	PAG 3 - Enthalpy determination PAG 4 - Qualitative analysis of ions	PAG 9 - Rates of reaction - continuous monitoring method

OCR Chemistry Year 13 – Overview

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Module 5: Physical chemistry and transition elements	Module 6: Organic chemistry and analysis	Module 6: Organic chemistry and analysis	Module 5: Physical chemistry and transition elements	Exam preparation and revision	Exam preparation and revision
The content in this module assumes knowledge from modules 2 & 3. This module extends the study of; energy, reaction rates and equilibria, and the periodic table. 5.1 Rates, equilibrium and pH 5.1.1 How fast? 5.1.2 How far? 5.1.3 Acids, bases and buffers	The content in this module assumes knowledge from modules 2 & 4. This module introduces several new functional groups and emphasises the importance of organic synthesis 6.1 Aromatic compounds, carbonyls and acids 6.1.1 Aromatic compounds 6.1.2 Carbonyl compounds 6.1.3 Carboxylic acids and esters	6.2 Nitrogen compounds, polymers and synthesis 6.2.1 Amines 6.2.2 Amino acids, amides and chirality 6.2.3 Polyesters and polyamides 6.2.4 Carbon-carbon formation 6.2.5 Organic synthesis 6.3 Analysis 6.3.1 Chromatography and qualitative analysis 6.3.2 Spectroscopy	5.2 Energy 5.2.1 Lattice enthalpy 5.2.2 Enthalpy and entropy 5.2.3 Redox and electrode potentials 5.3 Transition elements 5.3.1 Transition elements 5.3.2 Qualitative analysis		
PAG 9 - Rates of reaction - continuous monitoring method PAG 10 - Rates of reaction - initial rates method PAG 11 – pH measurement	PAG 7 - <i>Qualitative analysis of organic functional groups</i>	PAG 6 - <i>Synthesis of an organic solid</i>	PAG 4 - <i>Qualitative analysis of ions</i> PAG 8 - <i>Electrochemical cells</i>		