

**Student Learning Reflection & Personalised Learning Checklist – GCSE Geography**

**Paper 1:**

**Hazardous Earth**

**Development Dynamics**

**Challenges of an Urbanising World**

**Hazardous Earth paper 1**

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| **Key Idea** | **I know/ understand…** | RAG |
| *The world’s climate system* |
| Global Atmospheric Circulation | What global atmospheric circulation is. |  |
| How atmospheric circulation leads to high and low pressure belts. |  |
| How ocean currents transfer heat around the Earth. |  |
| How high and low pressure belts lead to arid (high) and high rainfall (low) areas. |  |
| Past climate change and natural causes | That climate has changed through the Quaternary period. |  |
| What the natural causes of climate change are and how they explain past climate change events:* Asteroid collisions
* Orbital changes
* Volcanic activity
* Variations in solar output (sunspots)
 |  |
| The evidence we can use for natural climate change and how we can use this:* Ice cores
* Tree rings
* Historical sources e.g. poems/ diaries
 |  |
| Global climate change and human activity | The natural greenhouse effect. |  |
| The enhanced greenhouse effect:* Human activities (e.g. industry, transport, energy, farming) that can produce greenhouse gases such as carbon dioxide and methane.
 |  |
| How the enhanced greenhouse effect leads to global warming. |  |
| The evidence we have for how human activity is causing climate change:* Sea level rise and warming oceans
* Global temperature rise
* Declining Arctic ice
* Increased extreme weather events
 |  |
| Consequences of climate change on people. |  |
| Projections for future climate change. |  |
| Reasons why these projections are uncertain. |  |
| *Extreme weather events – tropical cyclones* |
| Cause of tropical cyclones | How a tropical cyclone develops and the conditions needed for this (pressure, rotation and structure). |  |
| Where tropical cyclones are found – their global distribution. |  |
| The different names used (cyclones, typhoons and hurricanes) and where. |  |
| Why some tropical cyclones intensify. |  |
| Why tropical cyclones dissipate.  |  |
| The impacts of tropical cyclones | The physical hazards of tropical cyclones:* High winds
* Intense rainfall
* Storm surges
* Coastal flooding
* Landslides
 |  |
| The impacts of these hazards on people. |  |
| The impacts of these hazards on the environment. |  |
| Why some countries are more vulnerable than others to the impacts:* Socially
* Physically
* Economically
 |  |
| Preparation and responses to tropical cyclones | Ways in which countries can prepare for and respond to tropical cyclones, including:* Weather forecasting
* Satellite technology
* Warning and evacuation
* Storm-surge defences
 |  |
| **LOCATED EXAMPLE (1)****Developed country: Hurricane Sandy, USA*** When did this happen?
* What were the impacts?
* How did they prepare for the tropical cyclone?
* How did they respond to the tropical cyclone?
* Were these methods effective?
 |  |
| **LOCATED EXAMPLE (2)****Emerging country: Typhoon Haiyan, Philippines** * When did this happen?
* What were the impacts?
* How did they prepare for the tropical cyclone?
* How did they respond to the tropical cyclone?
* Were these methods effective?
 |  |
| *Tectonic hazards – earthquakes and volcanoes* |
| Earth’s structure | The layers of the Earth:For each layer:* Temperature
* Density
* Composition

Physical state1. Core
2. Mantle (including the asthenosphere)
3. Crust
 |  |
| How convection currents are generated |  |
| Plate boundaries and hazards | Distribution and characteristics of **conservative** plate boundaries |  |
| Distribution and characteristics of **convergent** plate boundaries. |  |
| Distribution and characteristics of **divergent** plate boundaries. |  |
| Distribution and characteristics of **hotspots.** |  |
| Which plate boundaries volcanoes and earthquakes are found at. |  |
| Composite volcanoes:* Causes of and locations
* Magma type/ lava flows
* Explosivity
 |  |
| Shield volcanoes* Causes of and locations
* Magma type/ lava flows
* Explosivity
 |  |
| Causes of earthquakes |  |
| Causes of tsunami |  |
| Impacts and management of tectonic hazards | **LOCATED EXAMPLE (3)****Developed country: Japan (2011)**Impacts* Primary impacts on people and property
* Secondary impacts on people and property

Management* Short-term relief
* Long-term planning, preparation and prediction
 |  |
| **LOCATED EXAMPLE (4)****Emerging country: Haiti (2010)**Impacts* Primary impacts on people and property
* Secondary impacts on people and property

Management* Short-term relief
* Long-term planning, preparation and prediction
 |  |

**Development Dynamics paper 1**

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| **Key Idea** | **I know/ understand…** | RAG |
| *Global inequality* |
| Measuring development | Countries are classified into three levels of development: developing, emerging and developed.  |  |
| Different ways to define development:* Economic
* Social
* Political
 |  |
| Different measures of development, including:* GDP per capita
* HDI
* Measures of inequality
* Indices of political corruption
 |  |
| Differences in demographic data within countries of different levels of development:* Fertility rates
* Death rates
* Population structures
* Maternal mortality rates
* Infant mortality rates
 |  |
| Global inequality in development | Causes and consequences of global inequality:* Social – education, health
* Historical – colonialism, neo-colonialism
* Environmental – climate, topography
* Economic & political – systems of governance, international relations
 |  |
| What Rostow’s modernisation theory is.  |  |
| What Frank’s dependency theory is.  |  |
| How these can both be used to explain how and why countries develop over time.  |  |
| Approaches to development | What globalisation is.  |  |
| What TNC stands for. |  |
| Why globalisation is increasing.  |  |
| Why some countries have benefitted more than others from this.  |  |
| Characteristics of a top-down strategy – Sardar Sarovar Dam |  |
| Characteristics of a bottom-up strategy - Biogas |  |
| Advantages and disadvantages of different approaches to development: * NGO led intermediate technology
* IGO funded large infrastructure
* Investment by TNCs
 |  |
| *CASE STUDY: Development of one emerging country – India*  |
| India’s location and context | Where is India located? |  |
| Why India’s location is significant (nationally, regionally and globally) related to its site, situation and connectivity. |  |
| The background of India – political, social, cultural and environmental. |  |
| The role of globalisation | How India’s economy has changed since 1990. Including trends in:* GDP
* Per capita GNI
* Changing importance of economic sectors
* Imports and exports
* Type and origin of FDI
 |  |
| How globalisation and government policy has helped increase development.  |  |
| Impacts of economic growth | How development has:* Contributed to demographic (population) change
* Caused urbanisation
* Created different regions of different socio-economic characteristics.
 |  |
| Positive and negative impacts of economic development and globalisation on different age and gender groups.  |  |
| How development has had an impact on India’s environment:* Air, water, land pollution
* Greenhouse gases
 |  |
| International role of India | What geopolitical means.  |  |
| How India’s global influence is changing. |  |
| Costs and benefits of foreign investment (TNCs) in India.  |  |

**Challenges of an Urbanising World paper 1**

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| **Key Idea** | **I know/ understand…** | RAG |
| *Urban change* |
| Global urbanisation trends | What urbanisation is. |  |
| How urbanisation has changed since 1980 and future projections.  |  |
| Where urbanisation is taking place most. |  |
| What a megacity is.  |  |
| The change in the global distribution of megacities since 1950. |  |
| What urban primacy (primate city) is and the influence of this.  |  |
| Reasons for urbanisation | Push and pull factors leading to rural-urban migration.  |  |
| Why cities in developing countries are growing.  |  |
| What formal and informal employment are.  |  |
| Which type of country most informal employment is found (developed, developing or emerging).  |  |
| The four economic sectors and the countries they are found in:* Primary
* Secondary
* Tertiary
* Quaternary
 |  |
| What the working conditions are like in developing countries.  |  |
| Cities change over time | How urban population changes over time through the cycle of urbanisation: * Urbanisation
* Suburbanisation
* De-industrialisation
* Counter-urbanisation
* Regeneration
 |  |
| The different urban land use zones:* Central business district (CBD)
* Inner city
* Suburbs
* Rural-urban fringe
 |  |
| Which of these land use zones are dominated by commercial, industrial and residential land use.  |  |
| Factors that influence land-use type including:Accessibility, availability, cost, planning regulations.  |  |
| *CASE STUDY: Why does quality of life vary in MUMBAI?* |
| The location and context of Mumbai | Where Mumbai is located.  |  |
| Why Mumbai’s location is significant related to its site, situation and connectivity.  |  |
| The structure of Mumbai’s land use, including:* Where is the CBD, the inner city, suburbs and rural-urban fringe?
* Where are the oldest buildings? Where are the newest?
 |  |
| Growth of Mumbai | Reasons for population growth in Mumbai.  |  |
| How this population growth has led to changes in land use in the city.  |  |
| Opportunities and challenges for people in Mumbai | Opportunities for people living in Mumbai (including access to resources and employment).  |  |
| Challenges for people in Mumbai (including housing shortages, slums, water supply, waste disposal, employment, services and traffic).  |  |
| Reasons for the differences in quality of life within Mumbai.  |  |
| Strategies to improve quality of life in Mumbai | **TOP-DOWN STRATEGY**One example of a top-down initiative that is trying to improve Mumbai and make it more sustainable: **Vision Mumbai** |  |
| Advantages and disadvantages of Vision Mumbai. |  |
| **BOTTOM-UP STRATEGY**One example of a bottom-up initiative that is trying to improve Mumbai and make it more sustainable: **LSS charity** |  |
| Advantages and disadvantages of LSS.  |  |

**Paper 2:**

**The UK Physical Landscape**

**The UK Human Landscape**

**Geographical Investigations (Unseen fieldwork)**

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| **Key Idea** | **I know/ understand…** |  |
| ***The UK’s physical landscape*** |
| Processes that have influenced the physical landscape of the UK | How upland and lowland landscapes in the UK have developed and the role of the following in this:* Geology
* Past tectonic activity
* Glacial processes (erosion and deposition)
 |   |
| Characteristics and distribution of the three main rock types:* Sedimentary e.g. chalk, carboniferous limestone, clay
* Igneous e.g. granite
* Metamorphic e.g. schists, slate
 |   |
| Creation of distinctive landscapes | What the physical processes that can change the landscape are and how they change upland/ lowland environments:* Weathering and climatological
* Post-glacial river
* Slope
 |   |
| That human activity can change the landscape. The role of the following in doing so:* Agriculture
* Forestry
* Settlement
 |   |
| ***COASTS: Processes and landscapes*** |
| Coastal landscapes | The difference between a discordant and a concordant coastline.  |   |
| How joints, faults and rock type (hard/ soft) can influence erosional landforms.  |   |
| The four types of erosion (solution, corrosion/ abrasion, attrition, hydraulic action). |   |
| How the following landforms are created by erosion:* Headlands and bays
* Caves, arches, stacks and stumps
* Wave cut platforms
 |   |
| Characteristics of destructive and constructive waves.  |   |
| The role of longshore drift.  |   |
| How the following landforms are created by deposition:* Spits and bars
* Beaches
 |   |
| Modification of coastal landscapes | How human activities (development, agriculture, industry and coastal management) have effects on coastal landscapes.  |   |
| **LOCATED EXAMPLE****Change in one named coastal landscape: The Holderness Coast in Yorkshire**How have physical and human processes caused change here? |   |
| ***COASTS: Challenges and management*** |
| Challenges along coastlines and management options | Why the risk of coastal flooding is increasing.  |   |
| The threats of coastal flooding to people and the environment.  |   |
| The difference between hard and soft engineering.  |   |
| Advantages and disadvantages of using hard engineering (e.g. groynes and sea walls). |   |
| Advantages and disadvantages of using soft engineering (e.g. beach replenishment and slope stabilisation). |   |
| Sustainable approaches to coastal management:* Do nothing
* Strategic realignment
 |   |
| ***RIVERS: Processes and landscapes*** |
| River landscapes | The long profile of a river |   |
| Characteristics of the upper, middle and lower course of rivers (including how channel width, depth, valley profile, gradient, discharge, velocity and sediment size and shape change).  |   |
| How the long profile of the **River Severn** changes.  |   |
| Types of erosion - solution, corrosion/ abrasion, attrition, hydraulic action. |   |
| Types of transportation – traction, saltation, suspension, solution.  |   |
| How the following landforms are formed:* Meanders and oxbow lakes
* Interlocking spurs
* Waterfalls
* Floodplains
* Levees
* Deltas
 |   |
| What a storm hydrograph shows. |   |
| What lag-time is.  |   |
| How physical factors (e.g. geology, soil type, slope, drainage basin shape and antecedent conditions) can affect hydrographs and lag-times.  |   |
| Human activity and physical processes in rivers | How human activities (urbanisation, land use change and deforestation) can affect river landscapes and hydrographs.  |   |
| **LOCATED EXAMPLE****River Flooding on River Severn: Tewkesbury 2007** How did physical and human processes cause river flooding here? |   |
| *RIVERS: Challenges and management* |
| River management | Why the risk of river flooding is increasing.  |   |
| The threats of river flooding to people and the environment. |   |
| Advantages and disadvantages of hard engineering (e.g. flood walls, embankments and flood barriers).  |   |
| Advantages and disadvantages of soft engineering (e.g. flood plain retention, river restoration).  |  |

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| **Key Idea** | **I know/ understand…** | RAG |
| ***The UK’s Evolving Human Landscape*** |
| The UK’s human landscape | What the urban core and rural periphery are. |  |
| Differences in population density, age structure, economic activities and settlement in the urban core and rural periphery.  |  |
| How the following are trying to reduce these differences (both from the UK government and the EU):* Enterprise zones
* Investment in transport infrastructure
* Regional development
 |  |
| The UK and the wider world | How UK population has changed over the past 50 years.  |  |
| Where people have migrated to the UK from in the past 50 years.  |  |
| Where these people have moved to (the distribution).  |  |
| How migration affects the age structure of the UK.  |  |
| How immigration policy (both UK and EU) has influenced the patterns of migration.  |  |
| Why primary and secondary industries have declined in the UK. |  |
| Why tertiary and quaternary industries have increased in the UK.  |  |
| The impacts of these changes on regions of the UK.  |  |
| What the following are:* Globalisation
* Free-trade
* Privatisation
* Foreign direct investment (FDI)
 |  |
| How globalisation is increasing FDI in the UK.  |  |
| The role of TNCs in the UK economy.  |  |
| ***CASE STUDY: How is London changing?*** |
| The location and context of London | Where London is located (regionally, nationally, internationally) |  |
| Why London’s location is significant related to its site, situation and connectivity.  |  |
| The structure of London’s land use, including:* Where is the CBD, the inner city, suburbs and rural-urban fringe?
* Where are the oldest buildings? Where are the newest?
 |  |
| How environmental quality varies across London. |  |
| Changes in employment, services and migration in London | How migration has affected growth and character in different parts of London. Consider:* Age structure
* Ethnicity
* Housing
* Services
* Culture
 |  |
| Reasons for differences in inequality (of employment, services, education and health) across London (Richmond and Newham). |  |
| Challenges and opportunities in London | Why parts of London experienced decline. |  |
| Why other parts of London have experienced growth (both economic and population).  |  |
| What gentrification and studentification are.  |  |
| Improvements in London | What rebranding is.  |  |
| How regeneration and rebranding have created positive and negative impacts on people. |  |
| Strategies aimed at improving sustainability in London.  |  |
| London and rural areas | How London and surrounding rural areas are interdependent.  |  |
| Counter-urbanisation and the impacts on surrounding rural areas (Chelmsford) |  |
| Why Cornwall has experienced economic and social changes. |  |
| Challenges and opportunities in the rural areas | Challenges facing quality of life for some rural groups, particularly in relation to:* Housing
* Employment
* Healthcare
* Education
 |  |
| What rural diversification is.  |  |
| Opportunities that rural diversification and tourism projects can create |  |
| Environmental impacts that both rural diversification and tourism can create.  |  |

**Remember that these section are based on unseen fieldwork.**

**1. HUMAN FIELDWORK**

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| **I know/ understand…** | RAG |
| The aim of the investigation  |  |
| The purpose of the investigation  |  |
| Creating your own enquiry question  |  |
| Why certain locations were chosen for an investigation  |  |
| How both primary and secondary data is collected  |  |
| Identify, describe and explain sampling (random, systematic or stratified).  |  |
| Why data was collected in a certain way |  |
| How to present a range of data  |  |
| How to describe data  |  |
| How to analyse data.  |  |
| How to draw conclusion  |  |
| What went well in the investigation? |  |
| What could have gone better in the investigation?  |  |
| How to assess the reliability of conclusions |  |

**2.** **PHYSICAL FIELDWORK –**

|  |  |
| --- | --- |
| **I know/ understand…** | RAG |
| The aim of the investigation  |  |
| The purpose of the investigation  |  |
| Creating your own enquiry question  |  |
| Why certain locations were chosen for an investigation  |  |
| How both primary and secondary data is collected  |  |
| Identify, describe and explain sampling (random, systematic or stratified).  |  |
| Why data was collected in a certain way |  |
| How to present a range of data  |  |
| How to describe data  |  |
| How to analyse data.  |  |
| How to draw conclusion  |  |
| What went well in the investigation? |  |
| What could have gone better in the investigation?  |  |
| How to assess the reliability of conclusions |  |

**Paper 3:**

**People and the Biosphere**

**Forests under Treat**

**Consuming Energy Resources**

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| ***The importance of the biosphere*** |
| The Earth’s biomes | What a biome is (large-scale ecosystems) |  |
| The major biomes and their characteristics:* Tropical rainforests
* Temperate forests
* Boreal forests (Taiga)
* Tropical grasslands
* Temperate grasslands
* Deserts
* Tundra
 |  |
| The distribution of these major biomes. |  |
| How the distribution of these biomes is influenced by:* Temperature
* Precipitation
* Sunshine hours
 |  |
| How altitude, rock & soil type and drainage can affect biome distribution locally. |  |
| The biotic components of biomes – flora and fauna. |  |
| The abiotic components of biomes – soils, rock, water and atmosphere.  |  |
| How the biotic and abiotic components interact. |  |
| The biosphere‘s importance for people | What indigenous means.  |  |
| What the biosphere means.  |  |
| How indigenous and local people rely on the biosphere for resources such as:* Food
* Medicine
* Building materials
* Fuel resources
 |  |
| What commercial exploitation is.  |  |
| How the biosphere is being commercially exploited for:* Energy
* Water
* Mineral resources
 |  |
| How the biosphere regulates the composition of the atmosphere.  |  |
| How the biosphere keeps soil healthy.  |  |
| How the biosphere affects the hydrological (water) cycle.  |  |
| There is an increased demand for resources of food, energy and water.  |  |
| This demand is increasing because of:* Population growth
* Rising affluence
* Urbanisation
* Industrialisation
 |  |
| What Malthus believed would happen to resource supply as population increased.  |  |
| What Boserup believed would happen to resource supply as population increased. |  |

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| **Key Idea** | **I know/ understand…** | ✓ |
| ***Forests Under Threat***  |
| **Tropical rainforests (TR)** |
| Structure, functions and adaptation of the tropical rainforest | How biotic and abiotic characteristics are interdependent in the TR (climate, soil, water, plants, animals and humans). |  |
| The four stratified layers in the TR:* Emergent layer
* Main canopy
* Understorey
* Forest floor
 |  |
| How plants have adapted to live in the TR:* Buttress roots
* Drip tips
 |  |
| How animals have adapted to live in the TR.  |  |
| The three nutrient stores in the TR (biomass, litter, soil). |  |
| Why nutrients are cycled quickly in the rainforest.  |  |
| How nutrient cycling supports high biodiversity and complex food webs.  |  |
| Threats to the tropical rainforest | Causes of deforestation in the TR:* Commercial hardwood logging
* Subsistence agriculture
* Commercial agriculture
* Local demand for fuel wood
* Demand for biofuels, mineral resources and electricity (HEP)
 |  |
| The difference between direct and indirect threats.  |  |
| Why climate change is an indirect threat to the TR.  |  |
| Management of the tropical rainforest  | What REDD is. |  |
| Advantages and disadvantages of using REDD as a method of conservation.  |  |
| What CITES is.  |  |
| Advantages and disadvantages of using CITES as a method of conservation. |  |
| What sustainable forest management is.  |  |
| Challenges of achieving sustainable forest management.  |  |
| What ecotourism and sustainable farming are.  |  |
| How they might help protect the TR.  |  |
| **Taiga (boreal) forest** |
| Structure, functions and adaptation of the taiga | How biotic and abiotic characteristics are interdependent in the taiga (climate, soil, water, plants, animals and humans). |  |
| How plants have adapted to live in the taiga:* Cone-shaped
* Needles
* Simple structure
 |  |
| How animals have adapted to live in the taiga (including migration). |  |
| Why the taiga has lower productivity and less active nutrient cycling.  |  |
| How nutrient cycling leads to low levels of biodiversity.  |  |
| Threats to the taiga | Direct threats to the taiga:* Logging for softwood
* Pulp and paper production
 |  |
| Indirect threats to the taiga:* Exploitation of minerals
* Exploitation of fossil fuels
* HEP potential
 |  |
| There is a loss of biodiversity in the taiga because of:* Acid precipitation
* Forest fires
* Pests and diseases
 |  |
| Management of the taiga | What a wilderness area is. |  |
| What national parks are. |  |
| The challenges of creating wilderness areas, national parks and sustainable forestry in the taiga.  |  |
| Why some people want to protect the taiga.  |  |
| Why other people want to exploit the taiga.  |  |

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|  | **I know/ understand…** | ✓ |
| **Consuming Energy Resources**  |
| Energy resources and production | The meaning of non-renewable, renewable and recyclable energy. |  |
| Examples of non-renewable energy:Finite stocks of fossil fuel coal, oil and gas.  |  |
| Examples of renewable energy:Flows of solar, wind and HEP |  |
| Examples of recyclable energy:Nuclear and biofuels. |  |
| Impacts than mining and drilling can have on the environment:* Landscape scarring
* Oil spills
* Carbon emissions
* Removal of forests
 |  |
| Impacts that renewable energy can have on the landscape:* HEP flooding
* Land use for wind turbines and solar panels
 |  |
| Access to energy | Factors that affect access to energy:* Access to technology
* Physical resources – geology, accessibility, climate and landscape
 |  |
| How global energy use per capita varies.  |  |
| Why energy consumption varies:* Levels of economic development
* Reliance of traditional fuel sources
* Demand from different economic sectors
 |  |
| Supply and demand for oil | What an oil reserve is.  |  |
| How oil reserves and production are unevenly distributed.  |  |
| Why oil consumption is growing. |  |
| What factors affect oil supply and prices:* International relations – conflicts, diplomatic relations
* Economic factors – recession VS boom, over or under supply
 |  |
| Exploitation of new areas | What a conventional energy reserve is.  |  |
| Benefits of developing conventional energy reserves in isolated areas.  |  |
| Costs of developing conventional energy reserves in isolated areas. |  |
| What unconventional energy reserves are (tar sands, shale gas).  |  |
| Environmental costs (impacts on water quality and ecosystems) of developing unconventional energy sources in isolated areas.  |  |
| Sustainable energy use | What the difference between energy efficiency and energy conservation is.  |  |
| How home s can be made more energy efficient. |  |
| How transport can be designed to better conserve energy. |  |
| How energy efficiency and conservation can reduce demand, help finite supplies last longer and reduce carbon emissions.  |  |
| Costs and benefits of alternatives to fossil fuels:* Biofuels
* Wind
* Solar
* HEP
 |  |
| What hydrogen fuel is and its advantages.  |  |
| How the alternatives to fossil fuels and technologies work to:* Reduce carbon footprints
* Improve energy security
* Diversify the energy mix
 |  |
| Changing attitudes to energy  | Contrasting views about energy futures from the following groups:* Consumers
* TNCs
* Governments
* Climate scientists
* Environmental groups
 |  |
| What the ‘business as usual’ scenario for future energy use is.  |  |
| What the ‘move to sustainability’ scenario for future energy use is. |  |
| Why the following are changing attitudes to energy futures in some, developed countries:* Rising affluence
* Environmental concerns
* Education
 |  |