

Advance Information for Summer 2022

AS Level

Geography

H081

We have produced this advance information to support teachers and students with revision for the Summer 2022 examinations.

Information

- This notice covers all examined components.
- There are no restrictions on who can use this notice.
- You are not permitted to take this notice into the exam.
- This document has **24** pages.

Advice

- This notice is meant to help students to focus their revision time.
- It is advised that teaching and learning should still cover the entire subject content in the specification.
- Students' responses to individual questions may draw upon other areas of specification content where relevant, and credit will be given for this where appropriate.
- Students and teachers can discuss this advance information.

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GUIDANCE

The following areas of content are key areas of focus for revision and final preparation. The information is presented in specification order and not in question order. The focus of the synoptic questions in component 02 will be from the content areas identified in the table at the end of this document. Assessment of geographical skills will occur throughout the two papers.

H081/01 Landscape and place

Topic 1.1 Landscape systems

1.1.1 Option A - Coastal landscapes

1. How can coastal landscapes be viewed as systems?

Key Ideas	Content
1.a. Coastal landscapes can be viewed as systems.	A conceptual overview of: <ul style="list-style-type: none"> - the components of coastal landscape systems, including inputs, processes and outputs - the flows of energy and material through coastal systems - sediment cells.
1.b. Coastal landscape systems are influenced by a range of physical factors.	Potential influences on coastal landscape systems of: <ul style="list-style-type: none"> - tides, including tidal cycles and range - geology, including lithology and structure

2. How are coastal landforms developed?

Key Ideas	Content
2.a. Coastal landforms develop due to a variety of interconnected climatic and geomorphic processes.	The influence of flows of energy and materials on geomorphic processes, including weathering, mass movement, wave, fluvial and aeolian erosion, transportation and deposition. The formation of distinctive landforms, predominantly influenced by erosion, including bays, headlands, cliffs, shore platforms, geos, blow holes, caves, arches, stacks, stumps. The formation of distinctive landforms, predominantly influenced by deposition, including beaches, spits, on-shore bars, tombolos and salt marshes.
2.b. Coastal landforms are inter-related and together make up characteristic landscapes.	Case studies of one high energy coastline (such as rocky) and one low energy coastline, such as estuarine, to illustrate: <ul style="list-style-type: none"> - the physical factors which influence the formation of landforms within the landscape system - the inter-relationship of a range of landforms within the characteristic landscape system - how and why the landscape system changes over time from millennia to seconds, such as cliff collapse in seconds, seasonal changes in beach profile and spit growth over millennia. At least one of the case studies must be from beyond the UK.

3. How do coastal landforms evolve over time as climate changes?

Key Ideas	Content
3.a. Emergent coastal landscapes form as sea level falls.	How landforms in emergent landscapes are influenced by falling sea levels due to a cooling climate, including: <ul style="list-style-type: none"> - climate changes that occurred during a previous time period and the resultant sea level fall - the influence of sea level fall and geomorphic processes in shaping landforms, including raised beaches, marine terraces and abandoned cliffs - the modification of these landforms by processes associated with present and future climate and sea level changes.
3.b. Submergent coastal landscapes form as sea level rises.	How landforms in submergent landscapes are influenced by rising sea level due to a warming climate, including: <ul style="list-style-type: none"> - the influence of sea level rise and geomorphic processes in shaping landforms, including rias, fjords and shingle beaches - the modification of these landforms by processes associated with present and future climate and sea level changes.

4. How does human activity cause change within coastal landscape systems?

Key Ideas	Content
4.a. Human activity intentionally causes change within coastal landscape systems.	Case study of one coastal landscape that is being managed, including: <ul style="list-style-type: none"> - the management strategy being implemented and the reason for its implementation, such as groyne construction or off-shore dredging - their intentional impacts on processes and flows of material and/or energy through the coastal system, such as their effect on the sediment budget - the effect of these impacts in changing coastal landforms, such as changes in beach profile - the consequence of these changes on the landscape, such as extension of the coastal landscape seawards.
4.b. Economic development unintentionally causes change within coastal landscape systems.	Case study of one coastal landscape that is being used by people to illustrate: <ul style="list-style-type: none"> - the economic development taking place and the reasons for it taking place, such as trade routes, port or tourist resort development - their unintentional impacts on processes and flows of material and/or energy through the coastal system, such as disturbance to the sediment cell balance - the effect of these impacts in changing coastal landforms, such as beach profiles - the consequence of these changes on the landscape, such as coastal retreat or protection

Topic specific skills

- measurement and geo-spatial mapping skills

1.1.2 Option B - Glaciated landscapes

1. How can glaciated landscapes be viewed as systems?

Key Ideas	Content
1.a. Glaciated landscapes can be viewed as systems.	A conceptual overview of: <ul style="list-style-type: none"> - the components of glaciated landscape systems, including inputs, processes and outputs - the flows of energy and material through glaciated systems - glacier mass balance.
1.b. Glaciated landscapes are influenced by a range of physical factors	Potential influences on glaciated landscape systems of <ul style="list-style-type: none"> - climate, including precipitation totals and patterns - geology, including lithology and structure - latitude and altitude - relief and aspect on microclimate and glacier movement.

2. How are glacial landforms developed?

Key Ideas	Content
2.a. Glacial landforms develop due to a variety of interconnected climatic and geomorphic processes.	<ul style="list-style-type: none"> - The influence of flows of energy and materials on geomorphic processes, including weathering, mass movement, glacial erosion, nivation, transportation and deposition. - The formation of distinctive landforms, predominantly influenced by erosion, including corries, arêtes, pyramidal peaks, troughs, roche moutonnée, striations and ellipsoidal basins. - The formation of distinctive landforms, predominantly influenced by deposition, including terminal, lateral and recessional moraines, erratics, drumlins and till sheets.
2.b. Glacial landforms are inter-related and together make up characteristic landscapes.	<p>Case studies of one landscape associated with the action of valley glaciers and one associated with the action of ice sheets to illustrate:</p> <ul style="list-style-type: none"> - the physical factors which influence the formation of landforms within the landscape system - the inter-relationship of a range of landforms within the characteristic landscape system - how and why the landscape system changes over time from millennia to seconds, such as rock fall in seconds, seasonal changes in deposition rates and erosion of basins over millennia. <p>At least one of the case studies must be from beyond the UK.</p>

3. How do glaciated landforms evolve over time as climate changes?

Key Ideas	Content
3.a. Glacio-fluvial landforms exist as a result of climate change at the end of glacial periods.	How landforms in glaciated landscapes are influenced in post-glacial periods, including: <ul style="list-style-type: none"> - climate changes that occurred during a post-glacial period and the effect on resultant geomorphic processes - the influence of these processes in forming landforms, including kames, eskers and outwash plains - the subsequent modification of these landforms by processes associated with present and future climate changes.
3.b. Periglacial landforms exist as a result of climate change before and/or after glacial periods.	How landforms in periglacial landscapes are influenced by climate change, including: <ul style="list-style-type: none"> - the influence of these processes in forming landforms, including patterned ground and pingos - the subsequent modification of these landforms by processes associated with present and future climate changes.

4. How does human activity cause change within glaciated and periglacial landscape systems?

Key Ideas	Content
4.a. Human activity causes change within periglacial landscape systems.	Case study of one periglacial landscape that is being used by people, to illustrate: <ul style="list-style-type: none"> - the human activity taking place and the reasons for it taking place, such as resource extraction - the impacts on processes and flows of material and/or energy through the periglacial system, such as increased heat produced by buildings - the effect of these impacts in changing periglacial landforms, such as thawing of permafrost - the consequence of these changes on the landscape, such as development of thermokarst.
4.b. Human activity causes change within glaciated landscape systems.	Case study of one glaciated landscape that is being used by people, to illustrate: <ul style="list-style-type: none"> - the human activity taking place and the reasons for it taking place, such as dam construction - the impacts on processes and flows of material and/or energy through the glacial system, such as trapping of sediment - the effect of these impacts in changing glacial landforms, such as increased channel scour below dams - the consequence of these changes on the landscape, such as changes to valley floor

Topic specific skills

- measurement and geo-spatial mapping skills

1.1.3 Option C - Dryland landscapes

1. How can dryland landscapes be viewed as systems?

Key Ideas	Content
1.a. Dryland landscapes can be viewed as systems.	A conceptual overview of: <ul style="list-style-type: none"> - the components of dryland landscape systems, including inputs, processes and outputs - the flows of energy and material through dryland systems - aridity index, including UNEP.
1.b. Dryland landscapes are influenced by a range of physical factors.	Potential influence on dryland systems of: <ul style="list-style-type: none"> - geology, including lithology and structure - relief and aspect on microclimate

2. How are landforms of mid and low latitude deserts developed?

Key Ideas	Content
2.a. Dryland landscapes develop due to a variety of interconnected climatic and geomorphological processes.	<ul style="list-style-type: none"> - The influence of flows of energy and materials on geomorphic processes, including weathering, mass movement, fluvial and aeolian erosion, transportation and deposition - The formation of distinctive landforms, predominantly influenced by erosion, including wadis, canyons, pedestal rocks, ventifacts and desert pavements. - The formation of distinctive landforms, predominantly influenced by deposition, including barchans, linear dunes, star dunes, alluvial fans and bajadas.
2.b. Dryland landforms are inter-related and together make up characteristic landscapes.	Case studies of one mid-latitude desert and one low-latitude desert to illustrate: <ul style="list-style-type: none"> - the physical factors which influence the formation of landforms within the landscape system - the inter-relationship of a range of landforms within the characteristic landscape system - how and why the landscape system changes over time from millennia to seconds, such as the impact of flash floods on alluvial fans in seconds, seasonal and ephemeral streams on canyons and pediment development over the millennia.

3. How do dryland landforms evolve over time as climate changes?

Key Ideas	Content
3.a. Fluvial landforms can exist in dryland landscapes as a result of earlier pluvial periods	How dryland landforms have been influenced by previous pluvial conditions, including: <ul style="list-style-type: none"> - climate changes that occurred during a previous time period and the resultant pluvial conditions - the influence of pluvial conditions and geomorphic processes in shaping landforms, including inselbergs and pediments - the modification of these landforms by processes associated with present and future climate changes.
3.b. Periglacial landforms can exist in dryland landscapes as a result of earlier colder periods.	How dryland landscapes have been influenced by colder climatic conditions, including: <ul style="list-style-type: none"> - the influence of colder climatic conditions and geomorphic processes in shaping landforms, including frost shattered debris, nivation hollows and solifluction deposits - the modification of these landforms by processes associated with present and future climate changes.

4. How does human activity cause change within dryland landscape systems?

Key Ideas	Content
4.a. Water supply issues can cause change within dryland landscape systems.	Case study of one dryland landscape that is being used by people, to illustrate: <ul style="list-style-type: none"> - the water supply issue taking place and the reasons for it taking place, such as water shortage due to drought - its impacts on processes and flows of material and/or energy through the dryland landscape system, such as high rates of sediment trapping behind dams or modifying rivers to distribute and store water - the effect of these impacts in changing dryland landforms, such as decreased growth of wadis - the consequence of these changes on the landscape, such as reducing depositional landforms such as alluvial fans or slowing pediment development.
4.b. Economic activity can cause change within dryland landscape systems.	Case study of one dryland landscape that is being used by people, to illustrate: <ul style="list-style-type: none"> - the economic activity taking place and the reasons for it taking place, such as tourism - its impacts on processes and flows of material and/or energy through the dryland landscape system, such as vegetation and cryptobiotic crust damage by dune buggy use - the effect of these impacts in changing dryland landforms, such as higher erosion rates on dunes - the consequence of these changes on the landscape, such as increased loess accumulation in marginal areas.

Topic specific skills

- measurement and geo-spatial mapping skills

Topic 1.2 Changing spaces; Making Places

1. What's in a place?

Key Ideas	Content
1.a. Places are multi-faceted, shaped by shifting flows and connections which change over time.	<p>Case studies of two contrasting place profiles at a local scale, including:</p> <ul style="list-style-type: none"> - their demographic, socioeconomic, cultural, political, built and natural characteristics that shape their place identity. - their past and present connections that shape the place identity and embed them in regional, national, international and global scaleshow shifting flows of people (such as commuter, migration), resources (such as natural, technology), money and investment (such as EU funding, TNCs) and ideas (such as knowledge economy) have helped shape the demographic, socio-economic and cultural profile of these places over time.

3. How does economic change influence patterns of social inequality in places?

Key Ideas	Content
3.a. The distribution of resources, wealth and opportunities are not evenly spread within and between places.	<ul style="list-style-type: none"> - The concept of social inequality and how this can be measured through indices such as housing, healthcare, education, employment and access to services. - How and why spatial patterns of social inequalities vary both within and between places.
3.b. Processes of economic change can create opportunities for some while creating and exacerbating social inequality for others.	<ul style="list-style-type: none"> - The influence of global connections and globalisation in driving structural economic change in places, such as de-industrialisation and the rise of the service industry. - How structural economic change impacts patterns of social opportunities and inequality for people and places. - How cyclical economic change (booms and recessions) has varied impacts on social opportunities and inequality. - The role of government in reducing, reinforcing and creating patterns of social inequality in places through spending or cuts in key services such as availability and accessibility of education, healthcare, infrastructure and community services.
3.c. Social inequality impacts people and places in different ways.	<p>Case studies of two contrasting places to illustrate:</p> <ul style="list-style-type: none"> - the types of evidence of social inequality that can be found there such as housing, environmental quality, crime rates, digital divide - the range of factors that influence people's social inequality such as income, gender, age, health, personal mobility, ethnicity, and education - how social inequality impacts upon people's daily lives in different ways.

4. Who are the players that influence economic change in places?

Key Ideas	Content
4.a. Places are influenced by a range of players operating at different scales.	<p>The role of players in driving economic change, including at least one of local and national government, MNCs or international institutions.</p> <p>Case study of one country or region that has been impacted by structural economic change, including:</p> <ul style="list-style-type: none"> - socio-economic, demographic, cultural and environmental characteristics of the place before the economic change - the economic change/changes that took place and the role of players involved in driving the change - socio-economic, demographic, cultural and environmental impacts on people and place.

5. How are places created through placemaking processes?

Key Ideas	Content
5.a. Place is produced in a variety of ways at different scales.	The concept of placemaking and how governments and organisations attempt to present places to the wider world to attract inward investment and regeneration.
5.b. The placemaking process of rebranding constructs a different place meaning through reimagining and regeneration.	<ul style="list-style-type: none"> - Why places rebrand through reimagining and regeneration to construct a different place meaning. - How a range of strategies can be used to rebrand places, such as sport, art, heritage, retail, architecture and food. These can be used singularly or in conjunction to change a place meaning. - A range of players and their role in placemaking, including government/EU funding, corporate bodies, not for profit organisations and community groups. - How and why some groups of people contest efforts to rebrand a place.
5.c. Making a successful place requires planning and design.	<p>Case study of one place that has undergone rebranding, including:</p> <ul style="list-style-type: none"> - why the place needed to rebrand - strategy/strategies involved in the rebranding of the place - the role and influence of a range of players involved in the placemaking - how the rebranding has altered people's perception of that place - the relative success of the rebranding.

Topic specific skills:

- how quantitative data is used to present place characteristics.

H081/02 Geographical debates

Topic 2.1 Climate Change

2. How and why has the era of industrialisation affected global climate?

Key Ideas	Content
2.a. Humans have influenced the climate system, leading to a new epoch, the Anthropocene.	<p>Evidence the world has warmed since the late-nineteenth century, including:</p> <ul style="list-style-type: none"> - increases in surface, atmospheric and oceanic temperatures - shrinking of valley glaciers and ice sheets - rising sea level - increasing atmospheric water vapour - decreasing snow cover and sea ice. <p>Reasons why anthropogenic greenhouse gas emissions have increased since the pre-industrial era.</p> <p>The balance of anthropogenic emissions around the world and how this has changed in recent history.</p> <p>How additional greenhouse gases being added to the atmosphere will enhance the natural greenhouse effect.</p>

3. Why is there a debate over climate change?

Key Ideas	Content
3.a. Debates of climate change are shaped by a variety of agendas.	<p>How humans have played a part in shaping the climate change debate, including:</p> <p>historical background of the global warming debate and how it has evolved over time.</p> <p>the role of governments and international organisations, such as the EU or UN.</p> <p>role and possible bias of the media, and different interest groups in shaping the public image of climate change.</p>

4. In what ways can humans respond to climate change?

Key Ideas	Content
4.a. An effective human response relies on knowing what the future will hold.	Overview of climate modelling to illustrate: <ul style="list-style-type: none"> - influence of positive and negative feedback - future emission scenarios, the resulting impacts on global temperatures and sea levels.
4.b. The impacts of climate change are global and dynamic.	Implications of climate change currently being experienced for people and the environment, such as from changes to ecosystems, health and extreme weather, and how these are projected to change in the future. The vulnerability of people and the environment to the impacts of climate change.
4.c. Mitigation and adaptation are complementary strategies for reducing and managing the risks of climate change.	Mitigation strategies to cut global emissions of greenhouse gases, including: <ul style="list-style-type: none"> - energy efficiency and conservation - fuel shifts and low-carbon energy sources - carbon capture and storage - forestry strategies - geoengineering Adaptation strategies to reduce the vulnerability of human populations at risk, including: <ul style="list-style-type: none"> - what future homes, offices, cities, transport and economies will look like following adaptation throughout the twenty-first century.

5. Can an international response to climate change ever work?

Key Ideas	Content
5.a. Effective implementation depends on policies and co-operation at all scales	Geopolitics associated with the human response to climate change, including: <ul style="list-style-type: none"> - success of international directives, such as the Kyoto Protocol - significance of carbon trading and carbon credits - evolution of national, and sub-national policy that extends beyond the vision of international directives.

Topic 2.2 Disease Dilemmas

1. What are the global patterns of disease and can factors be identified that determine these?

Key Ideas	Content
1.a. Diseases can be classified and their patterns mapped. The spread of diseases is complex and influenced by a number of factors.	Patterns of disease, including global distributions of malaria, HIV, tuberculosis, diabetes and cardio-vascular disease.
1.b. There is a relationship between physical factors and the prevalence of disease which can change over time.	Global patterns of temperature, precipitation, relief and water sources and how they affect patterns of disease. Physical factors can influence vectors of disease such as the prevalence of mosquitoes in warm, humid areas close to water sources. Climate change provides the conditions for emerging infectious diseases to spread to new places and new hosts such as West Nile virus, tsetse fly and tick seasons.

2. Is there a link between disease and levels of economic development?

Key Ideas	Content
2.a. As countries develop economically the frequency of communicable diseases decreases, while the prevalence of noncommunicable diseases rises.	How rising standards of living, including access to food, clean water and sanitation, impact upon susceptibility to disease and influence a country's epidemiological transition. The reasons why LIDCs have a higher prevalence for communicable diseases (diseases of poverty) and ACs have a higher prevalence for noncommunicable diseases (diseases of affluence). Case study of one country experiencing air pollution and the impact this has on incidences of cancers (such as lung or bladder). The global and national solutions in dealing with this

3. How effectively are communicable and noncommunicable diseases dealt with?

Key Ideas	Content
3.a. Communicable diseases have causes and impacts with mitigation and response strategies which have varying levels of success.	Case study of one communicable disease, such as malaria or tuberculosis, at a country scale, either an LIDC or EDC, including: <ul style="list-style-type: none"> - environmental and human causes of the disease - prevalence, incidence and patterns of the disease - socio-economic impacts of the disease - direct and indirect strategies used by government and international agencies to mitigate against the disease and respond to outbreaks.
3.b. Noncommunicable diseases have causes and impacts with mitigation and response strategies which have varying levels of success.	Case study of one noncommunicable disease, such as cardiovascular disease or diabetes, at a country scale, either an AC or EDC, including: <ul style="list-style-type: none"> - social, economic and cultural causes of the disease - prevalence, incidence and patterns of the disease - socio-economic impacts of the disease - direct and indirect strategies used by government and international agencies to mitigate against the disease.

4. How far can diseases be predicted and mitigated against?

Key Ideas	Content
4.a. Increasing global mobility impacts the diffusion of disease and the ability to respond to it, at a variety of scales.	The role of international organisations, such as the World Health Organization, in providing international strategies to combat disease, including predicting diseases, gathering data, research, support programmes and their work with agencies and governments. Case study of the role that one NGO has played in dealing with a disease outbreak within one country at national and local level.
4.b. Mitigation strategies to combat global pandemics and overcome physical barriers.	Mitigation strategies used by government and international agencies to combat global pandemics, such as HIV / AIDS, including screening, availability and funding of treatment and education programmes.

5. Can diseases ever be fully eradicated?

Key Ideas	Content
5.b. Top down and bottom up strategies that deal with disease risk and eradication.	Case study of the global impact of one pharmaceutical transnational, including scientific breakthroughs made, patents, drug manufacturing and their global flows for distribution. Strategies for disease eradication at a range of scales, including global and national campaigns. Impact of grassroots strategies in educating communities and the role of women in combating disease risk.

Topic 2.3 Exploring Oceans

Key Ideas	Content
1.b. Water in the world's oceans varies horizontally and vertically	Horizontal and vertical variations in salinity and temperature. The global distribution of warm and cold surface currents. The pattern of circulation in the North Atlantic, including both surface and deep currents.

2. What are the opportunities and threats arising from the use of ocean resources?

Key Ideas	Content
2.a. Biological resources within oceans can be used in sustainable or unsustainable ways.	Case study of the management of one renewable biological resource within oceans, such as krill or whale, including: <ul style="list-style-type: none"> - the use and management of this resource - how the values, attitudes, socioeconomic status and political context of the stake holders influence the use and management of the resource - the resilience of the resource and key thresholds to initiate management.
2.b. The use of ocean energy and mineral resources is a contested issue.	The use and management of ocean energy resources, including: <ul style="list-style-type: none"> - oil and gas (non-renewable resources) - wave and tidal energy (flow resources - renewable resources). The use of sea-bed minerals, including ferrous and non-ferrous minerals, as examples of non-renewable resource use.
2.c. Governing the oceans poses issues for the management of resources.	There are a series of zones extending out from the land that aim to help manage the ocean, including territorial waters, contiguous zone, exclusive economic zone (EEZ), high seas Resource management through frameworks such as the United Nations Convention on the Law of the Sea (UNCLOS) and marine reserves.

3. How and in what ways do human activities pollute oceans?

Key Ideas	Content
3.b. Off-shore oil production and transport poses threats for people and the environment.	Case study of one oil spill, including: <ul style="list-style-type: none"> - impacts on the physical environment and marine ecosystems - impacts on human activities such as fishing and tourism - management of the oil spill and its impacts.

4. How is climate change impacting the ocean system?

Key Ideas	Content
4.a. Climate change is altering the nature of the ocean's water.	How acidification of oceans contributes to depleting fish stocks and has resulting impacts for people. The rising temperature of the oceans and its threat to coral ecosystems, such as coral bleaching, loss in biodiversity and threats to local communities.
4.b. Climate change is altering sea levels.	The causes of sea level change due to climate change, the thermal expansion of water and the transfer of water from the land to the oceans.
4.c. Climate change is altering high latitude oceans.	The impact of global warming on the extent of sea ice. The feedback between the extent of ice cover and the degree of warming. The concept of a threshold beyond which change becomes irreversible should be investigated in this context. Case study of the Arctic region, including: <ul style="list-style-type: none"> - the geo-political implications of changes in ice-cover in the Arctic region - the impact on indigenous peoples - the threats and opportunities posed by the opening up of ocean route-ways and increasing access to ocean bed minerals - the management of the changing geography of the Arctic through international organisations.

5. How have socio-economic and political factors influenced the use of the oceans?

Key Ideas	Content
5.b. Oceans are important spaces where countries challenge each other	The use of oceans by countries to exert their influence including: <ul style="list-style-type: none"> - the distribution of naval strongholds for one country, such as USA, Russia or China, including its home and overseas ports - a marine conflict zone where countries dispute ocean territory areas.
5.c. Oceans present hazardous obstacles to human activities.	The distribution of 21st century piracy and its management. The use of oceans as escape routes for migrants such as South-east Asia to Australia or North Africa to Europe.

Topic 2.4 Future of Food

1. What is food security and why is it of global significance?

Key Ideas	Content
1.a. The concept of food security is complex and varies spatially.	Current trends in global food security using data such as undernourishment and hunger statistics and the Global Food Security Index.
1.b. Food is a precious resource and global food production can be viewed as an interconnected system	The physical conditions required for growing food including, air, climate, soil and water. How food production methods vary from intensive to extensive and subsistence to commercial.

2. What are the causes of inequality in global food security?

Key Ideas	Content
2.a. A number of interrelated factors can influence food security.	Understand the range of physical factors that affect food security across the globe such as geology, soil, length of growing season. The social, economic and political factors affecting food security such as land ownership systems, competition and land grabbing and how these vary from place to place. Case study of one place to illustrate how human and physical factors are/ have combined to cause issues with food security.

3. What are the threats to global food security?

Key Ideas	Content
3.a. Risks to food security can be identified to highlight the most vulnerable societies.	<p>The physical and human causes of desertification and how this changes ecosystems to increase risks to food security.</p> <p>Case study of one dryland area, including:</p> <ul style="list-style-type: none"> - food security risks and vulnerability are influenced by the specific ecosystem, climate and hydrology - worsening factors such as population change, land-grabbing and climate change.
3.b. The food system is vulnerable to shocks that can impact food security.	<p>How climate change is leading to increasing frequency of extreme weather events such as wild-fire, El-Niño, floods, and drought which can affect food production</p> <p>How water scarcity can exacerbate food production issues</p> <p>How tectonic hazards can influence food production and distribution.</p> <p>Case study of one indigenous farming technique in an extreme environment, such as the Arctic, including:</p> <ul style="list-style-type: none"> - the physical conditions of the environment including ecosystems, terrain and climate. - food production methods used by indigenous people in the environment - threats to the indigenous group's food security.

4. How do food production and security issues impact people and the physical environment?

Key Ideas	Content
4.a. Imbalance in the global food system has physical and human impacts.	<p>How attempts to increase food production and security can impact the physical environment including:</p> <ul style="list-style-type: none"> - irrigation and salinisation - deforestation and the impacts on biodiversity - changing landscapes - water quality from agrochemicals. <p>Case study of how one physical environment is/has been impacted by food production methods including the specific short- and long-term impacts on the environment</p> <p>How food security issues impacts people including:</p> <ul style="list-style-type: none"> - health issues associated with food shortages - health issues associated with food surpluses and poor diet - harmful impacts on human health as a result of the increased use of chemicals and pesticides. <p>Case studies of two places at contrasting levels of economic development to illustrate the implications of poor food security on the lives of people.</p>

5. Is there hope for the future of food?

Key Ideas	Content
5.a. Food is a geopolitical commodity; a number of key players will continue to influence the global food system.	The opportunities between countries to ensure food security including: <ul style="list-style-type: none">- agricultural trading policies- the role of the World Trade Organization- appropriate aid.
5.b. There is a spectrum of strategies that exist to ensure and improve food security.	Approaches to increasing food security can vary from short-term relief to capacity-building and long-term system redesign. The effectiveness and sustainability of a range of techniques that exist to improve food security from large-scale technological techniques down to small-scale bottom up and appropriate approaches. Case studies of two contrasting places at different levels of development and the strategies and techniques that have been used to ensure or improve food security.

Topic 2.5 Hazardous Earth

1. What is the evidence for continental drift and plate tectonics?

Key Ideas	Content
1.a. There is a variety of evidence for the theories of continental drift and plate tectonics.	Theories of continental drift and plate tectonics including: <ul style="list-style-type: none"> - the basic structure of the earth including the lithosphere, asthenosphere and the role of convection currents - evidence for sea-floor spreading; paleomagnetism; the age of sea floor rocks.
1.b. There are distinctive features and processes at plate boundaries.	Earth's crustal features and processes, including: <ul style="list-style-type: none"> - the features and processes associated with divergent (constructive) plate boundaries - the features and processes associated with convergent plate boundaries including oceanic-continental, oceanic-oceanic (destructive) and continental-continental (collision) boundaries

2. What are the main hazards generated by volcanic activity?

Key Ideas	Content
2.a. There is a variety of volcanic activity and resultant landforms and landscapes.	Different types of volcanoes to investigate their causes and features including: <ul style="list-style-type: none"> - explosive eruptions (higher viscosity magma) located at convergent (destructive) plate boundaries - effusive eruptions (lower viscosity magma) and landforms located at divergent (constructive) plate boundaries - eruptions not at plate boundaries (hot spots) such as the Hawaiian chain and the East African Rift valley - size and shape of different types of volcanoes, including super-volcanoes - the volcanic explosive index (VEI) measure of assessing volcanic activity.
2.b. Volcanic eruptions generate distinctive hazards.	Different types of volcanic eruptions and the different types of hazards they generate including: <ul style="list-style-type: none"> - lava flows, pyroclastic flows, gas emissions, tephra and ash - lahars and flooding associated with the melting of ice - tsunamis associated with explosive eruption.

3. What are the main hazards generated by seismic activity?

Key Ideas	Content
3.a. There is a variety of earthquake activity and resultant landforms and landscapes.	<p>Earthquake characteristics to investigate their causes and features including:</p> <ul style="list-style-type: none"> - the different measures of assessing earthquake magnitude (Richter, moment magnitude scale, modified Mercalli intensity scale) - the effects earthquakes have on landforms and landscapes including the development of escarpments and rift valleys.
3.b. Earthquakes generate distinctive hazards.	<p>Hazards generated by earthquakes, including:</p> <ul style="list-style-type: none"> - ground shaking and ground displacement - liquefaction - landslides and avalanches - tsunamis associated with sea-bed uplift and underwater landslides - flooding

4. What are the implications of living in tectonically active locations?

Key Ideas	Content
4.a. There are a range of impacts people experience as a result of volcanic eruptions.	<p>Case studies of two countries at contrasting levels of economic development to illustrate:</p> <ul style="list-style-type: none"> - reasons why people choose to live in tectonically active locations - the impacts people experience as a result of volcanic eruptions - economic, environmental and political impacts on the country
4.b. There are a range of impacts people experience as a result of earthquake activity.	<p>Case studies of two countries at contrasting levels of economic development to illustrate:</p> <ul style="list-style-type: none"> - reasons why people choose to live in tectonically active locations - the impacts people experience as a result of earthquake activity - economic, environmental and political impacts on the country

Key Ideas	Content
<p>5.a. There are various strategies to manage hazards from volcanic activity.</p>	<p>Case studies of two countries at contrasting levels of economic development to illustrate strategies used to cope with volcanic activity including:</p> <ul style="list-style-type: none"> - attempts to mitigate against the event, such as lava diversion channels - attempts to mitigate against vulnerability, such as community preparedness - attempts to mitigate against losses, such as rescue and emergency relief.
<p>5.b. There are various strategies to manage hazards from earthquakes.</p>	<p>Case studies of two countries at contrasting levels of economic development to illustrate strategies used to cope with hazards from earthquakes including:</p> <ul style="list-style-type: none"> - attempts to mitigate against the event, such as land-use zoning - attempts to mitigate against vulnerability, such as building design - attempts to mitigate against losses, such as insurance.
<p>5.c. The exposure of people to risks and their ability to cope with tectonic hazards changes over time.</p>	<p>How and why have the risks from tectonic hazards changed over time including:</p> <ul style="list-style-type: none"> - changes in the frequency and impacts of tectonic hazards over time - the degree of risk posed by a hazard and the probability of the hazard event occurring (the disaster risk equation) - possible future strategies to cope with risks from tectonic hazards. <p>The relationship between disaster and response including the Park model.</p>

Geographical Skills for H081/01 and H081/02

3.1 Geographical Information:

c) understand the nature of and use different types of geographical information, including:

- primary and secondary
- images, maps, diagrams and graphical representations
- factual text and discursive/creative material
- numerical and spatial data

3.2 Geo-located data:

With respect to geo-located data, learners should:

- (a) understand the opportunities and approaches available to collect data through the use of geospatial technologies, such as smart phones and tablet devices
- (b) understand the opportunities and benefits of presenting and analysing geographical data through the use of Geographical Information Systems (GIS).

3.3 Qualitative skills:

With respect to qualitative skills, learners should:

- (a) use and understand a mixture of methodological approaches, including using interviews
- (b) interpret, analyse and evaluate a range of source material including textual and visual sources
- (c) understand the opportunities and limitations of qualitative techniques such as coding and sampling.

3.4 Quantitative skills:

With respect to quantitative skills, learners should understand the purposes and difference between the following and be able to use them in appropriate contexts:

- (c) measurement, measurement errors, and sampling.

4 Fieldwork Skills:

With respect to fieldwork skills, AS Level Geography requires learners to:

- (a) identify appropriate field research questions, based on their knowledge and understanding of relevant aspects of physical and human geography
- (b) understand how to observe and record phenomena in the field and be able to devise and justify practical approaches taken in the field, (including frequency/timing of observation, sampling, and data collection approaches)
- (c) demonstrate knowledge and understanding of how to undertake practical field methodologies appropriate to the investigation of core human and physical processes
- (d) demonstrate knowledge and understanding of implementing chosen methodologies to collect data/information of good quality that is relevant to the topic under investigation.

Synoptic connections for H081/02

Topic 1	Climate Change and Landscape Systems Climate Change and Changing Spaces; Making Places
Topic 2	Disease Dilemmas and Changing Spaces; Making Places Disease Dilemmas and Changing Spaces; Making Places
Topic 3	Exploring Oceans and Changing Spaces; Making Places Exploring Oceans and Changing Spaces; Making Places
Topic 4	Future of Food and Changing Spaces; Making Places Future of Food and Changing Spaces; Making Places
Topic 5	Hazardous Earth and Landscape Systems Hazardous Earth and Changing Spaces; Making Places

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