Bellerive FCJ Catholic College

Department: Chemistry (Separate) **Year Group: 10**

Bold indicates building on previous knowledge

Term	Learning Focus	Key Knowledge and Skills	Assessment	Challenge and Enrichment
1	C1 - Atomic Structure (Covered in year9)	• **Definition of and element, chemical equations and explaining the gain or loss of mass in a reaction, separation techniques**, development of atomic theory, atomic structure and the subatomic particles, atomic number, mass number, isotopes, ions and electronic structure.	C1 EOU HW (H/F), Therapy followed by C1 GCSEPOD	C1 Essential knowledge. Atomic structure and Periodic Table Padlet Chemistry Paper 1
	C2 – The Periodic Table	• **Development of the Periodic Table, chemical and physical properties of group 1, 7 and 0,** explaining trends in reactivity of group 1 and 7, transition metals	C2 EOU HW (H/F), Therapy followed by C2 GCSEPOD	C2 Essential knowledge. Atomic structure and Periodic Table Padlet Chemistry Paper 1
	C3 – Structure and bonding	• **States of matter**, **energy changes in changes of state**, **limitations of the particle model**, ionic, covalent and metallic bonding, explaining the properties of ionic compounds, simple molecules, giant molecules (fullerenes and graphene) and metallic structures, nanoparticles.	C3 EOU HW (H/F), Therapy followed by C3 GCSEPOD	C3 Essential knowledge. Structure and Bonding Padlet Chemistry Paper 1
	C4 – Chemical Calculations	• Relative atomic mass, relative formula mass, moles = mass/M_r, Reacting masses calculation, %yield, % atom economy, concentration = mass (or moles)/volume, titrations and their calculations (Required practical), gas volumes.	C4 EOU HW (H/F), Therapy followed by C3 GCSEPOD	C4 Essential knowledge. Quantitative chemistry Padlet Chemistry Paper 1
2	C5 – Chemical Changes	• **Reactivity series, displacement reactions, Making salts** (Required practical**), neutralisation and the pH scale**, strong and weak acids.	C5 EOU HW (H/F), Therapy followed by C5 GCSEPOD	C5 Essential knowledge. Chemical changes padlet Chemistry Paper 1
	C6 – Electrolysis	• Electrolysis of ionic melts, products of electrolysis at the electrodes, extraction of aluminium, electrolysis of aqueous solutions (Required practical).	C6 EOU HW (H/F), Therapy followed by C6 GCSEPOD	C6 Essential knowledge. Electrolysis Padlet Chemistry Paper 1
	C7 – Energy Changes	• **Exothermic and endothermic reactions** (Required practical), **applications of exothermic**	C7 EOU HW (H/F), Therapy followed by C7 GCSEPOD	C7 Essential knowledge. Energy Changes Padlet Chemistry Paper 1

		and endothermic reactions, reaction profile diagrams, bond energy calculations, cells and batteries, fuel cells.		
3	C8 – Rates and Equilibrium	• Measuring rates of reaction, collision theory and surface area, temperature and rates of reaction, concentration and rates of reaction (2 Required practicals), **catalysts**, reversible reactions, energy and reversible reactions, dynamic equilibrium, altering conditions.	C7 EOU HW (H/F), Therapy followed by C7 GCSEPOD	C8 Essential knowledge. Rates of reaction Padlet https://padlet.com/herseyd3/chemistry-paper-2-4wr5rgoftnuyb0kv