

Subject: CHEMISTRY	Areas Covered	What students should understand/be able to demonstrate	Available resources to consolidate areas of weakness
Year 9	Crude Oil Chemistry of the Atmosphere	What crude oil is and how it forms. Fractional distillation of crude oil Error! Reference source not found. Error! Reference source not found. Error! Reference source not found. Error! Reference source not found. Error! Reference source not found. Testing for gases Composition of the atmosphere Evolution of the atmosphere Greenhouse gases Carbon footprint Other pollutant gases	All lessons on Teams CGP GCSE Chemistry Textbook Open Drive → Science → Chemistry → Y9
Year 10	Energy Rates of Reaction Dynamic Equilibrium (only applies to some TA groups)	Exo and endothermic reactions Energy transfer in reactions Energy level diagrams Calculating energy changes (Bond energies) Factors affecting rate Effects of concentration on rate Effects of temperature on rate Effects of surface area on rate Catalysts Reversible reactions Dynamic equilibrium Le Châtelier's principle Applications of equilibria	All lessons on Teams CGP GCSE Chemistry Textbook Open Drive → Science → Chemistry → Y10 and Y11
Year 12 Inorganic (4ppf)	Structure and Bonding Periodicity	Ionic bonding, structure and properties Covalent bonding, structure and properties (simple molecules) Metallic bonding, structure and properties Giant covalent structures (diamond, graphite and silicon dioxide) Dot-and-cross diagrams Hypovalent and hypervalent compounds VSEPR and shapes of molecules Polarity Intermolecular forces	All lessons on Teams A Level Chemistry textbook Open Drive → Science → Chemistry → Y12 and Y13

	Arenes (topic started, but not finished)	<p>Trends across the periodic table Group 2 – reactions and properties Group 7 - reactions and properties Disproportionation reactions Qualitative analysis of ions</p> <p>Nomenclature of benzene derivatives Evidence for the structure of benzene Electrophilic substitution mechanism</p>	
Year 12 Organic (5ppf)	<p>Rates and Equilibria (Y12)</p> <p>K_c & K_p</p> <p>Acids, pH and Buffers (up to, but not including Buffers)</p>	<p>Factors affecting the rate of reaction and methods of monitoring rates Rate graphs and tangents The Boltzmann distribution Le Châtelier's principle and dynamic equilibria K_c – the equilibrium constant in terms of concentration</p> <p>Determining equilibrium amounts and concentrations K_c calculations K_p – the equilibrium constant in terms of pressure Determining mole fractions and partial pressures</p> <p>Definitions of acids and general terminology of acids Conjugate acids and bases pH Weak acids and K_a – the acid dissociation constant pK_a pH of strong bases</p>	<p>All lessons on Teams</p> <p>A Level Chemistry textbook</p> <p>Open Drive → Science → Chemistry → Y12 and Y13</p>