Pearson Edexcel International Advanced Level in Geography

SCHEME OF WORK: Unit 1: Global Challenges

Introduction

The outline Scheme of Work has been specifically designed to provide teachers with a starting point, from which to aid and build their own Scheme of Work. It is not intended as a definitive document. Teachers must use the scheme of work outline in combination with the published specification IAL in Geography. The document is in Word format and is easy to adapt to meet teachers' specific needs.

- This unit is worth 60% of the total International Advanced Subsidiary (IAS) raw marks in this subject.
- The outline Scheme of Work is based on 1 teacher with 4-5 hours contact time with students per week. Consideration of prior learning should also be taken into account as part of that planning
- As teachers, schools and colleges have very different policies on the format and production of Schemes of Work, you may wish to change the format of the table. This can be done by inserting columns, changing column headings, and cutting and pasting.

Content Topic 1: World at Risk	
Week 1 **Global Hazards**	**Suggested activities/resources** • Photographs of hazard events to work up definition. • Table of causes for earthquakes and volcanic hazards; drawing hazard profiles. • Exploration of processes involved in generating hydro-meteorological hazards. • Geofactsheet 'El Nino' or Geography Review article. Use of HEWSWEB for El Nino forecasting. • Research different scales magnitude scales such as Moment Magnitude, Saffir-Simpson, VEI, and flood discharge. • Exploring the disaster risk equation by contrasting several named hazards and writing the equation out A4 size, with notes. • **http://www.unisdr.org/eng/library/lib-terminology-eng%20home.htm hazard key terms glossary** • **http://www.environment-agency.gov.uk/subjects/flood/ flood risk details from the UK Environment Agency.** • **http://www.hewsweb.org/home_page/default.asp for El Nino forecasts**
Aims and learning outcomes • Understand Plate tectonics and volcanic processes • Understand that landslides and avalanches are complex hazards • Understand the causes of short-term hydro-meteorological hazards • Understand that drought is caused by medium-term trends in rainfall • Understand how ENSO cycles can be linked to weather hazards • Understand the relationship between natural hazards and disasters • Understand how the magnitude of hazard events can be measured • Know that the disaster risk equation (Risk = hazard x vulnerability/ capacity to cope) can help explain contrasting disaster profiles.	

Content Topic 1: World at Risk	
Week 2 **Global hazard patterns**	**Suggested activities/resources** • Mapping activities to show the distribution of geophysical and hydro-meteorological and hazards • Exploration of the physical processes involved in generating hazards. • Critical examination of the importance of human factors such as the level of development, population density, accessibility and governance in explaining the distribution of hazards • Student research to produce factsheet on Philippines and California hazard distributions, risk and interactions (e.g. earthquakes + landslides). • Comparison of the impacts of the Indian Ocean Boxing Day Tsunami with the Sendai Tsunami. • Research the economic effects of these tsunami on the economies of these countries. • **http://www.ldeo.columbia.edu/chrr/research/hotspots/coredata.html Columbia University website focussed on hazard distribution** • **http://www.scsn.org/commentary/?cat=2 database of 'real time' earthquakes in California**
Aims and learning outcomes: • Understand distributions of natural hazards in terms of physical processes • Understand that human factors can help explain patterns of disaster impact globally and regionally • Understand the concept of multiple hazard zones and why some locations are considered hazard hotspots due to the frequency of different hazards events • Research disaster hotspots and explain causes, impacts and interactions in the Californian Coast and the Philippines • The concept of mega-disasters (tsunami, earthquakes, regional drought) that affect more than one country with unusually large human and economic impacts. • Understand the implications for regional economies and the global economy of mega-disasters both in terms of impacts and the scale of the required response	

Content Topic 1: World at Risk	
Week 3 **Global hazard trends**	**Suggested activities/resources** • Use of the EMDAT database to critically examine trends in reported hazards. • Plot out rising economic losses, rising numbers of people affected and falling death tolls • Mind map the causes of these trends focusing on physical (changing weather patterns, climate change) and human (deforestation, desertification) • Classify recent hazard events into disasters and non-disasters and examine the causes of these disasters • Research recent advances in volcanic eruption prediction, tsunami warning and cyclone tracking • Contrast warning evacuation, hazard resistant design, community preparedness and land-use zoning in countries at varying levels of development • **http://www.em-dat.net/ The CRED database of natural hazard trends** • **www.bbc.co.uk to source examples of hazard events (news search)** • **www.worldmapper.com disaster cartograms for distribution**
Aims and learning outcomes: • Understand the causes of the trends in the occurrence of hydro-meteorological hazards • Understand how disasters may be defined and measured • Understand the causes of the trends in the number of disasters • Understand how prediction and monitoring technology can reduce the impact of some disasters but not others	

Content Topic 1: World at Risk	
Week 4 **Climate change**	**Suggested activities/resources** • Annotating graphs of geological, historical and recent climate change to compare and contrast. • Reviewing the range of data available – assessing it usefulness and reliability in table format. • Considering long term changes due to orbital (Milankovitch Cycles), solar (sun spots) and volcanic / cosmic causes; do they fit the data? • Assessing the extent to which variations in solar output (11 year and longer sunspot cycles) and the impact of volcanic emissions can provide an explanation for medium and short-term climate changes. **http://vathena.arc.nasa.gov/curric/land/global/climchng.html an overview of long term climate change and the evidence for it** **http://www.ipcc.ch/index.html a source for the IPCC scenarios for future climate change.**
Aims and learning outcomes: • Describe trends in global climate, both long and short term. • State the evidence used to reconstruct past climate. • Explain natural causes of climate change. • Assess recent climate change in relation to past change • Evaluate the reliability, geographical coverage and accuracy of past and more recent climate data and prediction.	

Content Topic 1: World at Risk	
Week 5 **The causes and impacts of global warming**	**Suggested activities/resources** • Plot changes in atmospheric composition of greenhouse gases such as CO_2, CH_4 and NO_x since 1960 to show trends in concentrations of greenhouse gases • Map out the variations (including change over time) both in absolute and per capita terms of these greenhouse gases in terms of economic activity and county • Annotations of IPPC 'scenario' graphs and consideration of each ones likelihood due to variations in future population and economic development as well as mitigating efforts. • Analysis of graphs of sea level projections; mapping UK areas at risk. • Research the possible impacts on low-lying Pacific Islands as well as low lying coastlines such as Bangladesh. • Researching projected climate change in areas such as the Sahel in Africa, and the impacts on health, water supply and food production. **http://www.oxfam.org.uk/ to access the 'Africa – up in smoke?' reports on climate impacts.** **http://www.cru.uea.ac.uk/cru/info/slr/ discussion of sea level projections** **http://www.grida.no/climate/ipcc/emission/091.htm#4.2.1. IPCC scenario explanations**
Aims and learning outcomes: • Examining rising concentrations of GHG, their sources and the process of enhanced GHE; graphs to assess degree of 'unprecedented warming. • Understand the variations in the sources of these emissions by economic activity and countries • Understand the reasons why there are a range of projections of future global warming and sea level rise • Uncertainty also results from physical feedback mechanisms (ice albedo feedback, ocean carbon sinks, forest 'die-back'). • Understand that Sea-level rise represents a major risk to some low-lying countries that are physically and economically vulnerable as well as many coastal cities • Recognise that shifts in the location of climate belts represent risks to farmers in terms of precipitation levels, especially in rain-fed, low-income locations.	

Content Topic 1: World at Risk	
Week 6 **Managing global climate risk**	**Suggested activities/resources** • Factfile production on a range of approaches such as alternative energy, home efficiency, geoengineering. • Research the agreements and the success of conferences such as Montreal 1987, Kyoto 1997, Paris 2015. • Exploring the UK Government's policies and actions, including the question of nuclear power and alternative energy targets. • Evaluate the possibility of using adaptation strategies in areas such as Bangladesh and the Netherlands as well in rain fed farming areas such as the Sahel. • Explore, then assess, their own contributions and actions. Investigate the Arctic and evaluate the impacts of global warming. • **www.newscientist.com many articles on mitigation and adaptation alternatives.** • **http://www.climatechallenge.gov.uk/ the UK policy and strategies** **http://www.earthday.net/footprint/index.asp ecological footprints**
Aims and learning outcomes: • Define and illustrate mitigation and adaptation. • Understand that global actions have had variable success both in terms of reaching agreement and actual emissions reductions. • Recognise that adapting to rising sea levels and increased flood risk requires costly engineering • Farming adaptations (irrigation, crop changes and drought resistant crops) require investment, which may not be available to subsistence producers. • Globally, and within countries, attitudes to global warming vary between different groups and organisations • Global warming may provide new economic opportunities in some high-latitude locations	

Content Topic 2: Going Global	
Week 7 Globalisation, networks and trade	**Suggested activities/resources** • *'How globalised am I'* – using students clothes, trainers, mobile phones etc to identify product sources / TNCs. • Measuring the degree of degree of globalisation varies by country using indicators such as the AT Kearney index and the KOF index. • Compare the developments in transport and trade in the 19th century such as railways, telegraph and steam-ships to how globalisation is now driven by jet aircraft and containerisation. • Research differing use of 21st century developments such as mobile phones, internet and social networking in 'switched on' and 'switched off' places • Research patterns of global trade in commodities, goods and services between developed, emerging and developing countries. **http://www.globalization101.org/ for discussion and definition** **http://www.worldmapper.org/textindex/text_index.html for maps of global migration patterns**
Aims and learning outcomes • Define globalisation • Understand the process of globalisation. • Understand how developments in transport and communication technology accelerated globalisation. • Understand how the role of free trade as well as the economic growth in the developing world and the global shift of industry to Asia have promoted globalisation.	

Content Topic 2: Going Global	
Week 8 **Global groupings**	**Suggested activities/resources** • Research how through outsourcing and offshoring, TNC are able to develop global production networks through exploring the global network of a named TNC e.g. Toyota, Walmart, Nike. • Evaluate the costs and benefits of the chosen TNC in a variety of countries and assess the extent it has developed new markets as well as resorted to globalisation. • Map free trade blocs such as the EU, ASEAN and TTIP • Research the western Pacific Rim to map SEZ to correlate globalisation with government initiatives • Explore the WTO, IMF and World Bank web sites to research how they have promoted globalisation. **www.toyota.com / www.walmart.com** **http://www.unctad.org/Templates/Page.asp?intItemID=2443&lang=1 has TNC profiles**
Aims and learning objectives • Understand how TNCs contribute to globalisation by taking advantage of economic liberalisation • Understand the social, economic and environmental costs and benefits of TNC outsourcing to emerging and developing countries. • Understand how National governments are key players in terms of promoting free trade blocs and agreements. • Understand how special economic zones, government subsidies and attitudes to FDI have contributed to the spread of globalisation into new emerging global regions. • Understand how International political and economic organisations have contributed to globalisation through the promotion of economic liberalisation and free trade.	

Content topic 2: Going Global	
Week 9 **Globalisation impact on development**	**Suggested activities/resources** Evaluate the costs and benefits of the student as a global consumer – discuss the moral and ethical issues in having cheap consumer products. Assess the impacts of economic restructuring such as dereliction, depopulation, crime and high unemployment in some areas in Developed countries. Contrast this with the issues faced by areas that are not 'switched on'. • Examine the reasons why some countries are not switched on in terms of their physical, political and cultural characteristics – compare the implications for their populations with those of developed countries. • Assess the reasons why some parts of Asia have benefited that region such as poverty reduction, waged work, infrastructure investment, education and training. • Carry out an Eco footprint analysis both the student as well as the outsourcing locations. Link to carbon emissions as well as air, water and land pollution. **http://www.internetworldstats.com/stats1.htm has statistics for the world and regions.** **http://www.un.org/millenniumgoals/ the MDG chart the winners and losers in the battle to reduce poverty** **http://www.newint.org/ New Internationalist (left-leaning journal) is especially useful moral and ethical debates; all back issues are available online.** **http://www.climatechoices.org.uk/pages/food3.htm food miles and consumption choices.**
Aims and learning outcomes: • Understand that some people (such as Global consumers) have benefited from low-priced consumer goods but this has costs. • Understand that deindustrialised regions in developed countries face social and environmental problems. • Understand the variety of reasons why some developing locations are weakly connected to the wider global economy, • Understand how the movement of the global economic centre of gravity to Asia has in terms of development. • Understand that globalisation has environmental impacts	

Content topic 2: Going Global	
Week 10 Global population trends	**Suggested activities/resources** • Plot out various global population projections to 2050 and 2100 and rainstorm on possible causes of these variations • Use a selected variety of countries such as the UK, Japan and Niger to assess how birth, death, infant mortality and fertility rates will cause future changes in the population structure • Assess the impacts of the greying UK population on health and social care, employment and dependency ratio issues. • Cost / Benefit table of the impacts of a youthful population structure on a named country such as Niger. • Get class into three groups and research and then present their findings on one of the Malthus, Boserup and the Club of Rome. • **http://www.statistics.gov.uk/populationestimates/svg_pyramid/default.htm dynamic UK population pyramid to 2081 showing ageing.** • **http://www.sierraclub.org/population/consumption/ useful website on consumption and footprints.**
Aims and learning outcomes: • Understand the uncertainty of Global population projections to 2050 and 2100 • Understand how the projections vary between global regions. • Understand how population pyramids can be used to analyse current population and project future population numbers and structure • Understand the challenges of an ageing and youthful population • Understand that the debate over the relationship between population and resources is not resolved • Understand the issues caused by a rising population and the extent to which technology may mitigate these	

Content topic 2: Going Global	
Week 11 **Global Migration**	**Suggested activities/resources** • Table to contrast motives of voluntary, forced, illegal, legal, economic, refugee and asylum seeker migrants. • Class role play in the differences between high-skill elites and low-skill workers in a global hub such as Dubai. • Evaluation tables for economic, social, environmental and political costs and benefits. • Assess the challenges caused by migration from conflict zones such as refugees, asylum seekers, people trafficking. Assessment of two contrasting policies. **http://www.pstalker.com/migration/mg_types.htm for migrant definitions, major flows and examples.** **http://www.iom.int/jahia/Jahia/pid/241 global overview of migration and annual reports.** **For the two case studies, searching the BBC news website (www.bbc.co.uk) produces many useful articles, facts and figures, and regional examples.**
Aims and learning outcomes: • Understand the increase in migration and the pattern of major global migration flows. • Understand how Globalisation encourages rural–urban migration and international migration especially to global hubs and megacities. • Understand the costs and benefits to both host and source locations • Understand that managing migration in a globalised world with fewer borders is increasingly difficult which has led to contrasting policies	

Content topic 2: Going Global	
Week 12 World urbanisation	**Suggested activities/resources** • Assess the causes of urbanisation such as demographic and economic. • Evaluate the issues in developing world cities such as housing supply, urban air pollution and service provision. • Assess the consequences for a variety of people in urban areas at contrasting levels of development. • Mapping the changing location and size of megacities (1970, 1990, 2007); analysis of trends. • Contrasting growth rates in Asia versus Africa; photosets of contrasting cities to analyse conditions and level of development. **http://www.megacities.uni-koeln.de/documentation/ maps and statistics on the world's largest cities.** **http://esa.un.org/unup/ World Urbanisation Prospects; data and trends.** **http://www.unhabitat.org/categories.asp?catid=33 use of the UN Habitat website for case study and sustainability research, as well as data on chosen city examples.** **The BBC website is useful for images of cities e.g. Mumbai and its slums, including Dharavi.**

Aims and learning outcomes:

- Understand the Global trends in and causes of urbanisation since 1980 in contrasting regional including projections to 2050.
- Understand the implications for surrounding rural areas.
- Understand the challenges of rapid urbanisation.
- Meeting housing need requires joint working between NGOs, community self-help groups and city government.
- Define world city, million city and megacity and understand the pattern global pattern of megacities, including regional variations in growth rates.
- Understand the Issues in mega cities.