Qualification at a glance

Content and assessment overview

The Pearson Edexcel Level 1/Level 2 GCSE (9–1) in Geography A consists of three externally-examined papers.

Students must complete all assessments in May/June in any single year.

Component 1: The Physical Environment (*Paper 1 code: 1GA0/01)
Written examination: 1 hour and 30 minutes ***37.5% of the qualification*** ***94 marks***
Content overview • Topic 1: The changing landscapes of the UK – including optional sub-topics from which students choose **two** from three, 1A: Coastal landscapes and processes, 1B: River landscapes and processes and 1C: Glaciated upland landscapes and processes. • Topic 2: Weather hazards and climate change • Topic 3: Ecosystems, biodiversity and management
Assessment overview An externally-assessed written exam with three 30-mark sections. Of the 94 raw marks available, up to 4 marks are awarded for spelling, punctuation, grammar and use of specialist terminology[1]. **Section A: The changing landscapes of the UK** **Section B: Weather hazards and climate change** **Section C: Ecosystems, biodiversity and management** In Section A, students answer Question 1 and choose **two** from optional questions (Question 2 Coastal landscapes and processes, Question 3 River landscapes and processes, Question 4 Glaciated upland landscapes and processes). Students answer all questions from Sections B and C. The exam includes multiple-choice questions, short open, open response, calculations and 8-mark extended writing questions.

Component 2: The Human Environment (*Paper 2 code: 1GA0/02)
Written examination: 1 hour and 30 minutes ***37.5% of the qualification*** ***94 marks***
Content overview • Topic 4: Changing cities • Topic 5: Global development • Topic 6: Resource management – including optional sub-topics from which students choose **one** from two, 6A: Energy resource management and 6B: Water resource management

[1] The exam boards and Ofqual are working together to determine the marking expectations for spelling, punctuation, grammar and use of specialist terminology which will apply to all GCSE specifications in History, Geography and Religious Studies. The agreed wording will be included in the mark schemes for accredited sample assessment materials.

Assessment overview

An externally-assessed written exam with three 30-mark sections. Of the 94 raw marks available, up to 4 marks are awarded for spelling, punctuation, grammar and use of specialist terminology.[1]

Section A: Changing cities

Section B: Global development

Section C: Resource management

Students answer all questions from Sections A and B. In Section C, students answer **one** from two optional questions (Energy resource management or Water resource management).

The exam includes multiple-choice questions, short open, open response, calculations and 8-mark extended writing questions.

Component 3: Geographical Investigations: Fieldwork and UK Challenges (*Paper 3 code: 1GA0/03)
Written examination: 1 hour and 30 minutes   ***25% of the qualification***   ***64 marks***
Content overview   • Topic 7: Geographical investigations – fieldwork   • Topic 8: Geographical investigations – UK challenges
Assessment overview   An externally-assessed written exam with three sections. Of the 64 raw marks available, up to 4 marks are awarded for spelling, punctuation, grammar and use of specialist terminology.   **Section A: Geographical investigations – physical environments**   Students choose **one** from two optional questions (Rivers **or** Coasts).   **Section B: Geographical investigations – human environments**   Students choose **one** from two optional questions (Central/Inner Urban Area **or** Rural Settlements).   **Section C: UK challenges**   • The exam includes multiple-choice questions, short open, open response, calculations, 8-mark and 12-mark extended writing questions.

*See *Appendix 6: Codes* for a description of this code and all other codes relevant to this qualification.

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Component 1: The Physical Environment

Overview

This component brings together physical geography and people-environment processes and interactions. The component is divided into three sections:

- Topic 1: The changing landscapes of the UK – an overview of the distribution and characteristics of the UK's changing landscapes and detailed studies of **two** from three landscapes, 1A: Coastal landscapes and processes, 1B: River landscapes and processes or 1C: Glaciated upland landscapes and processes
- Topic 2: Weather hazards and climate change – an overview of the global circulation of atmosphere and climate change over time and a detailed study of tropical cyclones and a drought
- Topic 3: Ecosystems, biodiversity and management – an overview of the distribution and characteristics of global and UK ecosystems and a detailed study of tropical rainforests and deciduous woodlands.

Content

Topic 1: The changing landscapes of the UK

Overview of the UK's physical landscape	
Key idea	**Detailed content**
1.1 There are geological variations within the UK	a. Characteristics and distribution of the UK's main rock types: sedimentary (chalk, sandstone) igneous (basalt, granite), metamorphic (schists, slates). (1)
	b. The role of geology and past tectonic processes in the development of upland (igneous and metamorphic rocks) and lowland (sedimentary rocks) landscapes. (2)
1.2 A number of physical and human processes work together to create distinct UK landscapes	a. How distinctive upland and lowland landscapes result from the interaction of physical processes (glacial erosion and deposition, weathering and climatological, post-glacial river and slope processes). (3)
	b. How distinctive landscapes result from human activity (agriculture, forestry, settlement) over time. (4)
Integrated skills: (1) Geological maps (2) Using simple geological cross sections to show the relationship between geology and relief (3) Locating key physical features (uplands, lowland basins, rivers) on outline UK maps (4) Recognition of physical and human geography features on 1:25000 and 1:50000 OS maps.	

Optional sub topic 1A: Coastal landscapes and processes

Two optional sub topics from 1A **or** 1B **or** 1C**.**

Key idea		Detailed content
1.3	A variety of physical processes interact to shape coastal landscapes	a. The physical processes at work on the coast: weathering (mechanical, chemical, biological), mass movement (sliding and slumping), erosion (abrasion, hydraulic action, attrition and solution), transport (traction, saltation, suspension, solution and longshore drift) and deposition.
		b. Influence of geological structure (concordant/discordant, joints and faults), rock type (hard/soft rock) and wave action (destructive and constructive waves) on landforms (5)
		c. How the UK's weather and climate (seasonality, storm frequency and prevailing winds) affect rates of coastal erosion and retreat, and impact on landforms and landscape. (6)
1.4	Coastal erosion and deposition create distinctive landforms within the coastal landscape	a. The role of erosional processes in the development of landforms: headlands and bays, caves, arches, cliffs, stacks, wave cut platforms. (7)
		b. The role of depositional processes in the development of landforms: bars, beaches and spits. (7)
1.5	Human activities can lead to changes in coastal landscapes which affect people and the environment	a. How human activities (urbanisation, agriculture and industry) have affected landscapes and the effects of coastal recession and flooding on people and the environment. (8)
		b. The advantages and disadvantages of different coastal defences used on the coastline of the UK (hard engineering, sea walls, groynes and rip rap and soft engineering, beach nourishment and managed retreat) and how they can lead to change in coastal landscapes. (8)
1.6	Distinctive coastal landscapes are the outcome of the interaction between physical and human processes	a. The significance of the location of one named 🌍 distinctive coastal landscape within the UK (discordant, concordant, coastline of deposition, coastal retreat) including how it has been formed and the most influential factors in its change. (7)

Integrated skills:

(5) Use of BGS Geology maps (paper or online) to link coastal form to geology
(6) Using UK weather and climate data and calculation of mean rates of erosion using a multi-year data set
(7) Recognition of coastal landforms on 1:25000 and 1:50000 OS maps
(8) Use of 1:25000 and 1:50000 OS maps, and GIS, to investigate the impact of human intervention

🌍 = located example.

Optional sub topic 1B: River landscapes and processes

Key idea	Detailed content
1.7 A variety of physical processes interact to shape river landscapes	a. The physical processes at work in the river landscape: weathering (mechanical, chemical and biological), mass movement (sliding and slumping), erosion (abrasion, hydraulic action, attrition and solution), transport (traction, saltation, suspension and solution) and deposition.
	b. How river landscapes contrast between the upper courses, mid courses and lower courses of rivers and why channel shape (width, depth), valley profile, gradient, discharge, velocity and sediment size and shape change along the course of a named UK river. (9)
	c. How the UK's weather (short-term events such as storms and droughts) and climate affect river processes and impact on landforms and landscapes. (10)
1.8 Erosion and deposition interacting with geology create distinctive landforms in river landscapes	a. The role of erosion processes and the influence of geology in the development of landforms: interlocking spurs, waterfalls, gorges and river cliffs. (11)
	b. The role of depositional processes in the formation of flood plains, levees and point bars.
	c. The interaction of deposition and erosion processes in the development of landforms (meanders, oxbow lakes).
1.9 Human activities can lead to changes in river landscapes which affect people and the environment	a. How human activities and changes in land use (urbanisation, agriculture and industry) have affected river processes that impact on river landscapes; the physical and human causes and effects of river flooding. (12)
	b. Advantages and disadvantages of different defences used on UK rivers (hard engineering– dams, reservoirs and channelisation and soft engineering– flood plain zoning and washlands) and how they can lead to change in river landscapes. (13)
1.10 Distinctive river landscapes are the outcome of the interaction between physical and human processes	a. The significance of the location of one named distinctive UK river landscape (upland/lowland), how it has been formed and the most influential factors in its change.

Integrated skills:
(9) Use of BGS Geology maps (paper or online) to link river long profiles to geology
(10) Using UK weather and climate data
(11) Recognition of river landforms on 1:25000 and 1:50000 OS maps
(12) Drawing simple storm hydrographs using rainfall and discharge data
(13) Use of 1:25000 and 1:50000 OS maps, and GIS, to investigate the impact of human intervention

Optional sub topic 1C: Glaciated upland landscapes and processes

Key idea	Detailed content
1.11 A variety of physical processes interact to shape glaciated upland landscapes	a. Glacial processes that once operated in the glaciated upland landscape: glacial erosion (plucking, abrasion), transport (on or within the ice) and deposition.
	b. Physical processes that operate on the relict upland glacial landscapes of today: mechanical weathering (freeze thaw), mass movement (soil movement, and rock falls/slides),
	c. How past climate and current UK weather and climate (seasonal and diurnal variations in weather) affect processes that impact on glaciated upland landscapes. (14)
1.12 Glacial erosion and deposition create distinctive landforms within glaciated upland landscapes	a. The role of erosional processes in the development of landforms (truncated spurs, corries, glacial troughs, glacial lake/tarns, arêtes hanging valleys and roche moutonnées). (15)
	b. The role of depositional processes in the development of landforms (ground and terminal moraines). (15)
	c. The interaction of deposition and erosion processes in the development of landforms (crag and tail and drumlins). (15)
1.13 Human activities can lead to changes in glaciated upland landscapes	a. How humans activity (farming, forestry, settlement) have impacted on physical processes in glaciated upland landscapes. (16)
	b. Advantages and disadvantages of development (water storage and supply, renewable energy, recreation and tourism, conservation) and how they can lead to change in glaciated upland landscapes. (16)
1.14 Distinctive glaciated upland landscapes are the outcome of the interaction between physical and human processes	a. The significance of the location of one named distinctive glaciated upland landscape in the UK (karst limestone/ igneous/metamorphic), how it has been formed and the most significant factors in its change.

Integrated skills:
(14) Using UK weather and climate data
(15) Recognition glaciated upland landforms on 1:25000 and 1:50000 OS maps
(16) Use of 1:25000 and 1:50000 OS maps, and GIS, to investigate the impact of human intervention

Topic 2: Weather hazards and climate change

Key idea		Detailed content
2.1	The atmosphere operates as a global system transferring heat and energy	a. The features of the global atmospheric circulation.
		b. How circulation cells and ocean currents transfer and redistribute heat energy across the Earth.
2.2	The global climate was different in the past and continues to change due to natural causes	a. How climate has changed in the past over different time scales: glacial and interglacial periods during the Quaternary period.
		b. Causes (Milankovitch cycles, solar variation, volcanism) and evidence (ice cores, pollen records, tree rings, historical sources) for natural climate change.
2.3	Global climate is now changing as a result of human activity	a. How human activities (industry, transport, energy, farming) produce greenhouse gases (carbon dioxide, methane) that cause the enhanced greenhouse effect.
		b. Negative effects that climate change is having on the environment and people (changing patterns of crop yield, rising sea levels and retreating glaciers).
2.4	The UK has a distinct climate which has changed over time	a. Climate of the UK today and changes over the last 1000 years. (1)
		b. Spatial variations in temperature, prevailing wind and rainfall within the UK.
		c. The significance of the UK's geographic location in relation to its climate.
Tropical cyclones		
2.5	Tropical cyclones are extreme weather events that develop under specific conditions and in certain locations	a. How the global circulation of the atmosphere leads to tropical cyclones (hurricanes and typhoons) in source areas and the sequence of their formation. (2)
		b. Characteristics, frequency and geographical distribution of tropical cyclones and how these change over time.
2.6	There are various impacts of and responses to natural hazards caused by tropical cyclones depending on a country's level of development	a. Reasons why tropical cyclones are natural weather hazards (high winds, intense rainfall, storm surges, coastal flooding and landslides). (3)
		b. Different social, economic and environmental impacts that tropical cyclones can have on a named developed* and a named emerging* or developing* country.
		c. Different responses to tropical cyclones of individuals, organisations and governments in a named developed and a named emerging or developing country. (4)

*****See Appendix 2: Definitions*

Key idea	Detailed content
Drought	
2.7 The causes of drought are complex with some locations more vulnerable than others	a. Characteristics of arid environments compared to the extreme weather conditions associated with drought.
	b. Different causes of the weather hazard of drought: meteorological, hydrological, and human (agricultural, dam building, deforestation).
	c. Why the global circulation makes some locations more vulnerable to drought as a natural hazard than others and how this changes over time. (5)
2.8 The impacts of, and responses to drought vary depending on a country's level of development	a. Reasons why droughts are hazardous.
	b. How the impacts of drought on people and ecosystems can vary for a named developed and a named emerging or developing country. (6)
	c. Different responses to drought from individuals, organisations and governments in a named developed and a named emerging or developing country.

Integrated skills:
(1) Use and interpretation of line graphs/bar charts showing climate change
(2) Use of GIS to track the movement of tropical cyclones
(3) Use of weather and storm surge data to calculate Saffir-Simpson magnitude
(4) Use of social media source, satellite images and socio-economic data to assess impact
(5) Use and interpretation of graphs showing medium term rainfall trends
(6) Use and interpretation of socio-economic data

Topic 3: Ecosystems, biodiversity and management

Key idea		Detailed content
3.1	Large-scale ecosystems are found in different parts of the world and are important	a. Distributions and characteristics of the world's large-scale ecosystems (tropical, temperate and boreal forests, tropical and temperate grasslands, deserts and tundra). (1)
		b. The role of climate and local factors (soils and altitude) in influencing the distribution of different large-scale ecosystems. (2)
3.2	The biosphere is a vital system	a. How the biosphere provides resources for people (food, medicine, building materials and fuel resources) but is also increasingly exploited commercially for energy, water and mineral resources.
3.3	The UK has its own variety of distinctive ecosystems that it relies on	a. Distribution and characteristics of the UK's main terrestrial ecosystems (moorlands, heaths, woodlands, wetlands). (3)
		b. Importance of marine ecosystems to the UK as a resource and how human activities are degrading them.
Tropical rainforests		
3.4	Tropical rainforests show a range of distinguishing features	a. Biotic and abiotic characteristics of the tropical rainforest ecosystem (climate, soils, water, plants, animals and humans).
		b. The interdependence of biotic and abiotic characteristics (climate, soils, water, plants, animals and humans) and the nutrient cycle (Gersmehl model). (4)
		c. Why rainforests have very high biodiversity and how plants (stratified layers, buttress roots, drip tips) and animals (strong limbs, modified wings and beaks, camouflage) are adapted to that environment.
3.5	Tropical rainforest ecosystems provide a range of goods and services some of which are under threat	a. Examples of goods and services provided by tropical rainforest ecosystems (food stuffs, medicines, timber and recreation).
		b. How climate change presents a threat to the structure, functioning and biodiversity of tropical rainforests.
		c. Economic and social causes of deforestation (conversion to agriculture, resource extraction, population pressure). (5)
		d. Political and economic factors (governance, commodity value and ecotourism) that have contributed to the sustainable management of a rainforest in a named region.

Key idea		Detailed content
Deciduous woodlands		
3.6	Deciduous woodlands show a range of distinguishing features	a. Abiotic and biotic characteristics of the deciduous woodland ecosystem (climate, soil, water, plants, animals and humans).
		b. The interdependence of biotic and abiotic characteristics (climate, soil, water, plants, animals and humans) and the nutrient cycle (Gersmehl model).
		c. Why deciduous woodlands have moderate biodiversity and how plants (leaf size and structure, water conservation in winter) and animals (migration, hibernation and food storage) are adapted to that environment.
3.7	Deciduous woodlands ecosystems provide a range of goods and services some of which are under threat	a. Examples of goods and services provided by deciduous woodlands ecosystems (timber, fuel, conservation and recreation).
		b. How climate change presents a threats to both the structure, function and biodiversity of the deciduous woodland ecosystem.
		c. Economic and social causes of deforestation (urbanisation and population growth, timber extraction and agricultural change). (6)
		d. Different approaches to the sustainable use and management of deciduous woodlands in a named region.

Integrated skills:
(1) Use of world maps to show the location of global biomes
(2) Comparing climate graphs for different biomes
(3) Interpret GIS maps
(4) Use and interpretation of nutrient cycle diagrams and food webs diagrams
(5) Use and interpretation of line graphs showing the range of future global population projections, and population in relation to likely available resources
(6) Use of GIS to identify the pattern of forest loss.

Assessment information

- First assessment: May/June 2018.
- The assessment is 1 hour and 30 minutes.
- The assessment consists of three sections.
- The assessment is out of 94 marks.
- The paper will assess spelling, punctuation, grammar and use of specialist terminology which will contribute 4 marks towards the overall marks for this paper.
- Each question is set in a context.
- Students must answer two from three optional questions (Coastal landscapes and processes, River landscapes and processes or Glaciated upland landscapes and processes) in Section A. Students must answer all questions from Sections B and C.

- The exam includes multiple-choice questions, short open, open response, calculations and 8-mark extended writing questions.
- Extended writing questions will assess students' ability to develop extended written arguments and to draw well-evidenced and informed conclusions about geographical questions and issues.
- Calculators will be used in the examination.

Sample assessment materials

A sample paper and mark scheme for this paper can be found in the *Pearson Edexcel Level 1/Level 2 GCSE (9–1) in Geography A* Sample Assessment Materials (SAMs) document.

Component 2: The Human Environment

Overview

This component brings together human geography and people-environment issues. The component is divided into three sections:

- Topic 4: Changing cities – this covers an overview of global urban processes and trends and detailed case studies of a major UK city and a major city in a developing or emerging country
- Topic 5: Global development – this covers an overview of the causes and consequences of uneven global development and a detailed case study of challenges that affect a developing or emerging country
- Topic 6: Resource management – this covers an overview of the global and UK distribution of food, energy and water and one detailed study of **either** energy resource management **or** water resource management at different scales.

Content

Topic 4: Changing cities

Overview of urban patterns and processes	
Key idea	**Detailed content**
4.1 Urbanisation is a global process	a. Contrasting trends in urbanisation over the last 50 years in different parts of the world (developed, emerging and developing countries).
	b. How and why urbanisation has occurred at different times and rates in different parts of the world (developed, emerging and developing countries) and the effects.
4.2 The degree of urbanisation varies across the UK	a. Distribution of urban population in the UK and the location of its major urban centres.
	b. Factors causing the rate and degree of urbanisation to differ between the regions of the UK.

Case Study of a major* UK city		
Key idea		**Detailed content**
4.3	The context of the chosen UK city influences its functions and structure	a. Site, situation and connectivity of the chosen UK city in a national (cultural and environmental), regional and global context.
		b. Chosen UK city's structure (Central Business District (CBD), inner city, suburbs, urban-rural fringe) in terms of its functions and building age.
4.4	The chosen UK city is being changed by movements of people, employment and services	a. The sequence of urbanisation, suburbanisation, counter-urbanisation and re-urbanisation processes and their distinctive characteristics for the chosen UK city. (2)
		b. Causes of national and international migration and the impact on different parts of the chosen UK city (age structure, ethnicity, housing, services). (3)
4.5	Globalisation and economic change create challenges for the chosen UK city that require long-term solutions	a. Key population characteristics of the chosen UK city's that is available from the Census and reasons for population growth or decline. (4)
		b. Causes of deindustrialisation (globalisation, de-centralisation, technological advances and developments in transport) and impacts on the chosen UK city.
		c. How economic change is increasing inequality in the city and the differences in quality of life.
		d. Recent changes in retailing and their impact on the chosen UK city: decline in the Central Business District (CBD), growth of edge- and out-of-town shopping and increasing popularity of internet shopping).
		e. The range of possible strategies aimed at making urban living more sustainable and improving quality of life (recycling, employment, education, health, transport, affordable and energy-efficient housing) for the chosen UK city. (5)

Case Study of a major city in a developing country* or an emerging country*

Key idea	Detailed content
4.6 The context of the chosen developing country or emerging country city influences its functions and structure	a. Site, situation and connectivity of the chosen city in a national (cultural and environmental), regional and global context.
	b. The chosen city's structure (Central Business District (CBD), inner city, suburbs, urban-rural fringe) in terms of its functions and building age.
4.7 The character of the chosen developing country or emerging country city is influenced by its fast rate of growth	a. Reasons for past and present trends in population growth (rates of natural increase, national and international migration, economic investment and growth). (1)
	b. Causes of national and international migration and the impact on different parts of the chosen city (age structure, ethnicity, housing, services). (6)
	c. How the growth of the chosen city is accompanied by increasing inequality (areas of extreme wealth versus poverty) and reasons for differences in quality of life.
4.8 Rapid growth, within the chosen developing country or emerging country city, results in a number of challenges that need to be managed	a. Effects resulting from the chosen city's rapid urbanisation: housing shortages, squatter settlements, under-employment employment, pollution and inadequate services. (7)
	b. Advantages and disadvantages of both bottom-up and top-down approaches to solving the chosen city's problems and improving the quality of life or its people.
	c. The role of government policies in improving the quality of life (social, economic and environmental) within the chosen city.
Integrated skills: (1) Use and interpretation of line graphs and calculating of rate of change/annual or decadal percentage growth (2) Using satellite images to identify different land use zones in urban areas (3) Using a combination of population pyramids, choropleth maps and GIS (4) Using Census output area data for 2011 (5) Calculating the ecological footprint of people in the city, and comparing it to other locations (6) Using GIS/satellite images, historic images and maps to investigate spatial growth (7) Using quantitative and qualitative information to judge the scale of variations in quality of life.	

*****See *Appendix 2: Definitions*

Topic 5: Global development

Key idea	Detailed content
5.1 Definitions of development vary as do attempts to measure it	a. Contrasting ways of defining development, using economic criteria and broader social and political measures.
	b. Different factors contribute to the human development of a country: economic, social, technological, cultural, as well as food and water security.
	c. How development is measured in different ways: Gross Domestic Product (GDP) per capita, the Human Development Index, measures of inequality and indices of political corruption. (1)
5.2 The level of development varies globally	a. Global pattern of development and its unevenness between and within countries, including the UK. (2)
	b. Factors (physical, historic and economic) that have led to spatial variations in the level of development globally and within the UK.
5.3 Uneven global development has had a range of consequences	a. Impact of uneven development on the quality of life in different parts of the world: access to housing, health, education, employment, technology, and food and water security.
5.4 A range of strategies has been used to try to address uneven development	a. The range of international strategies (international aid and inter-governmental agreements) that attempt to reduce uneven development.
	b. Difference between top-down (government or transnational corporation (TNC) led) and bottom-up development projects (community led). Their advantages and limitations in the promotion of development.

Case Study of development in a developing country*or an emerging country*

Key idea		Detailed content
5.5	The level of development of the chosen developing or emerging country is influenced by its location and context in the world	a. Location and position of the chosen country in its region and globally.
		b. Broad political, social, cultural and environmental context of the chosen country in its region and globally.
		c. Unevenness of development within the chosen country (core and periphery) and reasons why development does not take place at the same rate across all regions.
5.6	The interactions of economic, social and demographic processes influence the development of the chosen developing or emerging country	a. Positive and negative impacts of changes that have occurred in the sectors (primary, secondary, tertiary and quaternary) of the chosen country's economy. (3)
		b. Characteristics of international trade and aid and the chosen country's involvement in both. (4)
		c. Changing balance between public investment (by government) and private investment (by TNCs and smaller businesses) for the chosen country.
		d. Changes in population structure and life expectancy that have occurred in the last 30 years in the chosen country. (5)
		e. Changing social factors (increased inequality, growing middle class and improved education) in the chosen country.
5.7	Changing geopolitics and technology impact on the chosen developing or emerging country	a. How geopolitical relationships with other countries affect the chosen country's development: foreign policy, defence, military pacts, territorial disputes.
		b. How technology and connectivity support development in different parts of the chosen country and for different groups of people. (6)
5.8	There are positive and negative impacts of rapid development for the people and environment of the chosen developing or emerging country	a. Positive and negative social, economic and environmental impacts of rapid development for the chosen country and its people.
		b. How the chosen country's government and people are managing the impacts of its rapid development to improve quality of life and its global status.

Integrated skills:
(1) Comparing the relative ranking of countries using single versus composite development measures
(2) Interpreting choropleth maps
(3) Using numerical economic data to profile the chosen country
(4) Using proportional flow line maps to visualize trade patterns and flows
(5) Interpreting population pyramids
(6) Using socio-economic data to calculate difference from the mean, for core and periphery regions.

*****See *Appendix 2: Definitions*

Topic 6: Resource management

Overview of the global and UK distribution of food, energy and water	
Key idea	**Detailed content**
6.1 A natural resource is any feature or part of the environment that can be used to meet human needs	a. Natural resources can be defined and classified in different ways (biotic, abiotic, renewable and non-renewable).
	b. Ways in which people exploit environments in order to obtain water, food and energy (extraction of fossil fuels, fishing, farming and deforestation).
	c. How environments are changed by this exploitation (reduced biodiversity, soil erosion and reduced water and air quality).
6.2 The patterns of the distribution and consumption of natural resources varies on a global and a national scale	a. Global and UK variety and distribution of natural resources (soil and agriculture, forestry, fossil fuels, water supply, rock and minerals). (1)
	b. Global patterns of usage and consumption of food, energy and water. (2)
Integrated skills. (1) Use and interpretation of UK and world maps showing the distribution of resources; (2) Using different choropleth maps and data visualisations such as Gapminder.	

Optional sub topic 6A: Energy resource management

One optional sub topic from **either** 6A **or** 6B**.**

Key idea	Detailed content
6.3 Renewable and non-renewable energy resources can be developed	a. Energy resources can be classified as renewable and non-renewable.
	b. Advantages and disadvantages of the production and development of one non-renewable energy resource.
	c. Advantages and disadvantages of the production and development of one renewable energy resource.
6.4 To meet demand, countries use energy resources in different proportions. This is called the energy mix	a. The composition of the UK's energy mix.
	b. How global variations in the energy mix are dependent on a number of factors: population, wealth and the availability of energy resources. (1)

Key idea		Detailed content
6.5	There is increasing demand for energy that is being met by renewable and non-renewable resources	a. How and why global demand and supply has changed over the past 100 years due to human intervention: world population, growth increased wealth and technological advances. (2)
		b. How non-renewable energy resources (coal, oil, natural gas and uranium) are being developed and how this can have both positive and negative impacts on people and the environment.
		c. How renewable energy resources (hydro-electric power (HEP), wind power and solar power) are being developed and how this can have both positive and negative impacts on people and the environment.
		d. How technology (fracking) can resolve energy resource shortages.
6.6	Meeting the demands for energy resources can involve interventions by different interest groups	a. How attitudes to the exploitation and consumption of energy resources vary with different stakeholders (individuals, organisations and governments).
6.7	Management and sustainable use of energy resources are required at a range of spatial scales from local to international	a. Why renewable and non-renewable energy resources require sustainable management. (3)
		b. Different views held by individuals, organisations and governments on the management and sustainable use of energy resources.
		c. How one developed country and one emerging country or developing country have attempted to manage their energy resources in a sustainable way.

Integrated skills.
(1) Use and interpretation of world maps showing the distribution of energy resources
(2) Use and interpretation of line graphs showing the range of future global population projections, and population in relation to likely available energy resources
(3) Calculation of carbon and ecological footprints.

Optional sub topic 6B: Water resource management

Key idea		Detailed content
6.8	The supply of fresh water supply varies globally	a. Global distribution of fresh water.
		b. How the availability of fresh water varies on a global, national and local scale.
		c. Why some parts of the world have a water surplus or a water deficit. (1)
		d. How and why the supply and demand for water has changed in the past 50 years due to human intervention. (2)
6.9	There are differences between the water consumption patterns of developing countries and developed countries	a. The proportion of water used by agriculture, industry and domestic in developed countries and emerging or developing countries.
		b. Why there are differences in water usage between developed countries and emerging or developing countries.
6.10	Countries at different levels of development have water supply problems	a. Why the UK has water supply problems (imbalances of the supply and demand for rainfall, seasonal imbalances and an ageing infrastructure: sewage and water pipes).
		b. Why emerging or developing countries have water supply problems (access to only untreated water, pollution of water courses and low annual rainfall).
6.11	Meeting the demands for water resources could involve technology and interventions by different interest groups	a. How attitudes to the exploitation and consumption of water resources vary with different stakeholders (individuals, organisations and governments). (3)
		b. How technology (desalination) can resolve water resource shortages.
6.12	Management and sustainable use of water resources are required at a range of spatial scales from local to international	a. Why water resources require sustainable management.
		b. Different views held by individuals, organisations and governments on the management and sustainable use of water resources.
		c. How one developed country and one emerging or developing country have attempted to manage their water resources in a sustainable way.

Integrated skills:
(1) Use and interpretation of UK and world maps showing the distribution of freshwater resources supply and demand
(2) Use and interpretation of line graphs showing the range of future global population projections, and population in relation to likely available water resources
(3) Use and interpretation of UK and World relative water stress maps.

Assessment information

- First assessment: May/June 2018.
- The assessment is 1 hour and 30 minutes.
- The assessment consists of three sections.
- The assessment is out of 94 marks.
- The paper will assess spelling, punctuation, grammar and use of specialist terminology which will contribute 4 marks towards the overall marks for this paper.
- Each question is set in a context.
- Students must answer all questions from Sections A and B. Students must answer **one** from two optional questions (Energy resource management or Water resource management) in Section C.
- The exam includes multiple-choice questions, short open, open response, calculations and 8-mark extended writing questions.
- Extended writing questions will assess students' ability to develop extended written arguments and to draw well-evidenced and informed conclusions about geographical questions and issues.
- Calculators will be used in the examination.

Sample assessment materials

A sample paper and mark scheme for this paper can be found in the *Pearson Edexcel Level 1/Level 2 GCSE (9–1) in Geography A* Sample Assessment Materials (SAMs) document.

Component 3: Geographical Investigations: Fieldwork and UK Challenges

Overview

This component brings together practical geographical enquiry into physical and human processes and environments and the interactions between the two. The component is divided into two sections:

- Topic 7: Geographical investigations – fieldwork. Two geographical investigations each involving fieldwork and research. There is a choice of **one from two** environments in 7A: Investigating physical environments (rivers or coasts) and **one from two** environments 7B: Investigating human environments (central/inner urban area or rural settlements).
- Topic 8: Geographical investigations – UK challenges. Students are required to draw across their knowledge and understanding of the UK, from the physical and human geography drawn from Components 1 and 2, in order to investigate a contemporary challenge for the UK. Students are required to have a geographical overview of the four UK challenges in Topic 8 from which the assessment context will be drawn.

Topic 7: Geographical investigations – fieldwork

The experience of fieldwork helps students to develop new geographical insights into the two contrasting environments required for this qualification and to apply their geographical knowledge, understanding and skills to these environments.

One environment must be chosen from a river landscape or a coastal landscape and one from a central/inner urban area or rural settlement. Fieldwork must be outside the classroom and school/college grounds. It does not have to take place in the UK necessarily, but the examination for this will always treat fieldwork within the context of the UK.

Contexts for fieldwork - focus, purpose, content and skills

The table below specifies the minimum types and range of fieldwork (including qualitative, quantitative and secondary data) required for the options available.

7A: Investigating physical environments (rivers landscapes OR coastal landscapes)

*Task: River landscapes – investigation of change in a river channe*l.

Enquiry process point	General focus and details of fieldwork
1. Formulating Enquiry questions	Students must have an opportunity to develop understanding of the kinds of questions that can be investigated through fieldwork in river environments. Students must have an opportunity to develop a question(s) based on their location and the task.
2. Fieldwork methods	Fieldwork data collection must include at least: • one quantitative fieldwork method to measure river discharge • one qualitative fieldwork method to record landforms that make up the river landscape. Human interaction: students must develop their understanding of the implications of river processes for people living in the catchment area.
3. Secondary data sources	• A flood risk map e.g. Environment Agency flood risk map. • One other secondary source.

Task: Coastal landscapes – investigation of coastal processes through landscape evidence

Enquiry process point	General focus and details of fieldwork
1. Formulating Enquiry questions	Students must have an opportunity to develop understanding of the kinds of question that can be investigated through fieldwork in coastal environments. Students must have an opportunity to develop a question(s) based on their location and the task.
2. Fieldwork methods *(for coastal landscapes)*	Fieldwork data collection must include at least: • one quantitative fieldwork method to measure beach morphology and sediment characteristics. • one qualitative fieldwork method to record landforms that make up the coastal landscape. Human interaction: students must develop their understanding of the implications of coastal processes for people living in the coastal environment.
3. Secondary data sources	• A geology map e.g. BGS Geology of Britain viewer. • One other secondary source.

7B: Investigating human environments(central/inner urban area OR rural settlements)

Task: Changing city environments – investigating change in central/inner urban area(s)

Enquiry process point	General focus and details of fieldwork
1. Formulating Enquiry questions	Students must have an opportunity to develop understanding of the kinds of question that can be investigated through fieldwork in urban environments. Students must have an opportunity to develop a question(s) based on their location and the task.
2. Fieldwork methods and techniques	Fieldwork data collection must include at least: • one qualitative fieldwork method to record the quality of the urban environment • one quantitative fieldwork method to measure land use function. Physical interaction: students must develop their understanding of the interaction between physical landscape features, the central/inner urban area and residents and visitors.
3. Secondary data sources	The use of at least **two** different secondary sources of data, including: • Census data e.g. Office for National Statistics (ONS) website • one other chosen by the centre.

Task: Changing rural environments – investigating change in rural settlements

Enquiry process point	General focus and details of fieldwork
1. Formulating Enquiry questions	Students must have an opportunity to develop understanding of the kinds of question that can be investigated through fieldwork in rural environments. Students must have an opportunity to develop a question(s) based on their location and the task.
2. Fieldwork methods and techniques	Fieldwork data collection must include at least: • one qualitative fieldwork method to record the views of people on the quality of the rural environment • one quantitative fieldwork method to measure flows of people within a rural settlement. Physical interaction: students must develop their understanding of the interaction between physical landscape features, rural settlements and residents and visitors.
3. Secondary data sources	The use of at least **two** different secondary sources of data, including: • Census data e.g. Office for National Statistics (ONS) Neighbourhood Statistics – neighbourhood summary report • one other chosen by the centre.

Topic 8: Geographical investigations – UK challenges

In this topic, students are required to draw on their knowledge and understanding of the physical and human characteristics of the UK from Components 1 and 2, and use their geographical skills, to investigate a contemporary challenge for the UK. The UK challenge will be drawn from one or more of four themes below.

The UK Challenges	Detailed content	Related topics
8.1 The UK's resource consumption and environmental sustainability challenge	a. Changes in the UK's population in the next 50 years and implications on resource consumption. b. Pressures of growing populations on the UK's ecosystems. c. Range of national sustainable transport options for the UK.	2.3a; 3.3; 3.6a, c; 4.1a; 4.4b; 4.5b, c, d, e; 5.2; 6.1; 6.2a
8.2 The UK settlement, population and economic challenges	a. The 'two-speed economy' and options for bridging the gap between south east and the rest of the UK. b. Costs and benefits of greenfield development and the regeneration of brownfield sites. c. UK net migration statistics and their reliability and values and attitudes of different stakeholders towards migration.	4.2b; 4.4a, b; 4.5b, c, d, e; 5.2; 5.4b
8.3 The UK's landscape challenges	a. Approaches to conservation and development of UK National Parks b. Approaches to managing river and coastal UK flood risk.	1.5; 1.9; 1.13
8.4 The UK's climate change challenges	a. Uncertainties about how global climate change will impact on the UK's future climate. b. Impacts of climate change on people and landscapes in UK c. Range of responses to climate change in the UK at a local and national scale.	1.4b; 1.7b; 1.11b; 2.3b; 2.4a; 3.3; 3.6b; 4.5b; 6.2

Assessment information

- First assessment: May/June 2018.
- The assessment is 1 hour and 30 minutes.
- The assessment consists of three sections.
- The assessment is out of 64 marks.
- The paper will assess spelling, punctuation, grammar and use of specialist terminology which will contribute 4 marks towards the overall marks for this paper.
- Students must answer one from the optional questions in Section A (river landscapes or Coastal landscapes and processes) and one from the optional questions in Section B (central inner urban area or rural settlements). Students must answer all questions from Section C.
- The exam includes multiple-choice questions, short open, open response, calculations, 8-mark and 12-mark extended writing questions.
- Extended writing questions will assess students' ability to develop extended written arguments and to draw well-evidenced and informed conclusions about geographical questions and issues.
- Calculators will be used in the examination.

In the examination in any given year, students will be assessed on **at least two** of the six enquiry stages below, **across both** their investigations:

Stage in the enquiry process	**Description**
1	Understanding of the kinds of question capable of being investigated through fieldwork and an understanding of the geographical enquiry processes appropriate to investigate these.
2	Understanding of the range of techniques and methods used in fieldwork, including observation and different kinds of measurement.
3	Processing and presenting fieldwork data in various ways including maps, GIS, graphs and diagrams (hand drawn and computer-generated).
4	Analysing and explaining data collected in the field using knowledge of relevant geographical case studies and theories.
5	Drawing evidenced conclusions and summaries from fieldwork transcripts and data.
6	Reflecting critically on fieldwork data, methods used, conclusions drawn and knowledge gained.

Sample assessment materials

A sample paper and mark scheme for this paper can be found in the *Pearson Edexcel Level 1/Level 2 GCSE (9–1) in Geography A* Sample Assessment Materials (SAMs) document.

Authentication of fieldwork

Centres must complete the Fieldwork Statement in *Appendix 1*. This form must be completed as evidence that students have undertaken appropriate fieldwork as part of their programme of study for this qualification. Pearson will publish the final deadline date for submission of this form on our website each year. Failure to return the Fieldwork Statement on time will constitute malpractice on the part of the Centre, see page 37.

Geographical skills

Students are required to develop a range of geographical skills throughout their course of study. These skills may be assessed across any of the examined components. The full list of geographical skills is given below. Some geographical skills are specific to particular subject content; these are indicated in the 'integrated skills' sections within the topics throughout the specification.

Atlas and map skills:

- recognise and describe distributions and patterns of both human and physical features at a range of scales using a variety of maps and atlases
- draw, label, annotate, understand and interpret sketch maps
- recognise and describe patterns of vegetation, land use and communications infrastructure, as well as other patterns of human and physical landscapes
- describe and identify the site, situation and shape of settlements

Graphical skills:

- label, annotate and interpret different diagrams, maps, graphs, sketches and photographs
- use and interpret aerial, oblique, ground and satellite photographs from a range of different landscapes
- use maps in association with photographs and sketches and understand links to directions

Data and information research skills:

- use online census sources to obtain population and local geo-demographic information

Investigative skills:

- identify questions or issues for investigation, develop a hypothesis and/or key questions
- consider appropriate sampling procedures (systematic vs random vs stratified) and sample size
- consider health and safety and undertake risk assessment
- select data collection methods and equipment to ensure accuracy and reliability, develop recording sheets for measurements and observation
- use of ICT to manage, collate, process and present information, use of hand-drawn graphical skills to present information in a suitable way
- write descriptively, analytically and critically about findings
- develop extended written arguments, drawing well evidenced and informed conclusions about geographical questions and issues.

Mathematics and Statistics Skills

These skills are taken from the document Geography GCSE subject content published by the Department for Education (DfE) April 2014. These skills may be assessed across any of the examined components. Some mathematics and statistics skills are specific to particular subject content; these are indicated in the 'integrated skills' sections within the topics throughout the specification.

Cartographic skills:

- use and understand gradient, contour and spot height on OS maps and other isoline maps (e.g. weather charts, ocean bathymetric charts)
- interpret cross sections and transects
- use and understand coordinates, scale and distance
- describe and interpret geo-spatial data presented in a GIS framework framework (e.g. analysis of flood hazard using the interactive maps on the Environment Agency website)

Graphical skills:

- select and construct appropriate graphs and charts to present data, using appropriate scales and including bar charts, pie charts, pictograms, line charts, histograms with equal class intervals
- interpret and extract information from different types of graphs and charts including any of the above and others relevant to the topic (e.g. triangular graphs, radial graphs, wind rose diagrams, proportional symbols)
- interpret population pyramids, choropleth maps and flow-line maps

Numerical skills:

- demonstrate an understanding of number, area and scale and the quantitative relationships between units
- design fieldwork data collection sheets and collect data with an understanding of accuracy, sample size and procedures, control groups and reliability
- understand and correctly use proportion and ratio, magnitude, frequency (e.g. 1:200 flood events) and logarithmic scales
- draw informed conclusions from numerical data

Statistical skills:

- 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

Assessment Objectives

Students must:		% in GCSE
AO1	Demonstrate knowledge of locations, places, processes, environments and different scales.	15
AO2	Demonstrate geographical understanding of: • concepts and how they are used in relation to places, environments and processes; • the inter-relationships between places, environments and processes.	25
AO3	Apply knowledge and understanding to interpret, analyse and evaluate geographical information and issues and to make judgements.	35 (10% applied to fieldwork context(s))
AO4	Select, adapt and use a variety of skills and techniques to investigate questions and issues and communicate findings.	25 (5% used to respond to fieldwork data and contexts)
	Total	**100%**

Breakdown of Assessment Objectives

Paper	Assessment Objectives				Total for all Assessment Objectives
	AO1 %	AO2 %	AO3 %	AO4 %	
Paper 1: The Physical Environment	6.7	11.3	11.3	8.3	37.5%
Paper 2: The Human Environment	6.7	11.3	11.3	8.3	37.5%
Paper 3: Geographical Investigations: Fieldwork and UK Challenges	1.6	2.4	12.4	8.4	25%
Total for GCSE	**15%**	**25%**	**35%**	**25%**	**100%**