

# Islip Manor High School

## Scheme of Learning Overview



This scheme of learning has been designed to ensure that you make progress, develop, and master key knowledge, skills, and ideas through academically rich content that reflects, values, and celebrates the diverse experiences, identities, and contributions of our school community.

<b>Year group:</b> 11	<b>Term:</b> Autumn 2	<b>Unit duration:</b> 3-4 weeks	<b>Number of lessons:</b> 6 lessons	<b>Unit title:</b> Using Resources and The Atmosphere
<b>Unit assessment:</b> End of topic test			<b>Fertile question:</b> Is "Net Zero" a scientific reality or just a political slogan?	
<b>Key skills/ concepts/ prior knowledge that students should have when starting this unit:</b>			<b>Start RAG</b>	<b>End RAG</b>
<ol style="list-style-type: none"> <li>The atmosphere is a thin layer of gases surrounding Earth.</li> <li>Greenhouse gases like CO<sub>2</sub> trap heat in the atmosphere.</li> <li>Burning fossil fuels contributes to global warming.</li> <li>Recycling helps conserve finite Earth resources.</li> <li>Water treatment is required for safe human consumption.</li> </ol>				
<b>Key skills/concepts/knowledge that students should cover</b>			<b>Start RAG</b>	<b>End RAG</b>
<ol style="list-style-type: none"> <li><b>Atmosphere Evolution:</b> Describe the shift from volcanic gases to O<sub>2</sub> via photosynthesis.</li> <li><b>Greenhouse Effect:</b> Explain how CO<sub>2</sub> and CH<sub>4</sub> maintain global temperatures.</li> <li><b>Climate Change:</b> Evaluate evidence for human activity causing global warming.</li> <li><b>Pollutants:</b> Describe the impact of carbon monoxide and sulphur dioxide.</li> <li><b>Potable Water:</b> Describe production via filtration and sterilization.</li> <li><b>Desalination:</b> Explain obtaining water from salty sources.</li> <li><b>Waste Water:</b> Describe sewage treatment (screening, sedimentation, etc.).</li> <li><b>Alternative Extraction:</b> Describe Phytomining and Bioleaching for copper.</li> <li><b>LCAs:</b> Analyse environmental impact from "cradle to grave."</li> <li><b>Sustainability:</b> Explain Reduce, Reuse, and Recycle to protect resources.</li> </ol>				
<b>Stretch. Key skills/concepts/knowledge that students should cover</b> Evaluate the potential for bias and limitation in LCAs				
			<b>Literacy. Key vocabulary/subject terminology that students should cover</b>  Potable, Desalination, Bioleaching, Phytomining, Life Cycle Assessment (LCA), Greenhouse Effect, Carbon Footprint, Sterilisation.	
			<b>Suggested materials teachers could/should use:</b>  AQA Combined Science textbook Oxford University Press Kerboodle  <b>Key home learning tasks students should complete:</b>  Kerboodle assessment checkpoint	

