



Granville
Sports College



GCSE Revision Topics 2016 - 2018

Subject – Chemistry Only Higher

Topic	Tick/date when revised				
C1 Atomic Structure					
C1.1 Atoms					
C1.2 Chemical equations					
C1.3 Separating mixtures					
C1.4 Fractional distillation and paper chromatography					
C1.5 History of the atom					
C1.6 Structure of the atom					
C1.7 Ions, atoms, and isotopes					
C1.8 Electronic structures					
C2 The Periodic Table					
C2.1 Development of the periodic table					
C2.3 Group 1 – the alkali metals					
C2.4 Group 7 – the halogens					
C2.5 Explaining trends					

C2.6 The transition elements					
C3 Structure and Bonding					
C3.1 States of matter					
C3.2 Atoms into ions					
C3.3 Ionic bonding					
C3.4 Giant ionic structures					
C3.5 Covalent bonding					
C3.6 Structure of simple molecules					
C3.7 Giant covalent structures					
C3.8 Fullerenes and graphene					
C3.9 Bonding in metals					
C3.10 Giant metallic structures					
C3.11 Nanoparticles					
C3.12 Applications of nanoparticles					
C4 Chemical Calculations					
C4.1 Relative masses and moles					
C4.2 Equations and calculations					
C4.3 From masses to balanced equations					
C4.4 the yield of a chemical reaction					

C4.5 Atom economy					
C4.6 Expressing concentrations					
C4.7 Titrations					
C4.8 Titration calculations					
C4.9 Volumes of gases					
C5 Chemical Changes					
C5.1 The reactivity series					
C5.2 Displacement reactions					
C5.3 Extracting metals					
C5.4 Salts from metals					
C5.5 Salts from insoluble bases					
C5.6 Making more salts					
C5.7 Neutralisation and the pH scale					
C5.8 Strong and weak acids					
C6 Electrolysis					
C6.1 Introduction to electrolysis					
C6.2 Changes at the electrodes					
C6.3 The extraction of aluminium					
C6.4 Electrolysis of aqueous solutions					

C7 Energy Changes					
C7.1 Exothermic and endothermic reactions					
C7.2 Using energy transfers from reactions					
C7.3 Reaction profiles					
C7.4 Bond energy calculations					
C7.5 Chemical cells and batteries					
C7.6 Fuel cells					
C8 Rates and Equilibrium					
C8.1 Rate of reaction					
C8.2 Collision theory and surface area					
C8.3 The effect of temperature					
C8.4 the effect of concentration and pressure					
C8.5 The effect of catalysts					
C8.6 Reversible reactions					
C8.7 Energy and reversible reactions					
C8.8 Dynamic equilibrium					
C8.9 Altering conditions					
C9 Crude Oil and Fuels					
C9.1 Hydrocarbons					

C9.2 Fractional distillation of oil					
C9.3 Burning hydrocarbon fuels					
C9.4 Cracking hydrocarbons					
C10 Organic Reactions					
C10.1 Reactions of the alkenes					
C10.2 Structures of alcohols, carboxylic acids and esters					
C10.3 Reactions and uses of alcohols					
C10.4 Carboxylic acids and esters					
C11 Polymers					
C11.1 Pure substances and mixtures					
C11.2 Condensation polymerisation					
C11.3 Natural polymers					
C11.4 DNA					
C12 Chemical Analysis					
C12.1 Pure substances and mixtures					
C12.2 Analysing chromatograms					
C12.3 Testing for gases					
C12.4 Tests for positive ions					
C12.5 Tests for negative ions					

C12.6 Instrumental analysis					
C13 The Earth's Atmosphere					
C13.1 History of our atmosphere					
C13.2 Our evolving atmosphere					
C13.3 Greenhouse gases					
C13.4 Global climate change					
C13.5 Atmospheric pollutants					
C14 The Earth's Resources					
C14.1 Finite and renewable resources					
C14.2 Water safe to drink					
C14.3 Treating waste water					
C14.4 Extracting metals from ores					
C14.5 Life cycle assessments					
C14.6 Reduce, reuse and recycle					
C15 Using Our Resources					
C15.1 Rusting					
C15.2 Useful alloys					
C15.3 The properties of polymers					
C15.4 Glass, ceramics and composites					

C15.5 Making ammonia – the Haber process					
C15.6 The economics of the Haber process					
C15.7 Making fertilisers in the lab					
C15.8 Making fertilisers in industry					