YEAR 11 CURRICULUM INFORMATION – Chemistry		
	Autumn 1	Autumn 2
What will students be learning?	**Crude oil and fuels** Students will learn about hydrocarbons and be introduced to the alkanes and fractional distillation. They should be able to identify alkanes from their formulae and be able to name and draw the displayed formula of the first four alkanes. Students will learn about some of the reactions of hydrocarbons, including combustion (both complete and incomplete) and cracking. All students should be able to write balanced symbol equations for the complete combustion of hydrocarbons and describe the conditions of cracking.	**The Earth's resources** Students will learn about the difference between finite and renewable resources. It is important that students understand that renewable resources are not an infinite supply, but are replaceable at a rate similar to the rate they are used up, whereas finite resources are used up faster than they can be replenished. Students understanding of finite and renewable resources should be applied to the need to reuse and recycle, and they should be able to describe and evaluate ways of reducing the use of finite resources, and carry out life cycle assessments on products. Students will then look at specific resources that we use, including water and metals (in particular copper). Students should be able to describe the different ways that water is treated, both to create potable water and to remove waste products so it is safe to release into the environment. Students have already met metal-ore extraction and electrolysis, and higher-tier students should have applied that knowledge to the extraction of copper, as well as understanding alternative biological methods used to extract copper.
How will students be assessed?	C9 (Crude oil and fuels) Milestone	C14 (The Earth's resources) Milestone Required practical – Analysis and purification of water samples from different sources, including pH, dissolved solids and distillation
Literacy – What keywords will be taught?	Finite, plankton, hydrocarbon, alkanes, fractions, fractional distillation, feedstock, boiling point, viscosity, flammability, cracking	Potable, pure, sustainable, finite, renewable, ground water, fresh water, sea water, rain water, filter, sterilise, organic matter, sewage, effluent, sludge, screening, agricultural, ore, extraction, phytomining, bioleaching, life cycle assessment, reduce, reuse, recycle
What employability skills are being developed?	Synthesis of organic compounds, analytical techniques	Analysing chemicals and their quantities
Wider Curriculum Links?	Business (supply and demand)	Business (supply and demand) Food tech (water supplies)

What useful websites are there for this topic?	 Free science lessons  Primrose Kitten  Seneca  BBC Bitesize	 Free science lessons  Primrose Kitten  Seneca  BBC Bitesize
What wider reading could be done for this topic?	Textbooks: AQA Chemistry for GCSE Combined Science: Trilogy (Oxford) Textbooks: AQA Chemistry for GCSE Separate Science: Trilogy (Oxford)	Textbooks: AQA Chemistry for GCSE Combined Science: Trilogy (Oxford) Textbooks: AQA Chemistry for GCSE Separate Science: Trilogy (Oxford)
What else can students be doing independently to develop their understanding of this topic?	Exam questions Numeracy practice	Exam questions Numeracy practice Practice and use of videos to recap the required practical carried out