



Curriculum Map

Subject: Geography Paper 1

Year group: A-Level

Time period (all time periods dependent on whether teachers have 3 or 2 hours per week)	Unit 1: Tectonic processes and hazards	Unit 2B: Coastal landscapes and change	NEA – Non-Examined Assessment Support – LEAD Teacher – June – October (Year 13)	Unit 5: The water cycle and water insecurity	Unit 6: The carbon cycle and energy security	Paper 3: Synoptic paper
Content <i>Declarative Knowledge – 'Know What'</i>	<p><u>EQ1: Why are some locations more at risk from tectonic hazards?</u></p> <ul style="list-style-type: none"> The distribution of tectonic hazards – plate boundaries and intra-plate phenomena Plate movement theories, including convection currents, palaeomagnetism, ridge-push and slab-pull, and Benioff zones Physical processes and the primary and secondary hazards that are created (e.g. crustal fracturing, liquefaction, jokulhlaups, lahars and tsunamis) <p><u>EQ2: Why do some tectonic hazards develop into disasters?</u></p> <ul style="list-style-type: none"> The relationship between hazards, resilience and vulnerability, examined through the hazard-risk equation and the Pressure and Release Model (PAR) Social and economic impacts of tectonic hazards in areas of contrasting wealth (e.g. HICs vs LICs) Methods of measuring the magnitude of a tectonic event (Mercalli, Moment Magnitude Scale and Volcanic Explosivity Index) Using hazard profiles and their components to compare tectonic events (e.g. areal extent, speed of onset, frequency) 	<p><u>EQ1: Why are coastal landscapes different and what processes cause these differences?</u></p> <ul style="list-style-type: none"> Features and landscapes of the littoral zone How geology influences coastlines, e.g. rocky coasts and coastal plain landscapes The influence of geological structure on coastlines (e.g. concordant and discordant coastlines, Dalmatian and Haff type coasts, jointing, dip and faulting) Influence of geological structure on the formation of micro-features The impact of lithology (types of rock) on coastal recession The role of vegetation in stabilising coastlines (e.g. sand dune succession and salt marsh formation) <p><u>EQ2: How do characteristic coastal landforms contribute to coastal landscapes?</u></p> <ul style="list-style-type: none"> The influence on waves (destructive and constructive) on beach morphology and sediment profiles The role of erosion (hydraulic action, corrosion, abrasion and 	<p>A period of introduction, set-up and support for the NEA – both teachers support. Students choose titles and sub-questions. Trip to Dorset in early July to facilitate data collection and practice of fieldwork techniques</p>	<p><u>EQ1: What are the processes operating within the hydrological cycle from the global to local scale?</u></p> <ul style="list-style-type: none"> The components of the global hydrological cycle (inputs, outputs, stores and flows), as well as the relative importance of water stores and annual fluxes Components of the drainage basin system, and the physical and human factors that influence it How water budgets work, and the influence of climate on them The use and utility of river regimes in illustrating annual variation in discharge The features of storm hydrographs, and how they are influenced by physical and human actors <p><u>EQ2: What factors influence the hydrological system over short and long-term timescales?</u></p>	<p><u>EQ1: How does the carbon cycle operate to maintain planetary health?</u></p> <ul style="list-style-type: none"> The different stores of carbon, and the fluxes between them Geological stores and processes that drive the carbon cycle Processes of carbon sequestration (carbonate pump and thermohaline circulation, photosynthesis and biological decomposition) Impacts of atmospheric carbon, ocean and terrestrial photosynthesis, and fossil fuel combustion, on the greenhouse effect <p><u>EQ2: What are the consequences for people and the environment of our increasing demand of energy?</u></p> <ul style="list-style-type: none"> The importance of energy security for nations The role of energy players (e.g. OPEC) in securing energy pathways The key role of energy pathways (e.g. pipelines, shipping 	<p>Introduction and support for Paper 3, building links between topics in Papers 1 and 2 to build detailed concept maps.</p>



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	<ul style="list-style-type: none"> The importance of development and governance when considering vulnerability and resilience to tectonic hazards <p><u>EQ3: How successful is the management of tectonic hazards and disasters?</u></p> <ul style="list-style-type: none"> Complex trends and patterns of tectonic disasters Social and economic impacts of tectonic mega-disasters Threats associated with multiple-hazard zones Theoretical frameworks used to understand and manage tectonic hazards (e.g. Degg's model, Park's model) Adaptation strategies (e.g. zonation, land-use zoning, modification and retro-fitting) 	<p>attrition) and how it is influence by wave type, size and lithology</p> <ul style="list-style-type: none"> How distinctive coastal landforms are created by erosion (e.g. wave-cut platforms, cliffs, stacks) The process of sediment transportation and deposition, and its role in the formation of distinct coastal landforms (beaches, spits, bars etc.) The Sediment Cell concept, and the importance of positive and negative feedback mechanisms Role of subaerial processes in the development of coastal landscapes, such as weathering and mass movement The landforms created by mass movement (rotational slumps, terraces, and talus scree) <p><u>EQ3: How do coastal erosion and sea-level change alter the physical characteristics of coastlines and increase risks?</u></p> <ul style="list-style-type: none"> The impact of eustatic and isostatic on long-term sea level changes Features of emergent coastlines (e.g. fossil cliffs and raised beaches) and submergent coastlines (fjords, rias) Risk associated with contemporary sea level rise Physical and human factors affected coastal recession The influence of sub-aerial processes on 		<ul style="list-style-type: none"> The causes of drought, and the contribution of human activity towards the risk of drought The impacts of drought on ecosystem resilience The cause of surpluses in the hydrological system (flooding), and how human actions can exacerbate flood risk The socio-economic and environmental impacts of flooding The role of climate change on the hydrological system (e.g. changes in precipitation, changing size of glacier mass, and oscillations in ENSO) <p><u>EQ3: How does water insecurity occur and why is it becoming such a global issue for the 21st century?</u></p> <ul style="list-style-type: none"> The physical and human causes of water insecurity The consequence and risks of water insecurity (e.g. water scarcity and price, impacts of economic development and water conflict) Strategies to manage water supplies effectively, such as hard engineering, water conservation schemes, and integrated drainage basin management 	<p>routes) to energy pathways, but a consideration of their proneness to disruption</p> <ul style="list-style-type: none"> The social costs and consequences of unconventional fossil fuel resources (e.g. fracking, tar sands, deep water oil)] <p><u>EQ3: How are the carbon and water cycles linked to the global climate system?</u></p> <ul style="list-style-type: none"> The threats to the water and carbon cycles from human activity (e.g. increasing resource demands, ocean acidification and increasing prevalence of drought) The implications of a degraded water and carbon cycle to human well-being (e.g. forest loss, changing precipitation patterns, threats to ocean health) Responses to global warming from different players at different scales (e.g. adaptation and mitigation strategies) 	
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		<p>coastal erosions, as well as short and long-term factors</p> <ul style="list-style-type: none"> The risk of coastal flooding in some areas, such as global sea level rise, storm surges, and storm intensity <p><u>EQ4: How can coastlines be managed to meet the needs of all players?</u></p> <ul style="list-style-type: none"> The consequences of coastal recession on coastal communities (socio-economic impacts) The consequences of coastal flood risk on coastal communities (socio-economic impacts) The impacts of climate change and the creation of environmental refugees Hard and soft engineering strategies to reduce the risk of coastal recession and flooding Holistic integrated coastal zone management strategies, and policy decision used to manage stretched of coastlines Conflicts between stakeholders on coastlines. 				
<p>Skills</p> <p><i>Procedural Knowledge – ‘Know How’</i></p>	<p>Many skills are covered during the course of study, but the below are ‘integrated skills’ that must be taught as part of this unit:</p> <ul style="list-style-type: none"> Analysis of hazard distribution patterns on world and regional maps Use of block diagrams Analysis of tsunami time-travel maps 	<p>Many skills are covered during the course of study, but the below are ‘integrated skills’ that must be taught as part of this unit:</p> <ul style="list-style-type: none"> GIS mapping of a variety of coastal landscapes Satellite interpretation of coastlines for classification 	<p>Many skills are incorporated in this unit. (15% out of 20% based on AO3 Skills)</p> <p>The unit involved four days of fieldwork, full list of skills see p93 of specification. To include:</p> <ul style="list-style-type: none"> Research relevant literature sources and understand 	<p>Many skills are covered during the course of study, but the below are ‘integrated skills’ that must be taught as part of this unit:</p> <ul style="list-style-type: none"> Use of diagrams showing proportional flows within systems 	<p>Many skills are covered during the course of study, but the below are ‘integrated skills’ that must be taught as part of this unit:</p> <ul style="list-style-type: none"> Use of proportional flow diagrams showing carbon fluxes Use of maps showing global temp and 	<p>This unit has no further content, it draws on content from all compulsory content areas.</p> <p>A review of content is undertaken to draw out key synoptic links which are seen across</p>



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	<ul style="list-style-type: none"> Correlation techniques to analyse links between magnitude, deaths, damage Statistical analysis of events of similar magnitude to compare deaths and damage (Spearman's Rank) Interrogation of large data sets to assess reliability and analyse complex trends (EM-DAT) Use of GIS to identify risk zones and degree of risk related to human and physical factors 	<ul style="list-style-type: none"> Field sketches of coastal landscapes Using measures of central tendency to classify waves into constructive and destructive Using student t-test to investigate changes in pebble size and shape along a drift-aligned beach Map and aerial interpretation of distinctive landforms from past sea-level change Use of GIS, aerial photos and maps to calculate recession rates (annual and longer-term) Use of GIS if management cells to ascertain land values and inform CBA for management Photo interpretation of a range of approaches to management to assess environmental impact Sand dune surveys to assess impact of succession using index of diversity (Chi-square) 	<p>comparative context</p> <ul style="list-style-type: none"> Define research questions Understand and undertake appropriate research methodologies, including sampling Represent and analyse data and evidence Write up results clearly and logically, applying existing knowledge, theory and concepts Evaluate and reflect on fieldwork investigations, understand wider context and ethical dimensions of research 	<ul style="list-style-type: none"> Comparative analysis of river regime annual discharges Analysis and construction of water budget graphs Using comparative data, labelling of features of storm hydrographs Use of large database to study the pattern and trends in floods and droughts worldwide (EM-DAT) Interpretation of synoptic charts and weather patterns Use of a global map to analyse water scarcity and stress Interpretation of water poverty indexes using diamond diagrams Identification of seasonal variations in the regime of international rivers and assess impact of dams 	<p>precipitation distribution</p> <ul style="list-style-type: none"> Graphical analysis of the energy mix of different countries, including change over time Analysis of maps showing global energy trade and flows Comparisons of emissions from different energy sources Using GIS to map lan-use changes such as deforestation over time Analysis of climate model maps to identify areas most at risk from water shortages and floods Plotting graphs of carbon dioxide levels, calculating means and rates of change 	<p>multiple topics and recap key maths skills.</p> <p>This review also highlights these aspects of core case studies and issues previously studied:</p> <ul style="list-style-type: none"> Players Attitudes and actions Futures and uncertainties
Key Questions	<ul style="list-style-type: none"> What tectonic processes are responsible for the greatest risk? What are the most significant factors in increasing risk of tectonic hazards? What are the most appropriate ways to 	<ul style="list-style-type: none"> What coastal processes have the greatest impact on the formation of distinct coastal landforms? What factors are the most responsible for coastal recession? 		<ul style="list-style-type: none"> Do human or physical factors influence the hydrological cycle (or water budgets, river regimes) most significantly? What are the most significant factors exacerbating the risk 	<ul style="list-style-type: none"> What factors have the most significant impact on the carbon cycle? What are the most significant consequences of the use of conventional (and unconventional) 	



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	<ul style="list-style-type: none"> respond to the risk of tectonic disasters? How does risk change depending on wealth, vulnerability and governance? 	<ul style="list-style-type: none"> What factors exacerbate coastal flood risk the most? Which strategies are most effective at reducing the risk of coastal recession and/or flooding? How can conflicts on how to respond to coastal recession be overcome? 		<ul style="list-style-type: none"> of drought, flooding and storm surges? What strategies are most effective in managing water security? How can water management be made sustainable in the future? 	<ul style="list-style-type: none"> fossil fuel use, and why? How can threats the carbon cycle be managed effectively – what strategies are the most appropriate? 	
Assessment	<p>Assessment Points - Unseen 12 mark 'assess' exam question assessments covering content from the unit of study.</p> <ul style="list-style-type: none"> Timed – Assess the importance of tectonic hazard profiles in understanding the severity of impacts resulting from earthquake events. [12] Timed - Assess the importance of development in the successful management of tectonic mega-disasters [12] <p>Minor Assessment points - A <u>minimum of two questions</u> are completed at home.</p> <p>Regular 'Knowledge Testing' - Students tested on knowledge and skills, including key definitions and content, case study facts, and examples. These are completed 'blind' during contact time and scores are recorded. Varying marks, most commonly out of 16. Completed without notes or signposting, testing a combination of:</p> <ul style="list-style-type: none"> Key terminology and definitions Facts and statistics Case study knowledge 	<p>Assessment Points - Unseen 6 and 8 mark 'explain' and 20 mark 'evaluate' exam question assessments covering content from the unit of study.</p> <ul style="list-style-type: none"> Timed – 2 x 6 mark stimulus questions about coastal processes and landforms [12] Timed – 1 x 6 mark and 1 x 8 mark question on EQ2 [14] Tined – 20 mark evaluate question about coastal risk Timed – 20 mark evaluate question about coastal management <p>Minor Assessment points – Multiple 'explain' questions are answered in class and for hbl, scaffolded at first and then independent completion.</p> <p>A <u>minimum of three 'evaluate' questions</u> are completed at home, either as a detailed plan and/or in full.</p> <p>Regular 'Knowledge Testing' - Students tested on knowledge and skills, including key definitions and content, case study facts, and examples. These are completed 'blind' during contact time and scores are recorded. Varying marks, most commonly out of 16.</p>	<p>The NEA cannot be individually marked during completion or given back to improve.</p> <p>Each section is carefully explained and modelled, using past studies and samples to dissect the mark scheme.</p> <p>Students complete sections on Google Drive so that we can provide generic feedback for improvement throughout.</p> <p>Skills are integrated throughout the units in Year 12, such as data representation, statistical analysis and methodology planning (from a day fieldtrip to Stratford in Jan).</p>	<p>Assessment Points - Unseen 6 and 8 mark 'explain' and 20 mark 'evaluate' exam question assessments covering content from the unit of study.</p> <ul style="list-style-type: none"> Timed – 2 x 6 mark questions (stimulus and non-stimulus) about hydrological cycle processes EQ1 [12] Timed – 20 mark evaluate question about flood causes (EQ2) Timed – 20 mark evaluate question about water conflicts (EQ3) <p>Minor Assessment points – Multiple 'explain' questions are answered in class and for hbl, scaffolded at first and then independent completion.</p> <p>A <u>minimum of three 'evaluate' and 'assess' questions</u> are completed at home, either as a detailed plan and/or in full.</p> <p>Regular 'Knowledge Testing' - Students tested on knowledge and skills, including key definitions</p>	<p>Assessment Points - Unseen 6 and 8 mark 'explain' and 20 mark 'evaluate' exam question assessments covering content from the unit of study.</p> <ul style="list-style-type: none"> Timed – 2 x 6 mark questions (stimulus and non-stimulus) about carbon cycle processes EQ1 [12] Timed – 20 mark evaluate question about energy sources (EQ2) Timed – 20 mark evaluate question about mitigation/adaptation (EQ3) <p>Minor Assessment points – Multiple 'explain' questions are answered in class and for hbl, scaffolded at first and then independent completion.</p> <p>A booklet of evaluate essay plans is completed to plan out answers against all parts of the spec.</p> <p>Assess questions are planned using a variety of diagrams/sources.</p> <p>Regular 'Knowledge Testing' - Students tested on</p>	<p>Assessment Points – A full mock exam paper is undertaken in April to provide full formative feedback.</p> <ul style="list-style-type: none"> Timed – Full mock paper. <p>Minor Assessment points – Modelling of an exam paper to explain and practise all questions types, including skills question, 'explain' and 'evaluate'.</p> <p>Use model answers for students to mark and identify priorities for completion.</p>



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		<p>Completed without notes or signposting, testing a combination of:</p> <ul style="list-style-type: none"> • Key terminology and definitions • Facts and statistics • Case study knowledge 		<p>and content, case study facts, and examples. These are completed 'blind' during contact time and scores are recorded. Varying marks, most commonly out of 16. Completed without notes or signposting, testing a combination of:</p> <ul style="list-style-type: none"> • Key terminology and definitions • Facts and statistics • Case study knowledge 	<p>knowledge and skills, including key definitions and content, case study facts, and examples. These are completed 'blind' during contact time and scores are recorded. Varying marks, most commonly out of 16. Completed without notes or signposting, testing a combination of:</p> <ul style="list-style-type: none"> • Key terminology and definitions • Facts and statistics • Case study knowledge 	
<p>Literacy/Num eracy/ SMSC/Charac ter</p>	<p>Literacy</p> <ul style="list-style-type: none"> • Continued development of PEE(EE)L paragraph structure • Development of evaluative language and judgement-making, including the use of 'however,' narratives • Development of student's use of tier 2 vocabulary and tier 3 geographical terminology <p>SMSC/Character - Messaging throughout this unit focuses on core geographical concepts such as inequality, development, sustainability, poverty, change, risk and thresholds. Students are encourage to become 'global citizens' as a result.</p>	<p>Literacy</p> <ul style="list-style-type: none"> • Continued development of PEE(EE)L paragraph structure • Development of evaluative language and judgement-making, including the use of 'however,' narratives • Development of student's use of tier 2 vocabulary and tier 3 geographical terminology <p>SMSC/Character - Messaging throughout this unit focuses on core geographical concepts such as inequality, development, sustainability, poverty, change, risk and thresholds. Students are encourage to become 'global citizens' as a result.</p>		<p>Literacy</p> <ul style="list-style-type: none"> • Continued development of PEE(EE)L paragraph structure • Development of evaluative language and judgement-making, including the use of 'however,' narratives • Development of student's use of tier 2 vocabulary and tier 3 geographical terminology <p>SMSC/Character - Messaging throughout this unit focuses on core geographical concepts such as inequality, development, sustainability, poverty, change, risk and thresholds. Students are encourage to become</p>	<p>Literacy</p> <ul style="list-style-type: none"> • Continued development of PEE(EE)L paragraph structure • Development of evaluative language and judgement-making, including the use of 'however,' narratives • Development of student's use of tier 2 vocabulary and tier 3 geographical terminology <p>SMSC/Character - Messaging throughout this unit focuses on core geographical concepts such as inequality, development, sustainability, poverty, change, risk and thresholds. Students are encourage to become 'global citizens' as a result.</p>	



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