

# IGCSE

## Geography

### Teacher's guide

## Edexcel IGCSE in Geography (4GE0)

First examination 2011

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### *Acknowledgements*

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## Introduction

The Edexcel International General Certificate of Secondary Education (IGCSE) in Geography is designed for schools and colleges. It is part of a suite of IGCSE qualifications offered by Edexcel.

## About this guide

This guide is for teachers who are delivering, or planning to deliver, the Edexcel IGCSE in Geography qualification. The guide supports you in delivering the course content and explains how to raise the achievement of your students. The guide gives you:

- an example course planner
- examples of how to deliver out-of-classroom learning
- a glossary of geographical terms for each topic
- suggestions for textbooks and other resources.



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# Why choose this qualification?

The Edexcel IGCSE in Geography:

- adds an international dimension to studying geography
- encourages the use of out-of-classroom activities to underpin knowledge and understanding
- is assessed through one external examination
- provides a solid basis for progression to GCE AS and Advanced qualifications in Geography, or equivalent qualifications such as BTEC Nationals in Travel and Tourism and land-based subjects
- merges the legacy Edexcel IGCSE in Geography (4370) and the Edexcel O Level in Geography (7209).

Visit [www.edexcel.com/igcse2009](http://www.edexcel.com/igcse2009) for more information about this IGCSE and related resources.

## Support from Edexcel

We are dedicated to giving you exceptional customer service. Details of our main support services are given below. They will all help you to keep up to date with IGCSE 2009.

### Website

Our dedicated microsite [www.edexcel.com/igcse2009](http://www.edexcel.com/igcse2009) is where you will find the resources and information you need to successfully deliver IGCSE qualifications. To stay ahead of all the latest developments visit the microsite and sign up for our email alerts.

### Ask Edexcel

Ask Edexcel is our free, comprehensive online enquiry service. Use Ask Edexcel to get the answer to your queries about the administration of all Edexcel qualifications. To ask a question please go to [www.edexcel.com/ask](http://www.edexcel.com/ask) and fill out the online form.

### Ask the Expert

This free service puts teachers in direct contact with over 200 senior examiners, moderators and external verifiers who will respond to subject-specific queries about IGCSE 2009 and other Edexcel qualifications.

You can contact our experts via email or by completing our online form. Visit [www.edexcel.com/asktheexpert](http://www.edexcel.com/asktheexpert) for contact details.

### Regional offices

If you have any queries about the IGCSE 2009 qualifications, or if you are interested in offering other Edexcel qualifications your Regional Development Manager can help you. Go to [www.edexcel.com/international](http://www.edexcel.com/international) for details of our regional offices.

### Head Office – London

If you have a question about IGCSE 2009 and are not sure who you need to ask email us on [IGCSE2009@edexcel.com](mailto:IGCSE2009@edexcel.com) or call our Customer Services Team on +44 (0) 1204770696.

### Training

A programme of professional development and training courses, covering various aspects of the specification and examination is available. Go to [www.edexcel.com](http://www.edexcel.com) for details.



# Section A: Qualification content

## Introduction

### Key subject aims

- To actively engage students in the study of geography, developing them as effective and independent students and as critical and reflective thinkers with enquiring minds.
- To develop a knowledge and understanding of geographical concepts and an appreciation of the relevance of these concepts to our changing world.
- To develop an appreciation of the differences and similarities between people's views, environments, societies and cultures.
- To further students' understanding of their responsibilities as global citizens and of how they can contribute to a future that is sustainable and inclusive.
- To enable students to develop and apply their learning to the real world through fieldwork and other out-of-classroom activities.
- To enable students to use geographical skills, appropriate technologies, enquiry and analysis.

### Unique features and benefits of the qualification

- Adds an international dimension to studying geography.
- Encourages out-of-classroom activities to underpin knowledge and understanding.

### Assessment and progression

- Single tier examination.
- Grades A\* to G.
- Provides a solid basis for progression to GCE AS and Advanced qualifications in Geography, or equivalent qualifications such as BTEC Nationals in Travel and Tourism and land-based subjects.

### Information for Edexcel centres

This qualification has evolved from the legacy Edexcel IGCSE Geography (4370) and the Edexcel O Level Geography (7209) qualifications. It combines the best of these two qualifications and introduces recent changes in both the world and in the teaching of geography. This Teacher's guide will help you in moving from the legacy qualifications to this IGCSE.

## Differences in content between the Edexcel IGCSE Geography (4370) and the Edexcel O Level (7209) to this qualification

The table below sets out the new topic titles and content in this qualification.

Topic	New title	New content
1	River environments	Weathering and mass movements. Water demand, supply and quality.
2	Coastal environments	Weathering, mass movement and rock type. Coastal ecosystems and biodiversity (coral reefs and mangroves).
3	Hazardous environments	Weather measurement and recording.
4	Economic activity and energy	
5	Ecosystems and rural environments	Temperate grassland biome and chernozem soils. Agriculture. Rural settlements. National parks.
6	Urban environments	
7	Fragile environments	Soil erosion (wind) and desertification.
8	Globalisation and migration	
9	Development and human welfare	

### Changes from Edexcel IGCSE (4370) to this qualification

- There are no longer any compulsory topics. There is a greater choice of topics to study and greater question choice in the examination. Centres can now teach five rather than seven topics and students answer five rather than seven questions in the examination. This has reduced the assessment burden from the current IGCSE examination papers.
- There is now a single common examination paper (Paper 1). There will be no tiered entry. All questions now carry 30 marks and are of equal length.
- *Migration* and *Development* have been moved to optional *Section C – Global issues*, and integrated with *Globalisation* and *Human welfare* respectively.
- *Coastal environments*, *Ecosystems and Rural environments* are new topics. The latter contains the agricultural aspects of *Production*, the rest of which has been renamed *Economic activity and energy*.
- Fieldwork and geographical skills are no longer assessed separately. These aspects will now be assessed within the examination for Paper 1. Fieldwork opportunities have been identified within the Section A and B content.
- Coursework has been removed but fieldwork remains and now includes virtual fieldwork.
- The latest World Bank economic classification of countries has been used. These are HIC – High income country, MIC – Medium income country, LIC – Low income country.

## Changes from Edexcel O Level (7209) to this qualification

- There is now a more selective approach to physical and human geography, through the study of five specific topics.
- There is greater prescription as to the required teaching and learning content.
- There is now a single common examination paper (Paper 1). There will be no tiered entry. All questions now carry 30 marks and are of equal length.
- There is no longer the need to teach some full topics, such as the whole of *Geomorphology*, *Vegetation and Soils*, *Hydrology*, *Meteorology and Climate*.
- Coursework has been removed but fieldwork remains and now includes virtual fieldwork.
- There are more specified fieldwork opportunities available.
- The latest World Bank economic classification of countries has been used. These are HIC – High income country, MIC – Medium income country, LIC – Low income country.

Although considerable efforts were made to accommodate our current O Level (7209) provision, we do appreciate that the changes brought by this new specification are greater for these centres than for existing IGCSE (4370) centres. No O Level topic has completely disappeared – topics have been scattered around the nine topics in the new specification, some only in part. The table on page 4 indicates where O Level content not covered in the current IGCSE has been placed within the nine topics of the new specification.

## Information for centres starting the Edexcel IGCSE for the first time

- New centres should find the contemporary content and global futures strand, combined with a high degree of guidance, support and focus, and a single examination paper, attractive.
- The examination paper is untiered so students, and centres, will find it easier to manage. All questions have equal weighting and each one carries 30 marks.
- Coursework has been removed but fieldwork remains and now includes virtual fieldwork.
- The latest World Bank economic classification of countries has been used. These are HIC – High income country, MIC – Medium income country, LIC – Low income country.



## Section B: Assessment

### Assessment overview

The table below gives you an overview of the assessment for this course.

We recommend that you make this information available to students to help ensure they are fully prepared and know exactly what to expect in each assessment.

Paper	Percentage	Marks	Time	Availability
Paper 1 (4GE0/01)	100	150	2 hours and 45 minutes	June First assessment: June 2011

### Assessment Objectives (AO) and weightings

	% in IGCSE
AO1: recall, select, and communicate their knowledge and understanding of places, environments and concepts	30-40%
AO2: apply their knowledge and understanding in familiar and unfamiliar contexts	30-40%
AO3: select and use a variety of skills, techniques and technologies to investigate, analyse and evaluate questions and issues	30-40%
<b>TOTAL</b>	<b>100%</b>

### Assessment summary

Paper	Description	Knowledge and skills
Paper 1 (4GE0/01)	<p>The single tier exam paper will contain a variety of question types, such as multiple choice, short and extended answers, graphical and data questions and fieldwork questions.</p> <p>The paper will be a question and answer booklet and students have to answer:</p> <ul style="list-style-type: none"> <li>two questions from a choice of three in Section A</li> <li>two questions from a choice of three in Section B</li> <li>one question from a choice of three in Section C.</li> </ul> <p>Each question is worth 30 marks.</p> <p>All questions can be compared with each other, to ensure that all students have the same assessment experience – whichever combination they choose.</p>	<p>Students will need to be able to demonstrate knowledge and understanding of two of the topics in Section A, two of the topics in Section B and one of the topics in Section C. Students will also need to demonstrate the skills listed in the specification in order to succeed in the examination.</p>

## Examination questions

These will not be radically different in style to the existing international written question papers, especially as in recent years the O Level (7209) papers have become more accessible. The paper for this qualification will accommodate the full ability range and will include a variety of question types from short answer to extended writing. All questions will open with stimulus material, and early tasks within questions will involve direct responses. Questions will be structured with an incline of difficulty. Differentiation of ability will be largely through outcome. Each question will end with a nine-mark task requiring an extended-writing answer.

Nine questions will be set on each paper, one per specification topic. Students will answer five questions in 2 hours and 45 minutes, allowing approximately 30 minutes for each chosen question to be answered. Each question will have a 30-mark maximum.

## Using the mark scheme

The mark scheme gives the responses we are expecting from students. Indicative answers are provided but, during the examiner standardisation process, the mark scheme is expanded to take account of unexpected, but correct, student responses.

The examination will follow the same format as the sample assessment materials. Within the mark scheme two types of marking strategy will be used: points marking and levels marking.

### 1. Points marking

Students are credited for each valid point they make. The wording of the question is used to determine the validity of the points made. It is most likely to be used where students are instructed to 'define', 'describe', 'identify', 'label' or 'complete' a table.

Students are advised to adhere strictly to these command or action words when giving their answers.

### 2. Levels marking

This is used where questions require explanation rather than description. For example, a question requiring 'reasons for' would not get full marks if only one reason is given in depth, some breadth would be needed. The mark scheme identifies the distinctive features of the different levels of attainment. Not all points mentioned for each level need to be met for an answer to start scoring at that level. Students can achieve a score through either the depth or breadth of their answer. Three levels of response will be used to mark the nine-mark final question parts. Movement through the levels should involve a 'gear shift' in the quality of the work.

**The answers suggested in the mark scheme are for guidance only.** In many cases, it will be possible for students to offer valid, plausible alternatives. Examiners must use their professional judgement to decide whether a given answer is acceptable. If in doubt, the examiner will refer the 'answer' (ie valid, plausible alternatives) to either the team leader or chief examiner.

Where appropriate, annotated diagrams are acceptable as a substitute for text and can gain full marks if they meet the requirements of the mark scheme.

Other criteria for success include:

- the use of geographical language. Students should be encouraged to use appropriate technical terms, including those not stated in the specification
- full reasons, not merely stated factors, of processes developed into an explained mechanism.

Students will need to be familiar with a range of diagrammatic presentational techniques, for example dot maps, choropleths, bar charts, scattergraphs.

## Section C: Planning and teaching

### Course planner

The content of the specification is both conceptual and issues based, and is divided into:

- two *traditional sections* of approximately equal size, each sub-divided into three topics that build on three key ideas
- a *global issues section* that addresses three issues of the modern world. Each issue is presented as a topic focusing on a single key idea.

This last section will help you to put together a course that covers at least 13 of the 21 key ideas. Students need to study at least four of the topics in the two traditional sections, and at least one of the global issues topics.

It is important to remember that some teaching time should be set aside for related practical skills development and out-of-classroom learning activities. Please refer to the final column of the topic content tables in the specification for more information on the out-of-classroom learning activities.

The qualification is designed to be delivered as a two-year programme. In terms of teaching, there is no reason why all the five topics covered should not receive approximately equal treatment. One term could be allocated to teaching each topic if:

- the whole course is to be covered over five terms, with the short sixth term used for revision
- there will be at least one-and-a-half hours of lessons and one piece of homework per week.

Teaching more than five topics may ensure a greater and more balanced, awareness and understanding of the unifying concept of sustainability, and would give students more question choice in the examination. This will obviously impact on the 'topic-a-term' plan described above.

The above plan may not suit all centres or all students – you can adapt the guidance to suit the needs of your students and your centre.

## Teaching programme

Two possible ways of organising the teaching programme are given below.

- Using a linear approach** (for example following the order set out in the specification document or similar.)

Term	Content	Examples
Year 1 Term 1	Section A – The natural environment and people First topic	eg Topic 1 – River environments
Year 1 Term 2	Section A – The natural environment and people Second topic	eg Topic 2 – Coastal environments
Year 1 Term 3	Section B – People and their environments First topic	eg Topic 6 – Urban environments
Year 2 Term 1	Section B – People and their environments Second topic	eg Topic 5 – Ecosystems and rural environments
Year 2 Term 2	Section C – Global issues Only one topic required	eg Topic 8 – Globalisation and migration
Year 2 Term 3	Practice and revision	n/a

- Using a linked approach**

It is possible to link much of Section C – *Global issues* to the traditional geographical concepts in Sections A and B.

For example:

- *Topic 4 – Economic activity and energy* and *Topic 8 – Globalisation and migration* have linked aspects
- desertification from *Topic 7 – Fragile environments* could be taught alongside aspects of *Topic 1 – River environments*
- aspects of *Topic 6 – Urban environments* (for example shanty towns) would benefit from coverage of aspects of *Topic 9 – Development and human welfare* (for example local development gaps)
- ecosystems are covered in *Topic 2 – Coastal environments*, *Topic 5 – Ecosystems and rural environments*, and *Topic 7 – Fragile environments*.



## Designing a programme of study

You can design your own teaching programme and scheme of work to cover the required specification content. Avoiding ‘content overload’ is a key consideration. The ‘*essential content*’ column in the specification should help you to avoid this, whilst at the same time encouraging a wide-ranging approach to the subject. Similarly, the ‘*required exemplification*’ column, whilst providing general guidance, also enables you to choose your own case studies (three per topic in Sections A and B four per topic in Section C) to illustrate the essential content. Local case studies and in-depth study are to be encouraged. The content of ‘*out-of-classroom learning and practical skills*’ column is probably best carried out through a combination of actual and virtual (classroom based) fieldwork. Programme design will need to take account of this.

## Teaching ideas

This section gives guidance on the different aspects of geography that need to be delivered and suggests ways of delivering them.

### General geographical information

#### 1. Interrelationships

Physical-human interrelationships will be examined, so students should be prepared to explain both physical influences on human activity, and the human impact on and/or response to the physical environment. The importance of this is reflected in the Section A and B headings.

#### 2. Examples

Students are expected to be able to locate the examples they quote (for example a simple sketch map) and to use their knowledge to support their answers. Case studies should be used to illustrate concepts and themes. The specification identifies 30 case studies (three per topic in Sections A and B and four per topic in Section C) but you can choose your own. Students should specify their choices on the examination paper. Case studies can be used for more than one topic, if appropriate. In studying the required number of topics students will cover 16 case studies.

#### 3. Geographical skills

Practical, geographical skills may be assessed in a specific question. The ‘out-of-classroom learning and practical skills’ column needs to be read in conjunction with page 4 of the specification where a range of geographical skills is listed. Students should be made aware of and practise these skills. The skills needed to interpret Ordnance Survey map extracts and photographic images are part of this list, and you should be aware of this when preparing students for examination.

#### 4. Sustainable development

This encourages students to consider future worlds as well as current issues. The concept of sustainability or durable development is a unifying theme in this qualification. It overarches all nine topics.

Topic 1 – Flood control and water quality

Topic 2 – Coastal biodiversity, coastal protection and conservation

Topic 3 – Hazard impact and response

Topic 4 – Scarce energy and renewability

Topic 5 – Food production and sustainable villages

Topic 6 – Cities for the future (urban planning, shanty towns etc)

Topic 7 – Deforestation, desertification and global warming

Topic 8 – Sustainable tourism, global transport

Topic 9 – Overpopulation, divided world

Students should appreciate that development is not real progress unless resources are used wisely and the environment is not damaged. In teaching this qualification you need to address how the needs of people today can be met without impacting on the needs of future generations

#### 5. Categories of country

The specification adopts the latest World Bank classification.

<b>Classification</b>	<b>Example</b>
High income countries (HIC)	USA, Canada, some countries of the European Union, Japan, Australia, New Zealand
Middle income countries (MIC) (including newly industrialised countries (NIC))	Brazil, Venezuela, Argentina, Libya, Malaysia, Taiwan, South Korea, Mexico, Russia
Low income countries (LIC)	Most of Africa, some of South America
Oil-rich countries	Libya, Kuwait, Venezuela

# Out-of-classroom learning and practical skills

## General

Topics 1 to 6 include opportunities for fieldwork (out-of-classroom investigations.) It is recommended that you carry out a minimum of one fieldwork activity from Section A and one from Section B. For example, if you choose to teach *Topic 1 – River environments* and *Topic 2 – Coastal environments* from Section A, together with *Topic 5 – Ecosystems and rural environments* and *Topic 6 – Urban environments* from Section B, you could incorporate fieldwork on beach measurements and urban land use transects. It is recommended that the remaining six fieldwork opportunities also involve out-of-classroom learning. However, we appreciate that this may be difficult for many centres, and, therefore, these can be virtual fieldwork.

Topics 1 to 6 also identify a range of practical skills. These can be taught as discrete sections or integrated with out-of-classroom investigations.

Please note that questions may be asked about all eight fieldwork opportunities in the examination.

## Exemplifiers for teaching

Example approaches to out-of-classroom learning are given on pages 14 to 17. They indicate virtual fieldwork alternatives for four topics. A number of the practical skills requirements, given in italics, are incorporated in the examples.

## Topic 1 – River environments

### Measuring channel features

Skills	Out-of-classroom learning (fieldwork)	Virtual fieldwork
Planning	<p>Locating the study area (<i>atlas, map and sketching skills, photo-interpretation skills</i>).</p> <p>Designing an investigation:</p> <ul style="list-style-type: none"> <li>stating one or more hypotheses and aims linked to geographical theory</li> <li>deciding the number and type of measurements (to include sampling methods)</li> <li>discussion of health and safety.</li> </ul>	<p>Locating the study area using secondary resources, for example <a href="http://www.georesources.co.uk">www.georesources.co.uk</a> (<i>atlas, map and sketching skills, photo-interpretation skills</i>).</p> <p>Designing an investigation:</p> <ul style="list-style-type: none"> <li>stating one or more hypotheses and aims linked to geographical theory</li> <li>deciding the number and type of measurements (to include sampling methods)</li> <li>discussion of health and safety.</li> </ul>
Field skills	Measuring and recording data, for example velocity, field sketches of the data collection sites ( <i>sketching skills</i> ).	Discussion of methods to measure and record data with reference to secondary data and field sketches of the data collection sites using secondary resources ( <i>sketching skills</i> ).
Graphic skills	Data presentation using a range of graphs, diagrams and annotations ( <i>annotated sketches</i> ).	Secondary data presentation using a range of graphs, diagrams and annotations ( <i>annotated sketches</i> ).
Statistical skills	Undertaking simple tests of the collected data, for example calculating the mean velocity at each site ( <i>statistical tests</i> ).	Undertaking simple tests of the secondary data, for example calculating the mean velocity at each site ( <i>statistical tests</i> ).
Analysis and evaluation skills	Analysing data, drawing conclusions with reference to the aims of the investigation, evaluating the techniques used and the conclusion drawn ( <i>analysis and evaluation skills</i> ).	Analysing the secondary data, drawing conclusions with reference to the aims of the investigation, evaluating the techniques used and the conclusions drawn ( <i>analysis and evaluation skills</i> ).

## Topic 2 – Coastal environments

### Surveying people's views on the management of a pressured coastline

Skills	Out-of classroom learning (fieldwork)	Virtual fieldwork
Planning	<p>Locating the study area (<i>atlas, map and sketching skills, photo-interpretation skills</i>).</p> <p>Designing an investigation:</p> <ul style="list-style-type: none"> <li>stating one or more hypotheses and aims linked to geographical theory</li> <li>deciding the number and type of measurements (to include sampling methods)</li> <li>discussion of health and safety.</li> </ul>	<p>Locating the study area using secondary resources, for example <a href="http://www.unesco.org/csi/pub/papers3/sande.htm">www.unesco.org/csi/pub/papers3/sande.htm</a> (<i>atlas, map and sketching skills, photo-interpretation skills</i>).</p> <p>Designing an investigation:</p> <ul style="list-style-type: none"> <li>stating one or more hypotheses and aims linked to geographical theory</li> <li>deciding the number and type of measurements (to include sampling methods)</li> <li>discussion of health and safety.</li> </ul>
Field skills	Measuring and recording data, use of questionnaire, field sketches of the data collection sites ( <i>sketching skills</i> ).	Discussion of methods to measure and record data and the use of a questionnaire, with reference to secondary data, the use of role play and field sketches of the data collection sites using secondary resources ( <i>sketching skills</i> ).
Graphic skills	Data presentation using a range of graphs, for example bi-polar diagrams and annotated maps, photographs and field sketches ( <i>annotated sketches</i> ).	Secondary data presentation using a range of graphs, for example bi-polar, diagrams and annotated maps, photographs and field sketches ( <i>annotated sketches</i> ).
Statistical skills	Undertaking simple calculations and tests of the collected data ( <i>statistical tests</i> ).	Undertaking simple calculations and tests of the secondary data ( <i>statistical tests</i> ).
Analysis and evaluation skills	Analysing data, drawing conclusions with reference to the aims of the investigation, evaluating the techniques used and the conclusion drawn ( <i>analysis and evaluation skills</i> ).	Analysing the secondary data, drawing conclusions with reference to the aims of the investigation, evaluating the techniques used and the conclusions drawn ( <i>analysis and evaluation skills</i> ).

## Topic 5 – Ecosystems and rural environments

### Farm production study

Skills	Out-of classroom learning (fieldwork)	Virtual fieldwork
Planning	<p>Locating the study area (<i>atlas, map and sketching skills, photo-interpretation skills</i>).</p> <p>Designing an investigation:</p> <ul style="list-style-type: none"> <li>stating one or more hypotheses and aims linked to geographical theory</li> <li>deciding the number and type of measurements (to include sampling methods)</li> <li>discussion of health and safety.</li> </ul>	<p>Locating the study area using secondary resources, for example <a href="http://www.face-online.org.uk">www.face-online.org.uk</a> (<i>atlas, map and sketching skills, photo-interpretation skills</i>).</p> <p>Designing an investigation:</p> <ul style="list-style-type: none"> <li>stating one or more hypotheses and aims linked to geographical theory</li> <li>deciding the number and type of measurements (to include sampling methods)</li> <li>discussion of health and safety.</li> </ul>
Field skills	<p>Recording land use data on a base map, use of questionnaire, field sketches of the data collection sites (<i>sketching skills</i>).</p>	<p>Discussion of methods to measure and record data, construction of a land use map and the use of a questionnaire with reference to secondary data, the use of role play, and field sketches of the data collection sites based on secondary resources (<i>sketching skills</i>).</p>
Graphic skills	<p>Data presentation using a range of graphs, proportional symbols, flow lines, input/processes/output diagrams and annotated sketches (<i>annotated sketches</i>).</p>	<p>Secondary data presentation using a range of graphs, proportional symbols, flow lines, input/processes/output diagrams and annotated sketches (<i>annotated sketches</i>).</p>
Statistical skills	<p>Undertaking simple tests and calculations based on the collected data (<i>statistical tests</i>).</p>	<p>Undertaking simple tests and calculations based on the secondary data (<i>statistical tests</i>).</p>
Analysis and evaluation skills	<p>Analysing data, drawing conclusions with reference to the aims of the investigation, evaluating the techniques used and the conclusion drawn (<i>analysis and evaluation skills</i>).</p>	<p>Analysing the secondary data, drawing conclusions with reference to the aims of the investigation, evaluating the techniques used and the conclusions drawn (<i>analysis and evaluation skills</i>).</p>

## Topic 6 – Urban environments

### Land use transect plotting

Skills	Out-of classroom learning (fieldwork)	Virtual fieldwork
Planning	<p>Locating the study area (<i>atlas, map and sketching skills, photo-interpretation skills</i>).</p> <p>Designing an investigation:</p> <ul style="list-style-type: none"> <li>stating one or more hypotheses and aims linked to geographical theory</li> <li>deciding the number and type of measurements (to include sampling methods)</li> <li>discussion of health and safety.</li> </ul>	<p>Locating the study area using secondary resources, for example <a href="http://www.slideshare.net/RCha/urban-land-use">www.slideshare.net/RCha/urban-land-use</a> (<i>atlas, map and sketching skills, photo-interpretation skills</i>).</p> <p>Designing an investigation:</p> <ul style="list-style-type: none"> <li>stating one or more hypotheses and aims linked to geographical theory</li> <li>deciding the number and type of measurements (to include sampling methods)</li> <li>discussion of health and safety.</li> </ul>
Field skills	Recording data on a large-scale base map, field sketches of the data collection sites ( <i>sketching skills</i> ).	Discussion of methods to measure and record data, construction of a large-scale base map with reference to secondary data, field sketches of the data collection sites based on secondary resources to show variations across the urban area ( <i>sketching skills</i> ).
Graphic skills	Data presentation using a range of graphs, annotated sketches and photographs ( <i>annotated sketches</i> ).	Secondary data presentation using a range of graphs, annotated sketches based on photographs ( <i>annotated sketches</i> ).
Statistical skills	Undertaking simple calculations of the collected data, for example variations in service provision ( <i>statistical tests</i> ).	Undertaking simple calculations of the secondary data ( <i>statistical tests</i> ).
Analysis and evaluation skills	Analysing data, drawing conclusions with reference to the aims of the investigation, evaluating the techniques used and the conclusion drawn ( <i>analysis and evaluation skills</i> ).	Analysing the secondary data, drawing conclusions with reference to the aims of the investigation, evaluating the techniques used and the conclusions drawn ( <i>analysis and evaluation skills</i> ).

# Glossary

All terms stated in the specification can be used in the examination. Students should be familiar with, and gain some understanding of, these terms in relation to the five topics that they study. A sample of the required terms is listed below under each of the topic headings. None of the lists is comprehensive; each list includes only terms stated in the specification. Students are encouraged to use technical terms other than those listed here in their answers.

Words in bold within each entry are covered elsewhere in the glossary. Some terms could have been placed under a second heading, for example mass movement in both *Topic 1 – River environments* and *Topic 2 – Coastal environments*.

## Topic 1 – River environments

<b>abstraction</b>	Removal of water from rivers, lakes or groundwater for human use.
<b>base flow</b>	That part of a river's discharge fed by groundwater.
<b>channel</b>	The part of a valley floor occupied by the flowing water of a stream or river.
<b>discharge</b>	The quantity of water that passes a given point on a stream or river-bank within a given period of time.
<b>drainage basin</b>	The area drained by a river and its tributaries, bounded by a watershed.
<b>erosion</b>	The wearing down of the land by water, ice, wind and gravity.
<b>flood plain</b>	That part of a valley floor over which a river spreads during seasonal floods.
<b>hydrograph</b>	A graph on which variations in a river's discharge are plotted against time.
<b>hydrological cycle</b>	The unending movement of water between land, sea and atmosphere.
<b>impermeable</b>	Rocks that do not allow water to pass through them.
<b>interlocking spurs</b>	A series of ridges projecting out on alternate sides of a valley and around which a river winds its course.
<b>levee</b>	A bank of sediment formed along the edge of a river channel deposited by floodwater.
<b>mass-movement</b>	The movement of weathered rock downslope without the direct action of running water.
<b>meander</b>	A pronounced bend in a river.
<b>precipitation</b>	The deposition of moisture on the Earth's surface, in the form of dew, frost, rain, hail, sleet or snow.
<b>stores</b>	Places within a system where materials or energy are held for a time.
<b>streamflow</b>	The flow of surface water in a well-defined channel.
<b>watershed</b>	The dividing line between one drainage basin and another.
<b>weathering</b>	The chemical alteration and physical breakdown of rock in situ.



## Topic 2 – Coastal environments

<b>biodiversity</b>	The variety of species in an ecosystem.
<b>ecosystem</b>	An organic community of plants and animals interacting with their environment.
<b>hard engineering</b>	The use of concrete and large artificial structures by civil engineers to defend land against natural erosion processes.
<b>longshore drift</b>	The movement of loose materials along a coastline by wave action because they break at an oblique angle to the shore.
<b>sea level change</b>	The rise or fall in the average level of the sea over long periods of time. This acts as a base level for natural erosion.
<b>sub-aerial processes</b>	The general re-shaping of the land by normal atmospheric processes, for example wind and rain. It includes weathering, mass movement, erosion and deposition.
<b>wave-cut platform</b>	A rocky, level area at or around sea level representing the base of old and now retreated cliffs.

## Topic 3 – Hazardous environments

<b>aid</b>	Help given by more wealthy nations (HICs) to less well-off nations (LICs), mainly to encourage development.
<b>earthquake</b>	A sudden or violent movement within the Earth's crust followed by a series of shocks.
<b>hazard</b>	A natural event (for example earthquake, flood, landslide, volcanic eruption) that threatens or causes damage, destruction and death.
<b>risk assessment</b>	Judging the amount of damage an area might expect from any given hazard.
<b>tectonic plate</b>	A rigid segment of the Earth's crust which can 'float' across the heavier, semi-molten rock below. Continental plates are less dense, but thicker than oceanic plates. Movement occurs.
<b>tropical storm (or cyclone)</b>	An area of low pressure with winds moving in a spiral around the calm central point called the eye of the storm. Winds are powerful and rain heavy.
<b>volcano</b>	An opening in the Earth's crust out of which lava, ash and gases erupt.

## Topic 4 – Economic activity and energy

<b>accessibility</b>	The ease with which people can get to a particular place.
<b>economic sector</b>	A major division of an economy. Most commonly four sectors are recognised: primary (agriculture, fishing, mining), secondary (manufacturing), tertiary (services) and quaternary (R&D, information processing).
<b>energy (resources)</b>	The means of providing motive force, heat or light. They include electricity, gas, steam and nuclear power, together with fuels such as coal, oil and wood.
<b>fossil fuel</b>	Combustible materials made from the fossilised remains of plants and animals, for example peat, coal, oil and natural gas.
<b>high-tech industry</b>	Manufacturing involving advanced technology, such as the making of microchips and computers. It also includes genetic engineering, communications and information technology.
<b>informal sector</b>	This is largely made up of jobs over which there is little or no official control. It includes jobs such as child minding, domestic cleaning and bar tending.
<b>non-renewable resource</b>	A material that cannot be restored after use. Examples include fossil fuels and minerals.
<b>raw material</b>	Anything that occurs in a natural state and that is useful to people.
<b>renewable resource</b>	A resource which is not diminished when it is used; it recurs and cannot be exhausted (for example wind and tidal energy).
<b>transnational company (TNC)</b>	A huge enterprise which operates on a global scale and is involved in a wide variety of businesses.
<b>transport</b>	Moving people and commodities from one location to another.

## Topic 5 – Ecosystems and rural environments

<b>arable farming</b>	A type of agriculture where the emphasis is on growing crops.
<b>biome</b>	A world-scale ecosystem usually defined by the dominant vegetation, for example the tropical rain forest.
<b>conservation</b>	The protection of such things as wild animals and plants, their habits, fine scenery, historic buildings, etc. This is because of a growing awareness of their amenity and value, and often because they are scarce or threatened.
<b>counter-urbanisation</b>	The movement of people and activities away from large cities to small towns, villages or the countryside.
<b>ecosystem</b>	An organic community of plants and animals interacting with their environment.
<b>genetically modified (GM) food</b>	Food coming from crops and livestock that have been genetically engineered to improve productivity and disease-resistance. The scientific techniques include either transferring genes from one organism to another, or changing genetic materials within an organism.
<b>irrigation</b>	The supply of water to the land by means of channels, streams and sprinklers in order to permit the growth of crops in dry areas.
<b>pastoral farming</b>	A type of agriculture concerned mainly with the rearing of livestock, for meat, milk, wool or hides.

## Topic 6 – Urban environments

<b>brownfield site</b>	Land that has been used, abandoned and now awaits some new use. Commonly found in urban areas, particularly in the inner city.
<b>ethnic group</b>	A group of people sharing the same characteristics of race, nationality, language or religion.
<b>greenfield site</b>	A plot of land in a rural area that has not yet been subject to any development.
<b>inner city</b>	That part of the built-up area and close to the CBD, often characterised by old housing, poor services and brownfield sites.
<b>mega-city</b>	A city with a population exceeding 10 million.
<b>shanty town</b>	An area of makeshift and unsanitary housing, often occupied by squatters (no legal right to occupy).
<b>socio-economic group</b>	A group of people distinguished by employment, income and social characteristics such as education and family status.
<b>social deprivation</b>	The degree to which an individual or an area is deprived of services, decent housing, adequate income and local employment.
<b>urbanisation</b>	The process of becoming more urban, mainly through more and more people living in towns and cities.
<b>urban regeneration</b>	The revival of old parts of the built-up area by either installing modern facilities in old buildings (known as renewal) or opting for redevelopment (ie demolishing all existing buildings and starting afresh).

## Topic 7 – Fragile environments

<b>agro-forestry</b>	Combining agriculture and forestry, as in the planting of windbreaks in areas suffering from wind erosion or growing trees for fuel.
<b>deforestation</b>	The felling and clearance of forested land.
<b>desertification</b>	The spread of desert-like conditions into semi-arid areas.
<b>drought</b>	A long, continuous period of dry weather.
<b>global warming</b>	A slow but significant rise in the Earth's temperature. It may be caused by the build up of excessive amounts of carbon dioxide in the atmosphere which increase the greenhouse effect.
<b>greenhouse effect</b>	The warming of the Earth's atmosphere because pollution is preventing heat from escaping into space.
<b>overgrazing</b>	Putting too many animals on grazing land so that the vegetation cover is gradually destroyed.
<b>soil erosion</b>	The removal of soil by wind and water and by the movement of soil downslope.

## Topic 8 – Globalisation and migration

<b>ecotourism</b>	A form of tourism which aims to conserve fragile ecosystems and ensure that its benefits (jobs, income) are retained within the local area.
<b>forced migration</b>	A movement of people caused by a push factor such as religious persecution or famine.
<b>foreign investment</b>	Undertaken by companies to extend their business interests overseas. It might involve creating a new source of raw materials (for example a mine), setting up a branch factory, opening new retail outlets or buying shares in a foreign company.
<b>interdependence</b>	The drawing together of the countries of the world by the processes of globalisation.
<b>pull factor</b>	Something that attracts a migrant to a new location (for example freedom, a better job).
<b>push factor</b>	Something in the home area that forces or persuades a migrant to move away (for example persecution, poverty).
<b>refugee</b>	A person who flees their country to avoid war, the threat of death, oppression or persecution.
<b>trade</b>	The buying and selling of goods and services between countries.
<b>voluntary migration</b>	This involves people who have chosen (not been forced) to move. Perhaps they have been persuaded to migrate by pull factors such as better housing or a higher paid job.

## Topic 9 – Development and human welfare

<b>affluence</b>	The general level of prosperity enjoyed by a population.
<b>appropriate aid</b>	Know-how and equipment that are suited to the basic conditions prevailing in the receiving country.
<b>birth rate</b>	The number of births in a year per 1000 of the total population.
<b>death rate</b>	The number of deaths in a year per 1000 of the total population.
<b>development</b>	The progress of a country in terms of economic growth, the use of technology and human welfare.
<b>development gap</b>	The difference in standards of living and wellbeing between the world's richest and poorest countries (between HICs and LICs).
<b>free trade</b>	When trade between countries is not restricted by, for example, import duties or not being a member of a group of trading nations.
<b>gross domestic product (GDP)</b>	The total value of goods and services produced by a country during a year. When expressed as per head of population (per capita), it provides a widely used measure of national prosperity and development.
<b>human development index (HDI)</b>	Used as a measure of development in a country and for making international comparisons.
<b>human welfare</b>	The general condition of a population in terms of diet, housing, healthcare, education, etc.
<b>infant mortality</b>	The average number of deaths of infants under 1 year of age, per 1000 live births, per year.
<b>intermediate technology</b>	The simple, easily learned and maintained technology used in a range of economic activities serving local needs in LICs.
<b>life expectancy</b>	The average number of years a person might be expected to live.
<b>quality of life</b>	Difficult to define, but it is often thought of as an umbrella term that takes into account GDP and human welfare.

## Resources

Please note that while resources are correct at the time of publication, they may be updated or withdrawn from circulation. Website addresses may change at any time.

It is hoped that students will gain their knowledge and understanding, and develop their skills, from using a variety of sources, such as atlases, topographic maps, newspapers, magazines, CD ROMs, the internet, videos/DVDs, field trips etc.

The Geographical Association, which is the subject association for geography teachers, publishes the quarterly journal 'Teaching Geography'. This journal frequently contains articles and ideas for using ICT in teaching geography and also contains a software review page and advertisements for new geographical computer software. The Geographical Association also organises an annual three-day conference during the Easter holiday.

The Geographical Association  
160 Solly Street  
Sheffield S1 4BF

Telephone: +44 (0) 114 2960088  
Website: [www.geography.org.uk](http://www.geography.org.uk)  
Email: [ga@geography.org.uk](mailto:ga@geography.org.uk)

## General textbooks

Hordern R, Milner S and Lamb P – *Managing Issues in Geography* (Hodder and Stoughton, 2003) ISBN 0340802162

Milner S and Phillipson O – *Longman Geography for IGCSE* (Longman, 2005)  
ISBN 140580209X

Parsons R – *GCSE Geography: the Revision Guide* (Coordination Group Publications Ltd, 1998) ISBN 184146700 6

Warren S and Harcourt M – *Tomorrow's Geography for Edexcel GCSE Specification* (Hodder and Stoughton, 2007) ISBN 0340941405

Waugh D and Bushell T – *Key Geography for GCSE Book 1* (Nelson Thornes, 1998)  
ISBN 0748763034

Waugh D and Bushell T – *Key Geography for GCSE Book 2* (Nelson Thornes, 1998)  
ISBN 0748736492

## General websites

These websites may be useful. The list represents a small number of the sites available.

Actionaid	<a href="http://www.actionaid.org">www.actionaid.org</a>
BBC news	<a href="http://www.news.bbc.co.uk">www.news.bbc.co.uk</a>
Brazilian Embassy	<a href="http://www.brazil.org.uk">www.brazil.org.uk</a>
Department for Environment, Food and Rural Affairs	<a href="http://www.defra.gov.uk">www.defra.gov.uk</a>
Food and Agricultural Organisation	<a href="http://www.fao.org">www.fao.org</a>
Geoactive	<a href="http://www.nelsonthornes.com">www.nelsonthornes.com</a>
Greenpeace	<a href="http://www.greenpeace.org">www.greenpeace.org</a>

Internet Geography	<a href="http://www.geography.learnonthetheinternet.co.uk">www.geography.learnonthetheinternet.co.uk</a>
Ordnance Survey	<a href="http://www.ordsvy.gov.uk">www.ordsvy.gov.uk</a>
Oxfam	<a href="http://www.oxfam.org.uk">www.oxfam.org.uk</a>
Student action on world poverty	<a href="http://www.peopleandplanet.org.uk">www.peopleandplanet.org.uk</a>
The Environment Agency	<a href="http://www.environment-agency.gov.uk">www.environment-agency.gov.uk</a>
The Met Office	<a href="http://www.metoffice.com">www.metoffice.com</a>
United Nations	<a href="http://www.un.org">www.un.org</a>
World Wildlife Fund	<a href="http://www.panda.org">www.panda.org</a>

## Geography-specific websites

These websites may help with some aspects of the specification.

Biomes	<a href="http://www.geography.btinternet.co.uk/biome.htm">www.geography.btinternet.co.uk/biome.htm</a>
Coasts	<a href="http://www.geography.btinternet.co.uk/coasts.htm">www.geography.btinternet.co.uk/coasts.htm</a>
Geo Factsheets and GCSE Questionbank	<a href="http://www.curriculum-press.co.uk/a-level/geography/factsheets.htm">www.curriculum-press.co.uk/a-level/geography/factsheets.htm</a>
Push/Pull Factors of International Migration	<a href="http://www.nidi.knaw.nl/web/html/pushpull/index.html">www.nidi.knaw.nl/web/html/pushpull/index.html</a>
UK Census Data	<a href="http://www.census.ac.uk">www.census.ac.uk</a>
US National Hurricane Centre	<a href="http://www.nhc.noaa.gov">www.nhc.noaa.gov</a>
Volcano World	<a href="http://volcano.oregonstate.edu">http://volcano.oregonstate.edu</a>
Wideworld (GCSE magazine)	<a href="http://www.philipallan.co.uk/wideworld/index.htm">www.philipallan.co.uk/wideworld/index.htm</a>
World Rainforest Information Portal	<a href="http://www.rainforestweb.org">www.rainforestweb.org</a>

Internet sites constantly change and new sites appear. At the time of publication these websites are active. There are too many appropriate websites to list but you and your students are encouraged to use a search engine to find other useful websites, including those related to virtual fieldwork study.

## CD ROMs and videos/DVDs

Anglia Multimedia – *British Coastlines from the Air*

BBC – various ([www.bbc.co.uk](http://www.bbc.co.uk))

Channel 4 – various. Contact Channel 4 School Publications (for example Virtual Rainforest CD ROM)

Microsoft – *Encarta 2000*

Nelson Thornes – *The Physical World*

Nelson Thornes – *Weather World*

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