Bellerive FCJ Catholic College

Department: Chemistry (Combined) **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**.**	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.	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, concentration = mass (or moles)/volume.	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

3	C7 – Energy Changes C8 – Rates and Equilibrium	• **Exothermic and endothermic reactions** (Required practical), **applications of exothermic and endothermic reactions**, reaction profile diagrams, bond energy calculations. • Measuring rates of reaction, collision theory and surface area, temperature and rates of reaction, concentration and rates of reaction	C7 EOU HW (H/F), Therapy followed by C7 GCSEPOD	C7 Essential knowledge. Energy Changes Padlet Chemistry Paper 1