

Year:	Topic/Theme: Paper 1- Global geographical investigations	Unit Title: Hazardous Earth	Term:
<p>Overview of SOW: The earth has many natural hazards that affect the lives of people on different parts of the planet. Students will be investigating natural processes, such as the climate system and tectonics, which will help to understand how they function and how we can prepare for them and deal with their effects. Students will also learn that not all hazards are entirely natural. They Will learn that humans have an increasing impact on shaping the earth and its climate, making it an increasingly hazardous place to live</p> <p>Knowledge:</p> <ul style="list-style-type: none"> • How the world’s climate system functions • What the natural causes of climate change are • How human activities are causing climate change • What the possible consequences of climate change are • How extreme weather events are increasingly hazardous for people • What impacts tropical cyclones have on people and the environment • Why some countries are more vulnerable to tropical cyclones • How the earths structure influences plate tectonics • What happens when tectonic plates move • What the different type of volcanoes are • What the impacts and responses to volcanic hazards are • What the impacts and responses to earthquakes are <p>Skills:</p> <ul style="list-style-type: none"> • Interpreting graphs that show a range of data • Using GIS to track tropical cyclones • Use data to calculate Saffir-Simpson magnitude • Use different sources of information to assess impact of hazards • Interpreting cross section of earth • Interpret the distribution of plate boundaries and plates on a world map • Use the Richter scale to compare magnitude of earthquakes <p>End Point:</p> <ul style="list-style-type: none"> • Ability to identify plate boundaries and plate margins • To understand global circulation and how the world’s climate system functions • To understand how and why climate changes through natural and human processes • A study of a tropical cyclone • A detailed study of tectonic activity and evaluate ways they can be managed 			

<p>Prior Learning: (Linked Topics)</p> <p>Climate change (KS3) Development (year 10) Urbanising World Hazards (KS3)</p>	<p>National Curriculum Links:</p> <p>Science – earths structure</p>	<p>GCSE (or A Level) AO Links:</p> <p>AO1: Demonstrate knowledge of locations, places, processes, environments and different scales</p> <p>AO2: Demonstrate geographical understanding of:</p> <p>a) Concepts & how they are used in relation to places, environments & processes</p> <p>The inter-relationships between places, environment & processes</p> <p>AO3: Apply knowledge and understanding to interpret, analyse and evaluate geographical information & issues & to make judgements</p> <p>AO4: Select, adapt & use a variety of skills & techniques to investigate questions & issues & communicate findings</p>	<p>Opportunities for mastery/stretch and challenge:</p> <ul style="list-style-type: none"> • HA assessment structure – less scaffolding after skills teaching. • HA questioning – more evaluative and less recall. • HA sources and texts used within lessons. • ‘Ask the teacher’ after reading sources and texts (structured questioning). • HA resources for homework tasks. • HA recommended reading lists. • Group work
<p>Key words/Vocabulary:</p> <p>Coriolis effect Polar cell Ferrel cell Current Weather Jet stream Arid Atmospheric Hadley Cell Pressure Inter tropical convergence zones Cumulonimbus Quaternary period Milankovitch Eccentricity</p>	<p>Personal Development & SMSC:</p> <ul style="list-style-type: none"> • Developing responsible, respectful and active citizens who are able to play their part and become actively involved in public life as adults • Developing and deepening pupils’ understanding of the fundamental British values of democracy, individual liberty, the rule of law and mutual respect and tolerance. • Developing pupils’ character, which we define as a set of positive personal traits, dispositions and virtues that informs their motivation and guides their conduct so that they reflect wisely, learn eagerly, behave with integrity and cooperate consistently well with others. This gives pupils the qualities they need to flourish in our society. • Developing pupils’ confidence, resilience and knowledge so that they can keep themselves mentally healthy. • Sense of enjoyment and fascination in learning about themselves, others and the world around them • Use of imagination and creativity in their learning • Willingness to reflect on their experiences • 	<p>Cultural Capital opportunities:</p> <ul style="list-style-type: none"> • Do we have a moral duty to support less developed countries with aid?? Concept of stewardship. • Direct links to Edexcel B GCSE content and skills (future pathways) • Develop an understanding and appreciation of the wide range of cultural influences that have shaped their own heritage and that of others • Develop an understanding and appreciation of the range of different cultures in the school and further afield as an essential element of their preparation for life in modern Britain • Develop an ability to recognise, and value, the things we share in common across cultural, religious, ethnic and socio-economic communities 	

<p>Axial tilt Precession Ice cores Tree rings</p>	<p>GCSE links to Edexcel paper 1 (Hazardous Earth – Global geographical issues)</p>	
<p>Greenhouse effect Thermal expansion Sea level Climate change Prevailing winds Cirrus Distribution Eye ITCZ-Inter tropical convergence zone</p>	<p>Low Stake Assessment:</p> <ul style="list-style-type: none"> • Names • Keywords • Dates • Command words • Information retrieval from prior learning • Retrieval of key skills linked to question types • Information recall from case studies • GEOG knowledge starters 	<p>Group/Pair work opportunities:</p> <ul style="list-style-type: none"> • Make relevant contributions to discussions, responding appropriately to others • Be flexible in discussion, making different kinds of contributions • Present information/points of view clearly and in appropriate language in formal and informal exchanges and discussions • Comment on the relevance of context and its effects on a text • Establish and develop their own opinion and evidence this from knowledge of case studies
<p>Rainfall Saturate Landslides Storm surge Vulnerability</p>	<p>Formative Assessment/AFL: Rapid recalls, PIT stop , Formative Assessment Exam questions</p>	<p>Talking Points (oracy/discussion) opportunities:</p> <ul style="list-style-type: none"> • Debating points of view • Explaining theories/ model answers • Think-pair-share activities • Expressing evaluative opinions
<p>Preparation Response Plate boundaries Mantle Core Granitic Crust Basaltic Continental crust Oceanic crust Lithosphere Asthenosphere Decay Convection currents Subduction Trench Magma Composite Shield volcano Faults</p>	<p>Summative % Assessment links: TBC</p>	<p>Cross Curricular links: Science KS4</p>

Pyroclastic flow
Primary hazard
Secondary hazard
Lava
Crater
Primary impact
Secondary impact
Magnitude
Richter
Seismometer
Epicentre
Focus
Seismic wave

Key Questions (product/process/developmental):

- Explain how low atmospheric and high atmospheric pressure occur?
- Explain how ocean currents transfer heat energy around the world?
- How do we know that natural climate change has happened?
- Name three conditions that must be present before a tropical cyclone can form?
- How can people prepare and predict specific hazards?
- Name the layers of the earth?
- Explain the role of the lithosphere and asthenosphere in plate tectonics?
- What type of volcano forms above an oceanic hotspot?
- What is the difference between a primary and secondary impact of a tectonic hazard?
- Explain how an earthquake can be measured and what the measurement tells us about it?

Weeks	Week overview – skills and knowledge	Directed Lessons	Resources	Assessment/Revision Opportunities	Consolidation Homework
Week 1	How does the world's climate system function?	<ul style="list-style-type: none"> To understand how circulation cells in the atmosphere and currents in the ocean transfer heat from hot areas of the earth to cooler areas To explore the role of the Coriolis effect and jet streams in explaining atmospheric circulation patterns. To explain how the global atmospheric circulation influences the location of arid areas and areas of very high rainfall 	Power point Edexcel B text book	Rapid recall Seneca	Exam question practice and homework booklet
Week 2	What are the natural causes of global climate change?	<ul style="list-style-type: none"> To know how the earth's climate has changed over time. To understand the causes of natural climate change at different times and their impact on the earth To understand how we can use natural evidence of climate change 	Power point Edexcel B text book	Rapid recall Seneca	Exam question practice and homework booklet
Week 3	How are human activities causing climate change?	<ul style="list-style-type: none"> To understand how human activity can lead to an enhanced greenhouse effect To interpret the evidence for human activity causing climate change To consider the possible consequences of climate change on people 	Power point Edexcel B text book	Rapid recall Seneca	Exam question practice and homework booklet
Week 4	How are extreme weather events increasingly hazardous for people? What impacts do tropical cyclones have on people and the environment?	<ul style="list-style-type: none"> To know the key characteristics of tropical cyclones and factors that affect where and when tropical cyclones occur To understand how the way tropical cyclones are formed relates to the global circulation of atmosphere To be able to explain the reasons why some tropical cyclones get stronger and why they eventually decline To know what physical hazards are caused by tropical cyclones To understand the impact tropical cyclones can have on people and environments To explain why some countries are more vulnerable to the impacts of tropical cyclones than others 	Power point Edexcel b Textbook	Rapid recall Seneca	Exam question practice and homework booklet

Week 5	How do countries prepare for and respond to tropical cyclones? Pitstop (Climatic)	<ul style="list-style-type: none"> • To know how countries can prepare for tropical cyclones • To understand how countries can respond to tropical cyclone hazards • To investigate how effective methods of preparation and response have been in two different countries (one developed, USA and one developing, Haiti) • Climatic hazards pitstop and DIRT lesson 	Power point Edexcel B text book Online resources	Rapid recall Seneca Pitstop	Exam question practice and homework booklet
Week 6	How does the earths structure influence plate tectonics? What are the different types of volcanoes?	<ul style="list-style-type: none"> • To know the structure of the earth and what causes tectonic plates to moves • To know the distribution and characteristics of plate boundaries and hotspots • To understand the causes of tectonic hazards and why they vary at different plate boundaries • To know the different types of volcanoes and how they are formed • To know the impacts of and responses to different types of volcanic activity, and how they vary with location. 	Power point Edexcel B text book Online resources	Rapid recall seneca	Exam question practice and homework booklet
Week 7	Why do most earthquakes occur at convergent plate boundaries? How can we manage earthquake hazards? End of topic assessment	<ul style="list-style-type: none"> • To know why earthquakes occur at convergent plate boundaries • To know the impacts of and responses to earthquakes and how they vary with location using case a case study (Haiti vs Japan) • To understand how different countries manage earthquakes. • Complete a mock/end of topic assessment based on paper 1 exam questions 	Power point Edexcel B text book Online resources	Rapid recall Seneca End of unit assessment	Exam question practice and homework booklet