

Year 9: Combined Chemistry	- Curriculum Intent: Year 9 Chemistry tackles more complex ideas and concepts in the subject. It builds on the key knowledge from years 7 and 8 to link together all the areas of the subject. The key areas of particles, atomic structure and periodic table are developed through more challenging topics such as structure and bonding, advanced chromatographic methods, and properties of compounds. Procedural knowledge and practical skills are developed further, building on experience with separation techniques and comparing properties of materials.						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
Key ideas and sequence of learning	Chemistry module C1 - particles • Particles • Chemical & physical changes • Atomic structure • History of the development of the atom	Chemistry module C2 – elements & compounds • Relative formula mass • Empirical formula • Filtration and crystallisation • Distillation	Chemistry module C2 – elements & compounds • Fractional distillation • Chromatography • Metals and non-metals • Electronic structure • Forming ions	Chemistry module C2 – elements & compounds • Ionic compounds • Simple molecules • Giant covalent	Chemistry module C2 – elements & compounds • Polymer • Structure of metals • Allotropes of carbon • Bulk properties	Students revise for their EoY exams and sit exams Students will review their PPE exam papers. Students will complete practical investigations	
Key Questions	1. How are particles arranged in solids, liquids and gases? 2. What in inside the atoms? 3. How did we discover the atom?	1. How do we separate chemical compounds? 2. How can we determine masses of reactants? 3. How can we purify and analyse chemicals?	1. How can we purify and analyse chemicals?	1. How are chemical bonds formed? 2. What are the allotropes of carbon?	1. What is the structure of metals and ionic compounds?		
Vocabulary	• Solid • Liquid • Gas • Melting Point	• Relative Formula Mass • Group • Period	• Distillation • Fractional Distillation • Chromatography	• Ionic Compound • Covalent Compound	• Giant Lattice • Allotrope • Polymer		

	• Boiling Point • Ion • Isotope • Group • Period	• Ionic • Filtration • Distillation • Pure and impure substances	• Rf value	• Dot And Cross Diagram • Metals • Lattice		
Practical Skills	• Comparing chemical and physical changes	• Filtration • Crystallisation • Distillation	• Fractional distillation • Chromatography	• Comparing properties of metals, ionic compounds and covalent compounds		