

Paper 1 – Living with the physical environment

<u>Tectonic Hazards – The Challenge of Natural Hazards</u>	Completed
What are natural hazards? What types of natural hazards are there? What factors affect hazard risk?	
Structure of the Earth	
Convection Currents	
Where do earthquakes and volcanoes happen?	
What are the physical processes happening at plate margins? (Constructive, Destructive and Conservative)	
Example: Chile earthquake, 2010 – primary & secondary effects and immediate & long-term responses	
Example: Nepal earthquake, 2015 - primary & secondary effects and immediate & long-term responses	
How do the effects and responses vary between the Chile and Nepal earthquakes?	
Why do people live near tectonic hazards?	
How can monitoring, prediction and protection help reduce the risks?	

<u>Weather Hazards</u>	Completed
General Atmospheric Circulation: Hadley, Ferrel, Polar Cells; Pressure; Surface Winds	
Distribution of Tropical Storms	
How do tropical storms form?	
Characteristics of Tropical Storms (Structure/Features and Weather Conditions)	
Primary and Secondary Effects of Tropical Storms	
Prediction and Protection of Tropical Storms	
Example of Tropical Storm (Typhoon Haiyan, 2013) showing Primary and Secondary Effects and Responses	
Types of Weather Hazard experienced in the UK	
Example of Flooding in the UK (Somerset Levels, 2014) showing Causes; Social, Economic and Environmental Effects; and Responses	
Evidence that weather is becoming more extreme in the UK	

<u>Climate Change – The Challenge of Natural Hazards</u>	Completed
Evidence of Climate Change in the recent past	
Natural Factors causing Climate Change (orbital changes, volcanic activity, solar output)	
Human Factors causing Climate Change (use of fossil fuels, agriculture, deforestation)	
Impacts of Climate Change on people AND the environment	
Managing Climate Change through Mitigation (alternative energy sources, carbon capture, afforestation, international agreements)	
Managing Climate Change through Adaption (changes in agricultural systems, managing water supplies, reducing risk from sea level rise)	

<u>Ecosystems and Tropical Rainforests – The Living World</u>	Completed
Understanding of producers, consumers, decomposers, food chains, food webs and nutrient cycling	
Freshwater Lakes: what are the characteristics of this environment and how is it impacted by changing one component?	
Example of a small-scale ecosystem: Avington Park Lake – what were the problems and how was it solved	
Overview of the causes, distribution and characteristics of large-scale global ecosystems	
Physical characteristics of tropical rainforests	
Connections between climate, water, soil, plants, animals and people	
Animal adaptations	
Plant adaptations	
What is biodiversity and what causes it to change?	
Example: Causes of deforestation in Malaysia: subsistence and commercial farming, logging, road building, mineral extraction, energy development, settlement, pop. growth	
Example: Impacts of deforestation in Malaysia: economic development, soil erosion, contribution to climate change	
Value of tropical rainforests to people and the environment	
Strategies to sustainably manage the rainforest: selective logging and replanting, conservation and education, ecotourism and international agreements, debt reduction	

<u>Cold Environments – The Living World</u>	Completed
Physical characteristics of cold environments	
Connections between climate, permafrost, soils, plants, animals and people.	
Animal adaptations	
Plant adaptations	
Example: Svalbard opportunities for development	
Example: Svalbard challenges for development	
The value of cold environments as wilderness areas	
Why these fragile environments should be protected.	
Strategies to reduce the risks of development in cold environments	

<u>Coasts – Physical Landscapes in the UK</u>	Completed
Wave types and characteristics	
Weathering processes: mechanical, chemical, biological	
Mass movement: landslides, rock falls and slumping	
Erosion: hydraulic action, abrasion, attrition and solution	
Transportation: longshore drift	
Deposition: why is sediment deposited at the coast?	
Concordant and Discordant coastlines	
Formation and Characteristics of headlands and bays	
Formation and Characteristics of headland erosion – cave, arch, stack, stumps	
Formation and Characteristics of wave cut notches & platforms	
Formation and Characteristics of sandy and pebble beaches	
Formation and Characteristics of sand dunes	
Formation and Characteristics of spits and bars	
Example: Swanage (Dorset) - Major landforms of erosion and deposition	
Why manage coastlines and Types of Management	
Costs and Benefits of hard engineering (sea walls, rock armour, gabions and groynes)	
Costs and Benefits of soft engineering (beach nourishment and reprofiling, dune regeneration)	
Costs and Benefits of managed retreat (coastal realignment)	
Example: Lyme Regis (Dorset) - reasons for management, what strategies are used, what are the effects and conflicts	

<u>Rivers – Physical Landscapes in the UK</u>	Completed
Hydrological Cycle	
Drainage basin, the long profile and the changing cross profile of a river and its valley	
Erosion: hydraulic power, abrasion, attrition and solution	
Transportation: traction, saltation, suspension and solution	
Deposition: where does it occur?	
Formation and Characteristics of v-shaped valley/interlocking spurs	
Formation and Characteristics of waterfalls and gorges	
Formation and Characteristics of meanders	
Formation and Characteristics of oxbow lakes	
Formation and Characteristics of floodplains and levees	
Formation and Characteristics of estuaries	
Example: River Tees (NE England) - Major landforms of erosion and deposition	
What factors increase the risk of flooding? (Human and Physical)	
Hydrographs	
Costs and Benefits of hard engineering (dams and reservoirs, straightening, embankments, flood relief channels)	
Costs and Benefits of soft engineering (flood warnings and preparation, flood plain zoning, planting trees and river restoration)	
Example: Banbury flood management scheme - why the scheme is required, the management strategies, and the social, economic and environmental issues	

Paper 2 – Challenges in the human environment

Urban Growth and Rio de Janeiro - Urban Issues and Challenges	Completed
What is urbanisation and how does it vary around the world?	
Why do cities grow? (migration (push–pull theory), natural increase)	
What are megacities?	
Rio: location, importance and population growth	
Rio: opportunities - Social (access to services – health and education; access to resources – water supply, energy)	
Rio: opportunities – Economic (how Rio’s industries have created economic development)	
Rio: challenges – managing urban growth (favelas)	
Rio: challenges – providing clean water, sanitation systems, energy	
Rio: challenges – providing access to services (health & education), reducing unemployment & crime	
Rio: challenges – managing environmental issues (waste disposal, air and water pollution, traffic congestion)	
Rio: Example of urban planning – The Favela Barrio Project	

Bristol and Sustainable Living - Urban Issues and Challenges	Completed
UK population distribution and location of major cities	
Bristol: location and importance	
Bristol: impacts of migration on the growth and character of the city	
Bristol: opportunities – social, economic, environmental (cultural mix, recreation and entertainment, industry, employment, integrated transport systems, urban greening)	
Bristol: challenges - social and economic (urban deprivation, inequalities in housing, education, health and employment – Filwood vs. Stoke Bishop)	
Bristol: challenges – environmental and social (dereliction, building on brownfield and greenfield sites, waste disposal, the impact of urban sprawl on the rural–urban fringe)	
Bristol: Example of urban regeneration - Temple Quarter (reasons for it, main features)	
Sustainable urban living features (water & energy conservation, waste recycling and creating green space)	
Urban transport strategies to reduce traffic congestion (Freiburg vs. Singapore vs. Beijing)	

The Challenge of Resource Management and Food	Completed
The global distribution of resources: food, energy and water	
Provision of food in the UK (growing demand for imports from LICs, ‘food miles’, agribusiness)	
Provision of water in the UK (changing demand, managing quality, surplus/deficit, transfers)	
Provision of energy in the UK (changing energy mix, economic and environmental issues)	
Reasons for increasing food consumption (economic development, rising population)	
Factors affecting food supply (climate, tech, pests & disease, water stress, conflict, poverty)	
Impacts of food insecurity (famine, undernutrition, soil erosion, rising prices, social unrest)	
Strategies to increase food supply (Irrigation, aeroponics and hydroponics, the new green revolution and use of biotechnology, appropriate technology)	
Example: Thanet Earth (Kent) - advantages/disadvantages of large-scale development	
Sustainable food supplies (organic farming, permaculture, urban farming initiatives, fish and meat from sustainable sources, seasonal food consumption, reduced waste and losses)	
Example: Makueni (Kenya) Food and Water Security Programme	

<u>Changing Economic World: Development Gap</u>	Completed
How can we classify parts of the world?	
Measuring development – indicators (economic and social e.g. GNI, HDI etc.)	
Demographic Transition Model (DTM)	
Physical Causes of Uneven Development	
Economic Causes of Uneven Development	
Historical Causes of Uneven Development	
Consequences of uneven development: wealth and health disparities	
Consequences of uneven development: migration	
Reducing the development gap strategies: What are the strategies? How do they help reduce the development gap? What are the disadvantages?	
Example of how the growth in tourism helps to reduce the development gap (Jamaica)	

<u>Changing Economic World: Nigeria</u>	Completed
Location	
The global and regional importance of Nigeria	
The political, social, cultural and environmental context	
Political and global trading links	
The industrial structure: how has this changed? What is the impact of manufacturing?	
TNCs: (Shell & Unilever) impact on Nigeria, advantages and disadvantages.	
Aid: definition, types of aid and impact of the country receiving it.	
Environmental impacts of economic development	
The impact economic development has on people's quality of life	

<u>Changing Economic World: UK Economy</u>	Completed
Causes of economic change: deindustrialisation, government policies and globalisation	
Post-industrial economy: services, finance, research, science and business parks	
Environmental impacts of industry: Example – Automotive Industry (Nissan)	
Social and economic changes in the rural landscape – An area of growth (South Cambridgeshire)	
Social and economic changes in the rural landscape – An area of decline (The Outer Hebrides)	
Improvements and developments in the road, rail, port and airport capacity.	
The north-south divide: strategies to resolve regional differences	
The place of the UK in the wider world	