

Scheme of work: Geography Year 3

3.1.1 The challenge of natural hazards

3.1.1.1 Natural hazards

Key idea	Specification content	Case studies Homework	Learning activity and resources
Natural hazards pose major risks to people and property.	Definition of a natural hazard. Types of natural hazard. Factors affecting Hazard risk.		Read P 2 Revision Textbook Define hazard and disaster Students identify, sort, categorize a variety of hazards. Identify the factors that affect hazard risk

3.1.1.2 Tectonic hazards

Key idea	Specification content	Case studies Homework	Learning activity and resources
Earthquakes and volcanic eruptions are the result of physical processes.	The structure of the Earth Plate tectonics theory.	Revise for a short test on the structure of the Earth. Do a power point presentation on the 'Evidence to	https://www.youtube.com/watch?v=3MFr2cC3erk The structure of the earth. Shows the 6 main layers of the earth and the two types of crust – Continental and Oceanic 2 minutes https://www.youtube.com/watch?v=WwiiOjyfvAU Why Does The Earth Have Layers? 5 MINS background information Read P 3 Revision guide Structure of the Earth Use the handout to do a fact file on the structure of the earth Draw up a table to show the differences in continental and oceanic crust. https://www.youtube.com/watch?v=KfYn9KVya-Q The Whole Saga of the Supercontinents 10 minutes https://www.youtube.com/watch?v=_5q8hzF9VVE

	<p>Global distribution of earthquakes and volcanic eruptions and their relationship to plate margins.</p>	<p>support the theory of Continental Drift by Alfred Wegener. Do an introductory slide(s) on who Wegener was and what his theory suggested. What was the main criticism of his theory?</p> <p>Plot 10 earthquakes and 10 volcanoes onto a base map and answer the question on the sheet</p>	<p>Continental Drift – Wegener Evidence of movement 12 mins https://www.jkgeography.com/alfred-wegener-and-continental-drift.html Alfred Wegener and Continental Drift https://www.youtube.com/watch?v=nbU809Cyrao Alfred Wegener: Great Minds https://www.youtube.com/watch?v=T1-cES1Ekto Continental Drift: Alfred Wegener Song by The Amoeba People</p> <p>Label the main tectonic plates onto a world map and show examples where plates are moving apart, towards each other and alongside each other</p> <p>https://www.youtube.com/watch?v=HrKTuCDierM Continents Adrift An Introduction to Continental Drift and Plate Tectonics 26 minutes – good over view of the topic. Planet Earth - worksheet on constructive plate boundaries</p> <p>https://www.youtube.com/watch?v=uh4dTLJ9q9o Introduction to Hot Spots 6 mins Introduce the movement of continental plates with the film of 'Scrat's Continental Crack Up' on YouTube GIS-mapping activity using USGS website to plot active volcanoes and earthquakes on a world map (plate margins marked on optional). Describe and explain the distribution.</p>
	<p>The physical processes taking place at different types of plate margins (constructive, destructive and conservative) that lead to earthquakes and volcanic activity.</p>		<p>Teacher taught using animations, such as "Kung Fu Panda Plate Tectonics" on YouTube Students to make well-annotated diagrams of the main types of plate margin. Write up an account of what is happening at each boundary.</p>

<p>The effects of and responses to a tectonic hazard vary between areas of contrasting levels of wealth.</p>	<p>Primary and secondary effects of a tectonic hazard. Immediate and long-term responses to a tectonic hazard.</p> <p>Use named examples to show how the effects and responses to a tectonic hazard vary between two areas of contrasting levels of wealth.</p>	<p>Earthquakes: LICs: Kashmir, Pakistan (2005), Economically advanced countries: L'Aquila, Italy (2009)</p>	<p>Read Page 7 Revision Guide Card sort of effects of tectonic hazards into four groups (primary, secondary, immediate and long term responses). Differentiate with group headings or let students classify into their own groups. Students write up findings into two T-Tables (effects and responses) Compare and contrast the difference between an earthquake in a LIC and a HIC.</p> <p>Introduce the idea of a Hazard Wall (Top Gear style Cool Wall). Throughout unit, students can rank and classify any case study or examples that occur during their course and put them on the Hazard Wall, depending on severity of effect. Brings forward the idea of comparing across the natural hazard types</p>
<p>Management can reduce the effects of a tectonic hazard.</p>	<p>Reasons why people continue to live in areas at risk from a tectonic hazard. How monitoring, prediction, protection and planning can reduce the risks from a tectonic hazard.</p>	<p>Past GCSE Questions Revise for end of tectonic hazards unit test</p>	<p>Read P 8 Revision Guide Enquiry Lesson: "Why do we still live in areas at risk?" https://www.youtube.com/watch?v=NmD2AF80O7g GCSE Geography Help Video 5: Why do people live in hazardous areas</p> <p>Introduce the Three P's (Planning, Prediction and Protection). Students draw out examples of each P from their two case studies. Hypothesise/discuss why the contrasting examples were different.</p>

3.1.1.3 Weather hazards Year 3

Key idea	Specification content	Case studies Homework	Learning activity and resources
Global	General atmospheric		<ul style="list-style-type: none"> Read P 9 Revision guide

<p>atmospheric circulation helps determine patterns of weather and climate.</p>	<p>circulation model: pressure belts and surface winds.</p>		<ul style="list-style-type: none"> • Draw a model of the Global Atmospheric Circulation • Draw a cross section to show the different movements of air and location of high and low pressure belts
<p>Tropical storms (hurricanes, cyclones, typhoons) develop as a result of particular physical conditions.</p>	<p>Global distribution of tropical storms (hurricanes, cyclones, typhoons). An understanding of the relationship between tropical storms and general atmospheric circulation. Cause of tropical storms and the sequence of their formation and development. The structure and features of a tropical storm. How climate change might affect the distribution, frequency and intensity of tropical storms.</p>	<p>Revise for a test on Hurricanes</p>	<p>National Geographic video- Hurricanes 101 National Geographic website: Environment - Natural Disasters-Forces of Nature Read P 10 Revision Guide Label onto a map the distribution of Hurricanes, Cyclones and Typhoons. Describe the distribution of these storms key factors in TRS development: Temperature of the ocean Wind shear Main wind belts Rotation of the Earth</p> <p>Draw a cross section of a hurricane and annotate it</p> <p>Describe how climate change may affect tropical storms in the future</p>
<p>Tropical storms have significant effects on people and the</p>	<p>Primary and secondary effects of tropical storms. Immediate and long-term responses to a</p>	<p>Hurricanes: Katrina (2005)</p>	<p>Card sort of effects of tectonic hazards into four groups (primary, secondary, immediate responses, long term responses). On computer Students write up findings into two T-Tables (Effects – primary and secondary and Responses short and long term)</p>

environment.	<p>tropical storm. Use named example of a tropical storm to show its effects and responses. How monitoring, prediction, protection and planning can reduce the effects of tropical storms.</p>		<p>Follow up with 3Ps already introduced to show how they ameliorate hazard effects. https://www.youtube.com/watch?v=0Y4MrcJMgmo GCSE Geography Climatic Hazards Overview 10 minutes</p>
The UK is affected by a number of weather hazards.	<p>Overview of types of weather hazard experienced in the UK.</p>		<p>Discussion and Concept mapping of types of hazards experienced in UK. Link it back to global circulation and position of UK on Polar Front Jet Stream/Polar and Ferrell cell convergence.</p>
Extreme weather events in the UK have impacts on human activity.	<p>One example of a recent extreme weather event in the UK to illustrate:</p> <ul style="list-style-type: none"> • causes • social, economic and environmental impacts • how management strategies can reduce risk • Evidence that weather is becoming more extreme in the UK. 	<p>Flash floods: Boscastle (August 2004)</p> <p>Periods of exceptionally cold weather and snow: Winter 2010/2011</p> <p>Past question GCSE</p>	<p>Extreme weather event of teacher choice Extreme cold weather in December 2010 P14 Revision Guide</p> <p>Design a poster showing the impacts of the extremely cold weather in December 2010 – use the pictures provided and write annotations</p> <p>Draw up a table to show how management strategies reduce the risk of weather hazards</p>

3.1.1.4 Climate change Year 3

Key idea	Specification content	Case studies Homework	Learning activity and resources
<p>Climate change is the result of natural and human factors and has a range of effects.</p>	<p>Evidence for climate change from the beginning of the Quaternary period to the present day. Possible causes of climate change. Natural factors: orbital changes, volcanic activity and solar output. Human factors: use of fossil fuels, agriculture and deforestation. Overview of the effects of climate change on people and the environment.</p>	<p>Past GCSE questions</p>	<p>Define: climate change Quaternary</p> <p>Describe the different ways that can collect evidence to show climate change has taken place over different time periods Students collect evidence climate change eg graphs of glacial retreat, CO₂ concentrations over time, maps of arctic ice reduction, weather records, historical evidence such as Frost Fair, Mauna Loa records, Vostok ice cores etc Design a power point slide to show these pieces of evidence</p> <p>Teach causes using videos and textbook. Students create a map/table of effects at the UK scale and global scale.</p>
<p>Managing climate change involves both mitigation (reducing causes) and adaptation (responding to</p>	<p>Managing climate change: mitigation – alternative energy production, carbon capture, planting trees, international</p>	<p>Past GCSE questions</p>	<p>Spilt class into two groups to cover mitigation and adaptation separately. Discuss the difference in approaches. Group discussion: Discuss differences to draw out the ideas of mitigation of climate change and adaptation to climate change.</p> <p>Colour code table with mitigation and adaptation</p>

change).	agreements Adaptation – change in agricultural systems, managing water supply, reducing risk from rising sea levels.		
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