	Intent **To develop students' understanding of matter and substances, to develop practical skills, to develop skills in data analysis and problem solving, to develop investigative and critical thinking skills, to develop chemical literacy to allow students to make sense of the world around them and scientific issues.**		
Year 11 Chemistry	**Term 1 September to December** C4a Metals and their Extraction C1c Quantitative Chemistry C4b Reversible Reactions and the Haber Process Review of C0 C1a C1b Key Concepts and C2 States of Matter Triple C5a Transition metals, alloys and corrosion Triple C5b Quantitative Chemistry	**Term 2 January to Easter** C3a Acids C3b Electrolysis Review of C0 C1a C1b Key Concepts and C2 States of Matter Triple C5c Cells and Equilibria	**Term 3 – Easter-Summer**
Knowledge (facts, information, concepts and key terminology)	List properties of metals List ways of extracting metals Corrosion and extraction of metals in terms of oxidation and reduction Describe a use of ammonia The terms "reversible reaction" and "dynamic equilibrium" TRIPLE: Electroplating, Sacrificial Protection	Describe the differences between acidic, neutral and alkaline solutions in terms of pH, identify and control their hazards as well as use various indicators to identify them Recall chemical reaction patterns that produce salts Describe practical methods to make salts in 3 different ways Describe the practical laboratory procedure of electrolysis reactions Describe uses of electrolysis to make useful products and purify copper TRIPLE- Describe chemical pathways to produce a substance on a large scale. Describe uses of fuel cells	Revision based lessons to recap Knowledge including Yr 10 material and specific gaps identified by EOU Assessments
Understanding (ability to connect and synthesise knowledge within a context)	Link properties of metals to their uses Interpret data about metal reactions from the reactivity series Apply patterns on chemical reactions of metals to new situations HT-Predict how changing temp, pressure and conc. can affect the position of equilibrium	Justify reasons for selecting a particular practical procedure to produce a salt as well as the separate different mixtures. Use data from observations of chemical tests to identify the products of electrolysis reactions	Revision based lessons to recap Knowledge including Yr 10 material and specific gaps identified by EOU Assessments
Skills (successful application of knowledge and understanding to a specific task)	Be able to interpret information about properties and uses of metals Represent any chemical reactions studied using word, balanced and ionic equations.(HT) Half equations(HT) Calculate relative formula mass and concentration and empirical formula (HT- Calculate reacting masses and moles) TRIPLE- Calculate concentrations from titration data, atom economy and molar gas volumes	Represent any chemical reactions studied using word, balanced and ionic equations. (HT) Half equations(HT)	Repetition of Core Practicals to practise calculations, data analysis and evaluation skills
Formal Assessments (those done by all/vast majority of the cohort)	End of topic tests Mock assessing content taught in Year 10 Verbal feedback	Paper 2 and Paper 1 Mock exam March	External Examination

By the end of the year students on course for at least a grade 5 will…

Be able to recall the structure of the atom and have knowledge of the subatomic particles they contain
Understand hazard symbols of substances and be able to take suitable precautions e.g using acids to make salts.
Use chemical equations can be used to represent chemical reactions e.g combustion
Be able the interpret information on the periodic table about elements and apply patterns about the properties of the elements
Describe and select suitable techniques to separate pure substances from mixtures.
Appreciate that the properties of substances arise from their structure and bonding.