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| Logo  Description automatically generatedAQA LEVEL GEOGRAPHY  PAPER 1  RAG CHECKLIST |

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| WATER AND CARBON CYCLES | | | |
| 3.1.1.1 - Water and carbon cycles as natural systems | **R** | **A** | **G** |
| Systems concepts and their application to the water cycle |  |  |  |
| Systems concepts and their application to the carbon cycle |  |  |  |
| 3.1.1.2 - The water cycle | **R** | **A** | **G** |
| Distribution and size of major water stores |  |  |  |
| Flows and transfers in the water cycle at hillslope scale |  |  |  |
| Flows and transfers in the water cycle at drainage basin scale |  |  |  |
| Flows and transfers in the water cycle at global scale |  |  |  |
| Drainage basin system |  |  |  |
| Concept of the water balance |  |  |  |
| Flood hydrograph and runoff variation |  |  |  |
| Natural changes to the water cycle over time |  |  |  |
| Human impacts on the water cycle – farming practices, land use changes, water abstraction |  |  |  |
| 3.1.1.3 - The carbon cycle | **R** | **A** | **G** |
| Distribution and size of major carbon stores |  |  |  |
| Flows and transfers in the carbon cycle at plant scale |  |  |  |
| Flows and transfers in the carbon cycle at sere scale |  |  |  |
| Flows and transfers in the carbon cycle at continental scale |  |  |  |
| Natural variation in the carbon cycle (including wild fires, volcanic activity) |  |  |  |
| Human impacts on the carbon cycle (including fossil fuel extraction and burning, farming, deforestation and land use change) |  |  |  |
| The carbon budget and the impact of the carbon cycle on land, oceans and atmosphere |  |  |  |
| 3.1.1.4 - Water, carbon, climate and life on Earth | **R** | **A** | **G** |
| The role of water and carbon supporting life on Earth |  |  |  |
| The role of feedbacks within and between cycles, linking to climate change |  |  |  |
| Human intervention in the carbon cycle to mitigate climate change |  |  |  |
| 3.1.1.5 - Quantitative and qualitative skills | **R** | **A** | **G** |
| Know a range of quantitative and relevant qualitative skills, within the theme water and carbon cycles |  |  |  |
| Simple mass balance |  |  |  |
| Unit conversions |  |  |  |
| Analysis and presentation of field data |  |  |  |
| 3.1.1.6 - Case studies | **R** | **A** | **G** |
| Case study of a tropical rainforest to illustrate key themes in carbon |  |  |  |
| Case study of a tropical rainforest - human activity and environmental change |  |  |  |
| Case study of a river catchment at a local scale – impact of precipitation on stores and transfers |  |  |  |
| Case study of a river catchment at a local scale – implications for sustainable water supply and/or flooding |  |  |  |
| hot desert systems and landscapes (option) | | | |
| 3.1.2.1 - Deserts as natural systems | **R** | **A** | **G** |
| Systems concepts and their application to the development of desert landscapes |  |  |  |
| The concepts of landform and landscape and how they relate |  |  |  |
| The global distribution of mid and low latitude deserts and their margins |  |  |  |
| Characteristics of hot desert environments and their margins |  |  |  |
| Water balance and aridity index |  |  |  |
| The causes of aridity: atmospheric processes relating to pressure, winds, continentality, relief and cold ocean currents |  |  |  |
| 3.1.2.2 - Systems and processes | **R** | **A** | **G** |
| Sources of energy in hot desert environments: insolation, winds, runoff |  |  |  |
| Sediment sources, cells and budgets |  |  |  |
| Geomorphological processes: weathering, mass movement, erosion, transportation and deposition |  |  |  |
| Distinctively arid geomorphological processes: weathering (thermal fracture, exfoliation, chemical weathering, block and granular disintegration) |  |  |  |
| The role of wind – erosion, transportation, deposition |  |  |  |
| Sources of water in hot deserts; the episodic role of water |  |  |  |
| 3.1.2.3 - Arid landscape development in contrasting settings | **R** | **A** | **G** |
| Origin and development of aeolian landforms in mid and low latitude deserts: deflation hollows, desert pavements, ventifacts, yardangs, zeugen, barchans and seif dunes |  |  |  |
| Origin and development of water landforms in mid and low latitude deserts: wadis, bahadas, pediments, playas, inselbergs |  |  |  |
| Relationship between process, time, landforms and landscapes: characteristic desert landscapes |  |  |  |
| 3.1.2.4 - Desertification | **R** | **A** | **G** |
| Changing extent and distribution of hot deserts over the last 10,000 years |  |  |  |
| Causes of desertification – climate change and human impact; distribution of areas at risk |  |  |  |
| Impact on ecosystems, landscapes and populations |  |  |  |
| Predicted climate change and the impacts, including alternative futures for local populations |  |  |  |
| 3.1.2.5 - Quantitative and qualitative skills | **R** | **A** | **G** |
| Know a range of quantitative and relevant qualitative skills, within the theme landscape systems |  |  |  |
| Observation skills |  |  |  |
| Measurement and geospatial mapping skills |  |  |  |
| Data manipulation and statistical skills applied to field measurements |  |  |  |
| 3.1.2.6 - Case studies | **R** | **A** | **G** |
| Case study of a hot desert environment illustrating key themes |  |  |  |
| Case study of a hot desert environment engaging with field data |  |  |  |
| Case study at a local scale of a landscape where desertification has occurred to illustrate and analyse key themes of desertification |  |  |  |
| Case study at a local scale of a landscape where desertification has occurred to evaluate human responses of resilience, mitigation and adaptation |  |  |  |
| COASTAL SYSTEMS AND LANDSCAPES (option) | | | |
| 3.1.3.1 - Coasts as natural systems | **R** | **A** | **G** |
| Systems concepts and their application to the development of coastal landscapes |  |  |  |
| The concepts of landform and landscape and how they relate |  |  |  |
| 3.1.3.2 - Systems and processes | **R** | **A** | **G** |
| Sources of energy in coastal environments: winds, waves (constructive and destructive), currents and tides |  |  |  |
| Low energy and high energy coasts. |  |  |  |
| Sediment sources, cells and budgets |  |  |  |
| Geomorphological processes: weathering, erosion, transportation, deposition |  |  |  |
| Marine coastal processes |  |  |  |
| Sub-aerial coastal processes |  |  |  |
| 3.1.3.3 - Coastal landscape development | **R** | **A** | **G** |
| Origin and development of landforms and landscapes of coastal erosion |  |  |  |
| Origin and development of landforms and landscapes of coastal deposition. Beaches, simple and compound spits, tombolos, offshore bars, barrier beaches and islands and sand dunes; factors and processes in their development |  |  |  |
| Estuarine mudflat/saltmarsh environments and associated landscapes; factors and processes in their development |  |  |  |
| Eustatic, isostatic and tectonic sea level change: major changes in sea level in the last 10,000 years |  |  |  |
| Coastlines of emergence and submergence. Origin and development of associated landforms: raised beaches, marine platforms; rias, fjords, Dalmation coasts |  |  |  |
| Recent and predicted climatic change and potential impact on coasts |  |  |  |
| The relationship between process, time, landforms and landscape in coastal settings |  |  |  |
| 3.1.3.4 - Coastal management | **R** | **A** | **G** |
| Human intervention in coastal landscapes. Traditional approaches to coastal flood and erosion risk: hard and soft engineering |  |  |  |
| Sustainable approaches to coastal flood risk and coastal erosion management: shoreline management/integrated coastal zone management |  |  |  |
| 3.1.3.5 - Quantitative and qualitative skills | **R** | **A** | **G** |
| Know a range of quantitative and relevant qualitative skills, within the theme landscape systems |  |  |  |
| Observation skills |  |  |  |
| Measurement and geospatial mapping skills |  |  |  |
| Data manipulation and statistical skills applied to field measurements |  |  |  |
| 3.1.3.6 - Case studies | **R** | **A** | **G** |
| Case study(ies) of coastal environment(s) at a local scale to illustrate and analyse fundamental coastal processes, their landscape outcomes as set out above and engage with field data |  |  |  |
| Case study(ies) of coastal environment(s) at a local scale to illustrate and analyse challenges represented in their sustainable management |  |  |  |
| Case study of a contrasting coastal landscape beyond the UK to illustrate and analyse how it presents risks and opportunities for human occupation and development |  |  |  |
| Case study of a contrasting coastal landscape beyond the UK to illustrate and evaluate human responses of resilience, mitigation and adaptation |  |  |  |
| glacial systems and landscapes | | | |
| 3.1.4.1 - Glaciers as natural systems | **R** | **A** | **G** |
| Systems concepts and their application to the development of glaciated landscapes |  |  |  |
| The concepts of landform and landscape and how they relate |  |  |  |
| 3.1.4.2 - The nature and distribution of cold environments | **R** | **A** | **G** |
| The global distribution of cold environments |  |  |  |
| Physical characteristics of cold environments. Climate, soils and vegetation (and their interaction) |  |  |  |
| The global distribution of past and present cold environments |  |  |  |
| 3.1.4.3 - Systems and processes | **R** | **A** | **G** |
| Glacial systems including glacial budgets |  |  |  |
| Ablation and accumulation – historical patterns of ice advance and retreat |  |  |  |
| Warm and cold based glaciers: characteristics and development |  |  |  |
| Geomorphological processes – weathering; ice movement; erosion; transportation and deposition |  |  |  |
| Fluvioglacial processes: meltwater, erosion, transportation and deposition |  |  |  |
| Periglacial features and processes: permafrost, active layer and mass movement |  |  |  |
| 3.1.4.4 - Glaciated landscape development | **R** | **A** | **G** |
| Origin and development of glaciated landscapes |  |  |  |
| Erosional and depositional landforms: corries, arêtes, glacial troughs |  |  |  |
| Fluvioglacial landforms of erosion and deposition: meltwater channels, kames, eskers, outwash plains. Characteristic fluvioglacial landscapes |  |  |  |
| Periglacial landforms: patterned ground, ice wedges, pingos, blockfields, solifluction, lobes, terracettes, thermokarst. Characteristic periglacial landscapes |  |  |  |
| Relationship between process, time, landforms and landscapes in glaciated settings: characteristic glaciated and periglacial landscapes |  |  |  |
| 3.1.4.5 - Human impacts on cold environments | **R** | **A** | **G** |
| Concept of environmental fragility. Human impacts on fragile cold environments over time and at a variety of scales |  |  |  |
| Recent and prospective impact of climate change |  |  |  |
| Management of cold environments at present and in alternative possible futures |  |  |  |
| 3.1.4.6 - Quantitative and qualitative skills | **R** | **A** | **G** |
| Know a range of quantitative and relevant qualitative skills, within the theme landscape systems |  |  |  |
| Observation skills |  |  |  |
| Measurement and geospatial mapping skills |  |  |  |
| Data manipulation and statistical skills applied to field measurements. |  |  |  |
| 3.1.4.7 - Case studies | **R** | **A** | **G** |
| Case study(ies) of glaciated environment(s) at a local scale to illustrate and analyse glacial processes, their landscape outcomes and engage with field data |  |  |  |
| Case study of a contrasting glaciated landscape from beyond the UK to illustrate and analyse how it presents challenges and opportunities for human occupation and development |  |  |  |
| Case study of a contrasting glaciated landscape from beyond the UK to illustrate and evaluate human responses of resilience, mitigation and adaptation |  |  |  |
| hazards (option) | | | |
| 3.1.5.1 - The concept of hazard in a geographical context | **R** | **A** | **G** |
| Nature, forms and potential impacts of natural hazards |  |  |  |
| Hazard perception and its economic and cultural determinants |  |  |  |
| Characteristic human responses and their relationship to hazard incidence, intensity, magnitude, distribution and level of development |  |  |  |
| The Park model of human response to hazards |  |  |  |
| The Hazard Management Cycle |  |  |  |
| 3.1.5.2 - Plate tectonics | **R** | **A** | **G** |
| Earth structure and internal energy sources |  |  |  |
| Plate tectonic theory of crustal evolution, including ridge push, slab pull (etc.) |  |  |  |
| Processes and associated landforms at destructive plate margins |  |  |  |
| Processes and associated landforms at constructive plate margins |  |  |  |
| Processes and associated landforms at conservative plate margins |  |  |  |
| Magma plumes and their relationship to plate movement |  |  |  |
| 3.1.5.3 - Volcanic hazards | R | A | G |
| The nature of vulcanicity and its relation to plate tectonics. |  |  |  |
| Forms of volcanic hazard |  |  |  |
| Spatial distribution, magnitude, frequency, regularity and predictability of volcanic events |  |  |  |
| Impacts of volcanic events |  |  |  |
| Short and long-term responses to volcanic events |  |  |  |
| Impacts and human responses as evidenced by a recent volcanic event |  |  |  |
| 3.1.5.4 - Seismic hazards | **R** | **A** | **G** |
| The nature of seismicity and its relation to plate tectonics - forms of seismic hazard |  |  |  |
| Spatial distribution, randomness, magnitude, frequency, regularity, predictability of seismic events |  |  |  |
| Impacts of seismic events |  |  |  |
| Short and long-term responses to seismic events |  |  |  |
| Impacts and human responses as evidenced by a recent seismic event |  |  |  |
| 3.1.5.5 - Storm hazards | **R** | **A** | **G** |
| The nature of tropical storms and their underlying causes; forms of storm hazard |  |  |  |
| Spatial distribution, magnitude, frequency, regularity, predictability of storm events |  |  |  |
| Impacts of storm events |  |  |  |
| Short and long-term responses to storm events |  |  |  |
| Impacts and human responses as evidenced by two recent tropical storms in contrasting areas of the world |  |  |  |
| 3.1.5.6 - Fires in nature | **R** | **A** | **G** |
| Characteristic human responses to wildfires – fatalism, prediction, adjustment/adaptation, mitigation, management, risk sharing – and their relationship to hazard incidence, intensity, magnitude, distribution and level of development |  |  |  |
| Nature of wildfires. Conditions favouring intense wildfires: vegetation type, fuel characteristics, climate and recent weather and fire behaviour. Causes of fires: natural and human agency |  |  |  |
| Impacts: primary/secondary, environmental, social, economic, political |  |  |  |
| Short and long-term responses to wildfire events |  |  |  |
| Impacts and human responses as evidenced by a recent wildfire event |  |  |  |
| 3.1.5.7 - Case studies | **R** | **A** | **G** |
| Case study of a multi-hazardous environment beyond the UK to illustrate and analyse the nature of the hazards and the social, economic and environmental risks presented |  |  |  |
| Case study of a multi-hazardous environment beyond the UK to illustrate and analyse how human qualities and responses such as resilience, adaptation, mitigation and management contribute to its continuing human occupation |  |  |  |
| Case study at a local scale of a specified place in a hazardous setting to illustrate the physical nature of the hazard |  |  |  |
| Case study at a local scale of a specified place in a hazardous setting to analyse how the economic, social and political character of its community reflects the presence of the hazard and the community’s response to the risk |  |  |  |
| ecosystems under stress (option) | | | |
| 3.1.6.1 - Ecosystems and sustainability | **R** | **A** | **G** |
| The concept of biodiversity, local and global trends in biodiversity |  |  |  |
| Causes, rates and potential impacts of declining biodiversity |  |  |  |
| Ecosystems and their importance for human populations in the light of continuing population growth and economic development. Human populations in ecosystem development and sustainability |  |  |  |
| 3.1.6.2 - Ecosystems and processes | **R** | **A** | **G** |
| Nature of ecosystems |  |  |  |
| Application of systems concepts to ecosystems |  |  |  |
| Concepts of biomass and net primary production |  |  |  |
| Concepts of succession: climatic climax, sub-climax and plagio-climax |  |  |  |
| Mineral nutrient cycling |  |  |  |
| Nature of terrestrial ecosystems |  |  |  |
| Terrestrial ecosystems response to changes in one or more of their components or environmental controls. |  |  |  |
| Factors influencing the changing of ecosystems, including climate change and human exploitation of the global environment |  |  |  |
| 3.1.6.3 - Biomes | **R** | **A** | **G** |
| The concept of the biome. The global distribution of major terrestrial biomes |  |  |  |
| The characteristics, ecological responses, human activity and development issues in the tropical rainforest biome |  |  |  |
| The characteristics, ecological responses, human activity and development issues in the savanna grassland biome |  |  |  |
| 3.1.6.4 - Ecosystems in the British Isles over time | **R** | **A** | **G** |
| Succession and climate climax as illustrated by lithoseres and hydroseres |  |  |  |
| The characteristics of the climatic climax: temperate deciduous woodland biome |  |  |  |
| The effects of human activity on succession in the British Isles, illustrated in one plagioclimax |  |  |  |
| 3.1.6.5 - Marine ecosystems | **R** | **A** | **G** |
| The distribution and main characteristics of coral reef ecosystems. Environmental conditions associated with reef development. |  |  |  |
| With reference to a named, located coral reef: factors in the health and survival of reefs: natural; human activity and impact; future prospects |  |  |  |
| 3.1.6.6 - Local ecosystems | **R** | **A** | **G** |
| The main characteristics of a distinctive local ecosystem |  |  |  |
| Ecological responses to the climate, soil and soil moisture budget of a distinctive local ecosystem |  |  |  |
| Local factors in ecological development and change |  |  |  |
| The impacts of change and measures to manage these impacts in local ecosystems. Conservation strategies and their implementation in specific settings |  |  |  |
| 3.1.6.7 - Case studies | **R** | **A** | **G** |
| Case study of a specified region experiencing ecological change to illustrate and analyse the nature of the change and the reasons for it |  |  |  |
| Case study of a specified region experiencing ecological change to illustrate and analyse how the economic, social and political character of its community reflects its ecological setting and how the community is responding to change |  |  |  |
| Case study of a specified ecosystem at a local scale to illustrate and analyse key themes set out above, including the nature and properties of the ecosystem and human impact upon it |  |  |  |
| Case study of a specified ecosystem at a local scale to illustrate and analyse key themes set out above, including the challenges and opportunities presented in its sustainable development |  |  |  |