



YEAR 11 Spr 1 Medium-Term Planning

'An ambitious curriculum that meets the needs of all'

Topic: Weather Hazards and Climate Change



Curriculum Intent	Students will learn:
Skills/Assessment Objective Links	<p>Weather Hazards</p> <ol style="list-style-type: none"> How global atmospheric circulation affects the weather and climate in different parts of the world. What a tropical storm is, and where and how they are formed. The structure and features of a tropical storm, and how climate change might affect the distribution, frequency and intensity of tropical storms in the future. About Typhoon Haiyan, the effects of the storm, and the immediate and long-term responses to it. How the effects of tropical storms can be reduced through strategies of monitoring, prediction, protection and planning, using Bangladesh as an example. The different weather hazards that affect the UK. The causes and impacts of the Beast from the East 2018, the immediate and long-term responses, and what has been done to reduce the future risk of future events. About recent examples of extreme weather in the UK, then consider the evidence that these may be on the increase, and the reasons why this might be happening <p>Climate Change</p> <ol style="list-style-type: none"> The evidence for climate change and its impacts on global ecosystems and on people's lives. The natural causes of climate change: cyclical changes in the earth's orbit, sunspots and volcanic eruptions. How human activity affects climate change, how the greenhouse effect works, the sources of greenhouse gases and their effect on global temperatures. How the impacts of climate change can be managed, through development of alternative energy sources, carbon capture, planting more trees, and international agreements. How the impacts of climate change can be managed by adapting to them, using the examples of managing water supply and reducing the risk from rising levels.
Spiritual, moral, social, and cultural development	<p>SMSC: Empathy for countries most affected by climate change and extreme weather. Stewardship..</p> <p>PSHE/British Values: International agreements (rule of law, democracy), mutual respect (impact of climate change, how to reduce the effects of climate change – a global issue)</p>
Numeracy	Describing patterns and trends; interpreting graphs; interpreting data; interpreting satellite images
Literacy	<p>Vocabulary Tier 2: Command words are used frequently. These are defined in the GCSE booklets for each topic.</p> <p>Vocabulary Tier 3: Subject-specific keywords are defined by students in their booklet.</p> <p>Reading:</p> <p>Writing:</p> <p>Oracy:</p>
Becoming future ready	Careers/Employability: Conservation, Ecologist, Environmental scientist etc. Students will be exposed to a wide range of careers in this unit.
Adaptation	Throughout this topic, quality first teaching will provide differentiation:
QFT/SEND Provision	<p>By product: GEOG your memory retrieval starters used each lesson to recap prior knowledge and make connections to current learning.</p> <p>By resource: Exam practice materials e.g. 9 marker bookmark/structure strip.</p> <p>By Intervention: by providing different levels of supervision and support.</p> <p>By Progressive Questioning: exploring pupils' understanding through interactive dialogue.</p> <p>By Grouping: according to prior attainment, gender, social preference, preferred learning style.</p> <p>By Task: Pupils should be involved in the identification of targets which are meaningful to them and in the selection of an appropriate task from the given range.</p> <p>By Offering Optional Activities: In class or as homework, to extend learning. Geography in the news – linking the specification to current events.</p> <p>This QFT/SEND provision will be explicit within the lesson-by-lesson schemes of work.</p>
Implementation	To be able to...

Curriculum Delivery	<p><u>Weather Hazards</u></p> <ul style="list-style-type: none"> • Explain global atmospheric circulation, with reference to cells and pressure belts • Explain how atmospheric circulation affects weather and climate in different parts of the world, with examples • Understand how atmospheric circulation drives tropical storms • Describe the distribution of tropical storms • Describe the conditions in which tropical storms can form • Explain the formation of a tropical storm • Describe the structure and main features of a tropical storm • Explain how hurricanes are measured using the Saffir-Simpson scale • Suggest how climate change may affect the distribution, frequency and intensity of tropical storms in the future • Explain why typhoon Haiyan was such a devastating storm • Describe the primary and secondary effects of the storm, with examples • Describe the immediate and longer-term responses to the storm, with examples • Empathise with survivors, and understand their immediate needs and longer-term challenges • Explain how monitoring, prediction, protection and planning can help reduce the effects of tropical storms, and give examples of each • Explain the difference between weather and climate • Give reasons for the UK's changeable, and sometimes extreme, weather • Describe the type of extreme weather events experienced in the UK • Explain the causes of the beast from the east • Describe the impact of the storm and the immediate responses • Explain what has been done to reduce the risk of future storm events • Give examples of different types of extreme weather events in the UK since 2000, and describe their impacts • Explain the possible links between extreme weather and climate change/global warming • Explain why the UK's weather may be getting 'stuck' for prolonged periods <p><u>Climate Change</u></p> <ul style="list-style-type: none"> • Describe the overall pattern of global temperature from the beginning of the Quaternary period to the present day • Describe the effects of climate change on ecosystems and on people's lives • Explain the recent evidence for climate change • Describe how ice cores can be used to provide information about temperatures in the past • Explain the three Milankovitch cycles, and how each affects global climate • Explain how sunspots affect global temperatures and climate • Explain how volcanic eruptions can affect global temperatures • Explain how the greenhouse effect works and its role in global warming • Identify the main greenhouse gases and their sources, and explain their role in the greenhouse effect • Explain how the use of alternative and renewable energy sources helps to reduce carbon emissions • Describe the process of carbon capture and storage • Explain why carbon sinks are important in reducing levels of CO₂ in the atmosphere • Understand the importance of international agreements in managing climate change • Describe the effects that climate change will have on agriculture, and how farmers can adapt to these changes • Explain how climate change will affect the supply of water, and why the management of water supply is important, especially in poor countries • Describe the effects of sea level rise on coastal areas • Describe how the Maldives are managing the impacts of a rising sea level <p>Red denotes interleaving; aspects of knowledge covered previously.</p>
Learning Outcomes (Knowledge)	
Current learning to be developed in the future within:	<p><i>Students will use their understanding of the greenhouse effect when looking at sustainability in the Urban Issues and Challenges topic.</i></p> <p><i>Students will use their understanding of international agreements in relation to climate change when looking at international agreements in the Ecosystems (tropical rainforests) topic.</i></p> <p><i>Students will use their understanding of the effect of climate change on water supply and the climate when learning about desertification in the Sahel. They will also use this understanding during the Challenges of</i></p>

	<i>Resource Management topic – specifically when looking at issues of global/UK water supply and management.</i>
Assessment	Refer to assessment maps for formative and summative assessment opportunities.
Impact	Attainment and Progress – Refer to assessment results / data review documentation.