Key Stage 5

Subject: Chemistry

Intent

Our aim in Chemistry is develop students' resilience by questioning and challenging the world they live in. Students will not only need to understand the fundamentals of chemistry but to apply them to explain so many phenomena. Students will study different materials such as fossil fuels, plastics and combustion to make informed choices on the issues surrounding their use. They will develop analytical skills through experimentation which will make them think critically of the way science can be presented by the media. We want to support our students in their future careers and make them prepared for jobs that my not even exist yet in medicine, engineering and beyond.

Programme of study and assessment

	Autumn Term	Spring Term	Summer Term
Year 12	• Atomic structure • Structure and bonding • Amount of a substance • Moles Required practical • Basics of organic chemistry	• Periodicity • Group chemistry • Qualitative analysis • Qualitative analysis required practical • Acids and bases • Acid-base required practical • Rates and equilibrium • Alcohols • Haloalkanes	• Enthalpy • Enthalpy determination Required practical • Organic synthesis and analysis • Organic Required practicals
Assessment	• Settling in assessments • End of topic tests: ○ Atomic structure and bonding ○ Moles ○ Organic nomenclature	• End of topic tests: ○ Periodicity, Group chemistry and analysis ○ Acids and titrations ○ Alcohols and haloalkanes	Year 12 examinations
Year 13	• Rates • Rates required practicals • Equilibrium • Acids, bases and Buffers • pH measurement required practical	• Lattice Enthalpy • Entropy • Electrode potentials • Electrode potentials required practical • Chromatography and spectroscopy • Organic Analysis required practicals	Preparation for external examinations

	• Transition elements • Redox • Redox required practical • Aromatic chemistry • Carbonyls and carboxylic acids • Amines • Organic synthesis		
Assessment	End of topic tests: • Rates • Transition metals • Benzene chemistry	Mock A level examinations	A level external examinations