



Unit: The Atmosphere	1. The early atmosphere 2. The current atmosphere 3. How oxygen levels increased and carbon dioxide levels decreased	4. Greenhouse gases and their effect 5. Climate change and carbon footprint	6. Atmospheric pollutants
LESSONS			
Knowledge & Skills Development	<ul style="list-style-type: none"> Knowledge of the composition of the early atmosphere, how it has changed and the current composition of the atmosphere Interpret evidence and evaluate different theories about the Earth's early atmosphere Describe the main changes in the atmosphere over time and some of the likely causes of these changes Describe and explain the formation of deposits of limestone, coal, crude oil and natural gas. Describe the greenhouse effect in terms of the interaction of short and long wavelength radiation with matter Evaluate the quality of evidence in a report about global climate change given appropriate information Describe uncertainties in the evidence base Recognise the importance of peer review of results and of communicating results to a wide range of audiences 		<ul style="list-style-type: none"> Describe briefly four potential effects of global climate change and be able to discuss the scale, risk and environmental implications of them Describe actions to reduce emissions of carbon dioxide and methane and give reasons why actions may be limited Describe how carbon monoxide, soot (carbon particles), sulphur dioxide and oxides of nitrogen are produced by burning fuels Predict the products of combustion of a fuel given appropriate information about the composition of the fuel and the conditions in which it is used Describe and explain the problems caused by increased amounts of these pollutants in the air
Assessment / Feedback Opportunities	Formative Assessment Teacher questioning Quizzes Exam style questions		Summative assessment End of topic assessment Exam questions in future end of topic assessments to assess recall
Key Vocabulary	Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly, Describe, Explain, Compare, Analyse, Calculate, Suggest Composition, atmosphere, photosynthesis, formation, deposits, greenhouse effect, uncertainties, radiation, wavelength, peer review, climate, implication, pollutant, combustion		
Literacy/Reading Opportunities	Subject specific vocabulary introduced before reading of related texts Word etymology from Latin and Greek roots Reading of simple and complex sentences, paragraphs, articles Scientific writing including structuring methods, comparisons and evaluations		

Cross Curricular Themes	<p>Numeracy/Maths – averages (means), reading scales, graph plotting, lines of best fit, using and rearranging equations, using scientific calculators</p> <p>Geography – effects of climate change</p>
Personal Development (Including British Values, RSE, Citizenship)	<p>The different ways in which a citizen can contribute to the improvement of his or her community, to include the opportunity to participate actively in community volunteering, as well as other forms of responsible activity (C14)</p>
Career Opportunities	<p>Politician, Climate Scientists, Environmentalist</p>