



Topic name	Term	Skills developed	Prior learning	Next link in curriculum
<p><b><u>Tectonics &amp; Hazards: EQ1 Why are some locations more at risk from tectonic hazards?</u></b></p> <p>1.1 a, b &amp; c. The global distribution of tectonic hazards can be explained by plate boundary and other tectonic processes Understanding the larger geographical /geological features of the Earth.</p>	AUTUMN	<ul style="list-style-type: none"> <li>• Use of tectonic plate maps</li> <li>• Use of models and thinking in 3D</li> <li>• Analysis of hazard distribution patterns on world and regional scale maps.</li> <li>• Use of simple sketches that summarise complex information</li> <li>• Completion of a multi layered sketch map.</li> </ul>	<p>Y7 tectonics (from 2021.09)</p> <p>Y8 Kenyan rift system</p> <p>Y10 Tectonic hazards (from 2022.09)</p>	<p>Overview of A1 tectonic Processes sessions in Y13</p>
<p>1.2 a &amp; b. There are theoretical frameworks that attempt to explain plate movements.</p>		<ul style="list-style-type: none"> <li>• Use of block diagrams to identify key features of different plate boundary settings.</li> <li>• Establishing scientific theory – continental drift into Plate tectonic theory.</li> </ul>	<p>Y7 tectonics (from 2021.09)</p> <p>Y10 Tectonic hazards (from 2022.09)</p> <p>London Optional Trip</p>	<p>Revision</p> <p>London Nat History Optional Trip</p>
<p>1.3 &amp; 1.2c Physical processes explain the causes of tectonic hazards and impact on:</p> <ul style="list-style-type: none"> <li>• the type of <b>volcanic</b> eruptions.</li> <li>• <b>earthquake</b> magnitude and focal depth (Benioff zone).</li> <li>• Whether earthquakes lead to <b>tsunamis</b></li> </ul>		<ul style="list-style-type: none"> <li>• Understanding igneous rock types by reference to actual lavas and ejected material samples in class.</li> <li>• Also reference to igneous table to show how colour crystal size and composition matches process with rock type.</li> <li>• Primary v secondary effects</li> <li>• Analysis of tsunami time-travel maps to aid prediction</li> </ul>	<p>Y7 tectonics (from 2021.09)</p> <p>Y10 Tectonic hazards (from 2022.09)</p> <p>Optional Iceland fieldwork – Lava centre</p> <p>London Optional Trip</p>	<p>Revision</p> <p>London Nat History Optional Trip</p>
<p><b><u>Tectonics &amp; Hazards: EQ2: Why do some tectonic hazards develop into disasters?</u></b></p> <p>1.4 Disaster occurrence can be explained by the relationship between hazards, vulnerability, resilience, and disaster.</p>		<ul style="list-style-type: none"> <li>• Using models such as the ‘Pressure and release’s (PAR) and hazard risk equation to compare hazards</li> <li>• Comparing hazards affecting differing economies.</li> </ul>	<p>Use of models in globalisation unit Y12</p> <p>Y10 Tectonic hazards (from 2022.09)</p> <p>Econ development Y11.</p> <p>Optional Iceland fieldwork</p>	<p>Revision Some aspects are in Health and Human Rights (Unit 8A) in Y13.</p> <p>London Nat History Optional Trip</p>
<p>1.5 Tectonic hazard profiles are important to an understanding of contrasting hazard impacts, vulnerability and resilience.</p>		<ul style="list-style-type: none"> <li>• Use of correlation techniques to analyse links between magnitude of events, deaths and damage</li> </ul>	<p>Y10 Tectonic hazards (from 2022.09)</p>	<p>revision</p>
<p>1.6 Development and governance are important in understanding disaster impact and vulnerability and resilience.</p>		<ul style="list-style-type: none"> <li>• Statistical analysis of contrasting events of similar magnitude to compare deaths and damage.</li> </ul>	<p>Y10 tectonics especially Quakes in Haiti (LIC) and Chile (NEE)</p>	<p>revision</p>



<p><b><u>Tectonics &amp; Hazards: EQ3. 3: How successful is the management of tectonic hazards and disasters?</u></b> 1.7 Understanding the complex trends and patterns for tectonic disasters helps explain differential impacts.</p>		<ul style="list-style-type: none"> <li>Interrogation of large data sets to assess data reliability and to identify and interpret complex trends</li> </ul>	-	revision
<p>1.8 Theoretical frameworks can be used to understand the predication, impact and management of tectonic hazards</p>		<ul style="list-style-type: none"> <li>Applying models such as the hazard management cycle and the Park Model to real life situations</li> </ul>	Use of models in globalisation unit Y12 Optional Iceland fieldwork	Glacial landscape management Y12
<p>1.9 Tectonic hazard impacts can be managed by a variety of mitigation and adaptation strategies, which vary in their effectiveness.</p>		<ul style="list-style-type: none"> <li>Use of Geographic Information Systems (GIS) to identify hazard risk zones and degree of risk related to physical and human geographical features.</li> </ul>	Previous work using GIS e.g.Y7 damaged environment Y10 use of GIS in coasts.	Revision will try and evelop further with visitor on GIS in GeogSoc.
<p><b><u>Option 2A: Glaciated Landscapes and Change. EQ1: How has climate change influenced the formation of glaciated landscapes over time?</u></b> 2A.1 The causes of longer and shorter climate change, leading to icehouse greenhouse changes.</p>	<b>SPRING</b>	<ul style="list-style-type: none"> <li>Graphical analysis of reconstructed climate versus landform evidence for past glacial/ interglacial periods.</li> </ul>	Y8 & Y9 climate and climate change work; Y10 Weather hazards Y12 spring fieldwork to Snowdonia	Synoptically linked to Y13 water cycle (Unit 5) and carbon cycle Y13 (Unit 6)
<p>2A.2 Present and past Pleistocene distribution of ice cover.</p>		<ul style="list-style-type: none"> <li>Comparison of past and present distribution of glaciated landscapes using global and regional maps.</li> </ul>	Light tough in Y7 glacial	Y13 water cycle (unit 5) Cryosphere
<p>2A.3 Periglacial processes produce distinctive landscapes.</p>		<ul style="list-style-type: none"> <li>Website research including GIS to identify periglacial features in Canada</li> </ul>	Previous work using GIS e.g.Y7 damaged environment & Y10	Y13 climate change in the Arctic tundra (Both Water and carbon units).
<p><b><u>EQ2: What processes operate within glacier systems?</u></b> 2A.4 Mass balance helps understand glacial dynamics and the operation of glaciers as systems.</p>		<ul style="list-style-type: none"> <li>Use of numerical data to calculate simple mass balance and equilibrium line position;</li> <li>use of GIS to identify main features of glacier types and assess glacier health.</li> </ul>	-	Use of large models such as hydrological cycle Y13 Water cycle.
<p>2A.5 Different processes explain glacial movement and variations in rates.</p>		<ul style="list-style-type: none"> <li>Cirque orientation analysis using large-scale maps (OS maps); calculating Spearman's rank correlations of height of basin, size of basin and orientation and commenting on the significance of the correlation.</li> </ul>	Possible introduction of ranking at GCSE Fieldwork depending on task. Y12 spring fieldwork Optional Iceland fieldwork	Y13 Carbon (Unit 6) climate change
<p>2A.6 The glacier landform system</p>		<ul style="list-style-type: none"> <li>Use of measures of central tendency to compare rates of glacier movement.</li> <li>Developing a key word vocabulary and the concept of scale and situation in the field.</li> </ul>	--	Revision



<p><b>EQ3 3: How do glacial processes contribute to the formation of glacial landforms and landscapes?</b> 2A.7 Glacial erosion creates distinctive landforms and contributes to glaciated landscapes.</p>		<ul style="list-style-type: none"> <li>• Cirque orientation analysis using large-scale maps (OS maps); calculating Spearman's</li> <li>• rank correlations of height of basin, size of basin and orientation and commenting on</li> <li>• the significance of the correlation.</li> </ul>	<p>Y7 glacial unit Y12 spring fieldwork - Snowdonia Optional Iceland fieldwork</p>	<p>Summer fieldwork in Lake District</p>
<p>2A.8 Glacial deposition creates distinctive landforms and contributes to glaciated landscapes.</p>		<ul style="list-style-type: none"> <li>• Till fabric analysis using rose diagrams.</li> <li>• Use of British Geological Society (BGS) glacial drift maps, Ordnance Survey (OS) maps,</li> <li>• GIS and fieldwork results to reconstruct past ice extent and ice flow direction.</li> <li>• Drumlin morphometry and orientation survey to measure correlation of height, length and elongation ratio.</li> </ul>	<p>Y7 glacial unit Y12 spring fieldwork – Snowdonia Optional Iceland fieldwork</p>	<p>London Nat History Optional Trip Summer fieldwork in Lake District</p>
<p>2A.9 Glacial meltwater plays a significant role in creating distinctive landforms and contributes to glaciated landscapes.</p>		<ul style="list-style-type: none"> <li>• Use of student t-test to analyse changes in sediment size and shape in outwash plains;</li> <li>• central tendency analysis of both glacial and fluvio-glacial deposits (comparison of size, shape and degree of sorting of clasts).</li> </ul>	<p>Y12 spring fieldwork – Snowdonia Optional Iceland fieldwork – outwash plains</p>	<p>Possible NEA coursework topic. Summer fieldwork in Lake District</p>
<p><b>EQ4: How are glaciated landscapes used and managed today?</b> 2A.10 Glacial and periglacial landscapes have intrinsic cultural, economic, and environmental value. ACTIONS include attitudes ranging from exploitation to preservation</p>	<p><b>SUMMER</b></p>	<ul style="list-style-type: none"> <li>• Discussing different viewpoints about actions in a balanced way.</li> </ul>	<p>Y10 Fieldwork in the Lake District and also FWK in Iceland. Optional Iceland fieldwork</p>	<p>Summer fieldwork in Lake District</p>
<p>2A.11 There are <b>threats</b> facing fragile active and relict glaciated upland landscapes How indirect actions by players affect natural systems.</p>		<ul style="list-style-type: none"> <li>• Numerical analysis of mean rates of glacial recession in different global regions.</li> </ul>	<p>Y12 spring fieldwork Optional Iceland fieldwork South Shore</p>	<p>Summer fieldwork in Lake District</p>
<p>2A.12 Threats to glaciated landscapes can be <b>managed</b> using a spectrum of approaches. How ACTIONS range from exploitation to preservation.</p>		<ul style="list-style-type: none"> <li>• Discussing different viewpoints about actions in a balanced way.</li> </ul>	<p>Y7 Glacial unit Y12 spring fieldwork.</p>	<p>Summer fieldwork in Lake District</p>