Curriculum Summary Document

Year 10 Triple – Science

Module/Unit of Learning	Taught During	What will students learn?	How does this help to build a broad and strong foundation?	Links to other subjects
AQA GCSE Periodic table and bonding	**HT1**	Students will learn about the development of the periodic table, groups and periods, electronic structure, ionic bonding, covalent bonding, metallic bonding and the properties of different substances.	Establishes a strong foundation in chemical principles and explains how atomic structure influences the properties and behaviour of elements and compounds. Prepares students for understanding chemical reactions and material properties.	Maths (ratios and formulae), Physics (electrons and atomic structure), Design Technology (properties of materials).
AQA GCSE Organic chemistry	**HT2**	Students will learn about crude oil, hydrocarbons, alkanes, alkenes, fractional distillation, combustion, cracking and the uses of organic compounds.	Provides an understanding of carbon-based compounds and their importance in everyday life. Develops knowledge of fuels, chemical reactions, industrial processes and the environmental impact of using fossil fuels.	Geography (fossil fuels and climate change), Maths (chemical formulae and calculations), Design Technology (polymers and materials).
AQA GCSE Chemical and energy changes	**HT3**	Students will learn about exothermic and endothermic reactions, reaction profiles, oxidation and reduction, reactivity of metals, displacement reactions, electrolysis and energy changes during chemical reactions.	Develops understanding of how and why chemical reactions occur. Builds knowledge of energy transfer, chemical reactivity and the practical applications of chemical processes in industry and everyday life.	Maths (energy calculations and graphs), Physics (energy transfers), Geography (industrial processes and environmental impact).
AQA GCSE Quantitative Chemistry	**HT3**	Students will study relative formula mass, conservation of mass, balanced chemical equations, moles, reacting masses, concentration and the use of quantitative methods in chemistry.	Develops mathematical confidence and precision in scientific problem-solving. Provides essential skills for understanding chemical reactions, analysing experimental results and making accurate predictions.	Maths (algebra, ratios, percentages and rearranging equations), Physics (formulae and calculations), Computer Science (data handling).
AQA GCSE Rates of reaction	**HT6**	Students will learn about factors affecting reaction rates, including temperature, concentration, pressure, surface area and catalysts. They will investigate collision theory and interpret graphs showing changes in reaction rates.	Develops understanding of how chemical reactions can be controlled and optimised. Strengthens practical investigation skills, analytical thinking and the ability to explain chemical processes in industrial and everyday contexts.	Maths (graphs, gradients and calculations), Physics (particle movement and energy), Design Technology (industrial processes).