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| **KEY IDEAS:** **Scientific Background** | | | | | |
| **BY THE END OF**  **YEAR 11:** | **Year group** | **Subject / Topic / theme** | **Which lesson(s) will you cover this LO in?** | **How is the LO covered in the lesson(s)?** | **Resources** |
| * Students can name a range of greenhouse gases and describe in detail the processes that lead to their increasing concentrations in the atmosphere |  |  |  |  |  |
| * Students know where uncertainties remain in climate science, e.g. how atmospheric water vapour will change; when tipping points may be reached; climate inertia; how ocean currents will change… |  |  |  |  |  |
| * Students can give examples of confirmation bias (cherry-picking) both by climate deniers and by proponents of Near Term Human Extinction |  |  |  |  |  |
| * Students understand the process of peer-review in science, and why it exists. |  |  |  |  |  |

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| **KEY IDEAS:** **Urgency of Need for Climate Action** | | | | | |
| **BY THE END OF YEAR 11:** | **Year group** | **Subject / Topic / theme** | **Which lesson(s) will you cover this LO in?** | **How is the LO covered in the lesson(s)?** | **RESOURCES** |
| * Students can explain key climate feedbacks in detail e.g. albedo changes, permafrost melt, soil degradation and wildfire frequency |  |  |  |  |  |
| * Students can summarise current actions being taken at regional, national and international levels to reduce greenhouse gas emissions and boost carbon sinks in response to the current situation |  |  |  |  |  |
| * Students are aware of geoengineering options, how they would work in theory, and recent evaluations of their potential |  |  |  |  |  |

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| **KEY IDEAS:** **Impacts of Climate Change** | | | | | |
| **BY THE END OF YEAR 11:** | **Year group** | **Subject / Topic / theme** | **Which lesson(s) will you cover this LO in?** | **How is the LO covered in the lesson(s)?** | **RESOURCES** |
| * Students can explain a range of benefits and additional stresses caused by climate change on a range of species and ecosystems |  |  |  |  |  |
| * Students can give examples of technologies that may be deployed to help species and ecosystems adapt to climate change |  |  |  |  |  |
| * Students can give several examples of expected impacts of global heating on human health |  |  |  |  |  |

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| **KEY IDEAS:** **Responses to Climate Change** | | | | | |
| **BY THE END OF YEAR 11:** | **Year group** | **Subject / Topic / theme** | **Which lesson(s) will you cover this LO in?** | **How is the LO covered in the lesson(s)?** | **RESOURCES** |
| * Students can offer opinions about the aims and methods of political groups / movements that are responding to aspects of the climate emergency |  |  |  |  |  |
| * Students understand arguments for and against legislative responses, including creating a “level playing field”, and limiting individual freedoms |  |  |  |  |  |
| * Students understand connections between personal, collective and political responses to the climate emergency |  |  |  |  |  |
| * Students begin to understand how political principles might shape the policy responses of different political parties |  |  |  |  |  |

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| **KEY IDEAS:** **Consumption and Climate Justice** | | | | | |
| **BY THE END OF YEAR 11:** | **Year group** | **Subject / Topic / theme** | **Which lesson(s) will you cover this LO in?** | **How is the LO covered in the lesson(s)?** | **RESOURCES** |
| * Students can articulate the benefits of low / zero-carbon alternatives and lifestyles |  |  |  |  |  |
| * Students can explain and debate their own informed views about aspects of modern life associated with high emissions, such as flying, ‘cloud’ data storage, and cruises |  |  |  |  |  |
| * Students can compare cap-and-trade, cap-and-share, and carbon tax approaches to reducing emissions |  |  |  |  |  |
| * Students understand the distinction between zero emissions and net-zero emissions |  |  |  |  |  |
| * Students develop their own opinions on climate justice proposals such as climate reparations, and contraction and convergence |  |  |  |  |  |
| * Students are familiar with the idea of a ‘just transition’ and can give examples of what might be involved. |  |  |  |  |  |

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| **KEY IDEAS:** **Possible Futures** | | | | | |
| **BY THE END OF YEAR 11:** | **Year group** | **Subject / Topic / theme** | **Which lesson(s) will you cover this LO in?** | **How is the LO covered in the lesson(s)?** | **RESOURCES** |
| * Students know how to find evidence-based information about a range of options for climate mitigation and adaptation, now and in the future * Students can confidently articulate connections between technological, social, ethical and political possibilities * Students can use permaculture principles to design their own concepts for future communities on different timescales |  |  |  |  |  |

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| **KEY IDEAS:** **Mindsets and Viewpoints** | | | | | |
| **BY THE END OF YEAR 11:** | **Year group** | **Subject / Topic / theme** | **Which lesson(s) will you cover this LO in?** | **How is the LO covered in the lesson(s)?** | **RESOURCES** |
| * Students can confidently evaluate a range of ways of understanding the relationship between Earth and humanity from different perspectives |  |  |  |  |  |
| * Students can begin to suggest how prevailing human mindsets might need to change or develop in response to the climate emergency. |  |  |  |  |  |

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| **KEY IDEAS:** **Feelings and Behaviours** | | | | | |
| **BY THE END OF YEAR 11::** | **Year group** | **Subject / Topic / theme** | **Which lesson(s) will you cover this LO in?** | **How is the LO covered in the lesson(s)?** | **RESOURCES** |
| * Students have a range of strategies for managing anxiety about climate change * Students can demonstrate self-awareness in their lifestyle choices, including of internal contradictions. They can empathise with people whose choices are different from their own. |  |  |  |  |  |

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| **SKILLS FOR A NET CARBON ZERO FUTURE** | | | | | | |
| * Food Growing | * Clothes Repair Skills | * Cycle Safety | * Cycle Maintenance | * Sustainable Cookery | * Household item repair skills | * Cutting down food waste |

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| **INTRODUCING KEY TERMS** | | | | | |
| **BY THE END OF YEAR 2:** | | **BY THE END OF YEAR 4:** | **BY THE END OF YEAR 6:** | **BY THE END OF YEAR 9:** | **BY THE END OF YEAR 11:** |
| * Weather and Climate | * Climate change * Atmosphere * Greenhouse effect * Greenhouse Gas emissions ./ * Carbon emissions * Carbon dioxide * Fossil fuels * Renewable energy | | * Carbon footprint * Climate emergency * Tipping points * Intergovernmental Panel on Climate Change * Ecosystems * Climate justice * Carbon sinks * Biodiversity * Permaculture | * Carbon drawdown * Carbon capture and storage * Climate debt / climate reparations * Climate denial * Computer model * Climate feedback * Mass extinction | * Confirmation bias * Peer review * Geoengineering * Just transition * Mitigation * Adaptation * Net Zero |