Ravens Wood School
KS3 Curriculum Plan

Subject: Year 8 Climate

Overarching Topic: Climate	
Why is this topic being studied at this time? How does it fit into the wider subject curriculum?	• This is a topic of significant social awareness as the effects of the contribution of human activity to global warming and thus climate change are increasing faster than in any point in the history of modern civilization. The students of KS3 are the Scientists of the future who will be able to impact on technology and government policy to try and undo the damage that is currently being caused. • This links directly into the previous Chemistry topic of Earth's Resources, which covers the combustion of fossil fuels and production of CO_2 and the Physics topic of Energy Transfers and Energy Costs.

	Critical	Core	Pinnacle
The Big Questions (What questions will students be able to answer upon mastery of the topic?)	What is climate? What is carbon dioxide? What happens when fuels are burnt in oxygen? What is global warming? What is climate change? What gases are/were there in the atmosphere of past and present?	How was the Earth's atmosphere formed? How does human activity cause global warning and how is this linked to climate change? Can I use a diagram to show how carbon is recycled in the environment and through living things? How can global warming impact on climate and local weather patterns? How can the effect of humans on global warming be reduced?	Can I evaluate the implications of a proposal to reduce carbon emissions? Evaluate claims that human activity is causing global warming or climate change? What are the links between burning fossil fuels, climate change and acid rain? Can I compare the relative effects of human-produced and natural global warming?

The Key Skills/ Techniques	The sophistication and application of skills will become more advanced as students' progress through the critical, core and pinnacle knowledge.	
	Skill/Technique	**How will this skill be developed?**
	1. Graphing & Drawing	Draw graphs with suitable scales, axes and units. Correct line of best fit. Appreciation of anomalies and processed data. Scientific drawing of cells, concepts and scientific equipment.
	2. Variables	Identify independent, dependent and control variables and devise experiments to include these to ensure valid results. Appreciation of uncertainty.
	3. Data Analysis	Describe, explain and predict trends. Graph and table data interpretation. Identify links and patters within and between topics. Statistical analysis of data to include mode/median/mean/range determination. Drawing justified conclusions from presented data.
	4. Application	Apply known and taught theory in unfamiliar contexts. Making links to taught theory and extracting key ideas. Communicating using correct scientific terminology.
	5. Working Scientifically	Identify hazards and planning to limit risk. Describe how to improve accuracy/precision/repeatability/reproducibility/validity. Evaluate reliability of methods and investigations, taking in to account data analysis.