



## Chemistry Curriculum Overview - Year 11 - Combined Higher

Unit	Details
<b>Organic</b>	<p>In this unit pupils learn about hydrocarbons. They start with crude oil as a source of hydrocarbons and the fractional distillation of crude oil, describing how the size of the hydrocarbon molecule affects its properties. They then look at two homologous series alkanes and alkenes, learning about their structure and reactions.</p>
<b>Analysis</b>	<p>Pupils learn about various techniques for analysing substances initially by understanding the difference between a pure substance, a mixture, and a formulation, and what is meant by purity. Pupils build upon their understanding of chromatography experiments from atomic structure and be able to analyse a chromatogram, both qualitatively and quantitatively using <i>R<sub>f</sub></i> values. Pupils should also be able to describe the different experimental tests for gases, including both the procedure and positive result.</p>
<b>The Atmosphere</b>	<p>Pupils learn how volcanic activity has developed our theory of the origin of the atmosphere, learn to interpret evidence concerning other theories and evaluate them. Along with an understanding of the origins of the atmosphere, pupils should also understand how it has evolved over time. They should be able to describe the human activities that are thought to cause global warming and have resulted in some of the changes to the atmosphere and be able to explain some of the effects this has on the climate of the Earth. Pupils should also be able to explain the effect of other pollutants on the Earth.</p> <p>Throughout this unit, pupils will have many opportunities to develop their working scientific skills, including evaluating models and interpreting and evaluating evidence for scientific theories.</p>
<b>The Earth's Resources</b>	<p>Pupils will learn about the difference between finite and renewable resources and use this to consider reuse, recycle and reduce, carrying out life cycle assessments on products. They then look at specific resources that we use, including water and metals (in particular copper). Pupils will 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.</p>