Curriculum Plans: KS5 A Level Geography (Years 12-13)

YEAR 12	Topic	Knowledge: By the end of the unit students will know:	Skills: What skills will students have developed by the end of this unit?	Key terms: What new key terms and vocabulary will be learnt in this unit?	Summative Assessment: How will pupils be assessed in this unit?
Term 1a - 1b	Paper 1 topic: Tectonics	**EQ1: Why are some locations more at risk from tectonics?** Tectonic hazards are distributed globally due to plate boundaries. There are different plate boundaries (divergent, convergent, conservative) and processes like subduction and mantle plumes. Some hazards occur within plates (intra-plate earthquakes and volcanoes). **EQ2: Why do some tectonic hazards develop into disasters?** Natural hazards become disasters based on vulnerability, resilience, and risk. The Pressure and Release (PAR) model helps explain how different factors contribute to the scale of a disaster. Social, economic, and environmental impacts vary between developed, emerging, and developing countries. **Examples** 2004 Asian tsunami	Analyse hazard distribution patterns on global and regional maps. Interpreting maps of tectonic hazards and plate boundaries. Understand the PAR model. Compare case studies of countries at different levels of development. Measure seismic and volcanic hazards using Mercalli, Moment Magnitude Scale (MMS), and Volcanic Explosivity Index (VEI).	**<u>Tectonics</u>** Tectonics Tectonic Plates Constructive (Divergent) Boundaries Destructive (Convergent) Boundaries Conservative (Transform) Boundaries Subduction Zone Ridge Push Slab Pull Mantle Convection Hotspot Volcano Shield Volcano Stratovolcano Cinder Cone Earthquake Fault Normal Fault Reverse Fault Strike-Slip Fault Epicentre Focus (Hypocentre Richter Scale Moment Magnitude Scale (MMS):	Microsoft Knowledge Tests EQ1 AI marked Responsive teaching Mid-Point Assessment 1 Open Book 32 marks – data response ques, 4m & 6m explain, 12m assess ques. Teacher marked Microsoft Knowledge Tests EQ2 AI marked Responsive teaching Mid-Point Assessment 2 Closed Book 32 marks – data response ques, 4m & 6m explain, 12m assess ques. Teacher marked Microsoft Knowledge Tests EQ3 AI marked Responsive teaching Mid-Point Assessment 3 Closed Book 32 marks – data response ques, 4m & 6m explain, 12m assess ques. Student levelled responses and teacher marked/ checked

		2010 Eyafjallajokull eruption in Iceland (global interdependence) 2011 Japanese tsunami (energy policy) Multiple-hazard zone (MHZ) the Philippines Research choice: Gorkha, Nepal 2015; Turkish-Syrian 2023 Christchurch, NZ Feb 2011; Palu, Indonesia 2018; Marrakesh-Safi, Morocco 2023 **EQ3: How successful is the management of tectonic hazards and disasters?** Management strategies for tectonic hazards include prediction, preparedness, mitigation, and response. The Hazard Management Cycle and Park's Model help analyse the effectiveness of responses. Strategies like land-use zoning and hazard-resistant design can mitigate the impact. **Examples** 2004 Asian tsunami 2010 Eyafjallajokull eruption in Iceland (global interdependence) 2011 Japanese tsunami (energy policy) Multiple-hazard zone (MHZ) the Philippines	Apply the Hazard Management Cycle and Park's Model to case studies. Evaluate strategies for managing tectonic hazards across different levels of development. Use GIS to identify hazard risk zones.	Seismic Waves Primary Waves (P-Waves): Secondary Waves (S-Waves): Tsunami Seismograph Lava Pyroclastic Flow Geophysical Hazard	

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		2010 Haiti, Nepal 2015 or 2021 Haiti, 2022 Namie (Japan)			
Term 2a - 2b	Paper 1 topic: Coasts	**EQ1: Why are coastal landscapes different and what processes cause these differences?** Coastal landscapes form from the interaction of winds, waves, and currents. The littoral zone consists of backshore, nearshore, and offshore zones. Geological structures like concordant and discordant coasts shape the landscape. **Examples**: Jurassic Coast, Devon. Holderness Coast **EQ2: How do characteristic coastal landforms contribute to coastal landscapes?** Erosional processes like hydraulic action, corrosion, attrition, and abrasion create distinct features like caves, arches, stacks, and stumps. Deposition creates beaches, spits, tombolos, and cuspate forelands. **Examples:** Christchurch Bay, Holderness Coastline, Jurassic Coast Devon **EQ3: How do coastal erosion and sea level change alter the physical**	Interpret geological maps and diagrams. Understand geological structures (jointing, faulting, folding). Field sketching / photo analysis of coastal landscapes. Analysis of coastal landform features using maps, aerial photos, and field sketches. Understand the concept of sediment cells. Mapping and aerial interpretation of sea-level change landforms.	**<u>Coasts</u>** Coastal Erosion Coastal Deposition Longshore Drift Fetch Wave Refraction Tidal Range Sea Level Rise Hard Engineering Soft Engineering Constructive Waves Destructive Waves Cliff Profile Sediment Cell Saltmarsh Mangroves Headlands and Bays Arch Stack Stump Spit Bar Dune Cave Arch Blowhole	Microsoft Knowledge Tests EQ1 AI marked Responsive teaching Mid-Point Assessment 1 Open Book 44 marks – data response ques, 4m & 6m explain, 12m assess ques, 20m evaluate exam ques. . Teacher marked Microsoft Knowledge Tests EQ2 AI marked Responsive teaching Mid-Point Assessment 2 Closed Book 44 marks – data response ques, 4m & 6m explain, 12m assess ques, 20m evaluate exam ques. . Teacher marked Microsoft Knowledge Tests EQ3 AI marked Responsive teaching Mid-Point Assessment 3 Closed Book 44 marks – data response ques, 4m & 6m explain, 12m assess ques, 20m evaluate exam ques. .

		characteristics of coastlines and increase risks? Sea level changes are influenced by eustatic (ice formation) and isostatic (land uplift) processes. Climate change contributes to rising sea levels, increasing risks of coastal flooding. **Examples**: Nile Delta, Bangladesh v the Maldives, Holderness **EQ4: How can coastlines be managed to meet the needs of all players?** Coastal management now uses integrated coastal zone management (ICZM) to address long-term sustainability and conflicts. **Examples:** Holderness Coast NE England, Chattogram, Bangladesh	Analysis of climate change impacts. Evaluate management approaches (e.g., Hold the Line, Strategic Realignment). Conduct cost-benefit analysis for coastal management strategies.		Student levelled responses and teacher marked/ checked .
Term 3a	Year 12 Mock Exams – ALL Year 10 content	**ALL Year 12 Content** Paper 1 topics Tectonics, Coasts Paper 2 topics Globalisation, Regeneration	Application of understanding to Year 12 Mock Exam	State Suggest Explain Assess Evaluate	Revision Microsoft Knowledge Tests – for each EQ for each topic

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Term 3b	NEA	A Level residential to investigate Coasts in North Wales and Regeneration in Manchester and North Wales. Students learn how to sequence an enquiry, complete fieldwork, find and use secondary data, present and analyse data, draw conclusions and evaluate their work. Students complete proposals for the NEA and complete start their own investigation using their own or group data from the trips.	Enquiry sequence Annotation of maps and diagrams OS map skills (scale, direction, relief) Photograph and satellite image interpretation Interpreting secondary data – Shoreline Management Plans, geological maps, wind and weather apps, property websites, GIS maps (bing and google), Census data and IMD maps Analysis of data • Ability to work in pairs/groups and in the field • Team work – gather data and in the field	<u>Fieldwork</u> Topic dependent	NEA's will be ongoing, with review points to compare to example work

YEAR 13	**Topic**	**Knowledge:** **By the end of the unit students will know:**	**Skills:** **What skills will students have developed by the end of this unit?**	**Key terms:** **What new key terms and vocabulary will be learnt in this unit?**	**Summative Assessment:** **How will pupils be assessed in this unit?**
Term 1a - 1b	Paper 1 topic:	**EQ1: What are the processes operating within the hydrological cycle from global to local scale?**	Interpretation of hydrological diagrams and flow systems. -	<u>Water and Water Security</u> Hydrological Cycle Watershed	Microsoft Knowledge Tests EQ1 AI marked Responsive teaching

	Water Cycle and Water Security (Physical systems topic)	The global hydrological cycle as a closed system driven by solar energy and gravity. The relative size and importance of water stores (oceans, atmosphere, cryosphere, biosphere, groundwater). The concept of water budgets and the limited availability of water due to various storage times. **Examples** Polar region Yukon Tropical Region Amazon Rainforest London Flooding 2016 **EQ2: What factors influence the hydrological system over short- and long-term timescales?** Physical and human causes of drought and its impacts on ecosystems. The role of ENSO (El Niño Southern Oscillation) and its cycles in contributing to drought and floods. - The impact of over-abstraction and land-use changes on water stores and flows. **Examples** Amazon Drought 2014/15 + 2021 Sahelian Droughts California Droughts 2010-2015 Storm Desmond Cumbria 2015 Flooding + Mudslides Peru 2017	Analysis of global water budget data. - Application of proportional flow chart creation to distinguish between short- and long-term water cycles. Use of large databases to study trends in droughts and floods. Interpretation of synoptic charts and ENSO-related weather patterns. Critical analysis of human interventions in the hydrological cycle (e.g., over-abstraction, damming, deforestation).	Aquifer Groundwater Surface Water Water Table Runoff Infiltration Precipitation Evaporation Transpiration Condensation Water Quality Water Scarcity Water Security Water Stress Water Scarcity Water Management Integrated Water Resource Management IWRM Water Footprint Desalination Water Infrastructure Watershed Management Flood Management Drought	Mid-Point Assessment 1 Open Book 32 marks – data response ques, 4m & 6m explain, 12m assess a Teacher marked Microsoft Knowledge Tests EQ2 AI marked Responsive teaching Mid-Point Assessment 2 Closed Book 40 marks – data response ques, 4m & 6m explain, 12m assess and 20m evaluate ques. Teacher marked Microsoft Knowledge Tests EQ3 AI marked Responsive teaching Mid-Point Assessment 3 Closed Book 40 marks – data response ques, 4m & 6m explain, 12m assess and 20m evaluate ques. Student levelled responses and teacher marked/ checked

		EQ3: How does water insecurity occur and why is it becoming such a global issue for the 21st century? The global mismatch between water supply and demand, leading to water stress and scarcity. The human and physical causes of water insecurity, including population growth, industrialization, and climate change. The growing risks of trans-boundary water conflicts. **Examples** Asia and Pacific, agriculture and industrial pollution. North America with specific focus on California + Texas. Trans-Boundary conflicts with Turkey, Syria and Iraq as well as China and Vietnam. The Murray-Darling Basin, Australia. Hard engineering: Three Gorges Dam, China and South-North Water Transfer Project, China Sustainable management: Holistic management in Singapore Integrated drainage basin management: Sharing the Colorado River, Colorado USA United Nations Economic Commission for Europe (UNECE) Water Convention, Helsinki	Mapping and analysing global water stress and scarcity patterns. Comparative analysis of water demand and availability across different regions. Evaluation of case studies on water security challenges (e.g., Israel, Turkey, California).		

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Term 1b-2b	Paper 1 topic: Carbon Cycle and Energy Security (Physical systems topic)	**EQ1: How does the carbon cycle operate to maintain planetary health?** The biogeochemical carbon cycle and its key stores (terrestrial, oceans, atmosphere) and fluxes. Geological processes that sequester carbon over long-term scales. Biological processes like photosynthesis, respiration, and decomposition that control short-term carbon fluxes. **Examples**: **EQ2: What are the consequences for people and the environment of our increasing demand for energy?**The concept of energy security and its importance for countries relying on fossil fuels. The role of key players (e.g., OPEC, TNCs) in influencing energy pathways. The environmental and social impacts of unconventional energy sources (e.g., fracking, tar sands, deep-water oil). **Examples**: **EQ3: How are the carbon and water cycles linked to the global climate system?**	Analysis of proportional flow diagrams to understand carbon stores and fluxes. Use of global distribution maps to identify carbon sinks and flows. Graphical analysis of atmospheric carbon concentrations and related temperature and precipitation patterns. Analysis of energy consumption maps and global energy resource distribution. Graphical analysis of changes in energy mix over time. Research and presentation skills to evaluate the role of key energy players and the impact of unconventional energy resources. Use of GIS to map land-use changes (e.g., deforestation).	**<u>Carbon and Energy Security</u>** Carbon Footprint Greenhouse Gases (GHGs) Carbon Offset Carbon Sequestration Climate Change Mitigation Climate Change Adaptation Cap and Trade Emission Trading Scheme (ETS) Energy Security Energy Mi Renewable Energy Non-Renewable Energy Energy Transition Peak Oil Energy Policy Energy Dem Energy Supply	Microsoft Knowledge Tests EQ1 AI marked Responsive teaching Mid-Point Assessment 1 Open Book 32 marks – data response ques, 4m & 6m explain, 12m assess ques. Teacher marked Microsoft Knowledge Tests EQ2 AI marked Responsive teaching Mid-Point Assessment 2 Closed Book 32 marks – data response ques, 4m & 6m explain, 12m assess ques. Teacher marked Microsoft Knowledge Tests EQ3 AI marked Responsive teaching Mid-Point Assessment 3 Closed Book 32 marks – data response ques, 4m & 6m explain, 12m assess ques. Student levelled responses and teacher marked/ checked .

		Human activity (e.g., deforestation, fossil fuel combustion) affects both the carbon and water cycles. - The feedback mechanisms (e.g., melting permafrost) that link the carbon and water cycles to global climate change. - Ocean acidification and its impact on marine ecosystems. **Examples**:	Analysis of climate models to predict regions most at risk from droughts and floods due to climate change. Graphical analysis of feedback mechanisms (e.g., carbon release from permafrost) affecting global climate.		
Term 3a	Year 13 In-practice in-class Mock Paper 3 Synoptic	Depending of synoptic focus – applied skills, knowledge from different parts of the Spec.	Application of analysis for smaller question and		Revision Microsoft Knowledge Tests – for each EQ for each topic Practice Paper 3 completed in lesson time, marked against example work
Term 3b	E X A M S				