



Geography GCSE Topic Lists for Revision

Subject: Geography

Topic or component: Unit 1

1A - Weather and Climate

Global atmospheric circulation and how circulation cells and ocean currents transfer and redistribute heat energy around the Earth.

How atmospheric circulation determines the location of arid and high rainfall areas.

The natural causes of climate change and how they explain past climate change events.

Evidence that supports natural climate change, and how it is used to reconstruct glacial and interglacial climates during the Quaternary and UK climates since Roman times.

Evidence for how human activity is causing climate change and the possible consequences on people.

The range of projections for global temperature change and sea level rise in the future, including physical processes and human reasons for an uncertainty about those projections.

The characteristics of the seasonal global distribution of tropical cyclones including source areas and tracks and change over time.

How the global circulation of the atmosphere leads to tropical cyclones and source areas, and reasons why they intensify and dissipate.

The physical hazards of tropical cyclones and their impact on people and environments.

Why some countries are more vulnerable than others to the impact of tropical cyclones.

How countries can prepare for, and respond to, tropical cyclones.

The effectiveness of these methods of preparation and response in one developed country and in one developing or emerging country.

Skills - climate graphs.

Skills - line graphs/bar charts showing climate.

Skills - temperature and sea level projection graphs to 2100.

Skills - GIS to track the movement of tropical cyclones.

Skills - weather and storm surge data to calculate Saffir–Simpson magnitude.

Skills - social media sources, satellite images and socio-economic data to assess impact.

Topic or component: Unit 1

1B - Tectonics

The Earth's layered structure (including the asthenosphere), and how it links to plate tectonics.

The core's internal heat source (through radioactive decay) generates convection currents, leading to plate movement.

The distribution and characteristics of the three plate boundaries and hotspots.

The causes of volcanic (type, magma/type/lava flows and explosivity) hazards.

The primary and secondary impacts of volcanoes on property and people in a developed and emerging country.

The management of volcanic hazards in a developed and emerging or developing country, including short-term relief and long-term planning.

The causes of earthquake hazards, including tsunami (shallow/deep, magnitude)

The primary and secondary impacts of earthquakes on property and people in a developed and emerging country.

The management of earthquake hazards in a developed and emerging or developing country, including short-term relief and long-term planning.

Skills - interpreting a cross-section of the Earth.

Skills - interpreting a world map showing distribution of plate boundaries and plates.

Skills - Using the Richter Scale to compare magnitude of earthquake events.

Skills – Using social media sources, satellite images and socio-economic data to assess impact.

Topic or component: Unit 2 – On paper 1 you may choose Unit 2 or 3

The contrasting ways of defining development and measuring development.

How countries at different levels of development have differences in their demographic data.

The causes and consequences of global inequalities: social, historical, environmental, economic and political.

How Rostow's modernisation theory and Frank's dependency theory can be used to explain how and why countries develop over time.

The characteristics of top-down and bottom-up development strategies in terms of their scale, aims, funding and technology. The processes and players contributing to globalisation and why some countries have benefitted more than others.

The advantages and disadvantages of different approaches to development: non-governmental organisation-led, intermediate technology, inter-governmental organisation-funded large infrastructure and investment by TNCs.
India - The site, situation and connectivity of the country and its significance, in a national (environmental and cultural), regional and global context.
India - The broad political, social, cultural and environmental context of the chosen country in its region and globally.
India - The key economic trends since 1990.
India - The role of globalisation and government policy in the development of the chosen country.
India - How rapid economic change has contributed to demographic change, caused urbanisation and created different regions with different socio-economic characteristics.
India - The positive and negative impacts of economic development and globalisation on different age and gender groups.
India - The impacts of economic development and globalisation on the environment at a variety of scales.
India - How rapid economic development has changed the geopolitical influence and relationships with the EU and USA.
India - The conflicting views of the costs and benefits of changing international relations and the role of foreign investment in the economic development.
Skills - The relative ranking of countries using single versus composite (indices) development measures.
Skills - Population pyramid graphs for countries at different levels of development.
Skills - Use income quintiles to analyse global inequality.
Skills - Use numerical economic data to profile the chosen country.
Skills - Use proportional flow-line maps to visualise trade patterns and flows.
Skills - Use socio-economic data to calculate difference from the mean, for core and periphery regions.

Topic or component: Unit 3 - On paper 1 you may choose Unit 2 or 3

Past and current global trends in urbanisation, how it varies between global regions, and outline future projections of global urbanisation.
The global pattern of megacities and how in many countries some urban areas have disproportionate economic and/or political influence.
How economic change and migration contributes to the growth and/or decline of cities in the developing, emerging and developed countries.
Why urban economies are different in the developing, emerging and developed countries.
How urban population numbers, distribution and spatial growth change over time.

The characteristics of different urban land uses and the factors that influence land-use type.
Lagos or Mumbai - The significance of site, situation and connectivity of the megacity in a national, regional and global context.
Lagos or Mumbai - The megacity's structure in terms of its functions and building age.
Lagos or Mumbai - Reasons for past and present trends in population growth for the megacity.
Lagos or Mumbai - How population growth has affected the pattern of spatial growth and changing urban functions and land use.
Lagos or Mumbai - The opportunities for people living in the megacity.
Lagos or Mumbai - The challenges for people living in the megacity caused by rapid population growth.
Lagos or Mumbai - The pattern of residential areas of extreme wealth and contrasted with slums and squatter settlements, and reasons for differences in the quality of life within the megacity and identify the political and economic challenges of managing the megacity.
Lagos or Mumbai - The advantages and disadvantages of city-wide government (top-down) strategies for making the megacity more sustainable.
Lagos or Mumbai - The advantages and disadvantages of community and NGO-led bottom-up strategies for making the megacity more sustainable.
Skills - Line graphs and calculate the rate of change/annual or decadal percentage growth.
Skills - Using satellite images to identify different land use zones in urban areas.
Skills - Using GIS/satellite images, historic images and maps to investigate spatial growth.
Skills - Using quantitative and qualitative information to judge the scale of variations in quality of life.

Topic or component: Unit 4

4A - Coasts

How geological structure and rock type influence erosional landforms in the formation of coastal landscapes of erosion.

How UK climate, marine and sub-aerial processes are important in coastal landscapes of erosion as well as the rate of coastal retreat.

How sediment transportation (longshore drift) and deposition processes influence coastal landforms on coastal landscapes of deposition.

How human activities have direct or indirect effects on coastal landscapes.

How the interaction of physical and human processes is causing change on one named coastal landscape, including the significance of its location.
Why there are increasing risks from coastal flooding and the threats to people and environment.
Why there are costs and benefits to, and conflicting views about, managing coastal processes by hard engineering and by soft engineering as well as more sustainable approaches.
Skills - Calculating mean rates of erosion using a multi-year dataset.
Skills – Using BGS Geology maps to link coastal form to geology.
Skills - Recognising coastal landforms on 1:25,000 and 1:50,000 OS maps.
Skills - Using 1:25,000 and 1:50,000 OS maps, and GIS, to investigate what is threatened by rapid erosion.
Skills - Using a simple cost–benefit analysis to investigate coastal defence options.
Skills - Using 1:25,000 and 1:50,000 OS maps, and GIS, to investigate the impact of policy decisions.

Topic or component: Unit 4
4B – Rivers
How river landscapes contrast between the upper courses, mid courses and lower courses of rivers.
Why the channel shape, valley profile, gradient, discharge, velocity and sediment size and shape change along the river course.
The interaction of erosion, transport and depositional processes in river landform formation.
The influence of climate, geology and slope processes on river landscapes and sediment load.
How storm hydrographs and lag times can be explained by physical factors.
How human activities change river landscapes which alter storm hydrographs.
How the interaction of physical and human processes is causing river flooding on one named river, including the significance of its location.
How increasing risks from river flooding provides threats to people and environment.
The costs and benefits of managing flood risk by hard engineering and by soft engineering.
The kinds of questions that can be investigated through fieldwork.
Skills - 1:25,000 and 1:50,000 OS maps to determine valley cross section from contour lines.

Skills - BGS Geology maps to link river long profiles to geology.
Skills - River landforms on 1:25,000 and 1:50,000 OS maps.
Skills - Storm hydrographs using rainfall and discharge data.
Skills - Simple cost–benefit analysis to investigate river management options.
Skills - 1:25,000 and 1:50,000 OS maps, and GIS, to investigate the impact of policy decisions.

Topic or component: Unit 5
The differences between urban core and rural, and how UK and EU government policies have attempted to reduce them.
Why national and international migration over the past 50 years has altered the population geography of the UK and how UK and EU immigration policy has contributed to increasing ethnic and cultural diversity.
Why the decline in primary and secondary sectors and the rise of the tertiary and quaternary sectors in urban and rural areas has altered economic and employment structure in contrasting regions of the UK.
Why globalisation, free-trade policies and privatisation have increased foreign direct investment and the role of TNCs in the UK economy.
The significance of site, situation and connectivity of the city in a national, regional and global context.
The city's structure, in terms of its functions and variations in building age and density, land-use and environmental quality.
The causes of national and international migration that influence growth and character of the different parts of the city.
Reasons for different levels of inequality, in employment and services, education, and health in the different parts of the city.
How parts of the city have experienced decline.
How regeneration and rebranding of the city has positive and negative impacts on people.
Strategies aimed at making urban living more sustainable and improving quality of life in the city.
How the city and accessible rural areas are interdependent, which leads to economic, social and environmental costs and benefits for both.

Why a rural area has experienced economic and social changes due to its links with the city.
The challenges of availability and affordability of housing, decline in primary employment, provision of healthcare and education and how they affect quality of life (IMD) for some rural groups.
How new income and economic opportunities are created by rural diversification and tourism projects, but these may have environmental impacts.
Skills - Using and interpret UK population pyramids from different time periods.
Skills - Using census data sets to understand changes in the UK's population.
Skills - Using Eurostat to investigate FDI and immigration to the UK.
Skills - Exploring the kinds of questions capable of being investigated through fieldwork.
Skills - Using census data sets to compare areas within inner cities.
Skills - Using 1:25,000 and 1:50,000 OS maps to identify different land use types.
Skills - Using crime and IMD databases to investigate the extent of inner-city problems.

Topic or component: Unit 6 – The familiar fieldwork has been removed
The equipment used for fieldwork
An understanding of sampling methods
Sources of error in methods
Analysing results to explain patterns
Evaluating methods to explain whether the investigation was fair

Topic or component: Unit 7
How the global distribution and characteristics of major biomes are influenced by climate.
The local factors that can alter the biome distribution locally and how the biotic and abiotic components of biomes interact.
How the biosphere provides resources for indigenous and local people but it is increasingly exploited commercially for energy, water and mineral resources.
How the biosphere regulates the composition of the atmosphere, maintains soil health and regulates water within the hydrological cycle, providing globally important services.

The global and regional trends increasing the demands for food, energy and water resources, and theories on the relationships between population and resources.

Skills - Climate graphs for different biomes.

Skills - World maps to show the location of global biomes.

Skills - Line graphs showing the range of future global population projections, and population in relation to likely available resources.

Topic or component: Unit 8

Abiotic and biotic characteristics.

Nutrient cycle diagrams and to explain biodiversity in the tropical rainforest.

Plant and animal adaptations to the equatorial climate.

Distinctive abiotic and biotic characteristics of the taiga forest.

Why taiga biodiversity is lower than in the tropical rainforest.

Plant and animal adaptations to the subarctic climate.

The difference between direct threats and indirect threats.

The causes of rainforest deforestation.

Why climate change is a threat to the tropical rainforest.

Direct and indirect threats to the taiga forest from commercial development and explain other factors contributing to a loss of taiga biodiversity.

Advantages and disadvantages of global actions to protect tropical rainforest species and areas.

Reasons for different rates in rainforest deforestation.

The challenges of sustainable rainforest management.

Some of the challenges facing attempts to protect wilderness areas in the taiga.

Why sustainable forestry is sometimes difficult to maintain in the taiga.

Why people have different views about protecting the taiga or exploiting the forest and natural resources of the taiga.

Skills - Interpretation of nutrient cycle diagrams and food webs diagrams.

Topic or component: Unit 9

Energy resources - non-renewable, renewable and recyclable.

The environmental impacts from mining and drilling and the impacts on the landscape from renewable energy.

How access to energy resources is affected by access to technology and physical resources.

The global pattern of energy use per capita and the causes of variations.

The uneven global distribution of oil reserves and production, and why oil consumption is growing.

How oil supply and oil prices are affected by changing international relations and economic factors.

The economic benefits and costs of developing new conventional oil and gas sources in ecologically sensitive and isolated areas.

The environmental costs of developing new unconventional oil and gas sources in ecologically sensitive and isolated areas.

The role of energy efficiency and energy conservation in reducing demand, helping finite energy supplies last longer and reducing carbon emissions.

The costs and benefits of alternatives to fossil fuels and future technologies aimed at reducing carbon footprints, improving energy security and diversifying the energy mix.

Contrasting views about energy futures and why different groups have particular views.

How, in some developed countries, rising affluence, environmental concerns and education are changing attitudes to unsustainable energy consumption and reducing carbon footprints.

Skills - Using and interpreting world maps showing the distribution of energy resources.

Skills - Using oil prices and oil production data to graph trends over time.

Skills - Calculating carbon and ecological footprints.

Strategies and Resources for Revision:

On your class Team or Year Team – the Geography Revision Resources folder has folders for each unit with many styles of revision.

Your Geography revision guide.

Quizlet – flash cards website. Search by the unit title to find specific sets of cards.

Search for Seneca Edexcel B Geography GCSE

Revision sessions. Speak to staff for details.