



Belfairs Academy

GEOGRAPHY Fundamentals Map

YEAR 9 (2022/23)

Fundamentals	Skills
<p>Natural Hazards – Plate Tectonics Must be confident in the following:</p> <ul style="list-style-type: none"> • Plate tectonics theory. • Global distribution of earthquakes and volcanic eruptions and their relationship to plate margins. • Physical processes taking place at different types of plate margin (constructive, destructive and conservative) that lead to earthquakes and volcanic activity. • The effects of, and responses to, a tectonic hazard vary between areas of contrasting levels of wealth. • Primary and secondary effects of a tectonic hazard. • Immediate and long-term responses to a tectonic hazard. • Use named examples to show how the effects and responses to a tectonic hazard vary between two areas of contrasting levels of wealth. • Management can reduce the effects of a tectonic hazard. • 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. 	<p><u>Cartographic skills</u> Cartographic skills relating to a variety of maps at different scales.</p> <p><u>Atlas maps:</u> use and understand coordinates – latitude and longitude recognise and describe distributions and patterns of both human and physical features maps based on global and other scales may be used and students may be asked to identify and describe significant features of the physical and human landscape on them, e.g. population distribution, population movements, transport networks, settlement layout, relief and drainage analyse the inter-relationship between physical and human factors on maps and establish associations between observed patterns on thematic maps.</p> <p><u>Ordnance Survey maps:</u> use and interpret OS maps at a range of scales, including 1:50 000 and 1:25 000 and other maps appropriate to the topic use and understand coordinates – four and six-figure grid references use and understand scale, distance and direction – measure straight and curved line distances using a variety of scales use and understand gradient, contour and spot height numerical and statistical information identify basic landscape features and describe their characteristics from map evidence identify major relief features on maps and relate cross-sectional drawings to relief features draw inferences about the physical and human landscape by interpretation of map evidence, including patterns of relief, drainage, settlement, communication and land-use interpret cross sections and transects of physical and human landscapes</p>
<p>The challenge of natural hazards – Climate Change</p> <ul style="list-style-type: none"> • Evidence for climate change from the beginning of the Quaternary period to the present day. • Possible causes of climate change: • natural factors – orbital changes, volcanic activity and solar output • human factors – use of fossil fuels, agriculture and deforestation. • Overview of the effects of climate change on people and the environment. • Managing climate change: 	



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<ul style="list-style-type: none"> mitigation – alternative energy production, carbon capture, planting trees, international agreements adaptation – change in agricultural systems, managing water supply, reducing risk from rising sea levels. 	<p>describe the physical features as they are shown on large scale maps of two of the following landscapes – coastlines, fluvial and glacial landscapes</p> <p>infer human activity from map evidence, including tourism.</p>
<p>Living World : Ecosystems, deserts, cold environments</p> <p>Must be confident in the following :</p> <ul style="list-style-type: none"> An example of a small scale UK ecosystem to illustrate the concept of interrelationships within a natural system, an understanding of producers, consumers, decomposers, food chain, food web and nutrient cycling. The balance between components. The impact on the ecosystem of changing one component. An overview of the distribution and characteristics of large scale natural global ecosystems. <p>3.1.2.2 Tropical rainforests</p> <ul style="list-style-type: none"> Tropical rainforest ecosystems have a range of distinctive characteristics. The physical characteristics of a tropical rainforest. The interdependence of 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. A case study of a tropical rainforest to illustrate: <ul style="list-style-type: none"> causes of deforestation – subsistence and commercial farming, logging, road building, mineral extraction, energy development, settlement, population growth impacts of deforestation – economic development, soil erosion, contribution to climate change. Tropical rainforests need to be managed to be sustainable. Value of tropical rainforests to people and the environment. Strategies used to manage the rainforest sustainably – selective logging and 	<p><u>Maps in association with photographs:</u></p> <p>be able to compare maps</p> <p>sketch maps: draw, label, understand and interpret</p> <p>photographs: use and interpret ground, aerial and satellite photographs</p> <p>describe human and physical landscapes (landforms, natural vegetation, land-use and settlement) and geographical phenomena from photographs</p> <p>draw sketches from photographs</p> <p>label and annotate diagrams, maps, graphs, sketches and photographs.</p> <p><u>Graphical skills</u></p> <p>Graphical skills to:</p> <p>select and construct appropriate graphs and charts to present data, using appropriate scales – line charts, bar charts, pie charts, pictograms, histograms with equal class intervals, divided bar, scattergraphs, and population pyramids</p> <p>suggest an appropriate form of graphical representation for the data provided</p> <p>complete a variety of graphs and maps – choropleth, isoline, dot maps, dot lines, proportional symbols and flow lines</p> <p>use and understand gradient, contour and value on isoline maps</p> <p>plot information on graphs when axes and scales are provided</p> <p>interpret and extract information from different types of maps, graphs and charts, including population pyramids, choropleth maps, flow-line maps, dispersion graphs.</p> <p><u>Numerical skills</u></p> <p>demonstrate an understanding of number, area and scales, and the quantitative relationships between units</p> <p>design fieldwork data collection sheets and collect data with an understanding of accuracy, sample size and procedures, control groups and reliability</p>



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<p>replanting, conservation and education, ecotourism and international agreements about the use of tropical hardwoods, debt reduction.</p> <p>Hot deserts</p> <ul style="list-style-type: none"> • Hot desert ecosystems have a range of distinctive characteristics. • The physical characteristics of a hot desert. • The interdependence of 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. • A case study of a hot desert to illustrate: • development opportunities in hot desert environments: mineral extraction, energy, farming, tourism • challenges of developing hot desert environments: extreme temperatures, water supply, 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. 	<p>understand and correctly use proportion and ratio, magnitude and frequency draw informed conclusions from numerical data.</p> <p><u>Statistical skills</u></p> <p>Statistical skills to: use appropriate measures of central tendency, spread and cumulative frequency (median, mean, range, quartiles and inter-quartile range, mode and modal class) calculate percentage increase or decrease and understand the use of percentiles describe relationships in bivariate data: sketch trend lines through scatter plots, draw estimated lines of best fit, make predictions, interpolate and extrapolate trends be able to identify weaknesses in selective statistical presentation of data.</p> <p><u>Use of qualitative and quantitative data</u></p> <p>Use of qualitative and quantitative data from both primary and secondary sources to obtain, illustrate, communicate, interpret, analyse and evaluate geographical information.</p> <p>Examples of types of data: maps fieldwork data geo-spatial data presented in a geographical information system (GIS) framework satellite imagery written and digital sources visual and graphical sources numerical and statistical information.</p> <p><u>Formulate enquiry and argument</u> identify questions and sequences of enquiry write descriptively, analytically and critically communicate their ideas effectively develop an extended written argument draw well-evidenced and informed conclusions about geographical questions and issues.</p> <p><u>Literacy</u></p> <p>Most communication is through the written word, raising the importance of good literacy skills. Students should be able to communicate</p>



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	information in ways suitable for a range of target audiences.
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