



## Valentines High School - KS5 Academic Learning Journey

### Y12 Skills

#### Topic 1:

- Analysis of hazard distribution patterns on world and regional scale maps.
- Use of block diagrams to identify key features of different plate boundary settings
- Analysis of tsunami time-travel maps to aid prediction.
- Use of correlation techniques to analyse links between magnitude of events, deaths and damage.
- Statistical analysis of contrasting events of similar magnitude to compare deaths and damage.
- Interrogation of large data sets to assess data reliability and to identify and interpret complex trends.
- Use of Geographic Information Systems (GIS) to identify hazard risk zones and degree of risk related to physical and human geographical features.

#### Topic 2b:

- GIS mapping of the variety of coastal landscapes, both for and beyond the UK
- Satellite interpretation of a variety of coastlines to attempt to classify them.
- Field sketches of contrasting coastal landscapes
- Using measures of central tendency to classify waves into destructive and constructive wave types.
- Using student t-test to investigate changes in pebble size and shape along a drift aligned beach and also across the littoral zone to above the storm beach.
- Map and aerial interpretation of distinctive landforms indicating past of sea level change.
- Use of GIS, aerial photos and maps to calculate recession rates for a variety of temporal rates (annual changes and longer-term changes).
- Interrogation of GIS of management cells to ascertain land use values and develop cost/benefit analysis to inform the choice of coastal management strategy.
- Photo interpretation of a range of approaches to management to assess environmental impact.
- Sand dune or salt marsh surveys to assess the impact of succession using an index of diversity,  $X^2$  (Chi-square to compare features of the various zones).

#### Topic 3:

- Use of proportional flow lines showing networks of flows.
- Ranking and scaling data to create indices.
- Analysis of human and physical features on maps to understand lack of connectedness.
- Use of population, deprivation and land-use datasets to quantify the impacts of deindustrialisation.
- Use of proportional flow arrows to show global movement of migrants from source to host areas.
- Analysis of global TNC and brand value datasets to quantify the influence of western brands.
- Critical use of World Bank and United Nations (UN) data sets to analyse trends in human and economic development, including the use of line graphs, bar charts and trend lines
- Plotting Lorenz curves and calculating the Gini Coefficient.



#### Topic 4a:

- Use of GIS to represent data about place characteristics.
- Interpretation of oral accounts of the values and lived experiences of places from different interest groups and ethnic communities.
- Use of Index of Multiple Deprivation (IMD) database to understand variations in levels and types of deprivation.
- Investigation of social media to understand how people relate to the places where they live.
- Testing of the strength of relationships through the use of scatter graphs and Spearman's rank correlation.
- Use of different newspaper sources to understand conflicting views about plans for regeneration.
- Evaluation of different sources (music, photography, film, art, literature) and appreciation of why they create different representations and image of a local place.
- Exploration of discursive/creative media sources to find out how place identity has been used as part of rebranding.
- The interpretation of photographic and map evidence showing 'before and after' cross-sections of regenerated urban and rural places.
- Interrogation of blog entries and other social media to understand different views of the success of regeneration projects.

#### Y12 Knowledge

##### Topic 1:

- 1.1: The global distribution of tectonic hazards can be explained by plate boundary and other tectonic processes.
- 1.2: There are theoretical frameworks that attempt to explain plate movements.
- 1.3: Physical processes explain the causes of tectonic hazards.
- 1.4: Disaster occurrence can be explained by the relationship between hazards, vulnerability, resilience and disaster.
- 1.5: Tectonic hazard profiles are important to an understanding of contrasting hazard impacts, vulnerability and resilience.
- 1.6: Development and governance are important in understanding disaster impact and vulnerability and resilience.
- 1.7: Understanding the complex trends and patterns for tectonic disasters helps explain differential impacts.
- 1.8: Theoretical frameworks can be used to understand the predication, impact and management of tectonic hazards.
- 1.9: Tectonic hazard impacts can be managed by a variety of mitigation and adaptation strategies, which vary in their effectiveness.

##### Topic 2b:

- 2b.1: The coast, and wider littoral zone, has distinctive features and landscapes.
- 2b.2: Geological structure influences the development of coastal landscapes at a variety of scales.
- 2b.3: Rates of coastal recession and stability depend on lithology and other factors.
- 2b.4: Marine erosion creates distinctive coastal landforms and contributes to coastal landscapes.
- 2b.5: Sediment transport and deposition create distinctive landforms and contribute to coastal landscapes.



- 2b.6: Subaerial processes of mass movement and weathering influence coastal landforms and contribute to coastal landscapes.
- 2b.7: Sea level change influences coasts on different timescales.
- 2b.8: Rapid coastal retreat causes threats to people at the coast.
- 2b.9: Coastal flooding is a significant and increasing risk for some coastlines.
- 2b.10: Increasing risks of coastal recession and coastal flooding have serious consequences for affected communities.
- 2b.11: There are different approaches to managing the risks associated with coastal recession and flooding.
- 2b.12: Coastlines are now increasingly managed by holistic integrated coastal zone management (ICZM).

#### Topic 3:

- 3.1: Globalisation is a long-standing process which has accelerated because of rapid developments in transport, communications and businesses.
- 3.2: Political and economic decision making are important factors in the acceleration of globalisation.
- 3.3: Globalisation has affected some places and organisations more than others.
- 3.4: The global shift has created winners and losers for people and the physical environment.
- 3.5: The scale and pace of economic migration has increased as the world has become more interconnected, creating consequences for people and the physical environment.
- 3.6: The emergence of a global culture, based on western ideas, consumption, and attitudes towards the physical environment, is one outcome of globalisation.
- 3.7: Globalisation has led to dramatic increases in development for some countries, but also widening development gap extremities and disparities in environmental quality.
- 3.8: Social, political and environmental tensions have resulted from the rapidity of global change caused by globalisation.
- 3.9: Ethical and environmental concerns about unsustainability have led to increased localism and awareness of the impacts of a consumer society.

#### Topic 4a:

- 4a.1: Economies can be classified in different ways and vary from place to place.
- 4a.2: Places have changed their function and characteristics over time.
- 4a.3: Past and present connections have shaped the economic and social characteristics of your chosen places.
- 4a.4: Economic and social inequalities changes people's perceptions of an area.
- 4a.5: There are significant variations in the lived experience of place and engagement with them.
- 4a.6: There is a range of ways to evaluate the need for regeneration.
- 4a.7: UK government policy decisions play a key role in regeneration.
- 4a.8: Local government policies aim to represent areas as being attractive for inward investment.
- 4a.9: Rebranding attempts to represent areas as being more attractive by changing public perception of them.
- 4a.10: Assessing the success of regeneration uses a range of measures: economic, demographic, social and environmental.
- 4a.11: Different urban stakeholders have different criteria for judging the success of urban regeneration.
- 4a.12: Different rural stakeholders have different criteria for judging the success of rural regeneration.



## Y13 Skills

### Topic 5:

- Use of diagrams showing proportional flows within systems.
- Comparative analysis of river regime annual discharges.
- Analysis and construction of Water Budget graphs.
- Using comparative data, labelling of features of storm hydrographs
- Use of large database to study the pattern and trends in floods and droughts worldwide.
- Interpretation of synoptic charts and weather patterns, leading to droughts and floods.
- Use of a global map to analyse world water stress and scarcity.
- Interpretation of water poverty indexes using diamond diagrams for countries at different levels of development.
- Identify seasonal variations in the regime of international rivers, such as the Nile and the Mekong and assess impact of existing and potential dams.

### Topic 6:

- Use of proportional flow diagrams showing carbon fluxes
- Use of maps showing global temperature and precipitation distribution.
- Graphical analysis of the energy mix of different countries, including change over time.
- Analysis of maps showing global energy trade and flows.
- Comparisons of emissions from different energy source.
- Using GIS to map land-use changes such as deforestation over time.
- Analysis of climate model maps to identify areas at most risk from water shortages, floods in the future.
- Plotting graphs of carbon dioxide levels, calculating means and rates of change.

### Topic 7:

- Constructing power indexes using complex data sets, including ranking and scaling.
- Mapping past, present and future sphere of influence and alliances using world maps.
- Using graphs of world trade growth using linear and logarithmic scales
- Mapping emissions and resource consumption using proportional symbols.
- Plotting the changing location of the world's economic centre of gravity on world maps.
- Analysing future Gross Domestic Product (GDP) using data from different sources.

### Topic 8b

- Comparison of different measurements of development using ranked data.
- Use of scatter graphs and correlation techniques to describe the relationship between health and life expectancy and other indicators of development.
- Use of proportional circles to show the relative size of government spending and the share of that spending devoted to welfare, health and education across developing, emerging and developed nations.
- Use qualitative and quantitative indicators to derive an index of corruption and show this on global maps to compare variations in levels of corruption with types of government.
- Use of flow-lines on global maps to show both the direction and level of aid from donor to recipient global regions.



- Evaluating source material, including newspaper articles and marketing material to determine the impact of development aid.
- Interpreting images to evaluate the impact of economic development on the environment minority groups live in.
- Critical analysis of source material to identify possible reasons for error in the assessment of success for named interventions such as the management of European or Asian boat people.
- Using Gini Coefficient and income or wealth proportion for quintiles or deciles of the population to describe inequalities in and between nations.
- Critical analysis of source materials to identify possible misuse of data in the qualitative assessment of success for military interventions such as Iraq, Afghanistan and Libya.

### Y13 Knowledge

#### Topic 5:

- 5.1: The global hydrological cycle is of enormous importance to life on earth
- 5.2: The drainage basin is an open system within the global hydrological cycle.
- 5.3: The hydrological cycle influences water budgets and river systems at a local scale.
- 5.4: Deficits within the hydrological cycle result from physical processes but can have significant impacts.
- 5.5: Surpluses within the hydrological cycle can lead to flooding, with significant impacts for people.
- 5.6: Climate change may have significant impacts on the hydrological cycle globally and locally.
- 5.7: There are physical causes and human causes of water insecurity.
- 5.8: There are consequences and risks associated with water insecurity.
- 5.9: There are different approaches to managing water supply, some more sustainable than others.

#### Topic 6:

- 6.1: Most global carbon is locked in terrestrial stores as part of the long-term geological cycle.
- 6.2: Biological processes sequester carbon on land and in the oceans on shorter timescales.
- 6.3: A balanced carbon cycle is important in sustaining other earth systems but is increasingly altered by human activities.
- 6.4: Energy security is a key goal for countries, with most relying on fossil fuels.
- 6.5: Reliance on fossil fuels to drive economic development is still the global norm.
- 6.6: There are alternatives to fossil fuels but each has costs and benefits.
- 6.7: Biological carbon cycles and the water cycle are threatened by human activity.
- 6.8: There are implications for human wellbeing from the degradation of the water and carbon cycles.
- 6.9: Further planetary warming risks large-scale release of stored carbon, requiring responses from different players at different scales.

#### Topic 7:

- 7.1: Geopolitical power stems from a range of human and physical characteristics of superpowers.
- 7.2: Patterns of power change over time and can be uni-, bi- or multi-polar.
- 7.3: Emerging powers vary in their influence on people and the physical environment, which can change rapidly over time.
- 7.4: Superpowers have a significant influence over the global economic system.



- 7.5: Superpowers and emerging nations play a key role in international decision making concerning people and the physical environment.
- 7.6: Global concerns about the physical environment are disproportionately influenced by superpower actions.
- 7.7: Global influence is contested in a number of different economic, environmental and political spheres.
- 7.8: Developing nations have changing relationships with superpowers with consequences for people and the physical environment.
- 7.9: Existing superpowers face ongoing economic restructuring, which challenges their power.

Topic 8b:

- 8b.1: Globalisation has led to an increase in migration both within countries and among them.
- 8b.2: The causes of migration are varied, complex and subject to change.
- 8b.3: The consequences of international migration are varied and disputed.
- 8b.4: Nation states are highly varied and have very different histories.
- 8b.5: Nationalism has played a role in the development of the modern world.
- 8b.6: Globalisation has led to the deregulation of capital markets and the emergence of new state forms.
- 8b.7: Global organisations are not new but have been important in the post-1945 world.
- 8b.8: IGOs established after the Second World War have controlled the rules of world trade and financial flows.
- 8b.9: IGOs have been formed to manage the environmental problems facing the world, with varying success.
- 8b.10: National identity is an elusive and contested concept.
- 8b.11: There are challenges to national identity.
- 8b.12: There are consequences of disunity within nations.