PORTLAND PLACE SCHOOL

GCSE Revision List

Physical landscapes in the UK

Coasts (Textbook pgs. 92 -112)

- Wave types and characteristics.
- Weathering processes – mechanical, chemical
- Mass movement – sliding and slumping
- Erosion – hydraulic power, abrasion, attrition and solution
- Transportation – longshore drift, traction, saltation, suspension and solution
- Deposition – why sediment is deposited in coastal areas.
- 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.
- **CASE STUDY** - Swanage Bay to Lulworth Cove
- Hard engineering – sea walls, rock armour, gabions and groynes
- Soft engineering – beach nourishment and re-profiling, dune regeneration
- Managed retreat – coastal realignment.
- One example of a coastal management scheme in the UK to show: the reasons for management, the management strategy and the resulting effects and conflicts.
- **CASE STUDY :** Holderness coast, Studland Bay, Barton on Sea and Walton on the Naze

River Landforms (Textbook pgs. 114-130)

- 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.
- 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.
- **CASE STUDY:** River Severn
- 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.
- One example of a flood management scheme in the UK to show:
    - Why the scheme was required
    - The management strategy
    - The social, economic and environmental issues.
- **CASE STUDY**: River Ouse – York, River Thames, River Parrett and River Tone – Somerset levels, River Severn – Shrewsbury

Urban Environments

Urban World (Textbook pgs. 146-162)

- The global pattern of urban change.
- Urban trends in different parts of the world including HICs and LICs.
- Factors affecting the rate of urbanisation - migration (push - pull theory), natural increase.
- The emergence of mega-cities.
- A case study of a major city in an LIC or NEE to illustrate:
- The location and importance of the city, regionally, nationally and internationally
- Causes of growth: natural increase and migration
- How urban growth has created opportunities:
    - Social: access to services – health, education; access to resources -water supply, energy
    - Economic: how urban industrial areas can be a stimulus for economic development.
- How urban growth has created challenges:
    - Managing urban growth - slums, squatter settlements
    - Providing clean water, sanitation systems and energy
    - Providing access to services - health and education, reducing unemployment and crime
- Managing environmental issues - waste disposal, air and water pollution, traffic congestion
- **CASE STUDY**: Rio de Janeiro

Urban change in the UK (Textbook pgs. 164-184)

- Overview of the distribution of population and the major cities in the UK.
- A case study of a major city in the UK to illustrate:
    - The location and importance of the city in the UK and the wider world
    - Impacts of national and international migration on the growth and character of the city
- How urban change has created opportunities:
    - Social and economic: cultural mix, recreation and entertainment, employment, integrated transport systems
    - Environmental: urban greening
- How urban change has created challenges:
    - Social and economic: urban deprivation, inequalities in housing, education, health and employment
    - Environmental: dereliction, building on brownfield sites, waste disposal

- The impact of urban sprawl on the rural-urban fringe and the growth of commuter settlements.
- An example of an urban regeneration project to show:
    - Reasons why the area needed regeneration
    - The main features of the project.
- **Case study:** Bristol

Urban Sustainability (Textbook pgs. 186-190)

- Features of sustainable urban living:
- Water and energy conservation
- Waste recycling
- Creating green space.
- How urban transport strategies are used to reduce traffic congestion.
- **CASE STUDY**: Freiburg

The Challenge of Natural Hazards

Natural Hazards (Textbook pgs.6-8)

- Definition of a natural hazard.
- Types of natural hazard.
- Factors affecting hazard risk.

Tectonic Hazards (Textbook pgs. 10-20)

- Plate tectonics theory.
- Global distribution of earthquakes and volcanic eruptions and their relationship to plate margins.
- The physical processes taking place at different types of plate margins (constructive, destructive and conservative) that lead to earthquakes and volcanic activity.
- Primary and secondary effects of a tectonic hazard.
- Immediate and long-term responses to a tectonic hazard.
- **CASE STUDIES**: Kobe & Haiti
- Reasons why people continue to live in areas at risk from a tectonic hazard.
- How monitoring, prediction, protection and planning can reduce the risks from a tectonic hazard.

Weather Hazards (Textbook pgs. 22-38)

- General atmospheric circulation model: pressure belts and surface winds
- Global distribution of tropical storms (hurricanes, cyclones, typhoons).
- An understanding of the relationship between tropical storms and general atmospheric circulation.
- Cause of tropical storms and the sequence of their formation and development.
- The structure and features of a tropical storm.
- How climate change might affect the distribution, frequency and intensity of tropical storms.
- Primary and secondary effects of tropical storms.
- Immediate and long-term responses to a tropical storm.
- **CASE STUDY**: Haiyan (2013)
- How monitoring, prediction, protection and planning can reduce the effects of tropical storms.
- Overview of types of weather hazard experienced in the UK
- Extreme weather event in the UK to illustrate:
    - Causes
    - Social, economic and environmental impacts
    - How management strategies can reduce risk
    - Evidence that weather is becoming more extreme in the UK.
- **CASE STUDY**: Boscastle, Somerset & Carlisle

The changing economic world

The Development Gap (Textbook pgs. 192 – 216)

- Different economic and social measures of development: gross national income (GNI) per head, birth and death rates, infant mortality, life expectancy, people per doctor, literacy rates, access to safe water, Human Development Index (HDI).
- Limitations of economic and social measures.
- Different ways of classifying parts of the world according to their level of economic development and quality of life.
- Causes of uneven development: physical, economic and historical.
- Consequences of uneven development, disparities in wealth and health, international migration
- Link between stages of the Demographic Transition Model and the level of development.
- An overview of the strategies used to reduce the development gap: investment, industrial development and tourism, aid, using intermediate technology, fair trade, debt relief, microfinance loans.
- **CASE STUDY:** Jamaica (how tourism can help to bridge the development gap)

Nigeria: a Newly Emerging Economy (Textbook pgs. 218 – 232)

- **CASE STUDY:** Nigeria
    - The location and political importance of Nigeria regionally and globally
    - The political, social, cultural and environmental context of Nigeria
    - The changing industrial structure. The balance between different sectors of the economy. How manufacturing industry can stimulate economic development
    - The role of transnational corporations (TNCs) in relation to industrial development.
    - Advantages and disadvantages of TNC(s) to the host country
    - The changing political and trading relationships with the wider world
    - International aid: types of aid, impacts of aid on the receiving country
    - How economic development is improving the quality of life for the population.

The changing UK economy (Textbook pgs. 234 – 252)

- Causes of economic change: deindustrialisation and decline of traditional industrial base, globalisation and government policies
- Moving towards a post-industrial economy: development of information technology, service industries, finance and research, and science and business parks

- Impacts of industry on the physical environment. An example of how modern industrial development can be more environmentally sustainable
- Social and economic changes in the rural landscape in one area of population growth and one area of population decline
- Improvements and new developments in road and rail infrastructure, port and airport capacity
- The North–South divide. Strategies used in an attempt to resolve regional differences
- The place of the UK in the wider world. Links through trade, culture, transport, and electronic communication. Economic and political links: the European Union (EU) and Commonwealth.

The Living World

Ecosystems (Textbook pgs. 52-56)

- An **example** of a small-scale UK ecosystem to illustrate the concept of inter-relationships within a natural system (Pond Ecosystem)
- Understanding of producers, consumers, decomposers, food chain, food web and nutrient cycling.
- The impact of changing one component on the ecosystem
- The distribution of large scale global ecosystems and an overview of their characteristics

Tropical Rainforests (Textbook pgs. 58-66)

- Describe the characteristics of a tropical rainforest (climate, water, soils, plants and animals)
- Explain how the vegetation has adapted to the physical conditions of a tropical rainforest e.g. buttresses and drip leaves
- **CASE STUDY**: Amazon rainforest:
    - Causes of deforestation – subsistence and commercial farming, logging, road building, mineral extraction, energy development, settlement, population growth
    - Impacts and issues resulting from deforestation – soil erosion, loss of biodiversity, contribution to climate change, economic development
- 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 (Textbook pgs. 68-76)

- To be able to describe the characteristics of a hot desert (climate, water, soils)
- How plants and animals adapt to the physical conditions (e.g. cacti and camels)
- **CASE STUDY:** Thar Desert
    - Development opportunities in hot desert environments: mineral extraction, energy, farming, tourism
    - Challenges of developing hot desert environments: extreme temperatures, water supply, inaccessibility.
- 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.

The Challenge of Resource Management

Resource Management (Textbook pgs. 256 – 262)

- Define social well being and economic well being
- To be able to explain how water, food and energy affect our social well being
- EXPLAIN why inequalities in food, water and energy exist across the globe
- The changing demand for food in the UK (including high-value food exports, all-year demand for seasonal food and organic produce)
- Impact of importing our food compared to local food sources
- What is agribusiness and how it works.
- Reasons for the changing demand for water in the UK – areas of surplus and deficit. How do we transfer water?
- UK has a changing energy mix – reliance on fossil fuels, growing significance of renewables what is happening to UK domestic supplies of coal, gas and oil
- Classify the economic and environmental issues associated with exploitation (use) of energy sources.

Energy Management (Textbook pgs. 288 – 298)

- The role of nuclear power
- Economic and environmental issues associated with exploitation of energy sources, including shale gas
- Areas of surplus (security) and deficit (insecurity): global distribution of energy consumption and supply
- Reasons for increasing energy consumption: economic development, rising population, technology
- factors affecting energy supply: physical factors, cost of exploitation and production, technology and political factors.
- Impacts of energy insecurity: energy supply problems – exploration of difficult and environmentally sensitive areas, economic and environmental costs, food production, industrial output, potential for conflict where demand exceeds supply.
- Strategies to increase energy supply:
    - renewable (biomass, wind, hydro, tidal, geothermal, wave and solar)
    - non-renewable (fossil fuels and nuclear power) sources of energy
- **CASE STUDY**: The North Sea
    - how oil is extracted from the North Sea
    - why oil is extracted from the North Sea
    - evaluate the advantages and disadvantages of using the North Sea
- Energy conservation: designing homes, workplaces and transport for sustainability
- Demand reduction, increasing use of technology to reduce the use of fossil fuels
- **CASE STUDY**: Tungu-Kabri, Kenya
    - A local scheme designed to increase sustainable supplies of energy
    - Evaluate the success of a local scheme designed to increase sustainable supplies of energy