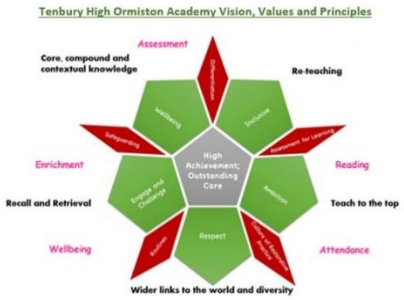
TENBURY HIGH
ORMISTON ACADEMY



Curriculum Overview for Chemistry
Year 11

Half Term 1: Organic Chemistry **Substantive Knowledge:** Describe how crude oil is formed Identify alkanes Identify the general formula for an alkane Describe fractional distillation. Describe the properties of hydrocarbons. Explain the properties of hydrocarbons. Describe cracking. Explain why we do cracking. Compare the reactivity of alkanes and alkenes. Explain alkene reactions. T Describe alcohol reactions. T Describe reactions of carboxylic acids. T Explain the acidity of carboxylic acids. T Describe polymerisation. T Describe condensation polymerisation. T Describe the structure of an amino acid. T Describe the polymerisation of an amino acid. T Describe the structure of DNA. T **Disciplinary Knowledge:** Identify carboxylic acids T Identify alkenes and alkanes Draw the first four alkanes and alkenes Identify the general formula for an alkene and alkanes Identify alcohols T Identify the general formula of an alcohol T		Skim and Scan of source information Decoding terms Etymology of key terms Breaking down exam questions
		Alkanes, Alkenes, catalytic cracking, combustion, complete combustion, crude oil, cracking, fractional distillation, condensing, homologous series, hydrocarbons, T- Addition polymerisation, alcohols, amino acids, carboxylic acids, condensation polymerisation, DNA, esters, fermentation, nucleotides, polyesters, polypeptide
		Baseline Recall questions to start every lesson Exam questions in homework End of unit assessment
		Revision Card preparation for every lesson Exam questions - application
Half Term 2: Chemical analysis **Substantive Knowledge:** ❑ Describe how we test for pure substances. ❑ Describe the use of formulation. ❑ Identify examples of formulations. ❑ Describe the chromatography required practical. ❑ Explain how paper chromatography separates mixtures ❑ Describe the test for hydrogen. ❑ Describe the test for oxygen ❑ Describe the test for chlorine. ❑ Describe the test for carbon dioxide ❑ Describe how to test for positive metal ions. (T) ❑ Identify the results for the positive metal ion test. (T) ❑ Describe how to use sodium hydroxide to test for some metal ions. (T) ❑ Identify the results of the sodium hydroxide test. (T) ❑ Describe the test for carbonates. (T) ❑ Describe the test for halides. (T) ❑ Identify the halide test results. (T) ❑ Describe the test for sulfates. (T) ❑ State advantages of instrumental analysis compared to chemical tests. (T) ❑ Describe flame emission spectroscopy. (T) **Disciplinary Knowledge:** ❑ Calculate Rf values, ❑ Interpret chromatograms ❑ Interpret an instrumental result. (T)		Skim and Scan of source information Decoding terms Etymology of key terms Breaking down exam questions
		Chromatogram, Chromatography, Flame emission spectroscopy, Flame test, Formulation Impure substance, Instrumental methods, Litmus paper, Mobile phase, Precipitation, Pure substances, Rf value, Stationary phase
		Baseline Recall questions to start every lesson Exam questions in homework End of unit assessment
		Revision Card preparation for every lesson Exam questions - application