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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
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