

GCSE

WJEC GCSE Geography

Approved by Qualifications Wales

Specification

Teaching from 2025

For award from 2027

Version 2 - February 2025



This Qualifications Wales regulated qualification is not available to centres in England.

Made for Wales.
Ready for the world.

This specification meets the requirements of the following regulatory documents published by Qualifications Wales:

- [Made for Wales GCSE Qualification Approval Criteria](#) which set out requirements for any new GCSE qualification Approved for first teaching from September 2025 and beyond.
- [Standard Conditions of Recognition](#) which contains the rules that all awarding bodies and their qualifications must meet when offering qualifications to learners in Wales.
- Approval Criteria for GCSE [Geography](#) which sets out the subject specific requirements for GCSE Geography qualifications from September 2025 and beyond.

SUMMARY OF AMENDMENTS

| Version | Description | Page number |
|---------|--|-------------|
| 2 | “legal” and “illegal” changed to “regular” and “irregular” | 15 and 16 |

CONTENTS

| | |
|--|----|
| GCSE GEOGRAPHY | 5 |
| SUMMARY OF ASSESSMENT | 5 |
| 1. INTRODUCTION..... | 6 |
| 1.1 Aims | 6 |
| 1.2 Curriculum for Wales..... | 6 |
| 1.3 Prior learning and progression | 8 |
| 1.4 Guided learning hours | 8 |
| 1.5 Use of language | 9 |
| 1.6 Equality and fair access | 9 |
| 2 SUBJECT CONTENT | 10 |
| How to read the amplification | 10 |
| Unit 1 | 10 |
| Unit 2 | 18 |
| Unit 3 | 24 |
| Unit 4 | 33 |
| Opportunities for integration of learning experiences | 35 |
| 3 ASSESSMENT..... | 36 |
| 3.1 Assessment objectives and weightings..... | 36 |
| 3.2 Arrangements for non-examination assessment..... | 37 |
| 4 MALPRACTICE..... | 39 |
| 5 TECHNICAL INFORMATION..... | 40 |
| 5.1 Making entries | 40 |
| 5.2 Grading, awarding and reporting..... | 41 |
| Appendix A: Opportunities for embedding elements of the Curriculum for Wales | 42 |
| Appendix B: Use of mathematics and statistics in geography | 45 |

GCSE GEOGRAPHY

SUMMARY OF ASSESSMENT

| | |
|---|-----------------|
| Unit 1: Our Physical and Human World Written examination: 1 hour 30 minutes 30% of qualification | 90 marks |
| Questions requiring objective responses, short and extended answers, with some based around applied situations. | |
| Unit 2: Developing Fieldwork Skills Non-examination assessment: 7 hours (not including the time it takes to undertake the fieldwork) 25% of qualification | 90 marks |
| Set and marked by WJEC. WJEC will set two topic areas a year from: geographical flows, settlement, sustainability, mitigating risk, inequality, place and space, change over time. | |
| Unit 3: Our Dynamic and Diverse World Written examination: 1 hour 30 minutes 30% of qualification | 90 marks |
| Questions requiring objective responses, short and extended answers, with some based around applied situations. | |
| Unit 4: Sustainable Solutions Non-examination assessment: 6 hours (3 hours for research and 3 hours to respond to tasks) 15% of qualification | 60 marks |
| Set by WJEC, marked by the Centre and moderated by WJEC. | |

This is a unitised qualification.

It is not tiered.

Aside from Unit 1, which is an introductory unit, there is no hierarchy implied by the order in which the three other units are presented. Therefore, the order does not imply a prescribed teaching order.

Units 1-3 will be available from 2026, with Unit 4 available in 2027.

The first award of the qualification will be 2027.

Qualification Approval Number: C00/4967/6

GCSE GEOGRAPHY

1. INTRODUCTION

1.1 Aims

GCSE Geography supports learners to:

- become independent, balanced and sympathetic geographers with a detailed understanding of spatial relationships and the changing world
- appreciate the complex, pluralistic and diverse nature of societies and their interactions with diverse and dynamic physical landscapes
- demonstrate a geographical viewpoint on values, attitudes and perspectives surrounding the interrelationships between people and their environment
- apply geographical understanding and practice to a range of contexts and enquiries
- foster a curiosity to explore geographical causes, effects and consequences
- make sense of the world to work towards a sustainable future.

These aims are set out in Qualifications Wales' Approval Criteria.

1.2 Curriculum for Wales

This GCSE Geography qualification is underpinned by the Curriculum for Wales framework and has been designed to ensure that learners can continue to make progress towards the four purposes whilst studying for this qualification.

Central to this design are the [principles of progression](#), along with the [statements of what matters](#) and those [subject specific skills and concepts](#) outlined in the '[Designing your Curriculum](#)' section of the Humanities Area of Learning and Experiences.

In developing this qualification, we have considered where there are opportunities to embed the cross-curricular themes and where there are opportunities for integral skills and cross-curricular skills to be developed. Appendix A provides a simple mapping, and information to support teachers will be provided in the Guidance for Teaching.

We have also considered where the qualification can generate opportunities for integrating the learning experiences noted in 'Opportunities for integration of learning experiences' on page 34, the Guidance for Teaching will include further information on integrating these learning experiences into delivery.

The GCSE Geography qualification supports the Curriculum for Wales by:

- supporting the statements of what matters¹ by giving learners the opportunity to:
 - gain a deeper understanding of the concepts underpinning humanities, and their application in local, national and global contexts
 - help learners gather, justify, present, analyse, and evaluate a range of evidence
 - explore how and why interpretations may differ and by critical understanding of a range of interpretations and representations derived from a variety of evidence, be better placed to evaluate their validity
 - experience the wonder of the natural world
 - understand and appreciate how and why places, landscapes and environments in their locality and elsewhere in Wales, as well as in the wider world, are changing
 - develop an understanding of how human actions in the past and present can affect interrelationships between the natural world and people
 - heighten learners' awareness of how the future sustainability of our world and climate change is influenced by the impact of those actions
 - appreciate how the evolution of places, communities and societies is driven by the interplay between a range of factors, including environmental, economic, social, political and cultural processes and human actions
 - develop an understanding of their responsibilities as citizens of Wales and the wider interconnected world
 - develop as self-aware, informed, ethical global citizens, who critically reflect on their own and others' beliefs, values and attitudes.
- supporting the principles of progression² by encouraging learners to:
 - ask increasingly sophisticated enquiry questions
 - demonstrate greater independence in finding suitable information, making informed predictions and hypotheses, and making judgments
 - increase their breadth and depth of knowledge and underlying concepts
 - develop an understanding of themselves in the world
 - demonstrate an ability to work with an increasing number and sophistication of sources of information, as well as a growing understanding of how to resolve contradictory or conflicting accounts
 - demonstrate a growing ability to transfer existing skills and knowledge into new, and increasingly unfamiliar contexts.

¹ <https://hwb.gov.wales/curriculum-for-wales/humanities/statements-of-what-matters/>

² <https://hwb.gov.wales/curriculum-for-wales/humanities/principles-of-progression/>

- supporting the subject specific considerations for geography³ by:
 - providing opportunities to understand and investigate physical and human landscapes, and a context for the causes and consequences of physical and human inter-relationships and interdependence which characterise our modern world
 - providing opportunities to understand and investigate key geographical issues
 - equipping learners with the skills to question, use and analyse maps, images, and geographical information systems
 - equipping learners with the geographical skills to formulate research questions, and to collect, manipulate and present data so they can evaluate and think critically about problems and issues
 - providing a range of opportunities to learn outdoors, through fieldwork and the outdoor classroom, and to experience and reflect on the wonder of the natural world in a variety of physical, human and historical environments.

The GCSE Geography qualification is based on the following geographical concepts:

- place and space⁴
- scale
- process
- continuity and change
- inter-relationships
- diversity
- environment
- interpretation.

Each of these concepts have been mapped to concepts stated within the Welsh Government 'designing your curriculum' guidance as well as those within the statements of what matters and progression steps for humanities.

1.3 Prior learning and progression

Although there is no specific requirement for prior learning, the qualification is designed primarily for learners between the ages of 14 and 16 and builds on the conceptual understanding learners have developed through their learning from ages 3 – 14.

The qualification allows learners to develop a strong foundation of knowledge, skills and understanding which supports progression to post-16 study and prepares learners for life, learning and work. The qualification 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.

1.4 Guided learning hours

GCSE Geography has been designed to be delivered within 120 – 140 guided learning hours. The qualification has been primarily designed as a 2-year programme for learners in years 10 and 11.

³ <https://hwb.gov.wales/curriculum-for-wales/humanities/designing-your-curriculum/#specific-considerations-for-this-area>

⁴ We have placed the two concepts together due to their natural inter-relationship.

1.5 Use of language

As our understanding of diversity, equity, and inclusion evolves, so must our language. Updated terminology better reflects individual identities and fosters respect and accuracy. Language used should be specific as possible. Staying informed and adaptable is crucial, as inclusive language promotes dignity and equity. Recognising that language will continue to evolve, we will remain open to further amendments to ensure it accurately represents and supports all individuals. WJEC will inform centres of any amendments and the most up to date version of the specification will always be on the website.

1.6 Equality and fair access

The 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 access and 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.

Access arrangements and reasonable adjustments are made for eligible learners to enable them to access the assessments and demonstrate their knowledge and skills without changing the demands of the assessment.

Information on access arrangements and reasonable adjustments is found in the following document from the Joint Council for Qualifications (JCQ): Access Arrangements, Reasonable Adjustments: General and Vocational Qualifications. This document is available on the JCQ website (www.jcq.org.uk).

We will be following the principles set out in this document and, as a consequence of provision for reasonable adjustments, very few learners will encounter a complete barrier to any part of the assessment.

2 SUBJECT CONTENT

How to read the amplification

The amplification provided in the right-hand column uses the following four stems:

- 'Learners should be aware of' is used when learners do not need to understand all aspects of the specified content in detail. Teachers should refer to Guidance for Teaching documents for further guidance on the depth and breadth to which this content should be taught.
- 'Learners should know' is used when learners are required to demonstrate basic knowledge and understanding.
- 'Learners should understand' is used when learners are required to demonstrate greater depth of knowledge and understanding, application of knowledge to familiar or unfamiliar contexts and analysis and evaluation of information for a given purpose.
- 'Learners should be able to' is used when learners need to apply their knowledge and understanding to a practical situation or demonstrate application of practical skills and techniques.

The use of the word 'including' indicates that the specified content must be taught and could be subject to assessment.

The use of the words 'for example' or 'such as' indicates that the specified content is for guidance only, and alternative examples could be chosen.

Unit 1

Our Physical and Human World

Written examination
30% of qualification
90 marks

Overview of unit

The purpose of this unit is to:

- introduce learners to the key concepts to be explored throughout the course
- explore an equal balance of physical and human geography
- include core topics that will set the context for the course and give the background needed to complete the other three units.

Learners should also develop their mathematical and statistical skills whilst preparing for this Unit. The depth of coverage required of these skills is given in Appendix B on pages 44-45 of the specification.

Areas of content

1.1 Drainage basin and rivers

In this topic learners will gain knowledge, understanding and skills in the following areas:

- 1.1.1 The global hydrological cycle
- 1.1.2 The drainage basin system
- 1.1.3 Drainage basin characteristics
- 1.1.4 Factors influencing drainage basin processes and landforms
- 1.1.5 How drainage basin landforms are created
- 1.1.6 Inter-relationships between rivers and people

This topic will cover the concepts of place and space, scale, process, continuity and change, inter-relationships and environment.

| Section | Amplification |
|---|--|
| 1.1.1 The global hydrological cycle | <p>Learners should know the characteristics of a closed system.</p> <p>Learners should understand:</p> <ul style="list-style-type: none"> the flows and stores that operate within the global hydrological cycle how water moves through the global hydrological cycle. |
| 1.1.2 The drainage basin system | <p>Learners should know:</p> <ul style="list-style-type: none"> the characteristics of an open system what is meant by the term drainage basin. <p>Learners should understand:</p> <ul style="list-style-type: none"> the inputs, transfers, stores and outputs that operate within a drainage basin how water moves through the drainage basin how the amount of water in a drainage basin varies seasonally. |
| 1.1.3 Drainage basin characteristics | <p>Learners should know:</p> <ul style="list-style-type: none"> the features of a drainage basin, including: <ul style="list-style-type: none"> channel confluence floodplain mouth source tributary watershed the processes operating within a drainage basin, including: <ul style="list-style-type: none"> weathering erosion transportation deposition. |

| | |
|--|--|
| <p>1.1.4 Factors influencing drainage basin processes and landforms</p> | <p>Learners should understand:</p> <ul style="list-style-type: none"> the changing channel characteristics of the long profile of the river, including changes to cross profile natural factors influencing rates of erosion and deposition: <ul style="list-style-type: none"> discharge geology gradient river velocity. |
| <p>1.1.5 How drainage basin landforms are created</p> | <p>Learners should understand:</p> <ul style="list-style-type: none"> the development of erosional landforms in upper and middle courses of rivers, including: <ul style="list-style-type: none"> gorges plunge pools waterfalls the development of depositional landforms, in middle and lower courses of rivers, including: <ul style="list-style-type: none"> floodplains meanders oxbow lakes an example of a local or Welsh river valley to identify its major landforms of erosion and deposition. |
| <p>1.1.6 Inter-relationships between rivers and people</p> | <p>Learners should understand:</p> <ul style="list-style-type: none"> how people use rivers and their landforms in sustainable and non-sustainable ways: <ul style="list-style-type: none"> floodplains for farming housebuilding on a floodplain rivers for Hydro-electric power (HEP) waterfalls for tourism the impact of rivers and their landforms on people, including: <ul style="list-style-type: none"> flooding and its associated impacts erosion, transportation and deposition in river environments hard and soft river engineering/management. <p>Learners should know how these factors have influenced change along a stretch of a local or Welsh river.</p> |

1.2 Changing coastlines

In this unit learners will gain knowledge, understanding and skills in the following areas:

- 1.2.1 The processes that operate along a coastline
- 1.2.2 Constructive and destructive waves
- 1.2.3 Development of erosional landforms
- 1.2.4 Development of depositional landforms
- 1.2.5 Human and physical factors that affect the rates of coastline change

This topic will cover the concepts of place and space, scale, process, continuity and change, inter-relationships and environment.

| Section | Amplification |
|---|--|
| 1.2.1 The processes that operate along a coastline | <p>Learners should know the processes operating along a coastline, including:</p> <ul style="list-style-type: none"> • weathering • mass movement • erosion • transportation • deposition. <p>Learners should understand the similarities and differences between the processes operating within a drainage basin and the processes that operate along a coastline.</p> |
| 1.2.2 Constructive and destructive waves | <p>Learners should understand:</p> <ul style="list-style-type: none"> • wave formation • the characteristics of constructive and destructive waves • the role of the fetch in influencing wave characteristics • how seasonal changes in wave energy leads to differing beach profiles. |
| 1.2.3 Development of erosional landforms | <p>Learners should understand how coastal processes interact to create the following erosional landforms:</p> <ul style="list-style-type: none"> • cave, arch, stack, stump sequence • cliffs • headlands and bays • wave cut platform. <p>Learners should know an example of a local or Welsh coastline where erosional landforms can be located.</p> |

| | |
|---|---|
| <p>1.2.4 Development of depositional landforms</p> | <p>Learners should understand how erosion, longshore drift and deposition interact to create the following depositional landforms:</p> <ul style="list-style-type: none"> • beach • sand dune • spit. <p>Learners should know an example of a local or Welsh coastline where depositional landforms can be located.</p> |
| <p>1.2.5 Human and physical factors that affect the rates of coastline change</p> | <p>Learners should understand:</p> <ul style="list-style-type: none"> • physical factors that affect rate of coastal change, including: <ul style="list-style-type: none"> • climate • fetch • geology – linking to concordant and discordant coasts • human factors that affect rate of coastal change, including: <ul style="list-style-type: none"> • human activity such as settlement, industry and agriculture • hard and soft engineering/management • sustainability issues of managing coastal change. <p>Learners should know how these factors have influenced change along a stretch of local or Welsh coastline.</p> |

1.3 Migration

In this topic learners will gain knowledge, understanding and skills in the following areas:

1.3.1 Causes of migration

1.3.2 Impacts of migration

1.3.3 Managing migration

This topic will cover the concepts of place and space, scale, process, continuity and change, inter-relationships, diversity and environment.

| Section | Amplification |
|---------------------------------------|--|
| <p>1.3.1 Causes of migration</p> | <p>Learners should know:</p> <ul style="list-style-type: none"> what the term 'migration' means migration classifications: <ul style="list-style-type: none"> forced or voluntary international or national regular or irregular. <p>Learners should understand:</p> <ul style="list-style-type: none"> the reasons for migration (such as escaping conflict, human rights violations, economic opportunity, joining family) the different physical and human reasons for international economic migration: <ul style="list-style-type: none"> push factors associated with a named source country (social, economic, environmental and political) pull factors associated with a named host country (social, economic, environmental and political). |
| <p>1.3.2 Impacts of migration</p> | <p>Learners should understand:</p> <ul style="list-style-type: none"> the impacts of international migration for a named source and host country, including: <ul style="list-style-type: none"> the impacts of migration on migrants (for example, asylum seekers, refugees) the experiences and contributions of those who migrate or have migrated impacts of migration, such as: <ul style="list-style-type: none"> brain drain community cohesion integration multiculturalism remittances segregation spread of culture. |

1.3.3**Managing migration**

Learners should understand:

- strategies used to manage international migration, such as:
 - managing irregular migration
 - points based migration
 - visa free travel
- ethical considerations of migration (including human rights)
- public perceptions and the role of the media in influencing public perceptions on migration.

1.4 Settlement change

In this topic learners will gain knowledge, understanding and skills in the following areas:

- 1.4.1 Urbanisation
- 1.4.2 Urban land use patterns
- 1.4.3 Global cities
- 1.4.4 Urbanisation in contrasting global cities

This topic will cover the concepts of place and space, scale, process, continuity and change, inter-relationships, diversity, environment and interpretation.

| Section | Amplification |
|--|---|
| 1.4.1 Urbanisation | <p>Learners should know what is meant by the process of urbanisation.</p> <p>Learners should understand how urbanisation rates have changed over time and between places.</p> |
| 1.4.2 Urban land use patterns | <p>Learners should understand:</p> <ul style="list-style-type: none"> the similarities and differences between the urban land use patterns of cities in contrasting countries and the physical and human reasons for these differences the characteristics of the different sectors of a city: <ul style="list-style-type: none"> Central Business District (CBD) fringe informal settlements inner city suburbs. |
| 1.4.3 Global cities | <p>Learners should know:</p> <ul style="list-style-type: none"> the difference between: <ul style="list-style-type: none"> global cities megacities named examples of each of the above and their global location and distribution. <p>Learners should understand why a city can be classed as a global city and why opinions on this vary.</p> |
| 1.4.4 Urbanisation in contrasting global cities | <p>Learners should understand:</p> <ul style="list-style-type: none"> causes and impacts of urbanisation responses to the problems caused by urbanisation sustainability issues with responses to the problems caused by urbanisation specific cultural identities in two contrasting global cities. |

Unit 2

Developing Fieldwork Skills

Non-examination assessment – Fieldwork enquiry

Set and marked by WJEC

25% of qualification

90 marks

Overview of unit

The purpose of this unit is to:

- explore both fieldwork and skills
- develop an understanding of the six-stage enquiry model.

Learners should also develop their mathematical and statistical skills whilst preparing for this Unit. The depth of coverage required of these skills is given in Appendix B on pages 44-45 of the specification.

Areas of content

2.1 Planning an enquiry

In this topic learners will gain knowledge, understanding and skills in the following areas:

- 2.1.1 The six-stage enquiry process
- 2.1.2 Posing enquiry questions
- 2.1.3 Using maps to locate and plan the enquiry
- 2.1.4 Risk and constraint considerations

This topic will cover the concepts of place and space, scale, process, continuity and change, inter-relationships, diversity and environment.

| Section | Amplification |
|--|---|
| 2.1.1 The six-stage enquiry process | <p>Learners should know the six-stage enquiry process.</p> <p>Learners should understand how:</p> <ul style="list-style-type: none"> • each stage supports other stages in the process • to select a topic for enquiry. |
| 2.1.2 Posing enquiry questions | <p>Learners should know how to pose enquiry questions.</p> <p>Learners should understand the role that enquiry questions have in framing the enquiry process.</p> <p>Learners should be able to:</p> <ul style="list-style-type: none"> • plan and design enquiry questions within a given topic • justify enquiry questions • give predicted outcomes • justify predicted outcomes with reference to geographical knowledge and understanding. |

| | |
|---|--|
| <p>2.1.3 Using maps to locate and plan the enquiry</p> | <p>Learners should be able to plan an enquiry by:</p> <ul style="list-style-type: none">• using appropriate Ordnance Survey (OS) maps to locate fieldwork study sites using four and six figure grid references, ensuring that they have all the correct information (for example, scale, north arrow, key and title)• interpreting available and relevant Geographical Information Systems (GIS) data. |
| <p>2.1.4 Risk and constraint considerations</p> | <p>Learners should be able to:</p> <ul style="list-style-type: none">• recognise what safety risks need consideration in the field and suggest strategies that will reduce these risks• recognise the need to be sympathetic geographers, by recognising ethical considerations, including human rights and diversity, when investigating the world around them• consider the impact of other restrictions on data collection, such as:<ul style="list-style-type: none">• accessibility• availability of secondary data• equipment• time• travel. |

2.2 Collecting evidence

In this topic learners will gain knowledge, understanding and skills in the following areas:

2.2.1 Selecting locations and sampling

2.2.2 Methods of collecting primary data

2.2.3 Methods of collecting secondary data

This topic will cover the concepts of place and space, scale, inter-relationships and environment.

| Section | Amplification |
|--|--|
| 2.2.1 Selecting locations and sampling | Learners should understand: <ul style="list-style-type: none"> the importance of choosing data collection locations the importance of obtaining representative and inclusive samples the process of sampling, including: <ul style="list-style-type: none"> factors influencing sample size the choice of sampling methods, including: <ul style="list-style-type: none"> opportunistic random stratified systematic. Learners should be able to choose and justify: <ul style="list-style-type: none"> data collection sites within a given area sample size sampling method. |
| 2.2.2 Methods of collecting primary data | Learners should be able to: <ul style="list-style-type: none"> design primary data collection sheets select and use fieldwork equipment to gain accurate and reliable results select and use quantitative data collection techniques select and use qualitative data collection techniques justify the choice of the data collection methods used. |
| 2.2.3 Methods of collecting secondary data | Learners should be able to: <ul style="list-style-type: none"> find, select and use relevant secondary data ensure the secondary data used adds value to their study in terms of: <ul style="list-style-type: none"> context comparison with primary data understanding the reliability and validity of secondary data. |

2.3 Processing and presenting evidence

In this topic learners will gain knowledge, understanding and skills in the following areas:

2.3.1 Selecting and using appropriate quantitative and qualitative techniques

2.3.2 Selecting and using appropriate presentation methods for quantitative and qualitative data

2.3.3 Referencing secondary data sources

This topic will cover the concepts of scale, inter-relationships and interpretation.

| Section | Amplification |
|--|--|
| 2.3.1 Selecting and using appropriate quantitative and qualitative techniques | Learners should be able to select appropriate techniques to process evidence which aids interpretation, including calculating: <ul style="list-style-type: none"> distance on maps median, mean, range and mode percentages other relevant techniques. |
| 2.3.2 Selecting and using appropriate presentation methods for quantitative and qualitative data | Learners should be able to: <ul style="list-style-type: none"> identify the strengths and weaknesses of different forms of data presentation select and use appropriate maps select and use appropriate graphs select and use appropriate qualitative data such as focus group transcripts, field sketches or photographs. |
| 2.3.3 Referencing secondary data sources | Learners should be able to: <ul style="list-style-type: none"> present secondary data in an appropriate way consider if stakeholders have a vested interest when reflecting on the reliability of secondary data accurately reference all sources of secondary data by citing sources, using a bibliography/resource list. |

2.4 Analysing and applying evidence

In this topic learners will gain knowledge, understanding and skills in the following areas:

2.4.1 Selecting relevant data to answer the enquiry question

2.4.2 Identifying, analysing and interpreting trends and patterns

This topic will cover the concepts of place and space, inter-relationships, environment and interpretation.

| Section | Amplification |
|---|---|
| 2.4.1 Selecting relevant data to answer the enquiry question | Learners should be able to select: <ul style="list-style-type: none"> primary data which contributes to answering the enquiry question secondary data which contributes to answering the enquiry question. |
| 2.4.2 Identifying, analysing and interpreting trends and patterns | Learners should be able to: <ul style="list-style-type: none"> analyse and synthesise relevant data to identify patterns and trends from primary and secondary data use data to interpret and justify trends described. |

2.5 Drawing conclusions

In this topic learners will gain knowledge, understanding and skills in the following areas:

2.5.1 Drawing conclusions from fieldwork enquiries

This topic will cover the concepts of place and space, scale, process, continuity and change, inter-relationships, diversity, environment and interpretation.

| Section | Amplification |
|--|--|
| 2.5.1 Drawing conclusions from fieldwork enquiries | Learners should be able to: <ul style="list-style-type: none"> draw supported conclusions which answer the original enquiry questions reference their findings in the context of wider geographical concepts, such as: <ul style="list-style-type: none"> continuity and change diversity environment interpretation inter-relationships place and space process scale. |

2.6 Evaluating techniques

In this topic learners will gain knowledge, understanding and skills in the following areas:

2.6.1 Evaluating each stage of the enquiry process

2.6.2 Identifying further areas of investigation/questions that could now be asked

This topic will cover the concepts of scale, inter-relationships and interpretation.

| Section | Amplification |
|--|--|
| 2.6.1 Evaluating each stage of the enquiry process | Learners should be able to evaluate each stage of the enquiry, including: <ul style="list-style-type: none"> planning the enquiry collecting evidence processing and presenting data analysing and applying data drawing conclusions. |
| 2.6.2 Identifying further areas of investigation/questions that could now be asked | Learners should be able to identify: <ul style="list-style-type: none"> further areas of investigation inspired by their findings geographical questions that have arisen as a result of their findings. |

Unit 3

Our dynamic and diverse world

Written examination:
30% of qualification
90 marks

Overview of unit

The purpose of this unit is to introduce learners to key areas of human and physical geography, exploring the economic, social, cultural and political inter-connectedness between people and places. Learners will investigate:

- inequality, focusing on human rights and diversity
- weather
- climate and climate change
- physical and human global challenges, including a focus on endangered environments (land and ocean).

Learners should also develop their mathematical and statistical skills whilst preparing for this Unit. The depth of coverage required of these skills is given in Appendix B on pages 44-45 of the specification.

Areas of content

3.1 The geography of inequality

In this topic learners will gain knowledge, understanding and skills in the following areas:

- 3.1.1 Regional inequalities in Wales and the UK
- 3.1.2 Measuring development to classify countries
- 3.1.3 The development gap
- 3.1.4 Reducing the development gap

This topic will cover the concepts of place and space, scale, process, continuity and change, inter-relationships, diversity, environment and interpretation.

| Section | Amplification |
|---|---|
| 3.1.1 Regional inequalities in Wales and the UK | <p>Learners should know what is meant by inequality.</p> <p>Learners should know the patterns of inequalities in Wales and the UK, such as those seen in:</p> <ul style="list-style-type: none"> • education • employment • investment • race • religion • rural and urban locations • services (such as broadband connectivity, mobile signal). |

| | |
|---|---|
| | <p>Learners should understand:</p> <ul style="list-style-type: none"> the physical and human causes of inequalities in Wales and the UK, including: <ul style="list-style-type: none"> access to housing and services demographic characteristics industrialisation location, landscape and resources transport and communications how the above causes of inequality are often inter-linked, and that they can be seen in positive and negative lights the consequences of inequality in the UK, including: <ul style="list-style-type: none"> differing perceptions of inequality amongst different groups of people regional variations in wealth, employment, school performance and access to housing and services segregation and its associated benefits and problems, including ethnic enclaves the impacts of inequality on different groups, including Black, Asian and minority ethnic individuals how governments in Wales and the UK attempt to reduce regional inequalities, such as: <ul style="list-style-type: none"> infrastructure projects improving housing and services creating employment education & public awareness race relations initiatives. |
| <p>3.1.2 Measuring development to classify countries</p> | <p>Learners should be aware of a range of indicators used to represent social and economic development, such as:</p> <ul style="list-style-type: none"> balance of trade calorie intake employment sectors Gross Domestic Product (GDP) Human Development Index (HDI) income levels literacy rate Purchasing Power Parity (PPP) urban population. <p>Learners should know the classification of countries in terms of development and a development continuum.</p> <p>Learners should understand the advantages and disadvantages of the ways to classify countries, for example the use of High Income Country (HIC), Middle Income Country (MIC) and Low Income Country (LIC) by the World Bank.</p> |

| | |
|---|---|
| <p>3.1.3 The development gap</p> | <p>Learners should know what is meant by the term development gap.</p> <p>Learners should understand the physical and human causes of the development gap, including:</p> <ul style="list-style-type: none">• colonialism• demographic characteristics• geographical location• globalisation• industrialisation• natural resources• urbanisation. |
| <p>3.1.4 Reducing the development gap</p> | <p>Learners should understand:</p> <ul style="list-style-type: none">• how governments and other agencies are aiming to close the development gap including:<ul style="list-style-type: none">• aid• fair trade• Multi-National Companies (MNCs)• tourism• the success and sustainability of strategies to close the development gap. |

3.2 The highs and lows of our weather

In this topic learners will gain knowledge, understanding and skills in the following areas:

- 3.2.1 Weather and climate
- 3.2.2 Factors affecting temperature
- 3.2.3 Factors affecting rainfall
- 3.2.4 Global atmospheric circulation
- 3.2.5 Low pressure weather systems – depressions
- 3.2.6 High pressure weather systems – anticyclones

This topic will cover the concepts of place and space, scale, process, continuity and change, environment and interpretation.

| Section | Amplification |
|---|--|
| 3.2.1 Weather and climate | Learners should know: <ul style="list-style-type: none"> the difference between weather and climate how the temperature and precipitation of Wales varies spatially and temporally the climate of Wales. |
| 3.2.2 Factors affecting temperature | Learners should understand the factors that affect temperature patterns of Wales, including: <ul style="list-style-type: none"> air masses altitude aspect latitude ocean currents prevailing winds. |
| 3.2.3 Factors affecting rainfall | Learners should understand the three types of rainfall formation: <ul style="list-style-type: none"> convictional frontal relief. |
| 3.2.4 Global atmospheric circulation | Learners should understand the causes of high and low pressure on the earth's surface, including precipitation trends and seasonal changes: <ul style="list-style-type: none"> low pressure (equatorial low) at the equator leading to convectional rainfall high pressure (sub-tropical high) where the Hadley and Ferrel cells meet leading to arid conditions low pressure (temperate low) where Ferrel and Polar cells meet, causing depressions moving from west to east across Wales and the UK influence of axial tilt on global climate. |

| | |
|--|---|
| <p>3.2.5 Low pressure weather systems – depressions</p> | <p>Learners should understand:</p> <ul style="list-style-type: none"> the effect on weather from low pressure systems (depressions) in Wales and the UK the weather conditions brought by depressions how weather changes over time and space as the depression moves from west to east across Wales and the UK, including: <ul style="list-style-type: none"> air pressure cloud cover and type precipitation frequency and intensity temperature wind speed and direction. |
| <p>3.2.6 High pressure weather systems – anticyclones</p> | <p>Learners should understand:</p> <ul style="list-style-type: none"> the effect on weather from high pressure systems (anticyclones) in Wales and the UK the difference between summer and winter anticyclones, including: <ul style="list-style-type: none"> air pressure cloud cover precipitation temperature wind speed and direction. |

3.3 Wild weather

In this topic learners will gain knowledge, understanding and skills in the following areas:

3.3.1 Global hazards caused by extreme low pressure

3.3.2 Global hazards caused by extreme high pressure

This topic will cover the concepts of scale, process, diversity, environment and interpretation.

| Section | Amplification |
|--|---|
| 3.3.1 Global hazards caused by extreme low pressure | Learners should understand: <ul style="list-style-type: none"> the causes (physical and human) impacts (social, economic and environmental) responses (emergency and future mitigation) the sustainability of responses of a specific global extreme low pressure weather event. |
| 3.3.2 Global hazards caused by extreme high pressure | Learners should understand: <ul style="list-style-type: none"> the causes (physical and human) impacts (social, economic and environmental) responses (emergency and future mitigation) the sustainability of responses of a specific global extreme high pressure weather event. |

3.4 Continual climate change

In this topic learners will gain knowledge, understanding and skills in the following areas:

- 3.4.1 Natural causes of climate change
- 3.4.2 Human causes of recent climate change
- 3.4.3 Evidence that our climate is changing
- 3.4.4 Consequences of climate change

This topic will cover the concepts of scale, process, continuity and change, inter-relationships, diversity, environment and interpretation.

| Section | Amplification |
|---|--|
| 3.4.1 Natural causes of climate change | <p>Learners should understand:</p> <ul style="list-style-type: none"> the natural causes of climate change (warming and cooling) over a range of timescales including: <ul style="list-style-type: none"> Milankovitch cycles sunspots volcanic eruptions. <p>Learners should know how the current climate compares to previous glacials and interglacials in the Quaternary Period.</p> |
| 3.4.2 Human causes of recent climate change | <p>Learners should know which greenhouse gases are found in the earth's atmosphere and how the natural greenhouse effect works.</p> <p>Learners should understand how human activity can increase greenhouse gas emissions and cause an enhanced greenhouse effect, including:</p> <ul style="list-style-type: none"> carbon dioxide: <ul style="list-style-type: none"> burning fossil fuels deforestation methane: <ul style="list-style-type: none"> farming waste decomposition nitrous oxide, including industrialisation. |
| 3.4.3 Evidence that our climate is changing | <p>Learners should understand evidence that shows our climate is changing, including:</p> <ul style="list-style-type: none"> long term evidence: <ul style="list-style-type: none"> ice core data short term evidence: <ul style="list-style-type: none"> changes to tree rings (dendrochronology) Intergovernmental Panel on Climate Change (IPCC)/NASA indicators of a warming world Keeling curve retreating glaciers, ice caps and sea ice sea level rise. |

3.4.4**Consequences of climate change**

Learners should understand the impacts of changing climate globally.

Learners should know the impacts of the changing climate on people and the environment in two contrasting places, such as:

- two countries at different stages of the development continuum
- an island country compared to a continental country
- a country with a coastline compared to a landlocked country
- two regions within the same country.

3.5 Managing global challenges

In this topic learners will gain knowledge, understanding and skills in the following areas:

3.5.1 Managing climate change

3.5.2 Managing threats to our oceans

This topic will cover the concepts of place and space, scale, process, continuity and change, inter-relationships, diversity, environment and interpretation.

| Section | Amplification |
|--|--|
| 3.5.1 Managing climate change | <p>Learners should understand:</p> <ul style="list-style-type: none"> • how people at a range of scales (local, national and global) are managing the physical and human impacts of climate change • the sustainability of management approaches. |
| 3.5.2 Managing threats to our oceans | <p>Learners should know about the large and small-scale physical and human threats to the biodiversity of our oceans from:</p> <ul style="list-style-type: none"> • climate change • plastics and pollution. <p>Learners should understand:</p> <ul style="list-style-type: none"> • different ways to manage threats to our oceans at a range of scales (local, national and global) • the sustainability of management approaches. |

Unit 4

Sustainable Solutions

Non-examination assessment – Decision making exercise

Set by WJEC, marked by centre and moderated by WJEC

15% of qualification

60 marks

Overview of unit

The purpose of this unit is to:

- explore current geographical issues and sustainable futures
- introduce the three pillars of sustainability and sustainability goals, based on taking action
- increase problem solving skills.

Learners should also develop their mathematical and statistical skills whilst preparing for this Unit. The depth of coverage required of these skills is given in Appendix B on pages 44-45 of the specification.

Areas of content

4.1 The concept of sustainability

In this topic learners will gain knowledge, understanding and skills in the following areas:

4.1.1 Developing ideas of sustainability

4.1.2 The three pillars of sustainability

4.1.3 Sustainability goals

This topic will cover the concepts of place and space, inter-relationships, environment and interpretation.

| Section | Amplification |
|--|---|
| 4.1.1 Developing ideas of sustainability | Learners should know a definition of sustainability. Learners should understand the importance of seeking sustainable solutions. |
| 4.1.2 The three pillars of sustainability | Learners should understand the three pillars of sustainability: <ul style="list-style-type: none"> • economic • environmental • social. |
| 4.1.3 Sustainability goals | Learners should understand: <ul style="list-style-type: none"> • the 17 United Nations' Sustainable Development Goals (SDGs) • how the goals relate to the seven well-being goals in the Well-being of Future Generations Act (Wales) 2015 • how the goals relate to the three pillars of sustainability • how the goals can contribute to sustainable solutions. |

4.2 Making sustainable decisions

In this topic learners will gain knowledge, understanding and skills in the following areas:

- 4.2.1 The skills of decision making
- 4.2.2 Using evidence to identify issues
- 4.2.3 Potential benefits of proposed solutions
- 4.2.4 Potential negative impacts of proposed solutions
- 4.2.5 Sustainability impact assessment

This topic will cover the concepts of place and space, scale, process, inter-relationships, diversity, environment and interpretation.

| Section | Amplification |
|---|---|
| 4.2.1 The skills of decision making | Learners should be able to use the following skills when undertaking decision making: <ul style="list-style-type: none"> • cartographic, graphical, numerical and statistical skills • communication skills • evaluative skills • interpretative skills • problem-solving skills • referencing skills. |
| 4.2.2 Using evidence to identify issues | Learners should be able to use and research evidence to identify geographical issues by: <ul style="list-style-type: none"> • identifying key information within sources and supporting materials • researching appropriate information • synthesising the information to clearly identify the issue • referencing the researched information • recognising misleading or invalid information, including bias and vested interest. |
| 4.2.3 Potential benefits of proposed options | Learners should be able to consider the potential benefits of proposed options for: <ul style="list-style-type: none"> • society (including human rights and diversity) • the economy • the environment. |
| 4.2.4 Potential negative impacts of proposed options | Learners should be able to consider the potential negative impacts of proposed options for: <ul style="list-style-type: none"> • society (including human rights and diversity) • the economy • the environment. |
| 4.2.5 Sustainability impact assessment | Learners should be able to: <ul style="list-style-type: none"> • undertake a sustainability impact assessment of proposed options • explain why some options or ideas may have been rejected • reach a decision based on the sustainability impact assessment of the best potential option. |

Opportunities for integration of learning experiences

GCSE Geography generates opportunities for the following learning experiences to be developed (experiences will not be directly assessed):

- make appropriate use of digital technology when completing the qualification, for example through accessing satellite images and digital maps
- develop empathy, tolerance, compassion and curiosity, through studying different geographical contexts
- participate in educational visits (other than fieldwork) in person or digitally
- engage in collaborative working

The Guidance for Teaching will include further information on the opportunities provided by the qualification for teachers/centres to integrate these learning experiences and skills into delivery.

For opportunities to develop cross-cutting themes, cross-curricular skills and integral skills please see Appendix A.

3 ASSESSMENT

The Assessment Pack will include all detailed information relating to assessment.

3.1 Assessment objectives and weightings

Below are the assessment objectives for this specification. Learners must:

AO1

Demonstrate knowledge and understanding of places, people, environments and processes at a variety of scales

AO2

Apply knowledge and understanding of geographical terms, skills and concepts to different contexts

AO3

Analyse, evaluate, or make judgements from a variety of sources, synthesising where appropriate

AO4

Select, use and apply skills and techniques in practice used by geographers to support geographical enquiry

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

| | AO1 | AO2 | AO3 | AO4 | Total |
|-------------------|------------|------------|------------|------------|--------------|
| Unit 1 | 15% | 10% | 5% | - | 30% |
| Unit 2 | - | 5% | 5% | 15% | 25% |
| Unit 3 | 10% | 10% | 10% | - | 30% |
| Unit 4 | - | 5% | 5% | 5% | 15% |
| Overall weighting | 25% | 30% | 25% | 20% | 100% |

3.2 Arrangements for non-examination assessment

Unit 2: Overview

For this assessment learners are required to undertake a fieldwork enquiry following the six-stage enquiry process.

The assignment, which includes several tasks, will be issued to centres in an Assessment Pack via the WJEC Portal. Tasks are not intended to change for the lifetime of the qualification. The two selected themes will change annually. Centres can select **one** of the two themes. The themes are published in the Assessment Pack for Unit 2 for five years. This will be updated to ensure there are always five years' worth of themes to allow for forward planning. Centres have the flexibility to decide when during the year learners undertake the assignment. However, it is important that centres select the topic from the year that they plan to submit the work for marking as this may be different to the year that the candidates undertake the assessment. If candidates choose to resit this unit at a later date, they must undertake a fieldwork enquiry for one of themes selected for the academic year they are submitting.

This assessment contributes to 25% of the overall qualification grade and will take 7 hours for candidates to complete the tasks (this does not include the time it takes to undertake the fieldwork). The tasks will be marked out of a total of 90 marks.

This unit will be assessed through an externally set assignment and will be set and marked by WJEC. Assessments must be submitted digitally (they may be handwritten and scanned, or completed digitally).

Centres will be expected to carry out fieldwork for the Unit 2 enquiry on one day, outside the classroom and school grounds. This must be accompanied by a fieldwork statement, signed by the Head of Centre, outlining the date, location and nature of the fieldwork conducted. Centres are encouraged to undertake further fieldwork during the course, either to support learning or to practice for the Unit 2 enquiry, however this is not required to be declared on the fieldwork statement.

Unit 4: Overview

For this assessment learners are required to undertake a decision making exercise based on a Resource Pack that contains sustainable issues with a number of possible options. In Phase 1 of the decision making, candidates will need to research the issue beyond the Resource Pack. Candidates should then produce a maximum of two sides of A4 notes to be used during the assessment. These notes will be submitted alongside the response to the tasks.

The assignment, including the Resource Pack, will be released during the first week of September for assessment in that academic year. The Resource Pack will change annually. Learners should not have access to the Resource Pack until the start of the assessment. Centres have the flexibility to decide when during the year learners undertake the assignment.

This assessment contributes to 15% of the overall qualification grade and will take 6 hours to complete. The assignment could be completed in one sitting, or in multiple, shorter sessions. The assignment will be marked out of a total of 60 marks.

This unit will be assessed through an externally set assignment and will be marked by the centre and moderated by WJEC. Assessments must be submitted digitally (they may be handwritten and scanned, or completed digitally).

4 MALPRACTICE

Before the course starts, the teacher is responsible for informing candidates of WJEC's regulations concerning malpractice. Candidates must not take part in any unfair practice in the preparation of work for GCSE Geography.

Information regarding malpractice is available in our [Guide to preventing, reporting and investigating malpractice](#).

All cases of suspected or actual malpractice must be reported immediately to WJEC (malpractice@wjec.co.uk). If candidates commit malpractice, they may be penalised or disqualified from the examinations.

In all cases of malpractice, centres are advised to consult the JCQ booklet [Suspected Malpractice: Policies and Procedures](#).

5 TECHNICAL INFORMATION

5.1 Making entries

This is a unitised qualification. Candidates are entered for each unit separately.

Assessment opportunities will be available in the summer series each year, until the end of the life of the specification.

Unit 1, Unit 2 and Unit 3 will be available in 2026 (and each year thereafter). Unit 4 will be available in 2027 (and each year thereafter) and the qualification will be awarded for the first time in summer 2027.

The terminal rule is set at 40% of the overall qualification for GCSE Geography. If the assessment being re-taken contributes to the 40% terminal rule requirement, the mark for the new assessment will count regardless of previous results in that assessment.

Pre-16 Candidates (i.e. candidates who are under 16 on 31st August in the year in which they were entered)

Candidates may resit an individual unit once only. The better uniform mark score from the two attempts will be used in calculating the final overall grade subject to the terminal rule being satisfied first, i.e. that candidates must complete 40% of the assessment for a qualification in the series in which they are cashing in.

If any unit has been attempted twice and a candidate wishes to enter the unit for the third time, the candidate will have to re-enter all units and the appropriate cash-in(s). This is referred to as a 'fresh start'. When retaking a qualification (fresh start), a candidate may have up to two attempts at each unit. However, no results from units taken prior to the fresh start can be used in aggregating the new grade(s).

If a candidate has been entered for but is absent for a unit, the absence does not count as an attempt. The candidate would, however, qualify as a resit candidate.

Marks for non-examination assessment may be carried forward for the life of the specification.

Post-16 Candidates (i.e. candidates who are 16 or over on 1st September in the year in which they are entered)

There is no limit on the number of times a candidate can resit an individual unit; however, the better uniform mark score from the most two recent attempts will be used in calculating the final overall grade subject to the terminal rule being satisfied first i.e. that candidates must complete 40% of the assessment for a qualification in the series in which they are cashing in.

The 'fresh start' rule does not apply to post-16 candidates.

If a candidate has been entered for but is absent for a unit, the absence does not count as an attempt. The candidate would, however, qualify as a resit candidate.

Marks for non-examination assessment may be carried forward for the life of the specification.

The entry codes appear below:

| | | Entry codes | |
|----------------------------|-------------------------------|----------------|--------------|
| | | English medium | Welsh medium |
| Unit 1 | Our Physical and Human World | 3140U1 | 3140N1 |
| Unit 2 | Developing Fieldwork Skills | 3140U2 | 3140N2 |
| Unit 3 | Our Dynamic and Diverse World | 3140U3 | 3140N3 |
| Unit 4 | Sustainable Solutions | 3140U4 | 3140N4 |
| WJEC GCSE Geography | | 3140QS | 3140CS |

5.2 Grading, awarding and reporting

GCSE qualifications are reported on an eight point scale from A*-G, where A* is the highest grade. Results not attaining the minimum standard for the award will be reported as U (unclassified).

Individual unit results are reported on a uniform mark scale (UMS) with the following grade equivalences:

| | MAX. | A* | A | B | C | D | E | F | G |
|----------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| Unit 1 | 180 | 162 | 144 | 126 | 108 | 90 | 72 | 54 | 36 |
| Unit 2 | 150 | 135 | 120 | 105 | 90 | 75 | 60 | 45 | 30 |
| Unit 3 | 180 | 162 | 144 | 126 | 108 | 90 | 72 | 54 | 36 |
| Unit 4 | 90 | 81 | 72 | 63 | 54 | 45 | 36 | 27 | 18 |
| Subject Award | 600 | 540 | 480 | 420 | 360 | 300 | 240 | 180 | 120 |

Appendix A: Opportunities for embedding elements of the Curriculum for Wales

| Curriculum for Wales Strands | Unit 1 | Unit 2 | Unit 3 | Unit 4 |
|---|--------|--------|--------|--------|
| Cross-cutting Themes | | | | |
| Local, National & International Contexts | ✓ | ✓ | ✓ | ✓ |
| Sustainability aspect of Local, National & International Contexts | ✓ | ✓ | ✓ | ✓ |
| Relationships and Sexuality Education | ✓ | ✓ | ✓ | ✓ |
| Human Rights | ✓ | ✓ | ✓ | ✓ |
| Diversity | ✓ | ✓ | ✓ | ✓ |
| Careers and Work-Related Experiences | ✓ | ✓ | ✓ | ✓ |
| Cross-curricular Skills - Literacy | | | | |
| Listening | ✓ | ✓ | ✓ | ✓ |
| Reading | ✓ | ✓ | ✓ | ✓ |
| Speaking | ✓ | ✓ | ✓ | ✓ |

| Curriculum for Wales Strands | Unit 1 | Unit 2 | Unit 3 | Unit 4 |
|--|--------|--------|--------|--------|
| Writing | ✓ | ✓ | ✓ | ✓ |
| Cross-curricular Skills - Numeracy | | | | |
| Developing Mathematical Proficiency | ✓ | ✓ | ✓ | ✓ |
| Understanding the number system helps us to represent and compare relationships between numbers and quantities | ✓ | ✓ | ✓ | ✓ |
| Learning about geometry helps us understand shape, space and position and learning about measurement helps us quantify in the real world | ✓ | ✓ | ✓ | ✓ |
| Learning that statistics represent data and that probability models chance help us make informed inferences and decisions | ✓ | ✓ | ✓ | ✓ |

| Curriculum for Wales Strands | Unit 1 | Unit 2 | Unit 3 | Unit 4 |
|---------------------------------------|--------|--------|--------|--------|
| Digital Competence | | | | |
| Citizenship | | ✓ | | ✓ |
| Interacting and Collaborating | | ✓ | | |
| Producing | | ✓ | | ✓ |
| Data and Computational Thinking | ✓ | ✓ | ✓ | ✓ |
| Integral Skills | | | | |
| Creativity and Innovation | ✓ | ✓ | ✓ | ✓ |
| Critical Thinking and Problem Solving | ✓ | ✓ | ✓ | ✓ |
| Planning and Organisation | | ✓ | | ✓ |
| Personal Effectiveness | ✓ | ✓ | ✓ | ✓ |

Appendix B: Use of mathematics and statistics in geography

The list below will support you in covering an appropriate range of skills in your teaching of the specification.

Examples (in italics) are to aid understanding and suggest range.

| Types of skills | Specific techniques |
|---|---|
| Numerical and statistical skills 1 Numerical skills 1.1 Demonstrate an understanding of number, area and scale and the quantitative relationships between units. 1.2 Design fieldwork data collection sheets and collect data with an understanding of accuracy, sample size and procedures, control groups and reliability. 1.3 Understand and correctly use proportion and ratio. 1.4 Draw informed conclusions from numerical data. 2 Statistical skills 2.1 Use appropriate measures of central tendency, spread and cumulative frequency. 2.2 Calculate percentage increase or decrease and understand the use of percentiles. 2.3 Use data for classification. 2.4 Describe relationships in bivariate data. 2.5 Identify weaknesses in selective statistical presentation of data. | <i>Calculate distance from maps using the scale line and estimate area. Use quantitative statements when describing relationships revealed by tables of data or graphs.</i> Sample using random, systematic, opportunistic and/or stratified techniques. Use fieldwork equipment to obtain accurate and reliable results (<i>for example, the use of clinometer or quadrats</i>). Make sketch maps and field sketches to present and interpret data. <i>For example, 1:200 year flood events.</i> <i>Use tables of data to draw evidenced conclusions about spatial or temporal patterns (for example, census data from Office of National Statistics).</i> Median, mean, range, quartiles and inter-quartile range, mode and modal class. <i>For example, calculate percentage increase/decrease in population from a line graph or table of data.</i> Using development statistics to classify countries at different levels of development. 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. <i>Identify limitations (for example, in the interpretation of a scatter graph).</i> |

| Types of skills that must be developed | Specific techniques |
|---|---|
| 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. 3.2 Interpret cross sections and transects. 3.3 Use and understand coordinates, scale and distance. 3.4 Describe and interpret geo-spatial data presented in a GIS framework. 4 Graphical skills 4.1 Select and construct appropriate graphs and charts to present data, using appropriate scales. 4.2 Interpret and extract information from different types of graphs. Interpret different graphs to identify patterns and trends. 4.3 Interpret choropleth maps and flow-line maps. | <p>Interpret atlas maps at different scales, topological maps, OS maps at 1:50,000 and 1:25,000 scales, isoline maps (<i>for example, weather charts, ocean bathymetric charts</i>), maps with proportional symbols, weather (synoptic) charts.</p> <p>Interpret cross sections (<i>for example, that show relief</i>) and transects (<i>for example, through the zones of a sand dune or across an eroded footpath</i>).</p> <p>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).</p> <p>Describe location, distribution and other spatial patterns as shown on a digital image, photograph or a screen shot from a GIS (<i>for example, Office of National Statistics or analysis of flood hazard using the interactive maps on the Natural Resources Wales website</i>).</p> <p>Bar and line/multiple line charts (to include climate graphs and hydrographs), infographics, pie charts, dispersion graphs and scatter graphs.</p> <p><i>See the techniques listed above for 4.1, in addition to pictograms, histograms with equal class intervals, star and radial graphs, kite diagrams and triangular graphs.</i></p> <p>Choropleth maps (<i>for example, those showing variations in economic development</i>) Flow-line maps with proportional arrows (<i>for example, showing migration, tourism or traffic flows</i>).</p> |