

OXFORD

INTERNATIONAL
AQA EXAMINATIONS

INTERNATIONAL AS GEOGRAPHY

(9635)

Schemes of work

Physical geography 1: Living with hazards

This scheme of work is not exhaustive or prescriptive; it is designed to suggest activities and resources that you might find useful in your teaching.

Hazards

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
<p>Week 1</p> <p>The concept of hazard in a geographical context</p> <p>Nature, forms and potential impacts of natural hazards (geophysical, atmospheric and hydrological). Hazard perception and its economic and cultural determinants.</p>	<p>Use of key subject specific and technical terminology.</p> <p>To identify connections and interrelationships between different aspects of geography.</p>	<p>Students should be able to define and differentiate between key terms of 'hazard', 'natural hazard' and 'disaster' as used by geographers.</p> <p>Students to be able to name examples of different types of natural hazards and classify these into:</p> <ul style="list-style-type: none"> • geophysical • atmospheric • hydrological. 	<p>Introduction to hazards via class discussion – brain storm about what a hazard is and the types</p> <p>Teacher feedback using an article or video that demonstrates what the terms 'hazard' and 'disaster' means and what natural hazards are students familiar with.</p> <p>Use the list of natural hazards from the students and ask them to classify into the types of hazard and add more ideas – use research to help students develop a better understanding.</p> <p>Some opportunities for linking and connecting ideas using a linking web and noting down differences (perhaps using a different colour) to begin looking at the characteristics and assess</p>	<p>Introductory article on natural hazards: oas.org/dsd/publications/Unit/oea54e/ch05.htm</p> <p>5 minute video clip on how natural hazards affect humans: youtube.com/watch?v=n73qtEojP_Y</p> <p>Definitions of types of hazards and excellent links to further information on each: ifrc.org/en/what-we-do/disaster-management/about-disasters/definition-of-hazard/</p> <p>List of natural hazards experienced in different countries around the world: cia.gov/library/publications/the-world-factbook/fields/2021.html</p> <p>National Geography feature length documentary on the world's 'top 10' natural disasters: youtube.com/watch?v=ps9jq6XS5Sc</p> <p>US Homeland Security has summarised different types of natural hazards. These links are also useful for mitigation and response: ready.gov/natural-disasters</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
			<p>students prior knowledge on the topic.</p> <p>Ensure students have definitions of key terms used so far.</p>	<p>Video suggesting difference between hazards and disasters: youtube.com/watch?v=DXshDu9EPZA</p>
<p>Week 1</p> <p>The concept of hazard in a geographical context</p> <p>Characteristic human responses – fatalism, prediction, adjustment/adaptation, mitigation, management, risk sharing – and their relationship to hazard incidence, intensity, magnitude, distribution and level of development.</p>	<p>Use of key subject specific and technical terminology.</p> <p>Labeling and annotation of diagrams.</p> <p>Identifying, finding and using a variety of sources of geographical information.</p>	<p>Students will understand that natural hazards have common characteristics:</p> <ul style="list-style-type: none"> • each has clear origins and distinctive effects • little or no warning • exposure to the risk may be involuntary • most damage and loss of life occurs shortly after the hazard, but impacts may last into the future • their scale and impact requires an emergency response. <p>Students to understand the terms ‘risk’ and ‘vulnerability’ with reference to natural hazards.</p> <p>Students to be able to identify and understand factors influencing the perception of</p>	<p>Use of images of particular hazards with locations. Ask student to rank the vulnerability of the people to the hazard and give reasons. Small group discussion - why might populations/groups be vulnerable to natural hazards and exposed to risk?</p> <p>Opportunity to use textbooks or the internet to research a model of vulnerability; students to draw/construct a mind-map or model identifying the variables that affect vulnerability.</p> <p>Paired/small group discussion with feedback for students to identify factors including:</p> <ul style="list-style-type: none"> • socio-economic status 	<p>Short introduction on concept of risk with links to academic resources on risk perception: geo.mtu.edu/rs4hazards/links/Social-KateG/Risk%20Perception.htm</p> <p>An introduction to risk perception: markusschmidt.eu/pdf/Intro_risk_perception_Schmidt.pdf</p> <p><i>Geofile 602</i> looks at vulnerability and hazard perception.</p> <p>RGS discussion of natural hazards and resilience with videos and diagrams: 21stcenturychallenges.org/natural-hazards-2/</p> <p>Useful list of hazards terminology from United Nations: unisdr.org/we/inform/terminology</p> <p>Some interesting links and resources on hazards, risks and mitigation from the World Bank: worldbank.org/en/topic/disasterriskmanagement</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
		<p>natural hazards, including:</p> <ul style="list-style-type: none"> • socio-economic status • level of education • employment status • religion, cultural background • family situation • past experience • personal values and personality. <p>Students to understand three key responses to natural hazards:</p> <ul style="list-style-type: none"> • fatalism • adaptation • fear. <p>Students to understand the difference between primary and secondary (short term and long term) impacts of natural hazards.</p> <p>Students to understand the terms 'distribution', 'frequency' and 'magnitude' as they are used by</p>	<ul style="list-style-type: none"> • level of education • employment status • religion, cultural background • family situation • past experience • personal values and personality <p>that influence people's perception of natural hazard – for stretch and challenge look at asking pupils to interconnect these and/ or rank them and justify their choices.</p> <p>Opportunity to ask students to explain the three key responses (fatalism; adaptation; fear) to natural hazards. Look at the similarities and differences between these, using research.</p> <p>Develop use of hot seat word game to look at new and old concepts including frequency, magnitude, distribution, primary and</p>	

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
		<p>geographers in relation to natural hazards.</p> <p>It is vital that these generic themes relating to the concept of 'hazards' are reinforced throughout the following on volcanic, seismic, storm and fire hazards.</p>	secondary.	
<p>Week 1</p> <p>The concept of hazard in a geographical context</p> <p>The Park model of human response to hazards. The hazard management cycle.</p>	<p>Use of key subject specific and technical terminology.</p> <p>Labeling and annotation of diagrams.</p> <p>Using models in geography.</p> <p>Research skills.</p>	<p>Students to understand key ideas relating to the management of natural hazards, including:</p> <ul style="list-style-type: none"> • community preparedness/risk sharing • integrated risk management • mitigation • monitoring • prediction • prevention • protection • reconstruction • rehabilitation • relief 	<p>Opportunity for independent research task. Students given a brief to research and create a short report on the key ideas relating to the management of natural hazards (listed in previous column). They should also find a copy of a model of the 'process of risk management', the Park response model and the hazard management cycle and give a written explanation of each. This could be presented as a wall display, PowerPoint/Prezi presentation, video/animation (to share on the VLE), or written report.</p>	<p>Interesting information about risk assessment and responses to hazards, including an interpretation of the "disaster, or hazard, response curve" - Park (1991): thegeographeronline.net/hazards-and-disasters---risk-assessment-and-response.html</p> <p>An entertaining TED talk about managing hazard response: ted.com/talks/caitria_and_morgan_o_neill_how_to_step_up_in_the_face_of_disaster</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
		<ul style="list-style-type: none"> • resilience. <p>Students to understand the terms 'risk' and 'vulnerability' with reference to natural hazards.</p> <p>Students to understand and be able to explain the Park response model and the hazard management cycle.</p> <p>Students to understand key ideas relating to the management of natural hazards, including:</p> <ul style="list-style-type: none"> • community preparedness/risk sharing • integrated risk management • mitigation • monitoring • prediction • prevention • protection • reconstruction • rehabilitation 	<p>Short discussion/question and answer session to ensure students can define the key terms relating to distribution, frequency and magnitude of natural hazards.</p> <p>Various opportunities above to assess learning with a range of exam style questions and peer assessment.</p>	

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
		<ul style="list-style-type: none"> relief resilience. <p>It is vital that these generic themes relating to the concept of 'hazards' are reinforced throughout the following on volcanic, seismic, storm and fire hazards.</p>		
<p>Week 2</p> <p>Plate tectonics</p> <p>Earth structure and internal energy sources. Plate tectonic theory of crustal evolution: tectonic plates; plate movement; gravitational sliding; ridge push, slab pull; convection currents and seafloor spreading.</p>	<p>Use of key subject specific and technical terminology.</p> <p>Opportunities to develop skills such as drawing, labeling and annotating diagrams.</p> <p>Using atlas maps and research to produce an annotated map.</p>	<p>Students to appreciate geological timescales and change</p> <p>Students to analyse the structure of the Earth and its role in plate tectonics</p> <p>Students to understand the structure of the Earth and internal energy sources, including:</p> <ul style="list-style-type: none"> Internal structure and the characteristics of: <ul style="list-style-type: none"> crust lithosphere asthenosphere mantle outer core 	<p>Paired/small group discussion followed by feedback – how old is the Earth? How did it form? What is the structure of the Earth?</p> <p>Back to back drawings to develop communication skills – show diagram of the earth and ask pupils to describe it to their neighbor – focusing on proportion, links, connections etc.</p> <p>Pupils use research online and other materials to produce a clear set of notes and diagrams covering the structure of the Earth.</p> <p>Students produce annotated sketches</p>	<p>Simple interactive diagrams of the structure of the earth and plate tectonics: learner.org/interactives/dynamicearth/structure.html</p> <p>More sophisticated background information on drivers of plate movement (ridge push, slab pull etc): umich.edu/~gs265/tecpaper.htm</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
		<ul style="list-style-type: none"> • inner core • The distribution of the major tectonic plates and plate boundaries. • Internal sources of heat, including: <ul style="list-style-type: none"> • residual heat from Earth's formation • radioactive decay of elements in the core. <p>Students to understand the characteristics and origin of continental and oceanic crust.</p> <p>Students to be able to describe and explain the nature of plate movement, including:</p> <ul style="list-style-type: none"> • Speed and direction of movement of the major plates. • The evolution of various theories to explain plate movement. To include: <ul style="list-style-type: none"> • gravitational sliding • ridge push 	<p>explaining the different characteristics of continental and oceanic crust and their origin.</p> <p>Check learning with displaying characteristics and asking which crust/ layer of the earth the characteristic pertains to.</p> <p>Annotate a map indicating the distribution of different ages of crust and add in major plate boundaries to link to the next ideas – ensuring plate boundaries to indicate the direction and speed of movement of the major tectonic plates.</p>	

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
		<ul style="list-style-type: none"> • slab pull • convection currents • sea floor spreading (possibly paleomagnetism). 		
Weeks 2–3 Plate tectonics Destructive, constructive and conservative plate margins. Characteristic processes: seismicity and volcanicity. Associated landforms: young fold mountains, rift valleys, ocean ridges, deep sea trenches and island arcs, volcanoes.	Use of key subject specific and technical terminology. Opportunities to develop skills such as drawing, labeling and annotating diagrams. Online research into plate tectonic theory. Construct and annotate a range of graphs and use statistical skills. Developing extended writing skills. Using atlas maps. Producing annotated maps. Practicing exam style questions. Including the use of peer	Students to understand that the movement of tectonic plates gives rise to different plate margins: <ul style="list-style-type: none"> • destructive • constructive • conservative. Students to be able to describe and explain the characteristic processes associated with each type of plate margin, including: <ul style="list-style-type: none"> • seismicity • volcanicity. Whilst learning about each type of plate boundary students should also understand the range of landforms that are associated with each type of plate boundary, including:	Using a range of resources students to produce detailed annotated diagrams to explain plate movement – the use of information, diagrams and key words could be perhaps matched up to provide a little more challenge. Using an atlas/textbook/ internet resources students to produce an annotated map to locate the different kinds of plate margins – can add volcanicity and seismicity to this later along with distinctive plate boundary feature examples. Complete a table that summarises where and why seismicity and volcanicity occurs in	Background to plate tectonic theory with a multiple choice quiz and extra reading: learner.org/interactives/dynamicearth/structure.html Excellent map and summary of types of plate boundaries and other areas of tectonic theory with interactive maps and video/animation clips: geolsoc.org.uk/Plate-Tectonics Short introductory video on plate boundaries and theory from National Geographic, with some questions and extra reading: nationalgeographic.org/media/plate-tectonics/ Information and diagrams explaining how volcanoes work: geology.sdsu.edu/how_volcanoes_work/intraplvolc_page.html University of Leicester on island arcs and subduction zones: le.ac.uk/gl/art/gl209/lecture5/lecture

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
	<p>assessment.</p> <p>Conducting independent and group research tasks.</p> <p>Making links within, across and beyond this area of the specification.</p>	<ul style="list-style-type: none"> • young fold mountains • rift valleys • ocean ridges • deep sea trenches • island arcs • volcanoes. 	<p>relation to boundary types.</p> <p>Practice short question tariffs to look at describing patterns on maps – use multiple-choice questions to look at making connections based upon a resource.</p> <p>Students to add a tracing overlay to their map of plate boundaries to indicate the distribution of earthquakes and volcanoes. Opportunity to assess learning with exam style questions to explain the nature of plates, plate boundaries, plate movement and associated processes.</p> <p>Opportunity for small group research task. Each student given one landform associated with a different type of plate margin to research. The group then produces a display/report/electronic presentation/set of revision notes etc. that describes the distribution of, describes the</p>	<p>5.html</p> <p>Geology.com look at the East African Rift system: geology.com/articles/east-africa-rift.shtml</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
			characteristics of and explains the formation of the range of landforms listed. Potential for using modeling dough to ask students to show the feature and discuss its creation linking to plate boundaries.	
Week 3 Plate tectonics Magma plumes and their relationship to plate movement.	<p>Use of key subject specific and technical terminology.</p> <p>Opportunities to develop skills such as drawing, labeling and annotating diagrams.</p> <p>Practicing exam style questions. Including the use of peer assessment.</p> <p>Conducting independent and group research tasks.</p> <p>Making links within, across and beyond this area of the specification.</p>	<p>Students should understand that movement of magma within the mantle is not as simple as some easier/older texts may suggest and that, although still valid and relevant, earlier ideas of simple convection cells are only part of the explanation. Students should understand the theory and proposed role of magma plumes. It may suffice to focus on the idea of Hot Spots as proposed by J T Wilson in the 1960s or more able students may wish to engage with the more recent and broader debate that exists about the nature and role of magma plumes.</p>	<p>Opportunity to direct students to short articles to research the idea of magma plumes and “hot spots”. Students could illustrate this with detailed annotated maps/cross-sections through the island chain of Hawaii and remnant seamount chains to help explain hot spots and their relationship to plate movement. Some students may be able to research more detailed academic articles to explore the more recent debate in the literature.</p>	<p>Brief overview of mantle thermal plumes: pubs.usgs.gov/gip/dynamic/hotspots.html</p> <p>CT scans link deep mantle plumes with volcanic hotspots: news.berkeley.edu/2015/09/02/ct-scan-of-earth-links-deep-mantle-plumes-with-volcanic-hotspots/</p> <p>Debate over the ‘question of mantle plumes’: earthmagazine.org/article/question-mantle-plumes</p> <p>Research the work of J T Wilson (1969) of magma plumes linked to hot spot volcanoes</p> <p>Video about magma plumes and hotspots in the Hawaiian islands: geolsoc.org.uk/Plate-Tectonics/Chap3-Plate-Margins/Mid-plate/Hawaiian-Islands</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
<p>Week 4</p> <p>Volcanic hazards</p> <p>The nature of vulcanicity and its relation to plate tectonics: forms of volcanic hazard: nuées ardentes, lava flows, mudflows, pyroclastic and ash fallout, gases/acid rain, tephra. Spatial distribution, magnitude, frequency, regularity and predictability of hazard events.</p>	<p>Use of key subject specific and technical terminology.</p> <p>Opportunities to develop skills such as drawing, labeling and annotating diagrams.</p> <p>Online research into volcanic hazards.</p> <p>Using atlas maps.</p> <p>Producing annotated maps.</p> <p>Practicing exam style questions. Including the use of peer assessment.</p> <p>Conducting independent and group research tasks.</p> <p>Making links within, across and beyond this area of the specification.</p> <p>Engage with remotely sensed satellite data.</p>	<p>Students to connect volcanic activity with plate tectonic processes and plate boundaries. Students describe and explain the distribution of volcanic activity in relation to:</p> <ul style="list-style-type: none"> ocean ridges and sea floor spreading destructive plate boundaries and subduction zones rift valleys intraplate vulcanicity – hot spots. <p>Students understand that the nature of volcanic events and volcanic features are the result of a combination of factors, including:</p> <ul style="list-style-type: none"> type of plate boundary – constructive, destructive or intraplate nature of magma, ie <ul style="list-style-type: none"> viscosity – silica, gas and water content explosivity – Volcanic 	<p>Engage students with a range of video clips to identify various types of eruptions. Begin to discuss where these might happen and why they are different. Return to this question at the end of the section.</p> <p>Provide maps of volcanic activity and volcanic features such as rift valleys, island arcs etc. Pupils to look at correlation and describe the distribution. Can begin to suggest relationships.</p> <p>Opportunity for students to research the distribution of ‘recent’ volcanic events and annotate a base map of the Earth accordingly.</p> <p>Students to use textbooks/online resources to research the nature of different types of magma and produce a classification table or better still a continuum of lava types, the volcano shape associated and the hazards linked to the type</p>	<p>The Smithsonian provides information of recent volcanic activity along with volcano discovery:</p> <p>volcano.si.edu/reports_weekly.cfm</p> <p>volcanodiscovery.com/erupting_volcanoes.html</p> <p>Hazard information about volcanoes in the USA:</p> <p>volcanoes.usgs.gov/vhp/hazards.html</p> <p>Factsheet on volcano hazards:</p> <p>pubs.usgs.gov/fs/fs002-97/</p> <p>Simple interactive map of earthquakes, volcanoes and plate boundaries:</p> <p>pbslearningmedia.org/resource/ess05.sci.ess.earthsys.tectonic/tectonic-plates-earthquakes-and-volcanoes/</p> <p>Live and up-to-date information on volcanic activity in the USA:</p> <p>usgs.gov/science/mission-areas/natural-hazards/volcano-hazards</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
		<p>Explosivity Index</p> <ul style="list-style-type: none"> acidic → basic, rhyolitic → andesitic → basic. <p>Students understand and link vulcanicity to 'spatial distribution', 'magnitude and frequency' in relation to volcanic events.</p>	<p>of eruption to synoptically link ideas.</p> <p>Opportunity to assess learning with a range of exam style questions – could involve some peer assessment.</p>	
<p>Week 4</p> <p>Volcanic hazards</p> <p>Impacts: primary/secondary, environmental, social, economic, political. Short and long-term responses: risk management designed to reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation.</p>	<p>Use of key subject specific and technical terminology.</p> <p>Opportunities to develop skills such as drawing, labeling and annotating diagrams.</p> <p>Online research into volcanic hazards.</p> <p>Construct a range of graphs and use statistical skills.</p> <p>Developing extended writing skills.</p> <p>Practicing exam style questions. Including the use of peer assessment.</p> <p>Conducting</p>	<p>Students should analyse the use of the volcanic explosivity index.</p> <p>Students should be able to describe, explain and assess the impact of a range of volcanic hazards, including:</p> <ul style="list-style-type: none"> primary hazards (impacts) <ul style="list-style-type: none"> ash lava flows nuées ardentes pyroclastic events tephra volcanic gases secondary hazards (impacts) <ul style="list-style-type: none"> acid rain 	<p>There is an opportunity here, or elsewhere, for students to explore how the experience of these ideas will vary from place to place and so links to 'experience of place' in the Changing places unit.</p> <p>Use of photographs, accounts, videos etc. to analyse the primary and secondary impacts of volcanic hazards. Students should note these down and define these.</p> <p>Paired/small group discussion – how can the impacts of volcanic hazards be categorized? Students to try and think of examples of each. Use an article of a volcanic hazard</p>	<p>Details on hazardous events caused by volcanic activity: volcanology.geol.ucsb.edu/hazards.htm</p> <p>Geohazards information on volcanoes: geohazards.massey.ac.nz/volcanoes/intro_v.html</p> <p>Brief summary of some volcanic hazards relating to an eruption in Auckland New Zealand: aucklandcouncil.govt.nz/EN/environmentwaste/naturalhazardsemergencies/hazards/Pages/volcanichazards.aspx</p> <p>A range of resources on volcanoes, including podcasts and presentations: geolsoc.org.uk/volcanoes</p> <p>Magnitude and frequency of volcanic eruptions, including diagrams showing the explosivity index</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
	<p>independent and group research tasks.</p> <p>Making links within, across and beyond this area of the specification.</p> <p>Engage with remotely sensed satellite data.</p>	<ul style="list-style-type: none"> • climate change • flooding • tsunamis. <p>Students to understand volcanic hazards can be categorised (possible opportunity to discuss the usefulness of classification in geography). Categories to include:</p> <ul style="list-style-type: none"> • primary/secondary • environmental, social, economic, political. <p>Students to understand that responses to volcanic hazards can be categorised as 'short and long-term'.</p> <p>Students to appreciate that risk management is designed to reduce the impacts of volcanic hazards via:</p> <ul style="list-style-type: none"> • preparation • mitigation • prevention • adaptation. 	<p>to read and classify the effects and responses. Some comprehension can be used and there is the possibility to use this to create some mid tariff questions.</p> <p>Students to discuss the following terms in relation to managing volcanic hazards, and to suggest examples of each:</p> <ul style="list-style-type: none"> • preparation • mitigation • prevention • adaptation. <p>Opportunity to assess learning with a range of exam style questions – could involve some peer assessment.</p>	<p>geology.sdsu.edu/how_volcanoes_work/Variability.html</p> <p>geology.com/stories/13/volcanic-explosivity-index/</p> <p>Interactive presentation on predicting volcanic eruptions: volcanoes.usgs.gov/vhp/predict_flash.html</p> <p>Article on development of new method for predicting volcanic eruptions: sciencedaily.com/releases/2015/10/151028084917.htm</p> <p>Short video clip on predicting volcanoes: youtube.com/watch?v=f164H2-Yty4</p> <p>Short video clip on predicting volcanic eruptions in Iceland: youtube.com/watch?v=wnKvO4IzJzk</p> <p>Information on effects of volcanic events: basicplanet.com/effects-volcanoes/</p> <p>Detailed academic article on the effects and consequences of very large explosive volcanic eruptions: rsta.royalsocietypublishing.org/content/364/1845/2073</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
				<p>60 minute lecture from the Open University on various impacts of volcanoes: youtube.com/watch?v=maRPczwbzFw</p> <p>Key facts about preparing for a volcanic eruption: emergency.cdc.gov/disasters/volcanoes/before.asp</p> <p>Short video on responses in Congo as a low income country: twigonglow.com/film/volcanoes-ledc-response-1774/</p> <p>Some links and ideas about teaching about response to a volcano: cotf.edu/ete/modules/volcanoes/vthereats.html</p> <p>Open University information about mitigating the effects of volcanoes worldwide, with links to mitigating volcano impacts: open.ac.uk/research/main/impact/reports/mitigating-effects-volcanoes</p> <p>National Geographic information on living with/adapting to volcanoes: ngm.nationalgeographic.com/2008/01/volcano-culture/andrew-marshall-text.html</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
				Short but in-depth academic article on living with volcanoes and potential opportunities for sustainable livelihoods: geo.mtu.edu/~raman/papers2/Kelma_nMatherJVGR.pdf
Week 5 Volcanic hazards Impacts and human responses as evidenced by a recent volcanic event.	Use of key subject specific and technical terminology. Producing annotated maps. Practicing exam style questions. Including the use of peer assessment. Conducting independent and group research tasks. Making links within, across and beyond this area of the specification. Engage with remotely sensed satellite data.	Students to develop a detailed understanding of one recent volcanic event (to be chosen by individual students/centres). Students must be able to: <ul style="list-style-type: none"> describe the spatial and temporal setting of the event describe and explain the association of the event to plate boundaries and plate movement assess the perception of the event, and the factors affecting those perceptions at a range of scales – eg magnitude, frequency, population characteristics etc explain the causes of the event explain and assess the impacts of the event 	If this is the first case study, work through the stages of research and what is required with the group – such as volcanic setting, location and boundary, features, lava type, eruption type, primary and secondary effects (can be sub classified into social, economic, environmental etc), short-term response and long-term response. Vulnerability should be considered alongside an evaluation against the park model to link in the basic hazard concepts from early in the programme of study. Students could be encouraged to be creative in the method used to present their findings, but as a guide, it should	The Smithsonian provides information of recent volcanic activity along with volcano discovery: volcano.si.edu/reports_weekly.cfm volcanodiscovery.com/erupting_volcanoes.html Resources for specific case studies will depend on those chosen by the individual student/centre.

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
		<ul style="list-style-type: none"> explain, assess and justify the response to the event – including the factors affecting this response. 	<p>include the information listed in previous column.</p> <p>Practice mid to high tariff exam questions to assess learning and create own questions from the learning.</p>	
<p>Weeks 5–6</p> <p>Seismic hazards</p> <p>The nature of seismicity and its relation to plate tectonics: forms of seismic hazard: earthquakes, shockwaves, tsunamis, liquefaction, landslides. Spatial distribution, randomness, magnitude, frequency, regularity, predictability of hazard events.</p>	<p>Use of key subject specific and technical terminology.</p> <p>Opportunities to develop skills such as drawing, labeling and annotating diagrams.</p> <p>Developing critical reading and research skills</p> <p>Using atlas maps.</p> <p>Producing annotated maps.</p> <p>Practicing exam style questions, including the use of peer assessment.</p>	<p>Students to understand that much seismic activity is associated with plate tectonic processes and occurs along plate boundaries.</p> <p>Students to be able to describe the distribution of seismic activity as being mainly associated with:</p> <ul style="list-style-type: none"> destructive plate boundaries – and subduction zones conservative plate margins/transform faults. <p>Students should understand that the nature of seismic events and resulting hazards is the result of a combination of factors, including:</p> <ul style="list-style-type: none"> type of plate boundary – constructive, destructive or 	<p>Use maps to make connections between seismic activity and plate boundaries</p> <p>Students discuss factors affecting the nature of an earthquake including type of plate boundary, nature of plate movement and focus depth. Matching activity on fault types, plate margins etc.</p> <p>Pupil diagrams of epicenter, focus etc of an earthquake and how factors affect the earthquake.</p> <p>Opportunity for students to research the different scales used to measure the magnitude or scale of seismic events including Richter scale, Mercalli</p>	<p>British Geological Survey summary of many of the key ideas around seismicity and earthquakes: bgs.ac.uk/discoveringGeology/hazards/earthquakes/home.html</p> <p>Short introductory video to earthquakes from National Geographic: video.nationalgeographic.com/video/101-videos/earthquake-101</p> <p>Brief summary of some earthquake/seismic hazards: gns.cri.nz/Home/Learning/Science-Topics/Earthquakes/Earthquake-Hazards</p> <p>USGS maps, magnitude, statistics and details of current/recent seismic events: earthquake.usgs.gov/earthquakes/</p> <p>Short animation on techniques and scales for measuring earthquakes: youtube.com/watch?v=NI8v1iSRtxA</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
		<p>conservative</p> <ul style="list-style-type: none"> nature and rate of movement depth of focus. <p>Ensure students understand what is meant by 'spatial distribution', 'magnitude and frequency' in relation to seismic events. Reinforce previous map work locating seismic activity and the scales used to measure the magnitude of seismic events, including:</p> <ul style="list-style-type: none"> Richter scale Mercalli scale moment magnitude scale. <p>(Students should also understand the almost randomness associated with some seismic hazards).</p>	<p>scale and moment magnitude scale.</p> <p>Ensure students have notes on the key ideas around magnitude and frequency of seismic events. There is an opportunity here, or elsewhere, for students to explore ideas of how the experience of these concepts will vary from place to place and so links to 'experience of place' in the Changing places unit.</p> <p>Some reading and extended ideas about the frequency, predictability etc of earthquakes would stretch the top end.</p>	<p>Brief summary of Richter, MM and Mercalli scales: geo.mtu.edu/UPSeis/intensity.html</p> <p>Excellent simple statistics of earthquake magnitude and frequency: earthquake.usgs.gov/earthquakes/browse/</p> <p>British geological survey discussion about whether earthquake activity is increasing: earthquakes.bgs.ac.uk/research/earthquakeActivity.html</p>
<p>Weeks 5–6</p> <p>Seismic hazards</p> <p>Impacts: Primary/secondary;</p>	<p>Use of key subject specific and technical terminology.</p> <p>Opportunities to</p>	<p>Students should be able to describe, explain and assess the impacts of seismic hazards, to include:</p>	<p>Opportunity for a small group research task: each group is given the list of seismic hazards and individuals research</p>	<p>Overview of the four main earthquake hazards: geo.mtu.edu/UPSeis/hazards.html</p> <p>More detailed information on types of</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
<p>environmental, social, economic, political.</p> <p>Short and long-term responses; risk management designed to reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation.</p>	<p>develop skills such as drawing, labeling and annotating diagrams.</p> <p>Online research into seismic hazards.</p> <p>Construct a range of graphs and use statistical skills.</p> <p>Developing extended writing skills.</p> <p>Using atlas maps.</p> <p>Producing annotated maps.</p> <p>Practicing exam style questions, including the use of peer assessment.</p> <p>Conducting independent and group research tasks.</p> <p>Making links within, across and beyond this area of the specification.</p> <p>Engage with remotely sensed satellite data.</p>	<ul style="list-style-type: none"> Primary hazards (impacts) <ul style="list-style-type: none"> earthquakes shockwaves ground shaking ground rupture. Secondary hazards (impacts) <ul style="list-style-type: none"> soil liquefaction landslides/avalanches tsunamis fires effects on people and the built environment. <p>Students to understand that seismic hazards can be categorised (possible opportunity to discuss the usefulness of classification in geography). Categories to include:</p> <ul style="list-style-type: none"> primary/secondary environmental, social, economic, political. <p>Students to understand that</p>	<p>one/two. This information is shared within their group and possibly with the class as a whole. Opportunity to produce a short report/wall display/electronic presentation etc.</p> <p>Paired/small groups discussion – how can the impacts of seismic hazards be categorised? Students to try and think of examples of each.</p> <p>Opportunity for a group discussion and mind-mapping activity. Ask students to discuss the following terms in relation to managing seismic hazards, and to suggest examples of each:</p> <ul style="list-style-type: none"> preparation mitigation prevention adaptation. 	<p>earthquake hazards, with diagrams: tulane.edu/~sanelson/Natural_Disasters/eqhazards&risks.htm</p> <p>Simple video clip on types of seismic wave: youtube.com/watch?v=ueIM5FkFco</p> <p>Computer animation of the travel of seismic waves (shockwaves) following an earthquake in California: smithsonianmag.com/videos/category/raw-source-video/traveling-seismic-waves/?no-ist</p> <p>16-page summary information sheet on many aspects of tsunamis: itic.ioc-unesco.org/index.php?option=com_content&view=article&id=1169&Itemid=1137&lang=en</p> <p>Short introductory video on tsunamis from National Geographic: video.nationalgeographic.com/video/101-videos/tsunami-101</p> <p>Brief video explaining the ‘anatomy of a tsunami’: youtube.com/watch?v=StdqGoezNrY</p> <p>Short summary of liquefaction with two video clips: geology.com/usgs/liquefaction/ Prof. D. Petley’s Landslide blog: some</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
		<p>responses to seismic hazards can be categorised as 'short and long-term'.</p> <p>Students to appreciate that risk management is designed to reduce the impacts of seismic hazards via:</p> <ul style="list-style-type: none"> • preparation • mitigation • prevention • adaptation. 		<p>interesting blogs, with great images and illustrative examples: blogs.agu.org/landslideblog/category/earthquake-induced-landslide/</p> <p>The Geological Society information on predicting, forecasting and mitigating earthquakes: geolsoc.org.uk/earthquake-briefing</p> <p>Short video from Harvard Museum of Natural Science on predicting earthquakes: youtube.com/watch?v=ROYOr2WbZdw</p> <p>Dara O'Briain's Science Club: short video clip on predicting earthquakes including crowd sourcing data: youtube.com/watch?v=w_jl97zWx2c</p> <p>Overview and definitions of hazards, and their primary and secondary impacts: tulane.edu/~sanelson/Natural_Disasters/introduction.htm</p> <p>More detailed information on some of the impacts of earthquakes: seismicresilience.org.nz/topics/seismic-science-and-site-influences/earthquake-effects/</p> <p>Earthquake country alliance information and resources about</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
				<p>preparing for, surviving and recovering from earthquakes: earthquakecountry.org/</p> <p>Detailed booklet with guidelines on preparing for, responding to and recovering from earthquakes: preventionweb.net/files/26164_earthquakeguidelinesenweb.pdf</p> <p>Article about seven ways the response to a devastating earthquake has changed: emergencymgmt.com/disaster/7-Ways-Response-Loma-Prieta-Earthquake.html</p> <p>An excellent list of resources to help prepare for and respond to earthquakes: earthquake.usgs.gov/learn/topics/topics.php?topicID=25</p> <p>Short geological society article on hazard mitigation: geolsoc.org.uk/earthquake-briefing</p>
<p>Week 6</p> <p>Seismic hazards</p> <p>Impacts and human responses as evidenced by a recent seismic</p>	<p>Use of key subject specific and technical terminology.</p> <p>Producing annotated maps.</p>	<p>Students to develop a detailed understanding of one recent seismic event (to be chosen by individual students/centres). Students</p>	<p>Students to be given clear instructions and guidance about creating a detailed case study of one recent seismic event. Students could be encouraged to be</p>	<p>Resources for specific case studies will depend on those chosen by the individual student/centre.</p> <p>Can use Japan casestudy as a base to work from for own choice:</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
event.	<p>Practicing exam style questions, including the use of peer assessment.</p> <p>Conducting independent and group research tasks.</p> <p>Making links within, across and beyond this area of the specification.</p>	<p>must be able to:</p> <ul style="list-style-type: none"> describe the spatial and temporal setting of the event describe and explain the association of the event to plate boundaries and plate movement assess the perception of the event, and the factors affecting those perceptions at a range of scales – eg magnitude, frequency, population characteristics etc explain the causes of the event explain and assess the impacts of the event explain, assess and justify the response to the event including the factors affecting this response. 	<p>creative in the method used to present their findings, but as a guide, it should include the information listed in previous column.</p>	<p>joeblakey.com/geography/case-study-japan-earthquake-tsunami-110311/</p> <p>UGS Earthquake track and EMSC show recent earthquakes</p> <p>earthquake.usgs.gov/earthquakes/map/</p> <p>earthquaketrack.com/v/asia/recent</p> <p>emsc-csem.org/#2</p>
<p>Week 7</p> <p>Storm hazards</p> <p>The nature of tropical storms and their</p>	<p>Use of key subject specific and technical terminology.</p> <p>Opportunities to develop skills such as</p>	<p>Students to understand that the nature of tropical storms is determined by their origins within the tropics. To be able to explain the causes of</p>	<p>Show pupils a range of weather maps and synoptic charts, show forecasting of tropical storms etc to initiate discussion about the</p>	<p>Good summary information on tropical storms from the Met Office: metoffice.gov.uk/weather/tropicalcyclone/</p> <p>Life cycle of hurricanes and tropical</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
underlying causes. Forms of storm hazard: high winds, storm surges, coastal flooding, river flooding and landslides. Spatial distribution, magnitude, frequency, regularity, predictability of hazard events.	<p>drawing, labeling and annotating diagrams.</p> <p>Online research into storm hazards.</p> <p>Using weather maps.</p> <p>Producing annotated maps.</p> <p>Practicing exam style questions, including the use of peer assessment.</p> <p>Engage with remotely sensed satellite data.</p>	<p>tropical storms, to include:</p> <ul style="list-style-type: none"> ocean location where sea temperatures are above 27°C ocean depth of at least 70m to provide moisture and latent heat a location beyond 5° north and south of the equator where the effect of the Coriolis force is greatest low level convergence of air rapid outflow of air in the upper atmosphere. <p>Students to be able to describe the distribution of tropical storms, noting their different names in different oceans.</p> <p>Reinforce previous map work locating storms and the scale used to measure the magnitude/intensity of tropical storms – the Saffir-Simpson scale</p>	<p>tropical storms.</p> <p>Use met office video or other similar video to look at the causes – write this as a list of ingredients and explain the formation in a sequence using research and textbooks. Link formation to temporal and spatial distribution.</p> <p>Practice low tariff examination questions to describe distribution and look at the various names based upon the storms location. Pupils may add these onto a base map</p> <p>Students discuss factors affecting the nature of hazards posed by tropical storms and rank these. Some development of justification.</p> <p>Opportunity for students to research how the scale and magnitude of tropical storms is measured including the Saffir-Simpson scale. Perhaps some statistical work could be done on correlation to</p>	<p>storms: ucar.edu/news/features/hurricanes/hc_t3.htm</p> <p>Short introductory video on tropical storms from National Geographic: video.nationalgeographic.com/video/101-videos/hurricanes-101</p> <p>Summary from National Hurricane Center of some impacts of tropical storms: nhc.noaa.gov/prepare/hazards.php</p> <p>Information on tropical storms and how to assess/categorise their impacts: bom.gov.au/cyclone/about/intensity.shtml</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
			develop skills.	
<p>Weeks 7–8</p> <p>Storm hazards</p> <p>Impacts: Primary/secondary, environmental, social, economic, political.</p> <p>Short and long-term responses: risk management designed to reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation.</p>	<p>Use of key subject specific and technical terminology.</p> <p>Opportunities to develop skills such as drawing, labeling and annotating diagrams.</p> <p>Online research into storm hazards.</p> <p>Construct a range of graphs and use statistical skills.</p> <p>Developing extended writing skills.</p> <p>Using atlas maps.</p> <p>Using weather maps.</p> <p>Producing annotated maps.</p> <p>Practicing exam style questions, including the use of peer assessment.</p> <p>Conducting independent and group research tasks.</p>	<p>Students should understand that the nature of tropical storm hazards relates to the marine and coastal locations involved, and hazards include:</p> <ul style="list-style-type: none"> • high winds • storms surges • coastal flooding • river flooding • landslides. <p>Students should be able to describe, explain and assess the specific nature of these impacts of tropical storms.</p> <p>Students to understand tropical storm hazards can be categorised (possible opportunity to discuss the usefulness of classification in geography). Categories to include:</p> <ul style="list-style-type: none"> • primary/secondary • environmental, social, economic, political. 	<p>There is an opportunity here, or elsewhere, for students to explore ideas of how the experience of these concepts will vary from place to place and so links to 'experience of place' in the Changing places unit.</p> <p>Opportunity for a small group research task: each group is given the list of hazards posed by tropical storms and individuals research one/two. This information is shared within their group and possibly with the class as a whole. Use examples and videos to demonstrate this.</p> <p>Opportunity to produce a short report/wall display/electronic presentation etc.</p> <p>Opportunity for a group discussion and mind-mapping activity. Ask students to discuss the following terms in relation to managing storm hazards</p>	<p>United States department of labor information on hurricane preparedness and response: osha.gov/dts/weather/hurricane/</p> <p><i>Geofiles 500 and 639.</i></p> <p>Various links to resources on preparing for, responding to and recovering from hurricanes: oceanservice.noaa.gov/hazards/hurricanes/</p> <p>Information on predicting tropical storms: web.mit.edu/12.000/www/m2010/teams/neworleans1/predicting%20hurricanes.htm</p> <p>Information with diagrams on tracking and forecasting tropical storms: hko.gov.hk/informtc/tracking.htm</p> <p>How tropical storms are forecast by the National Hurricane Center: hurricanescience.org/science/forecast/forecasting/forecastprocess/</p> <p>Live imagery mapping tropical storm activity around the world: wunderground.com/hurricane</p> <p>Short article about adapting to tropical storms:</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
	<p>Making links within, across and beyond this area of the specification.</p> <p>Engage with remotely sensed satellite data.</p>	<p>Students to understand that responses to storm hazards can be categorised as ‘short and long-term’.</p> <p>Students to appreciate that risk management is designed to reduce the impacts of tropical storm hazards via:</p> <ul style="list-style-type: none"> • preparation • mitigation • prevention • adaptation. 	<p>and to suggest examples of each:</p> <ul style="list-style-type: none"> • preparation • mitigation • prevention • adaptation. 	<p>scidev.net/global/disasters/opinion/countries-must-prepare-for-and-adapt-to-cyclone-im.html</p> <p>There are many online vlogs and journals about coping after hurricane Katrina which can be looked at for preparedness and social effects: webmd.com/a-to-z-guides/tc/marvins-story-coping-after-hurricane-katrina-marvins-story</p> <p>FEMA look at how to cope with disasters: fema.gov/coping-disaster</p>
<p>Weeks 7–8</p> <p>Storm hazards</p> <p>Impacts and human responses as evidenced by two recent tropical storms in contrasting areas of the world.</p>	<p>Use of key subject specific and technical terminology.</p> <p>Practicing exam style questions, including the use of peer assessment.</p> <p>Conducting independent and group research tasks.</p> <p>Making links within, across and beyond this area of the specification.</p> <p>Engage with remotely</p>	<p>Students to develop a detailed understanding of two recent tropical storms from contrasting areas of the world (to be chosen by individual students/centres). Students must be able to:</p> <ul style="list-style-type: none"> • describe the spatial and temporal setting of the tropical storms • assess the perception of the tropical storms, and the factors affecting those perceptions at a range of scales – eg magnitude, frequency, population 	<p>Students to be given clear instructions and guidance about creating detailed case studies of two recent tropical storms. Students could be encouraged to be creative in the method used to present their findings, but as a guide, it should include the information listed in previous column.</p> <p>Good opportunity to assess using the whole range of questions from low to high tariff.</p>	<p>Resources for specific case studies will depend on those chosen by the individual student/centre.</p> <p>Although outdated this shows an example of comparing two tropical storms – Nargis and Katrina: coolgeography.co.uk/9/Risky_Earth/Comparing%20Hurricanes/Comparing_hurricanes.htm</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
	sensed satellite data.	<p>characteristics etc</p> <ul style="list-style-type: none"> • explain the causes of the tropical storms • explain and assess the impacts of the tropical storms • explain, assess and justify the response to the tropical storms – including the factors affecting this response. 		
<p>Week 9</p> <p>Fires in nature</p> <p>Nature of wildfires. Conditions favouring intense wild fires: vegetation type, fuel characteristics, climate and recent weather and fire behaviour.</p> <p>Causes of fires: natural and human agency.</p>	<p>Use of key subject specific and technical terminology.</p> <p>Construct a range of graphs and use statistical skills.</p> <p>Using maps to analyse distribution.</p> <p>Analyse a range of causes.</p>	<p>Students to understand that the nature of wildfires is determined by the geographical characteristics of the area affected.</p> <p>To be able to explain the causes/conditions leading to intense wildfires, to include:</p> <ul style="list-style-type: none"> • vegetation type • fuel characteristics • climate • recent weather • fire behaviour. <p>Students to be able to describe the distribution of</p>	<p>Show pupils a map of wild fire distribution without a key/title and ask them what do the areas have in common – look at climatic characteristics, land type and weather maps linked to the areas shown to discuss similarities.</p> <p>Annotate a base map of wild fire distribution and describe the distribution of wild fires – use low tariff exam questions based upon a resource.</p> <p>Opportunity for students to use textbook/internet resources to ensure they</p>	<p>National Geographic photo gallery and summary of wildfires: environment.nationalgeographic.com/environment/natural-disasters/wildfires/</p> <p>Overview of wildfires: basicplanet.com/wildfire/</p> <p>Interactive global map of wildfires spanning from March 2000 to January 2016: earthobservatory.nasa.gov/GlobalMaps/view.php?d1=MOD14A1_M_FIRE</p> <p>Accounts of wildfires on each of the different continents: pbs.org/wgbh/nova/fire/world.html</p> <p>Simple introductory information on</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
		<p>wildfires.</p> <p>Students to understand the causes of wildfires, including:</p> <ul style="list-style-type: none"> • natural agency • human agency. 	<p>have detailed notes to explain the underlying causes of intense wildfires.</p> <p>Students to research the main causes of wildfires, including human and natural agency. Findings could be used to develop a class debate about the relative importance of each.</p>	<p>many aspects of wildfires: eschooltoday.com/natural-disasters/wildfires/information-on-wildfires.html</p> <p>Information on how wildfires work: science.howstuffworks.com/nature/natural-disasters/wildfire.htm</p> <p>Causes of wildfires: nps.gov/fire/wildland-fire/learning-center/fire-in-depth/wildfire-causes.cfm</p> <p>Earth unplugged video on causes of wildfires: youtube.com/watch?v=noJuE3oP2II</p> <p>SciShow video on the science behind wildfires: youtube.com/watch?v=F8OrmGAlqI4</p>
<p>Weeks 9–10</p> <p>Fires in nature</p> <p>Impacts: Primary/secondary; environmental, social, economic, political.</p> <p>Short and long-term responses; risk management designed to</p>	<p>Use of key subject specific and technical terminology.</p> <p>Opportunities to develop skills such as drawing, labeling and annotating diagrams.</p> <p>Online research into fire hazards.</p>	<p>Students should be able to describe, explain and assess the specific nature of impacts of wildfires.</p> <p>Students to understand wildfire hazards can be categorised (possible opportunity to discuss the usefulness of classification in geography). Categories to</p>	<p>Students discuss factors affecting the nature of hazards posed by wildfires. Use of discussion and ranking of the factors.</p> <p>Opportunity for a small group research task: each group to research hazards posed by wildfires and individuals research one/two. This information</p>	<p>Environmental impacts of forest fires: forestry.state.al.us/Publications/TR_EASURED_Forest_Magazine/2008%20Spring/The%20Environmental%20Effects%20of%20Wildfire.pdf</p> <p>Causes and effects of wildfires and solutions for dealing with them: conserve-energy-future.com/causes-effects-and-solutions-of-wildfires.php</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation.	<p>Construct a range of graphs and use statistical skills.</p> <p>Developing extended writing skills.</p> <p>Using atlas maps.</p> <p>Producing annotated maps.</p> <p>Practicing exam style questions, including the use of peer assessment.</p> <p>Conducting independent and group research tasks.</p> <p>Making links within, across and beyond this area of the specification.</p> <p>Engage with remotely sensed satellite data.</p>	<p>include:</p> <ul style="list-style-type: none"> primary/secondary environmental, social, economic, political. <p>Students to understand that responses to wildfire hazards can be categorised as 'short and long-term'.</p> <p>Students to appreciate that risk management is designed to reduce the impacts of wildfire hazards via:</p> <ul style="list-style-type: none"> preparation mitigation prevention adaptation. 	<p>is shared within their group and possibly with the class as a whole. Opportunity to produce a short report/wall display/electronic presentation etc. This could be done through mini examples from a range of newspaper articles to look at the wide ranging effects and link to the variety of effects based upon geographical location. Develop classification and categorisation from this.</p> <p>Opportunity for a group discussion and mind-mapping activity. Ask students to discuss the following terms in relation to managing wildfire hazards, and to suggest examples of each:</p> <ul style="list-style-type: none"> preparation mitigation prevention adaptation. 	<p>CBS article on the long term environmental impacts: cbsnews.com/news/fires-long-term-impact-on-environment/</p> <p>Social and economic impacts of wildfires: fireadaptednetwork.org/wp-content/uploads/2014/03/economic_costs_of_wildfires.pdf</p> <p>Wildfires and health: Information on research into the effects of wildfires on respiratory health: mtri.org/fire_health.html</p> <p>Long distance impacts of wildfires on health and climate change: nrdc.org/resources/where-theres-fire-theres-smoke-wildfire-smoke-affects-communities-distant-deadly-flames</p> <p>Managing wildfires: osha.gov/dts/wildfires/response.html</p> <p>Information on managing wildfires from the US forest service: fs.fed.us/fire/management/</p> <p>Canadian perspective on how to manage wildfires: nrcan.gc.ca/forests/fire-insects-</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
				<p>disturbances/fire/13157</p> <p>Preventing wildfires: preventwildfireca.org/</p> <p>National Geographic wildfire safety tips: environment.nationalgeographic.com/environment/natural-disasters/wildfire-safety-tips/</p> <p>Information on forest fire prevention: borealforest.org/world/innova/fire_prevention.htm</p> <p>Adapting to wildfires: Lecture on adapting to wildfires in California, with a video, podcast and PowerPoint: environment.ucla.edu/events/74</p> <p>Article on living in areas prone to wildfires: nbcnews.com/science/environment/wildfire-prone-areas-need-learn-live-flames-experts-say-n242081</p> <p>Article on learning to live with wildfires, including diagrams: bestthenews.com/article/learning-live-wildfires-arvind-ekka-mon-05232016-2055.html</p>
Weeks 9–10	Use of key subject specific and technical	Students to develop a detailed understanding of one recent wildfire event (to be	Students to be given clear instructions and guidance about creating detailed	Resources for specific case studies will depend on those chosen by the

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
<p>Fires in nature</p> <p>Impact and human responses as evidenced by a recent wild fire event.</p>	<p>terminology.</p> <p>Practicing exam style questions, including the use of peer assessment.</p> <p>Conducting independent and group research tasks.</p> <p>Making links within, across and beyond this area of the specification.</p> <p>Engage with remotely sensed satellite data.</p>	<p>chosen by individual students/centres). Students must be able to:</p> <ul style="list-style-type: none"> describe the spatial and temporal setting of the wildfire assess the perception of the wildfire, and the factors affecting those perceptions at a range of scales – eg magnitude, frequency, population characteristics etc explain the causes of the wildfire explain and assess the impacts of the wildfire explain, assess and justify the response to the wildfire – including the factors affecting this response. 	<p>case studies of one recent wildfire event. Students could be encouraged to be creative in the method used to present their findings, but as a guide it should include the information listed in previous column.</p>	<p>individual student/centre.</p> <p>Example materials on the Black Saturday bush fires in Australia are plentiful – which could be a framework for your case study choice:</p> <p>bbc.co.uk/news/world-asia-21651592</p> <p>http://firesinthebush.weebly.com/black-saturday-bushfires-case-study.html</p>
<p>Week 11</p> <p>Case study 1</p> <p>Case study of a multi-hazardous environment beyond the UK to illustrate and analyse the nature of the hazards</p>	<p>Collect, analyse and interpret a range of qualitative and quantitative data from a range of secondary sources.</p> <p>Report writing.</p>	<p>Much of what is taught here will depend on the multi-hazardous environment chosen.</p> <p>Students should understand the idea that some locations are multi-hazardous environments and are</p>	<p>Opportunity for group discussion – what is meant by the term ‘multi-hazardous environment’? Can students identify possible natural hazards?</p> <p>Opportunity for students to engage with geographic</p>	<p>Resources for specific case studies will depend on those chosen by the individual student/centre.</p> <p>Some resources that relate to multi-hazardous environments:</p> <p>maps.ngdc.noaa.gov/viewers/hazar</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
<p>and the social, economic and environmental risks presented, and how human qualities and responses such as resilience, adaptation, mitigation and management contribute to its continuing human occupation.</p> <p>Case study 2</p> <p>Case study at a local scale of a specified place in a hazardous setting to illustrate the physical nature of the hazard and analyse how the economic, social and political character of its community reflects the presence and impacts of the hazard and the</p>	<p>Collect, analyse and interpret a range of qualitative and quantitative data from a range of secondary sources.</p> <p>Report writing.</p>	<p>exposed to more than one category of natural hazard.</p> <p>Students should be able to identify areas of the world that are vulnerable to multiple natural hazards.</p> <p>Once a multi-hazardous environment has been selected (probably a small country or region within a larger country) students must be able to:</p> <ul style="list-style-type: none"> describe and assess the nature of the hazards assess and explain the social, economic and environmental risks presented by the hazards explain how local populations remain able to live in the environment due to their: <ul style="list-style-type: none"> human qualities responses – resilience, adaptation, mitigation and management. <p>Much of what is taught here will depend on the hazardous</p>	<p>information systems (GIS) and/or online mapping tools to locate and identify multiple hazard locations.</p> <p>Students should reflect on how they completed the case studies above, and then be given clear instructions and guidance about creating a detailed case study of one multi-hazardous environment.</p> <p>Students could be encouraged to be creative in the method used to present their findings, but as a guide, it should include the information listed in previous column. (There are opportunities for students to work together or independently).</p> <p>Opportunity to discuss what factors at a local scale affect the nature of a natural hazard, its impacts and responses to it in relation to the local</p>	<p>ds/ https://www.munichre.com/site/touch-publications/get/documents_E756103778/mr/assetpool.shared/Documents/0_Corporate_Website/Publications/302-05972_en.pdf</p> <p>ucl.ac.uk/hazardcentre/research/Multihazard</p> <p>preventionweb.net/files/13932_ACF1.pdf</p> <p>iitk.ac.in/nicee/wcee/article/14_S30-002.PDF</p> <p>Resources for specific case studies will depend on those chosen by the individual student/centre.</p>

Specification content Week number	Subject specific skills development	Learning outcomes	Suggested learning activities (including ref to differentiation and extension activities)	Resources
community's response to the risk.		<p>setting chosen.</p> <p>Ensure students understand that if case study 1 related to a small country or region within a larger country then case study 2 must relate to a smaller local scale place – a named place/location.</p> <p>Students should understand that the nature of a hazard, its impacts and the response to it is very much place specific and that a range of factors in that place will determine these.</p> <p>Once a specified place at a local scale in a hazardous setting has been selected (probably named settlement, or maybe <i>very</i> small island) students must be able to:</p> <ul style="list-style-type: none"> • Describe and analyse how the following affects the impacts of the hazard and the community's response to the risk: <ul style="list-style-type: none"> • the economic, social and political character of the community. 	<p>community.</p> <p>Students should reflect on how they completed the case studies above, and then be given clear instructions and guidance about creating a detailed case study of one local place in a hazardous setting. Students could be encouraged to be creative in the method used to present their findings, but as a guide, it should include the information listed in the previous column.</p> <p>(There are opportunities for students to work together or independently).</p>	

Quantitative and qualitative skills

Students must engage with a range of quantitative and relevant qualitative skills, within the Hazards theme. Students must specifically understand simple mass balance, unit conversions and the analysis and presentation of field data.

Making connections

Students must consider connections between the subject matter studied and be able to apply their geographical knowledge and understanding in different contexts including within a unit, between units and to novel situations, ie geographical contexts beyond the specification.

GET HELP AND SUPPORT

Visit our website for information, guidance, support and resources at oxfordaqaexams.org.uk

You can contact the geography team directly;

E: geography@oxfordaqaexams.org.uk



OXFORD INTERNATIONAL AQA EXAMINATIONS
LINACRE HOUSE, JORDAN HILL, OXFORD, OX2 8TA
UNITED KINGDOM

enquiries@oxfordaqaexams.org.uk
oxfordaqaexams.org.uk

Permission to reproduce all copyright material has been applied for. In some cases, efforts to contact copyright-holders may have been unsuccessful and Oxford International AQA Examinations will be happy to rectify any omissions of acknowledgements. If you have any queries please contact the Copyright Team, AQA, Stag Hill House, Guildford, GU2 7XJ.