GCSE

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Part of WJEC

WJEC Eduqas GCSE in GEOGRAPHY B

ACCREDITED BY OFQUAL

SPECIFICATION

Teaching from 2016
For award from 2018

wjec cbac

This Ofqual regulated qualification is not available for candidates in maintained schools and colleges in Wales.

WJEC Eduqas GCSE (9-1) in GEOGRAPHY B

For teaching from 2016
For award from 2018

GCSE GEOGRAPHY B

SUMMARY OF ASSESSMENT

Component 1: Investigating Geographical Issues
Written Examination: 1 hour 45 minutes
40% of qualification

Three structured data response questions. The final part of each question will require an extended response.
Question 1 will assess aspects of Theme 1, Changing Places - Changing Economies.
Question 2 will assess aspects of Theme 2, Changing Environments.
Question 3 will assess aspects of Theme 3, Environmental Challenges.

Component 2: Problem Solving Geography
Written Examination: 1 hour 30 minutes
30% of qualification

This component will assess content from across the themes using a variety of structured data response questions.
Part A will introduce an issue and set the geographical context.
Part B will outline a number of possible solutions to the issue.
Part C will provide an opportunity for the candidates to choose a solution and justify their choice in an extended response.

Component 3: Applied Fieldwork Enquiry
Written Examination: 1 hour 30 minutes
30% of qualification

A written examination in three parts using a variety of structured data response questions some of which will require extended responses.

Part A will assess approaches to fieldwork methodology, representation and analysis.

Part B will assess how fieldwork enquiry may be used to investigate geography's conceptual frameworks.

Part C will assess the application of broad geographical concepts to a wider UK context and assess the ability to make and justify a decision.

This linear qualification will be available in May/June each year. It will be awarded for the first time in Summer 2018.

Qualification Accreditation Number: 601/8153/9

GCSE GEOGRAPHY B

1 INTRODUCTION

1.1 Aims and objectives

WJEC Eduqas GCSE Geography B aims to enable learners to think 'like a geographer'. That is to say, learners will develop the skills necessary to conduct framed enquiries in the classroom and in the field in order to develop their understanding of specialised geographical concepts and current geographical issues. By following this specification learners will achieve the following objectives:

- develop the ability to think creatively, for example, by posing questions that relate to geographical process and concepts that include questioning about spatial pattern and geographical change
- develop the ability to think scientifically by collecting and recording appropriate evidence from a range of sources, including fieldwork, before critically assessing the validity of this evidence and synthesising their findings to reach evidenced conclusions that relate to the initial aim of their enquiry
- develop the ability to think independently by applying geographical knowledge, understanding, skills and approaches appropriately and creatively to real world contexts. In so doing they should appreciate that geography can be 'messy' i.e. that real geography does not always match typical or predicted outcomes.

WJEC Eduqas GCSE Geography B adopts a distinctive problem solving approach to the study of interactions between people and the environment. By following this course learners will develop skills of interpretation, analysis and evaluation when they collect primary data and are presented with reported evidence and information. Those following the course will become critical learners as they consider the strengths and limitations of this data and evidence. WJEC Eduqas GCSE Geography B also requires learners to consider the points of view of those who have a vested interest when they are affected by contentious geographical change. Learners will become informed and reflective citizens when they consider a range of viewpoints, values and attitudes which are held by stakeholders on a number of key geographical issues. By analysing the evidence and viewpoints learners will develop the ability to solve problems and justify their decisions. In this way, WJEC Eduqas GCSE Geography B enables young people to become globally and environmentally informed and thoughtful, enquiring citizens.

WJEC Eduqas GCSE Geography B develops and extends learners knowledge of locations, places, environments and processes, at a range of different scales. Learners who follow this qualification will build upon their locational knowledge acquired during key stage 3. This specification provides opportunities for learners to understand more about the distinctive human and physical features of the UK. It also builds knowledge of at least one Low Income Country at least one Newly Industrialised Country, as well as the wider world, the challenges it faces and their place within it.

Following this GCSE course will deepen understanding of geographical processes, illuminate the impact of change and of complex people-environment interactions, highlight the dynamic links and interrelationships between places and environments at different scales, and develop learners' competence in using a wide range of geographical investigative skills and approaches.

Fieldwork is an essential aspect of geographical education and of this qualification. It is placed at the heart of this specification and teachers should embed fieldwork within any programme of study that they create. Learners should consolidate and extend their understanding of geographical concepts learned in the classroom by engaging with enquiries conducted outside of the classroom and school grounds. Furthermore, they should be challenged to apply what they have learned through specific fieldwork in local contexts to the wider context of UK geography. By posing enquiry questions, learners develop the ability to relate these concepts to real world situations in order to make sense of wider spatial patterns.

1.2 Prior learning and progression

There are no previous learning requirements for this specification. Any requirements set for entry to a course based on this specification are at the school/college's discretion.

This specification builds on subject content which is typically taught at key stage 3 and is designed in such a way as to ensure progression in the following ways:

- broadening and deepening understanding of locational contexts, including greater awareness of the importance of scale and the concept of global
- a greater emphasis given to process studies that lead to an understanding of change
- a greater stress on the multivariate nature of 'human-physical' relationships and interactions
- a stronger focus on forming generalisations and/or abstractions, including some awareness of theoretical perspectives and of the subject's conceptual frameworks
- an increased involvement of learners in planning and undertaking independent enquiry in which skills and knowledge are applied to investigate geographical questions
- enhancing competence in a range of intellectual and communication skills, including the formulation of arguments, that include elements of synthesis and evaluation of material.

This specification provides a suitable foundation for the study of Geography at either AS or A level. In addition, the specification provides a coherent, satisfying and worthwhile course of study for learners who do not progress to further study in this subject.

1.3 Equality and fair access

This specification may be followed by any learner, irrespective of gender, ethnic, religious or cultural background. It has been designed to avoid, where possible, features that could, without justification, make it more difficult for a learner to achieve because they have a particular protected characteristic.

The protected characteristics under the Equality Act 2010 are age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation.

The specification has been discussed with groups who represent the interests of a diverse range of learners, and the specification will be kept under review.

Reasonable adjustments are made for certain learners in order to enable them to access the assessments (e.g. candidates are allowed access to a Sign Language Interpreter, using British Sign Language). Information on reasonable adjustments is found in the following document from the Joint Council for Qualifications (JCQ): *Access Arrangements, Reasonable Adjustments and Special Consideration: General and Vocational Qualifications.*

This document is available on the JCQ website (www.jcq.org.uk). As a consequence of provision for reasonable adjustments, very few learners will have a complete barrier to any part of the assessment.

2 SUBJECT CONTENT

The content of the specification is organised into three broad themes**:**

Theme 1: Changing Places - Changing Economies

Theme 2: Changing Environments

Theme 3: Environmental Challenges

Within each theme, learners should be encouraged to take an enquiry approach to a range of contemporary geographical and environmental issues.

Learners should be given the opportunity to represent geographical data using a range of cartographical and graphical techniques whilst exploring the content of each component. They should be given the opportunity to analyse a variety of maps, graphs, photographs and data sets. The range and extent of mathematical and statistical techniques required by WJEC Eduqas GCSE Geography B is given in Appendix A on pages 27-28 of the specification. These techniques will be assessed across **all three** components. Fieldwork enquiry will be assessed in Component 3 only.

2.1 Component 1

Investigating Geographical Issues
Written examination: 1 hour 45 minutes
40% of qualification
96 marks (plus 4 marks for spelling, punctuation, grammar and use of specialist terms)

Component 1 will assess content from **all three** compulsory themes of the specification. Three structured questions, each of 32 marks, will include opportunities for assessment using multiple choice, data response, short open response and extended responses. At least one open response question will synthesise knowledge and understanding of the UK as a whole.

Learners should be given the opportunity to develop their skills in using a range of mathematical and statistical techniques whilst preparing for this component. The depth of coverage of these techniques is given in Appendix A on pages 27-28 of the specification.

Theme 1: CHANGING PLACES - CHANGING ECONOMIES

Key Idea 1.1: Urbanisation in contrasting global cities

Enquiry questions	Depth of study
1.1.1 To what extent is urbanisation a global phenomenon?	1.1.1 Global scale patterns and how these patterns vary over time and space. Concepts of urbanisation and re-urbanisation. The concept of global cities*. The development over time and the present location and distribution of global cities.
1.1.2 What are the ways of life and current challenges created by urbanisation in **two** global cities?	1.1.2 The growth and character of **two** global cities. One city must be located in either a low income country (LIC)* or newly industrialised country (NIC)*. The other city must be located in a high income country (HIC). For each city, learners must set their studies within the regional, national and global context of that city. For each city: (a) The reasons for its growth. Factors to include natural population change and migration. Push and pull factors for rural to urban migration, regional migration and historic/recent international migration. (b) The resulting ways of life. The social, economic and cultural patterns within the city. (c) Current challenges to include: addressing poverty and deprivation; housing provision and quality; and infrastructure challenges of transport and waste disposal.
1.1.3 What strategies can be used to manage the impacts of urbanisation in global cities?	1.1.3 Strategies which aim to reduce inequality and improve the lives of people living in global cities (which should be the same cities chosen in 1.1.2). Coverage must include: (a) In the LIC/NIC city: self-help schemes, slum clearance programmes, housing projects and mass transit schemes. (b) In the HIC city: strategies to create sustainable urban environments.

*** See Appendix B, on page 29, for a list of recommended global cities**
*** See Appendix B, on page 29, for a list of NICs and LICs which may be studied.**

Key Idea 1.2: Urban and rural processes and change in the UK

Enquiry questions	Depth of study
1.2.1 What changes are taking place in where people live in both urban and rural areas of the UK?	1.2.1 An overview of urban change in the UK to include the processes of urbanisation, suburbanisation, counter-urbanisation, re-urbanisation and infill. The impact of change on rural areas of the UK to include villages which have become commuter settlements.
1.2.2 What are the distinctive features of urban areas in the UK?	1.2.2 How the processes of urban change over time have created distinctive spatial zones/patterns in UK towns and cities. The characteristics of town/city centres to include Central Business Districts (CBDs) and pedestrianised zones. The distinctive features of UK towns/cities to include zones of affluence, zones of deprivation, zones undergoing rapid regeneration, zones where multi-cultural communities thrive and multi-purpose zones where people live, work and enjoy leisure and cultural opportunities.
1.2.3 What factors help to drive urban and rural change across the UK?	1.2.3 Economic, social and environmental factors that drive urban renewal. Coverage must include the brownfield / greenfield debate. How regional inequalities and social factors contribute to population movement within the UK. How commuting and tele-working influence where people live and work in the UK. How migration, from outside the UK, has social and economic consequences for urban and rural areas of the UK. The factors leading to depopulation in some rural areas of the UK. The challenges of creating sustainable living environments in urban and rural locations. Coverage must include the importance of transport systems in creating sustainable communities.

1.2.4 What is the cause and effect of change in retail provision across the UK?	1.2.4 The cause and effect of change in retailing (shopping). Changes in where shops are located to include the decline of shopping areas within CBDs and the rise of out of town retail parks. Coverage must include the concepts of range, threshold population and catchment area. How technology is changing how and where we shop. The social, economic and environmental impact of increased online shopping.
1.2.5 What are the issues associated with leisure use in urban and rural areas across the UK?	1.2.5 How urban and rural areas are used for leisure. Advantages and disadvantages of leisure use for both local residents and leisure users. The impacts of increasing leisure use on rural honeypots. Positive and negative impacts of major sporting events on localities. Study of **one** location where leisure use is managed and the effectiveness of the management strategy.

Key Idea 1.3: A global perspective on development issues

Enquiry questions	**Depth of study**
1.3.1 What are global patterns of development?	1.3.1 How development data and images are used to learn about levels of development in different countries including the UK. The limitations of using data to ascertain levels of development. The merits of using economic data alongside human/social development data. How we define groups of countries that have similar characteristics. Definitions must include 'Least Economically Developed Countries' or 'Low Income Countries' (LICs) and 'Newly Industrialised Countries' (NICs).
1.3.2 What are the global processes that connect countries at different levels of development including the UK?	1.3.2 The key drivers of globalisation to include trade, technology, geo-political links, cultural exchange, migration and economic investment by multi-national companies (MNCs). An overview of how the UK is connected to other countries by the processes of globalisation.
1.3.3 What are the causes and consequences of uneven development?	1.3.3 How the key drivers of globalisation (identified in enquiry question 1.3.2) have caused uneven levels of development at a global scale and within nations. The consequences of this uneven development. Coverage must include the UK and at least **one** Low Income Country (LIC)* **and one** Newly Industrialised Country (NIC)*. The following causes and consequences must be covered: (a) The reasons MNCs have for locating in countries at different levels of development, including in the UK and **one** LIC or **one** NIC (one of the same countries chosen in the first strand of 1.3.3). The advantages and disadvantages of the development of global MNCs (for the MNC) and the consequences for the host country to include economic, social and environmental consequences.

	(b) The reasons for the emergence of Newly Industrialised Countries (NICs) as economic power houses in the world economy. The positive and negative consequences of this development in **one** NIC (the same country chosen in the first strand of 1.3.3). (c) The pattern and the impact of trade between nations at different levels of development including the UK and at least **one** Low Income Country (LIC) **and one** Newly Industrialised Country (NIC)* (the same countries used in the first strand of 1.3.3). Concepts of trade must include imports, exports, trade partnerships/blocs, tariffs and 'fair trade'. How patterns of trade can cause uneven development. How trade can be used to reduce global inequalities. (d) The social, cultural, political and economic consequences, both positive and negative, of globalisation on societies. To include globalisation's effects in the UK and at least **one** Low Income Country (LIC) **and one** Newly Industrialised Country (NIC)* (the same countries used in the first strand of 1.3.3). Coverage must include international patterns of migration, globalisation of consumer products, globalisation of culture and threats to local and national identity.
1.3.4 What are the advantages of different types of aid project?	1.3.4 The advantages of both **one** long-term development aid programme and **one** short-term emergency aid response for both donor and at least **one** recipient LIC (the same country chosen in the first strand of 1.3.3).

***See Appendix B, on page 29, for a list of NICs and LICs which may be studied.**

Theme 2: CHANGING ENVIRONMENTS

Key Idea 2.1: Shaping the landscape - coasts and coastal management

Enquiry questions	Depth of study
2.1.1 How do people and processes contribute to the development of distinctive coastal landscapes in the UK?	2.1.1 At a wider scale, ways in which climate, geology and human activity influence coastal processes and landscapes in the UK, to include: • how seasonal weather patterns and extreme events influence coastal processes • how geology influences rates of erosion and the creation of distinctive coastal landscapes • how human activity may slow down or accelerate the rate of natural coastal processes. Geomorphological processes should include weathering, mass movement and marine processes. At a local scale, erosional marine processes must include hydraulic action, abrasion, attrition and solution. Coverage must also include the processes of transportation and deposition including longshore drift, traction, saltation, suspension and solution. How the processes listed above create distinctive landforms in the UK to include cliffs, wave cut platforms, arches, stacks, headlands and bays, beaches, spits and estuaries. An overview of how past human activity has modified the UK's coastal landscapes for economic benefit.
2.1.2 How are coastlines managed?	2.1.2 Contemporary management options to reduce risk of coastal floods/erosion. Coverage must include: • costs/benefits of hard engineering options such as sea walls, groynes, gabions and rock armour • costs/benefits of soft engineering options to include beach nourishment, beach stabilisation and wetland creation • concepts of 'hold the line' and 'retreat the line'.
2.1.3 Why is coastal management often controversial?	2.1.3 The role of government and local authorities in shaping shoreline management plans (SMPs). Conflicting views on coastal management. The reasons why stakeholders have different views, values and attitudes and why this may lead to controversy.
2.1.4 What are the predicted impacts of climate change on coastal landscapes and communities?	2.1.4 The potential impacts of climate change on coastal communities in at least **two** countries at different levels of development. Management challenges which arise from sea level rise and the increased frequency of storms.

Key Idea 2.2: Shaping the landscape - rivers and river management

Enquiry questions	Depth of study
2.2.1 How do people and processes contribute to the development of distinctive river landscapes in the UK?	2.2.1 At a wider scale, ways in which climate, geology and human activity influence flows and stores of water within river landscapes. Coverage to include the processes of interception, transpiration, infiltration, surface run-off and throughflow. How these may be affected by human activity through changes to vegetation and urbanisation. How climate creates seasonal variation in discharge. The concept of annual regime. The use of hydrographs to show the relationship between climate and discharge. How fluvial processes, combined with weathering, mass movement and human activities create distinctive river landscapes in the UK. At a local scale, fluvial erosional processes to include hydraulic action, abrasion, attrition and solution. Processes of transportation and deposition to include traction, saltation, suspension and solution. Coverage of landforms must include v-shaped valleys, waterfalls, gorges, meanders, ox-bow lakes, floodplains and estuaries. How human activity affects river landscapes to include creation of reservoirs, dredging and straightening of channels.
2.2.2 Why do rivers flood and what are the consequences of flooding?	2.2.2 The physical factors (to include geology and vegetation) and human activities (to include urbanisation and changes to ecosystems) that cause rivers to flood. Climatic patterns that cause seasonal floods. Extreme weather events that cause flash floods. Social and economic consequences of flooding (positive and negative) on different groups of people.
2.2.3 How can rivers be managed to reduce the risk of flooding?	2.2.3 The costs and benefits of soft and hard engineering flood management options. Management options to include dam construction, river engineering, afforestation, managed flooding and land use zoning for flood plains. The impact of river management on hydrographs.
2.2.4 Why is river flood management often controversial?	2.2.4 Conflicting views on drainage basin management. The reasons why stakeholders have different views, values and attitudes and why this may lead to controversy. The economic and social impacts of river management on locations downstream.

Key Idea 2.3: Weather and climate

Enquiry questions	Depth of study
2.3.1 Why is the UK climate so variable?	2.3.1 The characteristics of the UK climate including regional variations. Coverage must include seasonality, average monthly temperature and precipitation rates. The influence of global atmospheric circulation, latitude, altitude, air pressure, and distance from the sea.
2.3.2 How does the global circulation of the atmosphere create distinctive climate zones?	2.3.2 An overview of the global circulation of the atmosphere to include the operation of cells in the troposphere. An overview of the location and distribution of distinctive climate zones across the globe. The features of the hot semi-arid climate *(note the link to the study of hot semi-arid grasslands in 3.1.1)* and **one** other climate zone.
2.3.3 How are weather hazards distributed at a global scale and how does this pattern change over time?	2.3.3 How global circulation creates areas of high and low pressure. Distribution and location of these pressure systems. Typical weather patterns and extreme weather hazards associated with high **and** low pressure systems. Coverage should include the use of weather charts. Temporal and spatial changes in extreme weather to include seasonal and longer term changes in the tropics which result in drought (*note the link to changing patterns of desertification in 3.4.1)* and the seasonal distribution of cyclone/hurricanes.
2.3.4 What are the causes, impacts and responses to two contrasting extreme weather events?	2.3.4 A detailed study of **two** contrasting extreme weather events located outside of the UK. **One** event must relate to a dominant long-lasting high pressure system. **One** event must relate to an intense low pressure system. For each event, coverage must include: • causes • impacts on different groups of people • responses (*note the link to responses to desertification in 3.4.3).*

Key Idea 2.4: Climate change - cause and effect

Enquiry questions	Depth of study
2.4.1 How has climate changed during the Quaternary period?	2.4.1 An overview of how climate has changed to include glacial and inter-glacial periods.
2.4.2 What are the causes of global warming?	2.4.2 Natural processes that create the greenhouse effect. Evidence for global warming, including the role of human activity as **one** contributory factor in global warming.
2.4.3 What are the consequences of climate change?	2.4.3 The consequences of climate change for people and environments. These must be in addition to the impact of climate change on coastal management strategies described in 2.1.4 above. Coverage must include the consequences on **at least two** of the following: • Farming and food supply • Wildlife and habitats • Water and water supplies • Where people live and population movement • Tourism and tourist destinations.
2.4.4 How and why do attitudes to climate change vary?	2.4.4 Differing views, values and attitudes which are held on the issue of climate change and the ways in which its effects could be addressed. Global initiatives to reduce the impact of climate change.
2.4.5 What role can individuals and government in the UK play in reducing the risk of climate change?	2.4.5 How individuals can play a part in reducing the risk of climate change. How and why local and national UK government may attempt to reduce the risk of climate change.

Theme 3: ENVIRONMENTAL CHALLENGES

Key Idea 3.1: How ecosystems function

Enquiry questions	**Depth of study**
3.1.1 What is the relationship between climate and biomes at a global scale?	3.1.1 The location and distribution of biomes at a global scale and their relationship to climate zones. An overview of the characteristics and interdependence of climate, soils, vegetation, animals and humans in **two** contrasting biomes. Coverage must include hot semi-arid grasslands *(note the link to the study of hot semi-arid climate in 2.3.2 and to the relationship between changing climatic patterns and the environment in 3.4.1)* and **one** other biome.
3.1.2 What physical processes and interactions operate within ecosystems?	3.1.2 The physical processes that link living/biotic components (plants, animals, decomposers) and non-living/abiotic components (temperature, light, moisture) in hot semi-arid grasslands and **one** other biome. Coverage must include nutrient stores and flows, energy flows and food webs (producers, primary, secondary and tertiary consumers). The concept of biodiversity.
3.1.3 How are small scale ecosystems in the UK used and managed?	3.1.3 The characteristics of **one** small scale ecosystem in the UK. The benefits of the ecosystem for local communities. The challenges of managing the ecosystem and how different stakeholders perceive its value.

Key Idea 3.2: Ecosystems under threat

Enquiry questions	**Depth of study**
3.2.1 How are ecosystems used by people?	3.2.1 An overview of how humans use, modify and change ecosystems and environments in order to obtain food, energy and water resources.
3.2.2 How are ecosystems damaged by human activity?	3.2.2 How hot semi-arid grasslands and **one** other ecosystem have been damaged by human activity. How processes within the ecosystem have been affected *(note the link to how human activity can contribute to desertification in 3.4.2).* The effects of the damage at the local scale, to include the effect on biodiversity, and at the global scale.
3.2.3 Why and how are ecosystems managed in a sustainable way?	3.2.3 The reasons for conservation and management. The ways in which hot semi-arid grasslands and **one** other ecosystem have been managed *(note the link to how environments vulnerable to desertification can be managed in 3.4.3)*. Strategies for sustainable management.

Key Idea 3.3: Water resources and management

Enquiry questions	Depth of study
3.3.1 Why does supply and demand for water vary over time and space?	3.3.1 An overview of past and present global trends in water supply and demand. The concepts of water footprints and water security. The social, economic and environmental reasons why supply and demand for water varies over time and place. The links between population change, economic growth, consumerism and increasing demands for water.
3.3.2 What happens when demand for water exceeds supply?	3.3.2 The concept of over-abstraction and the reasons for water transfer schemes. The impact of over-abstraction and unsustainable use of water on people, the economy and environment. Coverage to include the impacts in countries at contrasting levels of development *(note the link to how human activity may contribute to desertification in 3.4.2).*
3.3.3 What are the challenges of managing water supplies?	3.3.3 Ways in which an imbalance of supply and demand can be met within **one** country at a local scale. The international issues facing future water management across national boundaries.

Key Idea 3.4: Desertification

Enquiry questions	Depth of study
3.4.1 What are the physical processes operating in hot semi-arid regions that make them vulnerable to desertification?	3.4.1 An overview of the location and global distribution of environments vulnerable to desertification. How this distribution pattern is changing over time. The relationship of this distribution to the global circulation of the atmosphere and to the dominance of high pressure systems. Changing climatic patterns over periods of decades to include unreliable rainfall patterns and higher rates of evapotranspiration in hot semi-arid regions. Smaller scale processes related to changing patterns of vegetation, evapotranspiration and micro-climate.
3.4.2 To what extent does human activity contribute to the problem of desertification?	3.4.2 Human activities to include unsustainable use of water resources, over-grazing, poor land management and use of fire wood. The different viewpoints, values and attitudes of stakeholders in the region.
3.4.3 How can environments vulnerable to desertification be managed?	3.4.3 A range of strategies employed by Non-Government Organisations (NGOs), working at a local level with communities, to include drip irrigation, magic stones and use of drought-tolerant crops. International strategies aimed at reducing the spread of areas experiencing desertification.

2.2 Component 2

Problem Solving Geography

Written examination: 1 hour 30 minutes
30% of qualification
72 marks (plus 4 marks for spelling, punctuation, grammar and use of specialist terms)

A problem solving paper in three parts assessing content from across the three themes described in Component 1 on pages 7 to 16:

Theme 1: Changing Places - Changing Economies

Theme 2: Changing Environments

Theme 3: Environmental Challenges

Part A will introduce an issue and set the geographical context (in terms of location and scale). This structured question will include opportunities for assessment using multiple choice, data response and short open responses.
Part B will outline a number of possible solutions to the issue. This structured question will include opportunities for assessment using multiple choice, data response and short open responses.
Part C will provide an opportunity for the candidates to choose a solution and justify their choice following interpretation and analysis of the information and evaluation of the issue. Assessment will be by longer open response.

Learners should be given the opportunity to develop their skills in using a range of mathematical and statistical techniques whilst preparing for this component. The depth of coverage of these techniques is given in Appendix A on pages 27-28 of the specification.

2.3 Component 3

Applied Fieldwork Enquiry
Written examination: 1 hour 30 minutes
30% of qualification
72 marks (plus 4 marks for spelling, punctuation, grammar and use of specialist terms)

Component 3 is a written examination in three parts.

Part A will assess approaches to fieldwork methodology, representation and analysis.

Part B will assess how fieldwork enquiry may be used to investigate geography's conceptual frameworks.

Part C will assess the application of broad geographical concepts to a wider UK context and assess the ability to make and justify a decision.

In order to prepare for this component, learners are expected to undertake **two** fieldwork enquiries outside the classroom and school grounds, each in a **contrasting** environment:

- In one environment the fieldwork should include one methodological approach. The approach will be selected by WJEC from those listed in Table A on page 21.
- The second fieldwork experience should take place in a **contrasting** environment. This fieldwork enquiry must be underpinned by geography's conceptual framework. The approach will be selected by WJEC from those listed in Table B on pages 22-23.

Teachers will be notified at least two years in advance which two approaches should be taken by all centres in any given year. These approaches have been designed to allow centres a wide range of choice of environment in which they can conduct fieldwork. They should also allow centres to use familiar fieldwork locations that are known by them to be safe. The sample assessment materials illustrate a cycle in which 'flows' is the methodological approach selected from Table A and 'inequalities' is the geographical conceptual framework selected from Table B.

Learners should have the opportunity to carry out all **six** of the stages of the enquiry process when conducting fieldwork. The stages of the enquiry process are described fully on page 19. It is recommended that learners spend about 18 guided learning hours preparing for and consolidating their understanding of their fieldwork experiences. Learners might prepare for their fieldwork by being given opportunities to:

- pose geographical questions
- research fieldwork methodologies
- consider sampling strategies
- design data collection sheets.

Learners might consolidate their understanding of fieldwork by being given opportunities to:

- process data
- present their findings
- analyse patterns and trends
- draw conclusions
- consider limitations of the evidence / evaluate their fieldwork.

Fieldwork enquiry skills that will be examined in Component 3
Examples (in italics) are to aid understanding and suggest range, and these are not compulsory.

The enquiry process	Individuals should learn how to
1.1 What is the geographical enquiry process?	1.1 Pose questions about geographical processes/concepts that include questioning about spatial patterns and geographical processes/change. Test hypotheses.
1.2 How is evidence collected?	1.2 Design fieldwork data collection sheets. Select specific locations at which data can be collected. Establish control groups. Justify sample size and sampling technique, coverage to include sampling using random, systematic, opportunistic and/or stratified techniques. Use fieldwork equipment to obtain accurate and reliable results *(for example the use of clinometer or quadrats).* Collect data using quantitative and qualitative techniques. Quantitative techniques should include those that measure: • flow *(for example, discharge, infiltration, traffic)* • scale *(for example, river width, pebble size, gradient)* • spatial pattern *(for example, retail land use, sediment sorting)* • temporal change *(for example, temperature, rainfall, pressure).* Qualitative techniques should include use of questionnaires, bi-polar techniques and annotation of photos/sketches. Use secondary sources of evidence to include satellite images, aerial and oblique photographs, large databases *(for example, National Statistics)* and GIS *(for example, Environment Agency).*
1.3 How can evidence be processed and presented?	1.3 Process evidence to include calculation of percentages and mean. Present evidence to include maps, graphs and diagrams. Reference secondary data sources accurately. For details of numerical and statistical skills, including specific graphical and cartographic representation techniques, see **Appendix A** pages 27-28.
1.4 How can evidence be analysed and how do patterns and trends evidenced by fieldwork relate to wider geographical knowledge and understanding?	1.4 Identify, analyse and interpret trends and patterns. Apply knowledge and understanding of broad geographical concepts and processes to specific evidence collected during the enquiry.
1.5 What conclusions may be drawn from fieldwork enquiries?	1.5 Synthesise findings to reach evidenced conclusions that relate to the initial aim of the enquiry. Appreciate that geography can be 'messy' i.e. that fieldwork does not always match typical or predicted outcomes.
1.6 What evaluative techniques should be applied to the enquiry process?	1.6 Identify the limitations of geographical evidence: accuracy, reliability and bias. Reflect critically on the strengths and limitations of both primary and secondary data, methods used, conclusions drawn and knowledge gained. Appreciate that stakeholders may have vested interests *(for example, where primary or secondary sources of data rely on opinion).*

Approaches to fieldwork

Component 3 will assess different approaches to fieldwork in each examination series. In order to provide learners with a relevant fieldwork experience, WJEC will provide one methodological approach and a separate approach based on one conceptual framework for fieldwork at least two years in advance of each assessment. The full list of approaches is published in Table A on page 21 and Table B on pages 22-23 of the specification. Centres will be free to conduct each fieldwork enquiry in any environment but are reminded that learners should experience working in **contrasting** environments outside of the classroom and school grounds i.e. if a coastal environment is chosen for Table A then a contrasting environment should be chosen from Table B when conducting the second fieldwork enquiry.

Learners should be given the opportunity to explore physical and human processes and the interactions between them during their fieldwork experiences. They should be involved in the collection of primary physical and human data (but these requirements need not all be addressed in each piece of fieldwork).

Prior to each examination series, at least two years in advance of the assessment, WJEC will publish the **two** approaches that centres should take during fieldwork:

- **One** of the methodological approaches in Table A will be selected by WJEC.
- **One** of the conceptual frameworks in Table B will be selected by WJEC.

The sample assessment materials illustrate a cycle in which 'flows' is the methodological approach selected from Table A and 'inequalities' is the conceptual framework selected from Table B.

Each centre must provide a fieldwork statement to WJEC that details the fieldwork carried out by learners from the centre in each assessment cycle. Failure to provide a fieldwork statement will be treated as malpractice and/or maladministration by WJEC. Centres will be able to make their fieldwork statement by completing a form that will be available to download from the GCSE Geography subject page of the Eduqas website. Further details of fieldwork arrangements may be found in Section 3.2 on page 25.

Table A: fieldwork methodologies

WJEC will select **one** methodological approach each year from the table below. The second column, in the table below, suggests a range of examples of fieldwork enquiries set in contrasting environments which may be used by centres and are for illustration only.

Methodological approach	**Possible examples of fieldwork enquiries in contrasting environments**
Use of transects	***Use of a transect across a feature to:***
	Assess quality of life or environmental quality across an urban area
	Analyse micro-climate across a large town or up a slope
	Determine patterns of flow and deposition across a river channel
	Analyse patterns of vegetation across a sand dune system or through woodland
	Analyse slope profiles and sediment sorting up a beach profile
Change over time	***Comparing primary data with secondary sources to analyse:***
	Changing patterns of retailing – comparing current retail patterns to historical data from a previous year
	Changing weather - comparing data collected over several days with data collected for the same period in a previous year
	Changing river/coastal landforms based on comparison of current evidence to historical evidence from maps/photos
	Changing land use over time in an urban/rural environment
Qualitative surveys	***Analysing perception of:***
	The value of distinctive river or coastal landscapes
	Environmental quality of urban/rural environments
	Perception studies, for example about flood risk or climate change
	Comparing visitor/local perceptions of a honeypot site
Geographical flows	***Analysing flows and patterns of movement:***
	Infiltration rates in various soils or interception rates in various vegetation types
	Analysis of commuter movements
	Discharge rates compared to rainfall or Longitudinal survey of downstream changes in a river
	Traffic or pedestrian flows, for example relating pedestrian flows in a retail environment to parking provision in an urban area or identifying best route for a cycle path
	Analyse sediment size/shape as a result of longshore drift along a coastline

Table B: Approaches to fieldwork enquiry using conceptual frameworks

WJEC will select **one** conceptual framework each year from the table below. The second column, in the table below, suggests a range of examples of fieldwork enquiries set in contrasting environments which may be used by centres and are for illustration only.

Conceptual framework	**Possible examples of fieldwork enquiries in contrasting environments**
Place Applying understanding of uniqueness / identity.	Comparing and contrasting the features of two distinctive locations to identify the uniqueness of place: • the characteristics of coastal features in two locations • the characteristics of river features in two locations • the characteristics of an ecosystem in two locations • two villages or two urban environments • quality of life in two neighbourhoods.
Sphere of influence Applying understanding of sphere of influence / catchment and how it impacts on places.	Identifying the extent of sphere of influence / catchment area and analysing the positive or negative impacts of this on place(s): • sphere of influence of larger urban areas and their impacts on their hinterland. • positive and negative externalities of a major event (for example, County Show / cultural festival) or sporting venue. • sphere of influence of a honeypot site and its impact(s) for example, analysing visitor pressure along a footpath • sphere of influence of a distinctive landscape feature and its impact(s) • river catchment and its impact on potential flood risk.
Cycles and flows Applying understanding of change and movement in relation to place.	Identifying patterns of movement (in either a human or physical context) and the reasons for, or effects of, these movements: • migration survey which focuses on push-pull factors and their impacts in either an urban or rural locations • diurnal flows within urban environments and the effects for example, on transport systems • study of commuter flows between an urban and neighbouring rural location • comparing river flows in contrasting river stages and/or over time • identifying seasonal change in a local ecosystem.
Mitigating risk Applying understanding of hazard perception / risk and analysing management strategies / future actions.	Identifying the nature of risk and human responses to it in one location: • coastal erosion/flood risk and management strategies • flood risk and river management strategies • urban/rural land use and its impact on infiltration/interception/flood risk • perceptions of climate change and possible local responses • environmental risk and its management for example, location of a new wind farm or an investigation of air quality in an urban area.

Conceptual framework	**Possible examples of fieldwork enquiries in contrasting environments**
Sustainability Applying understanding of sustainable communities.	Assessing the extent to which a community can be made more sustainable: • impacts of a pedestrianisation scheme or park and ride scheme • the effectiveness of an existing or planned community (urban or rural) to meet requirements of Egan's wheel • choosing more sustainable ways to manage the journey to school for example, the best route for a new cycle route to school • evaluating sustainable coastal or flood management strategies • evaluating possible sustainable uses of a brownfield site.
Inequality Applying understanding of inequality and associated concepts such as deprivation or equality of access to services.	Analysing patterns of inequality: • how positive and negative externalities impact on standard of living in urban or rural environments • comparing access to services in rural and urban communities within the hinterland of one large urban area • evaluating quality of life for a named socio-economic group (for example, young families) in one community • assessing quality of the urban environment and its impact on house prices across an urban transect • evaluating the success of an urban regeneration scheme in reducing deprivation.

3 ASSESSMENT

3.1 Assessment objectives and weightings

Below are the assessment objectives for this specification. Learners must demonstrate their ability to:

AO1
Demonstrate knowledge of locations, places, processes, environments and different scales.

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.

AO3
Apply knowledge and understanding to interpret, analyse and evaluate geographical information and issues and to make judgements.

AO4
Select, adapt and use a variety of skills and techniques to investigate questions and issues and communicate findings.

The table below shows the weighting of each assessment objective for each component and for the qualification as a whole.

	AO1	AO2	AO3	AO4	Overall
Component 1	10%	10%	10%	10%	40%
Component 2	5%	10%	10%	5%	30%
Component 3	0	5%	15% *(10%)*	10% *(5%)*	30% *(15%)*
Overall weighting	**15%**	**25%**	**35% *(10%)***	**25% *(5%)***	**100%**

Figures in *italics* indicate the weighting that is reserved for the assessment of fieldwork.

For each series:

- the weighting for the assessment of mathematical and statistical techniques will be at least 10%
- the learners' spelling, punctuation and grammar and their use of specialist terminology will be assessed in specified questions that require extended writing. The total weighting for spelling, punctuation and grammar will be 5% of the sum of all marks available for assessment objectives AO1 to AO4 i.e. 12 marks overall.

3.2 The fieldwork statement

Each centre must provide a fieldwork statement to WJEC that details the fieldwork carried out by learners from the centre in each assessment cycle. Failure to provide a fieldwork statement will be treated as malpractice and/or maladministration by WJEC.

Centres will be able to make their fieldwork statement by completing a form that will be available to download from the GCSE Geography subject page of the Eduqas website. Centres will be able to use the form to:

(a) confirm that each learner has been provided with opportunities to undertake geographical fieldwork **on at least two occasions** and with respect to **at least two contrasting environments**, and

(b) in respect of each of those opportunities:

i. the date on which it was provided

ii. the location at which it was provided

iii. the environment to which it related

iv. the number of learners who participated, and

v. a description of how the tasks undertaken by learners met the requirements for geographical fieldwork detailed on pages 18-23 of the specification.

The fieldwork statement must be submitted to WJEC by 15 May of the year in which candidates receive their Award.

Further details of fieldwork arrangements may be found in Section 2.3 on pages 18-23.

4 TECHNICAL INFORMATION

4.1 Making entries

This is a linear qualification in which all assessments must be taken at the end of the course. Assessment opportunities will be available in the summer series each year, until the end of the life of this specification. Summer 2018 will be the first assessment opportunity.

Where candidates wish to re-sit the qualification, **all** components must be re-taken.

The entry code appears below.

WJEC Eduqas GCSE Geography B: C112QS

The current edition of our *Entry Procedures and Coding Information* gives up-to-date entry procedures.

4.2 Grading, awarding and reporting

GCSE qualifications are reported on a nine point scale from 1 to 9, where 9 is the highest grade. Results not attaining the minimum standard for the award will be reported as U (unclassified).

APPENDIX A

Use of mathematics and statistics in geography

The list below outlines the range and extent of mathematical and statistical techniques required by WJEC Eduqas GCSE Geography B. *Examples (in italics) are to aid understanding and suggest range, and these are not compulsory.*

Types of skills that must be developed	Specific techniques required
Numerical and statistical skills	
1 Numerical skills 1.1 Demonstrate an understanding of number, area and scale and the quantitative relationships between units.	*Calculate distance from maps using the scale line and estimate area. Use quantitative and qualitative statements when describing relationships revealed by tables of data or graphs.*
1.2 Design fieldwork data collection sheets and collect data with an understanding of accuracy, sample size and procedures, control groups and reliability.	Sample using random, systematic, opportunistic and/or stratified techniques. Use fieldwork equipment to obtain accurate and reliable results *(for example the use of clinometer or quadrats).* Make sketch maps and field sketches to present and interpret data.
1.3 Understand and correctly use proportion and ratio, magnitude and frequency.	*For example, 1:200 flood; and logarithmic scales such as the Richter scale, in orders of magnitude*.
1.4 Draw informed conclusions from numerical data.	*Use tables of data to draw evidenced conclusions about spatial or temporal patterns (for example, from Office of National Statistics).*
2 Statistical skills 2.1 Use appropriate measures of central tendency, spread and cumulative frequency.	Median, mean, range, quartiles and inter-quartile range, mode and modal class.
2.2 Calculate percentage increase or decrease and understand the use of percentiles.	*For example, calculate percentage increase/decrease in population from a line graph. Draw a histogram of a normal/skewed distribution and use it to calculate percentiles.*
2.3 Describe relationships in bivariate data.	Sketch trend lines through scatter plots; draw estimated lines of best fit. Interpret evidence to make predictions. Interpolate and extrapolate trends on a line graph.
2.4 Identify weaknesses in selective statistical presentation of data.	Identify limitations *(for example, in the interpretation of a scatter graph).*

Types of skills that must be developed	Specific techniques required
Presentation and processing skills **3.1 Cartographic skills** 3.1 Use and understand gradient, contour and spot height on OS maps and other isoline maps.	Interpret and analyse atlas maps at different scales, topological maps, OS maps at 1:50,000 and 1:25,000 scales, isoline maps (*for example, weather charts, ocean bathymetric charts*), maps with proportional symbols, weather (synoptic) charts.
3.2 Interpret cross sections and transects.	Interpret cross sections *(for example to show relief)* and transects *(for example, through the zones of a sand dune or across an eroded footpath).*
3.3 Use and understand coordinates, scale and distance.	Give 4 and 6 figure grid references. Measure distance accurately and estimate area from maps (including from O.S maps at a scale of 1:50,000 and 1:25,000).
3.4 Describe and interpret geo-spatial data presented in a GIS framework.	Describe location, distribution and other spatial patterns as shown on a screen shot from a GIS *(for example Office of National Statistics or analysis of flood hazard using the interactive maps on the Environment Agency website).*
4 Graphical skills 4.1 Select and construct appropriate graphs and charts to present data, using appropriate scales.	Bar and line charts (to include climate charts and hydrographs), pie charts, proportional circles, pictograms, histograms with equal class intervals, star and radial graphs, kite diagrams, dispersion graphs, triangular graphs and scatter graphs.
4.2 Interpret and extract information from different types of graphs. Interpret different graphs to identify patterns and trends.	*See the techniques listed above for 4.1.*
4.3 Interpret population pyramids, choropleth maps and flow-line maps.	Interpret population pyramids *(for example, displaying both absolute and percentage figures)* Choropleth maps *(for example, those showing variations in economic development)* Flow-line maps *(for example, showing migration, tourism or traffic flows).*

APPENDIX B

Global cities

Global cities (or world cities) are those cities which play an important role in the global economic system of finance and trade. As such, their existence is due to the processes of interdependence and globalisation that link the world together.

The top 20 in 2012 were:
London, New York City, Hong Kong, Paris, Singapore, Shanghai, Tokyo, Beijing, Sydney, Dubai, Chicago, Mumbai, Milan, Moscow, Sao Paulo, Frankfurt, Toronto, Los Angeles, Madrid, Mexico City.

There are 14 UK cities in the top 200 list of global cities. In rank order these are:
London, Manchester, Birmingham, Edinburgh, Bristol, Glasgow, Leeds, Belfast, Southampton, Newcastle, Liverpool, Cardiff, Aberdeen, Sheffield.

Newly Industrialised Countries (NIC)

Newly industrialised countries (NICs) are middle income countries where the pace of economic growth outstrips that of other developing countries. NICs are characterised by: the relatively rapid growth of the manufacturing sector of the economy; rapid urban growth; strong trading relationships with other countries; and the operation of foreign owned multi-national companies (MNCs) within the country.

It is recommended that learners use one or more of the following NICs when following this specification. If another is chosen, it should match the definition given above. The following are listed in order of wealth (in 2015):

Brazil, Turkey, Malaysia, Mexico, China, South Africa, Thailand, Indonesia, Philippines, Vietnam, India.

Low Income Countries (LIC)

Low Income Countries are defined by the World Bank as having a GNI per capita income of $1,045 or less in 2013. In 2015 there are 34 LICs.

It is recommended that learners use one or more of the following LICs when following this specification. They are listed in alphabetical order. If another is chosen, it should match the World Bank definition.

Afghanistan, Bangladesh, Burkina Faso, Cambodia, Ethiopia, Gambia, Haiti, Kenya, Lesotho, Malawi, Mali, Nepal, Niger, Rwanda, Tanzania, Uganda.