AQA GEOGRAPHY GCSE

PAPER 1: LIVING WITH THE PHYSICAL ENVIRONMENT

PERSONAL LEARNING CHECKLISTS

2022

Challenges in the physical environment: Paper 1: Personalised Learning Checklist

RAG Rate each section in the first column

Red = Not at all confident – needs major revision focus, Amber = requires more revision until confident. Green = Confident.

Use remaining columns to colour code when you have revised and tested your knowledge and understanding over several weeks.

Section A: The challenge of natural hazards – You will answer all of the questions in Section A of the exam.

Section A: The challenge of natural hazards							
Key Idea	**Key Knowledge to understand**	**RAG**					
Natural Hazards							
Natural hazards pose major risks to people and property.	Define a natural hazard						
	Type of hazard						
	The factors affecting hazard risk						
Tectonic Hazards							
Earthquakes and volcanic eruptions are the result of physical processes.	How tectonic plates move - convection currents						
	Global distribution of earthquakes and volcanoes						
	Types of plate margin - constructive, destructive and conservative and how these lead to earthquakes and volcanic activity						
The effects of, and responses to, a tectonic hazard vary between areas of contrasting levels of wealth.	Primary effects of a tectonic hazard						
	secondary effects of a tectonic hazard						
	Immediate responses to a tectonic hazard						
	long-term responses to a tectonic hazard						
Management can reduce the effects of a tectonic hazard.	Reasons why people live in areas at risk from a tectonic hazard						
	Ways monitoring, prediction, protection and planning can reduce the risks from a tectonic hazard						

Weather Hazards							
Global atmospheric circulation helps to determine patterns of weather and climate.	Global atmospheric circulation model, pressure belts and surface winds						
Tropical storms (hurricanes, cyclones, typhoons) develop as a result of particular physical conditions.	Global distribution of tropical storms (hurricanes, cyclones, typhoons)						
	The relationship between tropical storms and general atmospheric circulation						
	Causes of tropical storms						
	Sequence of formation and development						
	The structure and features of a tropical storm						
	How climate change can affect the distribution, frequency and intensity of tropical storms.						
Tropical storms have significant effects on people and the environment.	Primary effects of a tropical storm						
	secondary effects of a tropical storm						
	Immediate responses to a tropical storm						
	long-term responses to a tropical storm						
	Ways monitoring, prediction, protection and planning can reduce the risks from tropical storms						
The UK is affected by a number of weather hazards.	Overview of types of weather hazard experienced in the UK						
Extreme weather events in the UK have impacts on human activity.	Causes of an extreme weather event in the UK						
	Social, economic and environmental impacts of an extreme weather event in the UK						
	How management strategies can reduce risk of an extreme weather event in the UK						
	Evidence that weather is becoming more extreme in the UK.						

Climate Change							
Climate change is the result of natural and human factors, and has a range of effects.	Evidence for climate change from the Quaternary to present day						
	Possible causes of climate change: natural factors – orbital changes, volcanic activity and solar output.						
	Human causes of climate change e.g. use of fossil fuels, agriculture and deforestation						
	Effects of climate change on people and the environment						
Managing climate change involves both mitigation (reducing causes) and adaptation (responding to change).	Managing climate change - mitigation - alternative energy production, carbon capture, afforestation and international agreements						
	Managing climate change - adaptation - change in agricultural systems, managing water supply, reducing risk from rising sea levels						

Section B: The living world – In the exam you only answer questions on Ecosystems, Tropical Rainforests and Hot deserts NOT COLD ENVIRONMENTS

Section B: The living world		**RAG**					
Ecosystems							
Ecosystems exist at a range of scales and involve the interaction between biotic and abiotic components.	Small scale ecosystem to show the concept of interrelationships within a natural system, an understanding of food chains and webs						
	Understanding of producers, consumers, decomposers and nutrient cycling						
	The balance between components in an ecosystem and the impact on the ecosystem of changing one component						
	Overview of the distribution and characteristics of large scale global ecosystems						
Tropical Rainforests							
Tropical rainforest ecosystems have a range of distinctive characteristics.	The physical characteristics of tropical rainforests						
	The relationship between climate, water, soils, plants, animals and people.						
	How plants and animals adapt to the physical conditions						
	Issues related to biodiversity						
Deforestation has economic and environmental impacts.	Changing rates of deforestation						
	Case Study - causes of deforestation – subsistence and commercial farming, logging, road building, mineral extraction, energy development, settlement, population growth						
	Case Study - impacts of deforestation – economic development, soil erosion, contribution to climate change						
Tropical rainforests need to be managed to be sustainable.	The Value of tropical rainforests to people and the environment.						
	Strategies used to manage the rainforest sustainably – selective logging and replanting, conservation and education, ecotourism and international agreements about the use of tropical hardwoods, debt reduction.						

Hot Desert Environments							
Hot desert ecosystems have a range of distinctive characteristics.	The physical characteristics of tropical rainforests						
	The relationship between climate, water, soils, plants, animals and people.						
	How plants and animals adapt to the physical conditions						
	Issues related to biodiversity						
Development of hot desert environments creates opportunities and challenges.	Development opportunities in hot desert environments e.g. tourism, energy						
	Challenges of developing hot desert environments e.g. water supply and inaccessibility						
Areas on the fringe of hot deserts are at risk of desertification.	Causes of desertification – climate change, population growth, removal of fuel wood, overgrazing, over-cultivation and soil erosion.						
	Strategies used to reduce the risk of desertification – water and soil management, tree planting and use of appropriate technology.						

Section C: Physical landscapes in the UK – In the exam you will answer questions on the physical landscape of the UK, Coastal landscapes and River landscapes. **You DO NOT answer questions on COLD ENVIRONMENTS.**

Section C: Physical landscapes in the UK		**RAG**						
The UK has a range of diverse landscapes.	An overview of the location of major upland/lowland areas and river systems.							
Coastal landscapes								
The coast is shaped by a number of physical processes.	Wave types and characteristics.							
	Coastal processes: weathering processes – mechanical, chemical							
	Coastal processes: mass movement – sliding, slumping and rock falls							
	Coastal processes: erosion – hydraulic power, abrasion and attrition							
	Coastal processes: transportation – longshore drift							
Distinctive coastal landforms are the result of rock type, structure and physical processes.	How geological structure and rock type influence coastal forms.							
	Characteristics and formation of landforms resulting from **erosion** – headlands and bays, cliffs and wave cut platforms, caves, arches and stacks.							
	Characteristics and formation of landforms resulting from **deposition** – beaches, sand dunes, spits and bars.							
	Using the **Dorset** coastline as an **example** of a section of coastline in the UK to identify its major landforms of erosion and deposition.							
Different management strategies can be used to protect coastlines from the effects of physical processes.	The costs and benefits of the hard engineering – sea walls, rock armour, gabions and groynes:							
	The costs and benefits of soft engineering – beach nourishment and reprofiling, dune regeneration							
	The cost and benefits of managed retreat – coastal realignment.							
	An example of a coastal management scheme in the UK - ***Mappleton, Holderness*** to show: the reasons for management the management strategy the resulting effects and conflicts.							

River Landscapes								
The shape of river valleys changes as rivers flow downstream.	The long profile and changing cross profile of a river and its valley.							
	Fluvial processes: **erosion** – hydraulic action, abrasion, attrition, solution, vertical and lateral erosion							
	transportation – traction, saltation, suspension and solution							
	deposition – why rivers deposit sediment.							
Distinctive fluvial landforms result from different physical processes.	Characteristics and formation of landforms resulting from erosion – interlocking spurs, waterfalls and gorges.							
	Characteristics and formation of landforms resulting from erosion and deposition – meanders and ox-bow lakes.							
	Characteristics and formation of landforms resulting from deposition – levées, flood plains and estuaries.							
	An **example** of a river valley in the UK to identify its major landforms of erosion and deposition.							
Different management strategies can be used to protect river landscapes from the effects of flooding.	How physical and human factors affect the flood risk – precipitation, geology, relief and land use.							
	The use of hydrographs to show the relationship between precipitation and discharge.							
	The costs and benefits of the following management strategies: **hard engineering** – dams and reservoirs, straightening, embankments, flood relief channels							
	soft engineering – flood warnings and preparation, flood plain zoning, planting trees and river restoration							
	An **example** of a flood management scheme in the UK to show: 1.) why the scheme was required 2) the management strategy 3) The social, economic and environmental issues.							

<u>Exam structure for 2022.</u>

- Students must answer **all** questions in Section A: Urban issues,
- They will then choose to answer **either** Section B: The changing economic world or Section C: The challenge of resource management.