

Module Map

Ideas about Science		Module story	Science Explanations	
<i>In other modules</i>	<i>In this module</i>		<i>In this module</i>	<i>In other modules</i>
		<p>What chemicals make up the Earth's atmosphere?</p> <p>↓</p> <p>How can you find out about air quality?</p> <p>↓</p> <p>Does it matter where you live?</p> <p>↓</p> <p>How are pollutants formed?</p> <p>↓</p> <p>What happens to air pollutants?</p> <p>↓</p> <p>How does air quality affect health?</p> <p>↓</p> <p>How can air quality be improved?</p>	<p>Chemicals that make up air. Human activity adds chemicals – air pollutants.</p> <p>Concentrations of air pollutants (CO, SO₂, NO_x, particulates) are regularly monitored. CO₂ emissions are of concern on a global rather than local scale.</p> <p>Emissions and climatic conditions are two key factors.</p> <p>Comparing inputs and outputs from vehicles and fossil-fuel power stations identifies that chemical changes are occurring.</p> <p>Conservation of atoms during combustion reactions, and implications of this for air quality.</p> <p>Representing rearrangement of atoms and molecules.</p> <p>Primary and secondary pollutants.</p> <p>Exemplified through hay fever and asthma.</p> <p>Technological developments (flue gas desulfurization, catalytic converters) can be used to reduce pollutant emissions.</p>	<p>Global warming in P2 <i>Radiation and life</i>.</p> <p>Global warming in P2 <i>Radiation and life</i>. Comparison of fossil fuel to nuclear power in P3 <i>Radioactive materials</i>.</p> <p>Symbol equations, balanced equations and calculation of reacting masses in C4–6 and A3 & 4.</p>
<p>laS1: Data and its limitations in C2 <i>Material choices</i>.</p>	<p>Role of outliers, mean, and range in determining and reporting the best estimate of a quantity. Justifying if a difference is real.</p>			
<p>laS2: Correlation and cause in B2 <i>Keeping healthy</i> and P2 <i>Radiation and life</i>.</p>	<p>Data used to identify correlations between a factor and an outcome. Evidence of a mechanism is required before it can be claimed that a factor causes an outcome. The importance of replication.</p> <p>Official regulations and laws (e.g. MOT test) can be used to control emissions from vehicles and power stations.</p>			
<p>Concept of sustainable development (laS6.3) in C3 <i>Food matters</i> and P3 <i>Radioactive materials</i>.</p>	<p>The actions of governments and individuals can lead to the adoption of more sustainable approaches to transport and power generation.</p>			