

Edexcel A Level Geography (2016 Specification)

Topic 1: Tectonic Processes and Hazards

EQ1: Why are some locations more at risk from tectonic hazards?	R	A	G
1.1 The global distribution of tectonic hazards can be explained by plate boundary and other tectonic processes			
Describe and explain the global distribution of earthquakes, volcanic eruptions and tsunamis			
Describe the distribution of plate boundaries (divergent, convergent and conservative)			
Explain cause of intraplate earthquakes and volcanoes			
1.2 There are theoretical frameworks that attempt to explain plate movements			
Explain the theory of plate tectonics (internal structure, mantle convection, palaeomagnetism and seafloor spreading, subduction and slab pull)			
Explain how the processes operate at different margins (destructive, constructive, collision and transform)			
Explain how physical processes can impact upon the: 1) magnitude of volcanic eruptions 2) type of eruption 3) magnitude of earthquakes 4) earthquake focal depth			
1.3 Physical processes explain the causes of tectonic hazards			
Explain how P, S and L waves cause crustal fracturing, ground shaking and secondary hazards such as liquefaction and landslides			
Explain how volcanoes cause lava flows, pyroclastic flows, ash falls, gas eruptions, and secondary hazards such as lahars, jökulhlaup			
Explain how tsunamis can be caused by submarine earthquakes at subduction zones as a result of sea-bed and water column displacement			
EQ2: Why do some tectonic hazards develop into disasters?			
1.4 Disaster occurrence can be explained by the relationship between hazards, vulnerability, resilience and disaster			
Define the difference between a hazard and a natural disaster.			
Explain the importance of vulnerability and a community's threshold for resilience the hazard risk equation			
Explain the Pressure and Release model (PAR) and the complex inter-relationships between the hazard and its wider context			
Analyse the social and economic impact of tectonic hazards on the people, economy and environment of contrasting locations in the developed, emerging and developing world			
1.5 Tectonic hazard profiles are important to an understanding of contrasting hazard impacts, vulnerability and resilience			

Explain how the magnitude and intensity of tectonic hazards is measured using different scales (Mercalli, Moment Magnitude Scale (MMS) and Volcanic Explosivity Index (VEI))			
Analyse the characteristics of earthquakes, volcanoes and tsunamis (magnitude, speed of onset and areal extent, duration, frequency, spatial predictability) through hazard profiles			
Analyse the range of profiles of earthquake, volcano and tsunami events showing the severity of social and economic impact in developed, emerging and developing countries			
1.6 Development and governance are important in understanding disaster impact and vulnerability and resilience			
Analyse the impact of access to education, housing, healthcare and income opportunities on vulnerability and resilience			
Analyse the impact of governance and geographical factors (population density, isolation and accessibility, degree of urbanisation) on vulnerability and a community's resilience			
Analyse contrasting hazard events in developed, emerging and developing countries to show the interaction of physical factors and the significance of context in influencing the scale of disaster			
EQ3: How successful is the management of tectonic hazards and disasters?			
1.7 Understanding the complex trends and patterns for tectonic disasters helps explain differential impacts			
Describe tectonic disaster trends since 1960 (number of deaths, numbers affected, level of economic damage) in the context of overall disaster trends			
Analyse the accuracy and reliability of the hazard data			
Explain how tectonic mega-disasters can have regional or even global significance in terms of economic and human impacts			
Explain the concept of a multiple-hazard zone and explain how linked hydrometeorological hazards sometimes contribute to a tectonic disaster			
1.8 Theoretical frameworks can be used to understand the predication, impact and management of tectonic hazards			
Explain how prediction and forecasting accuracy depends on the type of location of the tectonic hazard			
Analyse the importance of of different stages in the hazard management cycle (response, recovery, mitigation, preparedness)			
Explain the use of Park's Model to compare the response curve of hazard events, comparing areas at different stages of development			
1.9 Tectonic hazard impacts can be managed by a variety of mitigation and adaptation strategies, which vary in their effectiveness			
Evaluate the use of strategies to modify the event include land-use zoning, hazard – resistant design and engineering defences as well as diversion of lava flows			
Evaluated the use of strategies to modify vulnerability and resilience include hi-tech			

monitoring, prediction, education, community preparedness and adaptation			
Evaluate the use of strategies to modify loss include emergency, short- and longer-term aid and insurance (P: role of NGOs and insurers) and the actions of affected communities themselves			

Topic 2B: Coastal Landscapes and Change

EQ1: Why are coastal landscapes different and what processes cause these differences?	R	A	G
2B.1 The coast, and wider littoral zone, has distinctive features and landscapes			
Describe the features of the littoral zone in a wide variety of coastal types including backshore, nearshore and offshore zones			
Explain why the coastal zone is a dynamic zone which can undergo rapid change			
Explain how coasts can be classified by using longer term criteria such as geology and changes of sea level or shorter term processes such as inputs from rivers, waves and tides			
Analyse the differences between rocky coasts and coastal plains consider: 1) energy levels and sources 2) geology 3) sediment supply			
2B.2 Geological structure influences the development of coastal landscapes at a variety of scales			
Explain how geological structure is responsible for the formation of concordant and discordant coasts			
Explain how geological structure influences coastal morphology: Dalmatian and Haff type concordant coasts and headlands and bays on discordant coasts			
Explain how geological structure (jointing, dip, faulting, folding) is an important influence on coastal morphology and erosion rates, and also on the formation of cliff profiles and the occurrence of micro-features, e.g. caves			
2B.3 Rates of coastal recession and stability depend on lithology and other factors			
Explain how bedrock lithology (igneous, sedimentary, metamorphic) and unconsolidated material geology are important in understanding rates of coastal recession			
Explain how differential erosion of alternating strata in cliffs (permeable / impermeable, resistant/less resistant) produces complex cliff profiles and influences recession rates			
Explain why vegetation is important in 1)stabilising sandy coastlines through dune successional development on sandy coastlines and 2)salt marsh successional development in estuarine areas			
EQ2: How do characteristic coastal landforms contribute to coastal landscapes?			
2B.4 Marine erosion Creates distinctive coastal landforms and contributes to coastal landscapes			
Explain how different wave types (constructive/destructive) influence beach morphology and beach sediment profiles			
Explain how waves can beach morphology and sediment profiles can vary at a variety of temporal scales from short term (daily) through to longer periods			
Explain the importance of erosion processes (hydraulic action, corrosion, abrasion, attrition)			
Explain how erosional processes are influenced by wave type, size and lithology			

Explain how erosion creates distinctive coastal landforms (wave cut notches, wave cut platforms, cliffs, the cave-arch-stack stump sequence)			
2B.5 Sediment transport and Deposition create distinctive landforms and contribute to coastal landscapes			
Explain how sediment transportation is influenced by the angle of wave attack, tides and currents and the process of longshore drift			
Explain how transportation and deposition processes produce distinctive coastal landforms (beaches, recurved and double spits, offshore bars, barrier beaches and bars, tombolos and cusped forelands)			
Explain how depositional landforms can be stabilised by plant succession			
Explain why the Sediment Cell concept (sources, transfers and sinks) is important in understanding the coast as a system with both negative and positive feedback, it is an example of dynamic equilibrium			
2B.6 Subaerial processes of mass movement and weathering influence coastal landforms and contribute to coastal landscapes			
Explain how weathering (mechanical, chemical, biological) is important in sediment production and influences rates of recession			
Explain why mass movement (blockfall, rotational slumping, landslides) is important on some coasts with weak and/or complex geology			
Explain how mass movement creates distinctive landforms (rotational scars, talus scree slopes, terraced cliff profiles)			
EQ3: How do coastal erosion and sea-level change alter the physical characteristics of coastlines and increase risks?			
2B.7 Sea level change influences coasts on different timescales.			
Explain how longer-term sea level changes result from a complex interplay of factors both eustatic (ice formation/melting, thermal changes) and isostatic (post glacial adjustment, subsidence, accretion) and tectonics			
Explain how sea level change has produced emergent coastlines (raised beaches with fossil cliffs) and submergent coastlines (rias, fjords and Dalmatian)			
Explain why contemporary sea level change from global warming or tectonic activity is a risk to some coastlines			
2B.8 Rapid coastal retreat causes threats to people at the coast			
Explain how rapid coastal recession is caused by physical factors (geological and marine) but can also be influenced by human actions (dredging or coastal management, the Nile Delta, Guinea and Californian coastlines)			
Explain how sub aerial processes (weather and mass movement) work together to influence rates of coastal recession			
Explain how rates of recession are not constant and are influenced by different factors both			

short- and longer term (wind direction/fetch, tides, seasons, weather systems and occurrence of storms)			
2B.9 Coastal flooding is a significant and increasing risk for some coastlines			
Explain how local factors increase flood risk on some low-lying and estuarine coasts (height, degree of subsidence, vegetation removal); global sea level rise further increases risk			
Explain why storm surge events can cause severe coastal flooding with dramatic short-term impacts (depressions, tropical cyclones) can cause severe coastal flooding			
Explain how climate change may increase coastal flood risk (frequency and magnitude of storms, sea level rise) but why the pace and magnitude of this threat is uncertain			
Explain why the pace and magnitude of coastal flooding, caused by climate change is uncertain			
EQ4: How can coastlines be managed to meet the needs of all players?			
2B.10 Increasing risks of coastal recession and coastal flooding have serious consequences for affected communities			
Explain why the impact of coastal recession can be significant, especially in areas of dense coastal developments consider both economic losses (housing, businesses, agricultural land, infrastructure) and social losses (relocation, loss of livelihood, amenity value)			
Explain how coastal flooding and storm surge events can have serious economic and social consequences for coastal communities in both developing and developed countries			
Explain how climate change may create environmental refugees in coastal areas			
2B.11 There are different approaches to managing the risks associated with coastal recession and flooding			
Explain how hard engineering approaches (groynes, sea walls, rip rap, revetments, offshore breakwaters) are economically costly and directly alter physical processes and systems			
Explain how soft engineering approaches (beach nourishment, cliff regrading and drainage, dune stabilisation) attempt to work with physical systems and processes to protect coasts and manage changes in sea level			
Evaluate the success of sustainable management in its ability to cope with future threats (increased storm events, rising sea levels)			
Explain how implementation of sustainable management can lead to local conflicts in many countries			
2B.12 Coastlines are now increasingly managed by holistic integrated coastal zone management (ICZM)			
Explain how coastal management increasingly uses the concept of littoral cells to manage extended areas of coastline. Use examples from around the world to aid in this explanation			
Explain how policy decisions (No Active Intervention, Strategic Realignment and Hold The Line Advance The Line) are based on complex judgements (engineering feasibility, environmental sensitivity, land value, political and social reasons); Cost Benefit Analysis (CBA) and Environmental Impact Assessment (EIA) are used as part of the decision making			

process			
Explain how policy decisions can lead to conflicts between different players (homeowners, local authorities, environmental pressure groups) with perceived winners and losers in countries at different levels of development (developed and developing or emerging countries)			

Topic 3 - Globalisation

EQ1: What are the causes of globalisation and why has it accelerated in recent decades?	R	A	G
3.1 Globalisation is a long-standing process which has accelerated because of rapid developments in transport, communications and businesses			
Explain how globalisation involves widening and deepening global connections, interdependence and flows (commodities, capital, information, migrants and tourists)			
Explain how developments in transport and trade in the 19th century (railways, telegraph, steam-ships) accelerated in the 20 th century (jet aircraft, containerisation), contributing to a 'shrinking world'			
Explain how the 21st century has been dominated by rapid development in ICT and mobile communication (mobile phones, internet, social networking, electronic banking, fibre optics), lowering communication costs and contributing to time-space compression			
3.2 Political and economic decision making are important factors in the acceleration of globalisation			
Analyse the role that International political and economic organisations (World Trade Organization (WTO), International Monetary Fund (IMF), World Bank) have contributed to globalisation through the promotion of free trade policies and foreign direct investment (FDI)			
Analyse the role that National governments are key players in terms of promoting free trade blocs (EU; ASEAN) and through policies (free-market liberalisation, privatisation, encouraging business start-ups)			
Analyse the role that special economic zones, government subsidies and attitudes to FDI (China's 1978 Open Door Policy) have contributed to the spread of globalisation into new global regions			
3.3 Globalisation has affected some places and organisations more than others			
Explain how degree of globalisation varies by country and can be measured using indicators and indices (AT Kearney index, KOF index)			
Explain why TNCs are important in globalisation both in contributing to its spread (global production networks, glocalisation and the development of new markets) and taking advantage of economic liberalisation (outsourcing and offshoring)			
Explain why some locations remain largely 'switched off' from globalisation e.g. North Korea, Sahel countries for physical, political, economic and environmental reasons			
EQ2: What are the impacts of globalisation for countries, different groups of people and cultures and the physical environment?			
3.4 The global shift has created winners and losers for people and the physical environment			
Analyse how the movement of the global economic centre of gravity to Asia via the global shift of manufacturing (China) and outsourcing of services (India) can lead to changes in the built environment that can bring benefits (infrastructure investment, waged work, poverty reduction, education and training) but also costs (loss of productive land, unplanned settlements, environmental and resource pressure)			

Explain how some communities in developing countries have experienced major environmental problems (including air and water pollution, land degradation, over-exploitation of resources, and loss of biodiversity), which impact on people's health and wellbeing			
Explain how some deindustrialised regions in developed countries face social and environmental problems as a result of economic restructuring (dereliction, contamination, depopulation, crime and high unemployment)			
3.5 The scale and pace of economic migration has increased as the world has become more interconnected, creating consequences for people and the physical environment			
Explain how rural-urban migration (push and pull factors), and/or natural increase, is responsible for the growth of megacities rapid urban growth creates social and environmental challenges			
Explain how international migration has increased in global hub cities and regions, deepening interdependence between regions and mass low-wage economic migration to certain named examples			
Analyse the impact that migration has economic, social, political and environmental costs and benefits for both host and source locations			
3.6 The emergence of a global culture, based on western ideas, consumption and attitudes towards the physical environment, is one outcome of globalisation			
Explain how cultural diffusion occurs as a result of globalisation; TNCs, global media corporations tourism and migration create and spread an increasingly 'westernised' global culture			
Explain how cultural diffusion impacts on both the environment and people			
Explain how the spread of a global culture has also led to new awareness of opportunities for disadvantaged groups particularly in emerging and developing countries			
Explain how in some locations, cultural erosion (loss of language, traditional food, music, clothes, social relations (loss of tribal lifestyles in Papua New Guinea) has resulted in changes to the built and natural environment (de-valuing local and larger-scale ecosystems)			
Analyse the concerns about cultural impacts, economic and environmental exploitation has led to opposition to globalisation from some groups			
EQ3: What are the consequences of globalisation for global development and the physical environment and how should different players respond to its challenges?			
3.7 Globalisation has led to dramatic increases in development for some countries, but also widening development gap extremities and disparities in environmental quality			
Explain the use of economic measures (both single and composite indices) of development (income per capita, economic sector balance) in contrast with those focused on social development (Human Development Index (HDI), Gender Inequality Index (GII) and environmental quality (air pollution indices)			
Explain trends in widening income inequality, globally and nationally (measured using the Gini Coefficient)			

Explain how globalisation has created winners and losers for people and physical environments between and within developed, emerging and developing economies			
Analyse contrasting trends in economic development and environmental management between global regions since 1970 indicate differential progress that can be related to the outcomes from globalisation			
3.8 Social, political and environmental tensions have resulted from the rapidity of global change caused by globalisation			
Explain how open borders, deregulation and encouragement of foreign direct investment has created culturally mixed societies and thriving migrant diasporas in some locations, but tensions have resulted elsewhere			
Explain how and why attempts have been made in some locations to control the spread of globalisation by censorship, limiting immigration and trade protectionism			
Explain why some groups seek to retain their cultural identity within countries and seek to retain control of culture and physical resources, whereas others embrace its economic advantages			
3.9 Ethical and environmental concerns about unsustainability have led to increased localism and awareness of the impacts of a consumer society			
Explain how local groups and NGOs promote local sourcing as one response to globalisation by increasing sustainability (A: actions of local pressure groups); this has economic, social and environmental costs and benefits			
Explain how fair trade and ethical consumption schemes may reduce the environmental degradation, the inequalities of global trade and improve working conditions for some people			
Explain how recycling has a role in managing resource consumption and ecological footprints, but its use varies by product and place			

Guidance for integrating geographical skills for Topic 3

The following skills provide suggested opportunities for integrating the full range of skills outlined in the geographical skills appendix (Appendix 1). These skills are not exclusive to the topic areas under which they appear; students will need to be able to apply these skills across any suitable topic area throughout their course of study.

- (1) Use of proportional flow lines showing networks of flows.
- (2) Ranking and scaling data to create indices.
- (3) Analysis of human and physical features on maps to understand lack of connectedness.
- (4) Use of population, deprivation and land-use datasets to quantify the impacts of deindustrialisation.
- (5) Use of proportional flow arrows to show global movement of migrants from source to host areas.
- (6) Analysis of global TNC and brand value datasets to quantify the influence of western brands.
- (7) Critical use of World Bank and United Nations (UN) data sets to analyse trends in human and economic development, including the use of line graphs, bar charts and trend lines.
- (8) Plotting Lorenz curves and calculating the Gini Coefficient.

Topic 4A - Regenerating Places

EQ1: How and why do places vary?	R	A	G
4A.1 Economies can be classified in different ways and vary from place to place			
Describe how economic activity can be classified by sector and also by type of employment			
Describe and explain differences in economic activity and how this is reflected through variation in social factors			
Explain how inequalities in pay levels across economic sectors and in different types of employment are reflected in quality of life indices			
4A.2 Places have changed their function and characteristics over time			
How places change their functions (administrative, commercial, retail and industrial) and demographic characteristics (gentrification, age structure and ethnic composition) over time			
Explain why changes in a place might be explained by physical factors, accessibility and connectedness, historical development and the role of local and national planning			
How change can be measured using employment trends, demographic changes, land use changes and levels of deprivation (income deprivation, employment deprivation, health deprivation, crime, quality of the living environment, abandoned and derelict land)			
4A.3 Past and present connections have shaped the economic and social characteristics of your chosen places			
Regional and national influences have shaped the characteristics of your chosen places. These places can be represented in a variety of different forms, giving contrasting images to that presented more formally and statistically. How the lives of students and those of others are affected by this continuity and change, both real and imagined			
International and global influences that have shaped your chosen places. These places can be represented in a variety of different forms, giving contrasting images to that presented more formally and statistically. How the lives of students and those of others are affected by this continuity and change, both real and imagined			
Consideration of the way in which economic and social changes in your chosen places have influenced people's identity			
EQ2: Why might regeneration be needed?	R	A	G
4A.4 Economic and social inequalities changes people's perceptions of an area			
Explain why successful regions have high rates of employment, inward migration (internal and international) and low levels of multiple deprivation but also high property prices and skill shortages in both urban and rural areas			
How economic restructuring may trigger a spiral of decline, including increasing levels of social deprivation (education, health, crime, access to services and living environment) in both deindustrialised urban areas and rural settlements once dominated by primary economic activities			

There are priorities for regeneration due to significant variations in both economic and social inequalities (gated communities, 'sink estates', commuter villages, declining rural settlements)			
4A.5 There are significant variations in the lived experience of place and engagement with them			
Describe wide variations in levels of engagement in local communities (local and national election turnout, development and support for local community groups)			
Describe how lived experiences of, and attachment to, places varies according to age, ethnicity, gender, length of residence (new migrants, students) and levels of deprivation; these in turn impact on levels of engagement			
Describe conflicts that can occur among contrasting groups in communities which have different views about the priorities and strategies for regeneration, these have complex causes (lack of political engagement and representation, ethnic tensions, inequality and lack of economic opportunity)			
4A.6 There are significant variations in the lived experience of place and engagement with them			
To calculate statistical evidence to determine the need for regeneration in your chosen local place			
Explain how different media platforms can provide contrasting evidence, questioning the need for regeneration in your chosen local place			
Explain how different representations of your chosen local place could influence the perceived need for regeneration			
EQ3: How is regeneration managed?	R	A	G
4A.7 UK government policy decisions play a key role in regeneration			
Describe how infrastructure investment (high speed rail, airport development) is required to maintain growth and improve accessibility to regenerate regions.			
Explain why the rate and type of development (planning laws, house building targets, housing affordability, permission for 'fracking') affects economic regeneration of both rural and urban regions			
Describe how UK government decisions about international migration and the deregulation of capital markets (enabling foreign investment in prime London real estate) have significant impacts on the potential for growth and both direct and indirect investment			
4A.8 Local government policies aim to represent areas as being attractive for inward investment			
Explain how and why local governments compete to create sympathetic business environments with local plans designating areas for development for a range of domestic and foreign investors			
How local interest groups (Chambers of Commerce, local preservation societies, trade unions) play a key role in decision-making about regeneration			
Urban and rural regeneration strategies include retail-led plans, tourism, leisure and sport (London Olympics 2012), public/private rural diversification (Powys Regeneration Partnership)			

4A.9 Rebranding attempts to represent areas as being more attractive by changing public perception of them			
Describe how to rebrand a re-imaging place using a variety of media to improve the image of both urban and rural locations and make them more attractive for potential investors			
For UK deindustrialised cities, rebranding can stress the attraction of places, creating specific place identity building on their industrial heritage; this can attract national and international tourists and visitors			
There are a range of rural rebranding strategies in the post production countryside based on heritage and literary associations, farm diversification and specialised products, outdoor pursuits and adventure in both accessible and remote areas; these strategies are intended to make these places more attractive to national and international tourists and visitors			
EQ4: How successful is regeneration?	R	A	G
4A.10 Assessing the success of regeneration uses a range of measures: economic, demographic, social and environmental			
Explain how the success of economic regeneration can be assessed using measures of income, poverty and employment (both relative and absolute changes) both within areas and by comparison to other more successful areas			
Explain how social progress can be measured by reductions in inequalities both between areas and within them and improvements in social measures of deprivation and in demographic changes (improvements in life expectancy and reductions in health deprivation)			
Describe how regeneration is successful if it leads to an improvement in the living environment (levels of pollution reduced, reduction in abandoned and derelict land)			
4A.11 Different urban stakeholders have different criteria for judging the success of urban regeneration			
Explain strategies used in the regeneration of an urban place and the contested nature of these decisions within local communities			
Explain how changes taken place as a consequence of national and local strategies can be judged using a range of economic, social, demographic and environmental variables in an urban area			
Explain why different stakeholders (local and national governments, local businesses and residents) will assess success using contrasting criteria; how their views will vary			
4A.12 Different rural stakeholders have different criteria for judging the success of rural regeneration			
A study of the strategies used in the restructuring of a rural place and the contested nature of these decisions within local communities			
Explain how changes that have taken place as a consequence of national and local strategies can be judged using a range of economic, social, demographic and environmental variables in a rural area			
Explain why different stakeholders (local and national governments, local businesses and residents) will assess success using contrasting criteria; how their views will vary			

Topic 5: The Water Cycle and Water Insecurity

EQ1: What are the processes operating within the hydrological cycle from global to local scale?	R	A	G
5.1 The global hydrological cycle is of enormous importance to life on earth			
Explain how the global hydrological cycle operates as a closed system (inputs, outputs, stores and flows) and is driven by solar energy and gravitational potential energy.			
Explain the relative importance and size of the water stores (oceans, atmosphere, biosphere, cryosphere, groundwater and surface water) and annual fluxes between atmosphere, ocean and land			
Explain how the global water budget limits water available for human use and water stores have different residence times; some stores are non-renewable (fossil water or cryosphere losses).			
5.2 The drainage basin is an open system within the global hydrological cycle			
Explain how the hydrological cycle is a system of linked processes; inputs (including precipitation patterns and types; orographic, frontal, convectional) flows (infiltration, direct run-off, saturated overland flow, throughflow, percolation, groundwater flow) and outputs (evaporation, transpiration and channel flow).			
Explain how physical factors within the drainage basin determine the relative importance of inputs, flows and outputs (climate, soils, vegetation, geology, relief).			
Explain how humans can disrupt the drainage basin cycle by accelerating processes (deforestation, changing land use) and creating new water storage reservoirs or by abstracting water eg Amazonia.			
5.3 The hydrological cycle influences water budgets and river systems at a local scale.			
Explain how water budgets show the annual balance between inputs and outputs and their impact on soil water availability and are influenced by climate type e.g. Barrow, Alaska (polar), Cairo, Egypt (hot desert) and Southern England (temperate).			
Explain how river regimes indicate the annual variation of discharge of a river and result from the impact of climate, geology and soils as shown in regimes from contrasting river basins. Eg Yukon, Indus, Amazon			
Explain how a storm hydrograph's shape depends on physical features of drainage basins (size, shape, drainage density, rock type, soil, relief and vegetation) as well as human factors (land use and urbanisation).			

EQ2: What factors influence the hydrological system over short- and long-term timescales?	R	A	G
5.4 Deficits within the hydrological cycle result from physical processes but can have significant impacts			
Explain the causes of drought, both meteorological (short-term precipitation deficit, longer trends ENSO cycles) and hydrological			
Explain the contribution that human activity makes to the risk of drought: over abstraction of			

surface water resources and groundwater aquifers eg Sahelian drought and Australian			
Explain the impacts of drought on ecosystem functioning (wetlands, forest stress) and the resilience of these ecosystems			
5.5 Surpluses within the hydrological cycle can lead to flooding, with significant impacts for people			
Explain the meteorological causes of flooding, including intense storms leading to flash flooding, unusually heavy or prolonged rainfall, extreme monsoonal rainfall and snowmelt			
Explain how human actions can exacerbate flood risk (changing land use within the river catchment, mismanagement of rivers using hard engineering systems)			
Explain how damage from flooding has both environmental impacts (soils and ecosystems) and socio-economic impacts (economic activity, infrastructure and settlement) e.g. UK flood events of 2012			
5.6 Climate change may have significant impacts on the hydrological cycle globally and locally			
Explain how climate change affects inputs and outputs within the hydrological cycle: trends in precipitation and evaporation			
Explain how climate change affects stores and flows, size of snow and glacier mass, reservoirs, lakes, amount of permafrost, soil moisture levels as well as rates of runoff and streamflow			
Explain how climate change resulting from short-term oscillations (ENSO cycles) and global warming increase the uncertainty in the system; this causes concerns over the security of water supplies. Including projections of future drought and flood risk			

EQ2: How does water insecurity occur and why is it becoming such a global issue for the 21st century?	R	A	G
5.7 There are physical causes and human causes of water insecurity			
Explain how the growing mismatch between water supply and demand has led to a global pattern of water stress and scarcity.			
Explain that the causes of water insecurity are physical (e.g. climate variability, salt water encroachment at the coast) as well as human (e.g. over abstraction from rivers, lakes and groundwater aquifers, water contamination from agriculture, industrial water pollution).			
Explain that the finite water resource is facing pressure from rising demand due to increasing population, improving living standards, industrialisation and agriculture. Understand that this is increasingly serious in some locations and is leading to increasing risk of water insecurity.			
5.8 There are consequences and risks associated with water insecurity			
Explain the causes of and global pattern of physical water scarcity and economic scarcity and why the price of water varies globally.			
Explain the importance of water supply for economic development (industry, energy supply, agriculture) and human well-being (sanitation, health and food preparation); the environmental and economic problems resulting from inadequate water.			

Explain the potential for conflicts to occur between users within a country, and internationally over local and transboundary water sources e.g. Nile and Mekong.			
5.9 There are different approaches to managing water supply, some more sustainable than others			
Explain the pros and cons of the techno-fix of hard engineering schemes to include water transfers, mega dams and desalination plants. E.g. water transfers in China.			
Analyse the value of more sustainable schemes of restoration of water supplies and water conservation (smart irrigation, recycling of water) e.g. Singapore.			
Assess the role of different players in reducing water conflict risk through integrated drainage basin management schemes for large rivers and water sharing treaties and frameworks e.g. UNECE Water Convention, Helsinki Rules, Berlin Rules.			

Topic 6: The Carbon Cycle and Energy Security

EQ1: How does the carbon cycle operate to maintain planetary health?	R	A	G
6.1 Most global carbon is locked in terrestrial stores as part of the long-term geological cycle			
Explain how the biogeochemical carbon cycle consists of carbon stores of different sizes (terrestrial, oceans and atmosphere), with annual fluxes between stores of varying size (measured in Pg/Gt), rates and on different timescales.			
Explain why most of the earth's carbon is geological, resulting from the formation of sedimentary carbonate rocks (limestone) in the oceans and biologically derived carbon in shale, coal and other rocks.			
Explain how geological processes release carbon into the atmosphere through volcanic out-gassing at ocean ridges/subduction zones and chemical weathering of rocks.)			
6.2 Biological processes sequester carbon on land and in the oceans on shorter timescales			
Explain how phytoplankton sequester atmospheric carbon during photosynthesis in surface ocean waters; carbonate shells/tests move into the deep ocean water through the carbonate pump and action of the thermohaline circulation.			
Explain how terrestrial primary producers sequester carbon during photosynthesis; some of this carbon is returned to the atmosphere during respiration by consumer organisms.			
Explain how biological carbon can be stored as dead organic matter in soils, or returned to the atmosphere via biological decomposition over several years.			
6.3 A balanced carbon cycle is important in sustaining other earth systems but is increasingly altered by human activities			
Explain how the concentration of atmospheric carbon (carbon dioxide and methane) strongly influences the natural greenhouse effect, which in turn determines the distribution of temperature and precipitation.			
Explain why ocean and terrestrial photosynthesis play an important role in regulating the composition of the atmosphere.			
Explain how soil health is influenced by stored carbon and why this is important for ecosystem productivity.			
Explain how the process of fossil fuel combustion has altered the balance of carbon pathways and stores with implications for climate, ecosystems and the hydrological cycle.			
EQ2: What are the consequences for people and the environment of our increasing demand for energy?			
6.4 Energy security is a key goal for countries, with most relying on fossil fuels			
Explain how consumption (per capita and in terms of units of GDP) and energy mix (domestic and foreign, primary and secondary energy, renewable versus non-renewable vary.			
Explain how access to and consumption of energy resources depends on physical availability, cost, technology, public perception, level of economic development and environmental priorities (national comparisons: USA versus France).			
Explain the energy players (e.g. role of TNCs, The Organisation of the Petroleum Exporting Countries (OPEC), consumers, governments) have different roles in securing pathways and energy supplies.			

6.5 Reliance on fossil fuels to drive economic development is still the global norm			
Explain why there is a mismatch between locations of conventional fossil fuel supply (oil, gas, coal) and regions where demand is highest, resulting from physical geography.			
Explain why energy pathways (pipelines, transmission lines, shipping routes, road and rail) are a key aspect of energy security and why they can be prone to disruption especially as conventional fossil fuel sources deplete (Russian gas to Europe)			
Explain why the development of unconventional fossil fuel energy resources (tar sands, oil shale, shale gas, deep water oil) has social costs and benefits, implications for the carbon cycle, and consequences for the resilience of fragile environments			
6.6 There are alternatives to fossil fuels but each has costs and benefits			
Explain how renewable and recyclable energy (nuclear power, wind power and solar power) could help decouple fossil fuel from economic growth.			
Explain why different energy sources have costs and benefits, economically, socially, and environmentally and in terms of their contribution they can make to energy security.			
Explain why biofuels, an alternative energy source, are increasing globally and explain why growth in biofuels however has implications for food supply as well as uncertainty over how 'carbon neutral' they are.			
Explain how radical technologies, including carbon capture and storage and alternative energy sources (hydrogen fuel cells, electric vehicles) could reduce carbon emissions but uncertainty exists as to how far this is possible			
EQ3: How are the carbon and water cycles linked to the global climate system?			
6.7 Biological carbon cycles and the water cycle are threatened by human activity			
Explain why growing demand for food, fuel and other resources globally has led to contrasting regional trends in land-use cover (deforestation, afforestation, conversion of grasslands to farming) which affect terrestrial carbon stores and subsequently the water cycle and soil health.			
Explain how ocean acidification, is increasing due to fossil fuel combustion and is at risks crossing the critical threshold for the health of coral reefs and other marine ecosystems that provide vital ecosystem services			
Explain how climate change, resulting from the enhanced greenhouse effect, may increase the frequency of drought due to shifting climate belts, which may impact on the health of forests as carbon stores.			
6.8 There are implications for human wellbeing from the degradation of the water and carbon cycles			
Explain how forest losses has implications for human wellbeing but that there is also evidence that forest stores are being protected and even expanded, especially in countries at higher levels of development (environmental Kuznets' curve model).			
Explain how increased temperatures affect evaporation rates and the quantity of water vapour in the atmosphere with implications for precipitation patterns, river regimes and water stores (cryosphere and drainage basin stores).			
Explain why threats to ocean health pose threats to human wellbeing, especially in developing regions that depend on marine resources as a food source and for tourism and coastal protection.			
6.9 Further planetary warming risks large-scale release of stored carbon, requiring responses from different players at different scales			

Explain why future emissions, atmospheric concentration levels and climate warming are uncertain owing to natural factors, human factors and feedback mechanisms			
Analyse the adaptation strategies for a changed climate (water conservation and management, resilient agricultural systems, land-use planning, flood-risk management, solar radiation management) and explain the different costs and risks.			
Explain how re-balancing of the carbon cycle could be achieved through mitigation and why this requires global scale agreement and national actions both of which have proved to be problematic..			

Topic 7: Superpowers

EQ1: What are superpowers and how have they changed over time?	R	A	G
7.1 Geopolitical power stems from a range of human and physical characteristics of superpowers			
Explain how superpowers, emerging and regional powers can be defined using contrasting characteristics (economic, political, military, cultural, demographic and access to natural resources)			
Explain why mechanisms of maintaining power sit on a spectrum from 'hard' to 'soft' power, which vary in their effectiveness.			
Explain the relative importance of these characteristics and mechanisms for maintaining power has changed over time (Mackinder's geo-strategic location theory)			
7.2 Patterns of power change over time and can be uni-, bi- or multi-polar			
Explain the maintenance of power during the imperial era by direct colonial control (British Empire, multipolar world 1919–1939).			
Explain how multi-faceted, indirect control (political, economic, military, cultural), including neo-colonial mechanisms, has become more important (Cold War era; emergence of China as a potential rival to the USA's hegemony).			
Explain why different patterns of power bring varying degrees of geopolitical stability and risk			
7.3 Emerging powers vary in their influence on people and the physical environment, which can change rapidly over time			
Explain why a number of emerging countries, including Brazil, Russia, India and China (BRIC) and other G20 members, are considered increasingly important to global economic and political systems, as well as global environment governance (UN Climate Change Conference).			
Explain why each country has evolving strengths and weaknesses (economic, political, military, cultural, demographic and environmental) that might inhibit or advance their economic and geopolitical role in the future.			
Explain how Development Theory (World Systems Theory, Dependency Theory, Modernisation Theory) can be used to help explain changing patterns of power			
EQ2: What are the impacts of superpowers on the global economy, political systems and the physical environment?			
7.4 Superpowers have a significant influence over the global economic system			
Explain how superpowers influence the global economy (promoting free trade and capitalism) through a variety of IGOs (World Bank, IMF, WTO, World Economic Forum (WEF)).			
Explain why TNCs (public and state-led) are dominant economic forces in the global economy and economic and cultural globalisation in terms of technology (patents) and trade patterns.			
Explain why global cultural influence (the arts, food the media) and 'westernisation' is an important aspect of power, linked to economic influence and technology.			
7.5 Superpowers and emerging nations play a key role in international decision making concerning people and the physical environment			

Explain how superpowers and emerging nations play a key role in global action (crisis response, conflict, climate change)..			
Explain how different types of alliances (military, economic and environmental) increase interdependence and are important in geostrategy and global influence.			
Explain why the UN (Security Council, the International Court of Justice, and peacekeeping missions and climate change conferences) are important to global geopolitical stability.			
7.6 Global concerns about the physical environment are disproportionately influenced by superpower actions			
Explain why superpower resource demands (food, fossil fuels, and minerals) can cause environmental degradation and their carbon emissions contribute disproportionately to global warming.			
Explain why there are differences in the willingness to act (USA, EU, China, and Russia) to reduce carbon emissions and reach global agreements on environmental issues.			
Explain why future growth in middle-class consumption in emerging superpowers has implications for the availability and cost of key resources (rare earths, oil, staple grains and water), as well as for the physical environment.			
EQ3: What spheres of influence are contested by superpowers and what are the implications of this?			
7.7 Global influence is contested in a number of different economic, environmental and political spheres			
Explain why tensions can arise over the acquisition of physical resources (Arctic oil and gas) where ownership is disputed and disagreement exists over exploitation.			
Explain why the global system of intellectual property rights can be undermined by counterfeiting, which strains trade relations and TNC investment.			
Explain why political spheres of influence can be contested leading to tensions over territory and physical resources (South and East China Seas) and in some cases resulting in open conflict (Western Russia/Eastern Europe) with implications for people and physical environments.			
7.8 Developing nations have changing relationships with superpowers with consequences for people and the physical environment			
Explain why developing economic ties between emerging powers and the developing world (China and African nations) increase interdependence, generate environmental impacts and bring opportunities and challenges.			
Explain why the rising economic importance of certain Asian countries (China or India) on the global stage increases the geopolitical influence of the region but also creates economic and political tensions within the region.			
Explain why cultural, political, economic and environmental tensions in the Middle East represent an ongoing challenge to superpowers and emerging powers due to complex geopolitical relations combined with the supply of vital energy resources.			
7.9 Existing superpowers face ongoing economic restructuring, which challenges their power			
Explain why economic problems (debt, unemployment, economic restructuring, social costs) represent an ongoing challenge to the USA and EU.			
Explain why the economic costs of maintaining global military power (naval, nuclear, air power, intelligence services) and space exploration are questioned in some existing powers.			
Explain why the future balance of global power in 2030 and 2050 is uncertain and there are a range of possible outcomes (continued USA dominance, bi-polar and multi-polar structures).			

Topic 8B: Migration, Identity and Sovereignty

EQ1: What are the impacts of globalisation on international migration?	R	A	G
8B.1 Globalisation has led to an increase in migration both within countries and among them			
Explain how globalisation has caused extremely significant changes in the global economic system, changing the pattern of demand for labour; this has encouraged both rural-urban migration within countries (China) and international migration between countries			
Explain why between 3–4% of the global population live outside their country of birth but this proportion varies greatly between countries (different policies relating to international migration and levels of engagement with the global economy)			
Explain why patterns of international migration are changing and will continue to change because environmental, economic and political events which affect both the source areas of many migrants and their destinations;			
Explain the patterns of flow of migrants of both voluntary economic migrants, refugees and asylum seekers.			
8B.2 The causes of migration are varied, complex and subject to change			
Explain why most migrants move for work or to re-join family members and why there are other significant causes, including displacement of refugees due to conflict and poverty in their regions of origin.			
Explain why economic theory suggests that economic efficiency is maximised when goods (free trade), capital (deregulated financial markets) and labour (open-borders) can move freely across international borders but why this poses serious challenges for national identity and sovereignty.			
Explain why the movement of labour is unrestricted within many nation states to ensure efficient allocation of resources (regional movements in the UK) and the same logic applies for some global regions (EU) but does not yet apply at a global level			
8B.3 The consequences of international migration are varied and disputed			
Explain how migration changes the cultural and ethnic composition of nation states but the rate of assimilation of migrants varies from nation to nation especially when there are distinctive ethnic differences.			
Explain why migration causes political tensions because of differences in perceptions of the social, economic, cultural and demographic impacts of migration.			
Explain why there are variations in the ability of people to migrate across national borders according to levels of skill and income; and opportunities, including the presence or absence of controls and international borders.			
EQ2: How are nation states defined and how have they evolved in a globalising world?			
8B.4 Nation states are highly varied and have very different histories			
Explain why national sovereign states vary greatly in their ethnic, cultural and linguistic unity (Iceland compared to Singapore); and how this results from their history of population growth, their isolation and the role of migration.			
Explain why many national borders are a consequence of physical geography and historical development; whilst other borders are a result of colonial history and might not take account of different ethnic or religious groups (Iraq or Rwanda), which can lead to problems of sovereignty and legitimacy			

Explain why there are many contested borders (Ukraine/Russia) and not all nation states are universally recognised as such (Taiwan) which can lead to both conflict and population movements.			
8B.5 Nationalism has played a role in the development of the modern world			
Explain how superpowers and emerging nations play a key role in global action (crisis response, conflict, climate change)..			
Explain how different types of alliances (military, economic and environmental) increase interdependence and are important in geostrategy and global influence.			
Explain why the UN (Security Council, the International Court of Justice, and peacekeeping missions and climate change conferences) are important to global geopolitical stability.			
8B.6 Globalisation has led to the deregulation of capital markets and the emergence of new state forms			
Explain how globalisation has encouraged the growth of states that have low-tax regimes which provide havens for the profits for TNCs and homes for wealthy expatriates.			
Explain why most governments and IGOs have accepted the emergence of tax-havens although many NGOs have raised objections			
Explain why growing global inequalities have been recognised as a major threat to the sustainability of the global economic system and some governments have promoted alternative models			
EQ3: What are the impacts of global organisations on managing global issues and conflicts?			
8B.7 Global organisations are not new but have been important in the post-1945 world			
Explain why the United Nations was the first post-war IGO to be established and has grown in importance.			
Explain the role of the United Nations in global governance and how it is affected by the different geopolitical visions of members of the Security Council and its multiple functions in managing global environmental, socio-economic and political problems.			
Explain why interventions by the UN through the use of economic sanctions and direct military intervention have been made in defence of human rights but have a mixed record of success.			
Explain why Some member states (US, UK, Russia) have operated independently of the UN in intervening in 'failed states' or to conduct a 'war on terror' with profound impacts on geopolitical relations and global stability.			
8B.8 IGOs established after the Second World War have controlled the rules of world trade and financial flows			
Explain why the IMF, WB and WTO were established by the WWII allied nations and have been important in maintaining the dominance of 'western' capitalism, global economic management and trade policy (free trade).			
Explain why global borrowing rules and trade policies have been especially effective in delivering growth to the developed world, but the impact of Structural Adjustment and HIPC policies on the developing world's economies and economic sovereignty is disputed			
Explain why membership of global trade and financial IGOs is almost universal, as a result of the dominance of these organisations, but regional groupings have emerged in the form of trading blocs and in some cases there has been a movement to closer political unity.			
8B.9 IGOs have been formed to manage the environmental problems facing the world, with varying success			

Explain how IGOs manage global environmental issues concerning the quality of the atmosphere ,biosphere and economic problems and why they represent an ongoing challenge to the USA and EU.			
Explain why IGOs have been involved in developing laws for managing oceans (UN Convention on the Law of the Sea) and international rivers (Water Convention, Helsinki) as well as monitoring the state of the environment (Millennium Ecosystem Assessment).			
Explain why IGO management also includes responsibility for Antarctica as a continent of peace and science (Antarctic Treaty System).			
EQ4: What are the threats to national sovereignty in a more globalised world?			
8B.10 National identity is an elusive and contested concept			
Explain how nationalism remains a powerful force and is reinforced through education, sport and by political parties stressing loyalty to both the institutions and ideals of nation states			
Explain why identity and loyalty might be tied to distinctive legal systems, methods of governance, national 'character' or even a landscape (The English Countryside).			
Explain why most countries are multi-national with many contrasting ethnic groups; questions of national identity and loyalty are therefore complex, especially in an era of globalisation.			
8B.11 There are challenges to national identity			
Explain why many UK-based companies are foreign owned (EDF or Jaguar Land Rover (JLR)), making 'Made in Britain' an increasingly complex idea			
Explain how 'Westernisation' is often dominated by US cultural values through the operation of large corporations in both retailing and entertainment; which in turn, promotes a distinctive view of the benefits the dominant capitalist model			
Explain why ownership of property, land and businesses in countries is increasingly non-national (Qatari and Russian property in London and US or Indian or Chinese ownership of TNCs) and how this impacts on national identity			
8B.12 There are consequences of disunity within nations			
Explain why there are strong nationalist movements seeking to create independent, smaller states whilst remaining within larger trading groups (Catalonia or Scotland in the EU)			
Explain why there are significant political tensions in the BRIC and other emerging nations resulting from the uneven pattern of the costs and benefits of globalisation			
Explain how the role of the state is variable and national identity is not always strong, especially in 'failed states' where there are stark differences between the politically and economically powerful elite, foreign investment groups and the wider population (Somalia)			