

Subject	A Level Geography – Climate Change																								
Context	<ul style="list-style-type: none"> <li>Climate Change is an overarching theme in Geography in the 21<sup>st</sup> Century and is a key component of the first Physical Geography topic you will study on The Water and Carbon Cycles.</li> <li>Later in Year 13 you will undertake a topic in Human Geography on Antarctica and there are a lot of cross-over links between this and The Carbon Cycle topic.</li> <li>The following tasks will increase your knowledge and understanding of the causes, impacts and responses to climate change and also to give you experience of accessing relevant research and articles and summarising your findings, a skill you will need for your fieldwork-based independent project later in Year 12.</li> </ul>																								
Securing	<p>Learn the definitions of the following key terms that relate to climate change and you will come across in the articles you read. Test yourself on these so that you are ready for a quiz in the first lesson. You could make a Quizlet to help you practice recall.</p> <table border="1"> <thead> <tr> <th>Key term</th><th>Definition</th></tr> </thead> <tbody> <tr> <td><b>Deforestation</b></td><td>The removal of trees, leading to surface runoff and soil erosion and reducing soil water stores</td></tr> <tr> <td><b>Afforestation</b></td><td>Planting or replanting trees. Trees act as carbon sinks, removing CO<sub>2</sub> through photosynthesis and storing it within their biomass or the soil.</td></tr> <tr> <td><b>Carbon sink</b></td><td>Anything that absorbs more carbon than it releases e.g., the ocean</td></tr> <tr> <td><b>Carbon source</b></td><td>Anything that releases more carbon than it absorbs</td></tr> <tr> <td><b>Mitigation</b></td><td>Any method used to reduce or prevent emission of greenhouse gases</td></tr> <tr> <td><b>Carbon capture and storage (CCS)</b></td><td>The technological 'capturing' of carbon emitted from power stations. Atmospheric carbon dioxide is compressed into a liquid and is then pumped and stores several kilometres into the ground.</td></tr> <tr> <td><b>Carbon farming</b></td><td>Where one type of crop is replaced by another that has greater productivity and can absorb more carbon dioxide from the atmosphere.</td></tr> <tr> <td><b>Enhanced greenhouse effect</b></td><td>Rising global temperatures due to greenhouse gases being put into the atmosphere because of human activities</td></tr> <tr> <td><b>Intergovernmental Panel on Climate Change (IPCC)</b></td><td>An international organisation set up by the UN to share knowledge about climate change.</td></tr> <tr> <td><b>Carbon trading schemes</b></td><td>These are a type of international agreement. Countries and businesses are given a limit on the emissions they can produce. If they produce less they can sell the extra credits, if they produce more they need to buy more credits.</td></tr> <tr> <td><b>Energy conservation</b></td><td>The decision and practice of using less energy. Turning lights off, installing double glazing, using the car less, buying energy efficient appliances, are all examples.</td></tr> </tbody> </table>	Key term	Definition	<b>Deforestation</b>	The removal of trees, leading to surface runoff and soil erosion and reducing soil water stores	<b>Afforestation</b>	Planting or replanting trees. Trees act as carbon sinks, removing CO <sub>2</sub> through photosynthesis and storing it within their biomass or the soil.	<b>Carbon sink</b>	Anything that absorbs more carbon than it releases e.g., the ocean	<b>Carbon source</b>	Anything that releases more carbon than it absorbs	<b>Mitigation</b>	Any method used to reduce or prevent emission of greenhouse gases	<b>Carbon capture and storage (CCS)</b>	The technological 'capturing' of carbon emitted from power stations. Atmospheric carbon dioxide is compressed into a liquid and is then pumped and stores several kilometres into the ground.	<b>Carbon farming</b>	Where one type of crop is replaced by another that has greater productivity and can absorb more carbon dioxide from the atmosphere.	<b>Enhanced greenhouse effect</b>	Rising global temperatures due to greenhouse gases being put into the atmosphere because of human activities	<b>Intergovernmental Panel on Climate Change (IPCC)</b>	An international organisation set up by the UN to share knowledge about climate change.	<b>Carbon trading schemes</b>	These are a type of international agreement. Countries and businesses are given a limit on the emissions they can produce. If they produce less they can sell the extra credits, if they produce more they need to buy more credits.	<b>Energy conservation</b>	The decision and practice of using less energy. Turning lights off, installing double glazing, using the car less, buying energy efficient appliances, are all examples.
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Processing	<p>Read this <b>geofile article</b> and answer the first three 'focus questions' at the end (NOT the fourth). <b>Answer on a word document.</b>  <a href="https://www.thegeographeronline.net/uploads/2/6/6/2/26629356/global_warming_fact_fiction_and_myth.pdf">https://www.thegeographeronline.net/uploads/2/6/6/2/26629356/global_warming_fact_fiction_and_myth.pdf</a></p>																								
Exploring	<p>Below is a list of relevant articles, videos and podcast. Each one addresses at least one aspect of climate change.</p>																								

	<ul style="list-style-type: none"> <li>As you read/listen/view, take <b>brief notes</b> under four headings: <b>evidence, causes, impacts</b> and <b>responses</b>. Look out for place examples too, always important in geography!</li> <li>Write down the title and source of each article/video/podcast that you use and make your notes for that source under this title, using the headings above. DO NOT TAKE TOO MANY NOTES. Far better to view a range of material with the aim of seeing which facts and issues come up most often or those that really strike you – these are the things that are really worth noting. There is quite a lot of overlap so as you get going you will probably find that you are not needing to note down much new information.</li> <li>The first one is a BBC video featuring David Attenborough – what better place to start! Select at least 5 sources. If you are able to, try some of the TED talks and/or podcasts as well.</li> </ul> <ol style="list-style-type: none"> <li><a href="https://www.bbc.co.uk/iplayer/episode/m00049b1/climate-change-the-facts">https://www.bbc.co.uk/iplayer/episode/m00049b1/climate-change-the-facts</a> (video)</li> <li><a href="https://www.bbc.co.uk/news/science-environment-24021772">https://www.bbc.co.uk/news/science-environment-24021772</a> (BBC Simple Guide to Climate Change)</li> <li><a href="https://www.bbc.co.uk/news/science-environment-58073295">https://www.bbc.co.uk/news/science-environment-58073295</a> (BBC article)</li> <li><a href="https://www.bbc.co.uk/news/science-environment-60984663">https://www.bbc.co.uk/news/science-environment-60984663</a> (BBC article)</li> <li><a href="https://www.theguardian.com/environment/2022/may/18/critical-climate-indicators-broke-records-in-2021-says-un">https://www.theguardian.com/environment/2022/may/18/critical-climate-indicators-broke-records-in-2021-says-un</a> (news article)</li> <li><a href="https://climate.nasa.gov/solutions/adaptation-mitigation/">https://climate.nasa.gov/solutions/adaptation-mitigation/</a> (NASA feature)</li> <li><a href="https://www.theguardian.com/commentisfree/2019/jan/22/the-guardian-view-on-rising-sea-levels-a-warning-from-greenland">https://www.theguardian.com/commentisfree/2019/jan/22/the-guardian-view-on-rising-sea-levels-a-warning-from-greenland</a> (editorial comment - opinion)</li> <li><a href="https://www.sciencemag.org/news/2015/03/amazon-rainforest-ability-soak-carbon-dioxide-falling">https://www.sciencemag.org/news/2015/03/amazon-rainforest-ability-soak-carbon-dioxide-falling</a> (Science magazine article)</li> </ol> <p><b>TED talks</b> are a good way of hearing different viewpoints and ideas. Try these ones:</p> <ol style="list-style-type: none"> <li><a href="https://www.ted.com/talks/chad_frischmann_100_solutions_to_reverse_global_warming?language=en">https://www.ted.com/talks/chad_frischmann_100_solutions_to_reverse_global_warming?language=en</a></li> <li><a href="https://www.ted.com/talks/per_espen_stoknes_how_to_transform_apocalypse_fatigue_into_action_on_global_warming">https://www.ted.com/talks/per_espen_stoknes_how_to_transform_apocalypse_fatigue_into_action_on_global_warming</a></li> <li><a href="https://www.ted.com/talks/alice_bows_larkin_climate_change_is_happening_here_s_how_we_adapt">https://www.ted.com/talks/alice_bows_larkin_climate_change_is_happening_here_s_how_we_adapt</a></li> <li><a href="https://www.ted.com/talks/kate_marvel_can_clouds_buy_us_more_time_to_solve_climate_change">https://www.ted.com/talks/kate_marvel_can_clouds_buy_us_more_time_to_solve_climate_change</a></li> <li><a href="https://www.theguardian.com/environment/2022/may/17/climate-geoengineering-must-be-regulated-says-former-wto-head">https://www.theguardian.com/environment/2022/may/17/climate-geoengineering-must-be-regulated-says-former-wto-head</a> (news article)</li> </ol> <p><b>Podcasts:</b> An in depth look at global warming: 15. <a href="https://www.bbc.co.uk/sounds/play/b086s95f">https://www.bbc.co.uk/sounds/play/b086s95f</a> The impact and response to climate change in the UK: 16. <a href="https://www.bbc.co.uk/sounds/play/b0b3ftj9">https://www.bbc.co.uk/sounds/play/b0b3ftj9</a></p>
Reviewing	<p>Using the notes that you took as you were doing your exploring to <b>hand write a 1000 word report on Climate Change</b>. <b>Write on an A4 sheet of paper, ready to be handed in to your teacher in your first lesson.</b></p> <p>Your report should be organised like this:</p> <ol style="list-style-type: none"> <li>An <b>introduction</b> in which you set out the evidence for climate change and say what climate change is.</li> <li>A section on the <b>causes</b> of climate change – these may be both natural and human.</li> <li>A section on the main <b>impacts</b> of climate change. You may want to split this up into different sub-sections, for example UK/Wider World, Social/Economic/Environmental, immediate/longer-term. You choose sub-heading that best fits with your findings and notes.</li> </ol>

	<p>4) A Section on <b>responses and mitigation strategies</b>. What is currently being done, or could be done to reduce the risks of climate change?</p> <p>5) A <b>conclusion</b> in which you give your own opinion of the main challenging facing us in terms of tackling climate change and (if you can) what you think should be the main priorities for the UK over the coming decades.</p> <p>6) A <b>bibliography</b> at the end in which you list the main sources of information that you drew upon to write your report. This is essential – without this your report would be classed as plagiarism.</p> <p><b>Success criteria for the report:</b></p> <ul style="list-style-type: none"> <li>• Rich in specific details, geographical language, figures and place examples.</li> <li>• Written in clear, discrete sections – possibly with the use of sub-headings.</li> <li>• Paragraphs use the PEEL structure, each starting with a clear point (focus of the paragraph), followed by evidence/examples and explanation/discussion. Paragraphs should end with a link back to the point of that paragraph or link to the next paragraph.</li> <li>• Text is in your own words with nothing lifted directly from the sources. It represents what you personally have taken from your research.</li> <li>• Information is drawn from a wide range of the sources suggested (listed in a bibliography). At least 5 separate sources used.</li> <li>• Accurate spelling, punctuation and grammar.</li> <li>• Approximately 1000 words in length.</li> </ul>
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Now that you have read/listened and reviewed knowledge on climate change, it is time to reflect on what you have learnt and identify any remaining knowledge gaps. This is something we need to do throughout the course to ensure all content is embedded in your long-term memory.

Complete this table with all knowledge you can remember (without using any of the notes you have made!). Then, using a different colour, add in any more detail from your notes that you hadn't initially recalled. There should therefore be two colours in the table. The second colour then provides a list of knowledge gaps that you can then focus on when it comes to revision.

Evidence of climate change	Causes of climate change	Impacts of climate change	Responses to climate change