



Geography

IGCSE

Introduction

Aims

The main aims of the Introduction are to describe:

- the **specification content** of IGCSE and how it relates to the general **structure** of your course
- the papers that you will sit in your examination

Context

In the course of your study for the examination you will have to acquire certain skills, as well as knowledge and understanding. Because there is this emphasis on skills, you will find that this course has many “activity” sections. These should be completed in each case before you move on to the next part of the lesson.



Welcome to your IGCSE Geography course! Geography is the study of the Earth, its physical form and features, its political and physical divisions, the climate, productions and populations of different countries. By understanding the Earth, we give ourselves a much better chance of understanding the present and making the right decisions that will affect our future.

The Edexcel IGCSE in Geography enables students to:

- actively engage in the process of geography to develop as effective and independent learners and as critical and reflective thinkers with enquiring minds
- develop their knowledge and understanding of geographical concepts and appreciate the relevance of these concepts to our changing world
- develop a framework of spatial awareness in which to appreciate the importance of the location of places and environments from a local to global
- appreciate the differences and similarities between people's views of the world, its environments, societies and cultures
- understand the significance of values and attitudes to the development and resolution of issues
- develop their responsibilities as global citizens and recognise how they can contribute to a future that is sustainable and inclusive
- develop and apply their learning to the real world through fieldwork and other out-of-classroom learning
- use geographical skills, appropriate technologies, enquiry and analysis.

The written exams you will take at the end of this course cover a series of geographical topics based on three themes: the natural environment and people; people and their environments, and global issues.

Naturally the examiners will be looking for good factual knowledge, but the IGCSE examination is designed to test more than this — the successful candidate will also have acquired the skills necessary to any true geographer.

The Arrangement of Lessons

Preliminary Module: Geographical Skills

Lesson No. Title

- 1 Map References
- 2 Height and Relief Features
- 3 Cross-Sections
- 4 Rivers and Valleys
- 5 Glaciation; Coastlines
- 6 Communications and Settlement
- 7 Vegetation and Land Use
- 8 Interpreting Photographs

Tutor-marked Assignment A

- 9 Simplified Maps
- 10 The Interpretation of Data
- 11 The Interpretation of Data (2)

Tutor-marked Assignment B

Section A: The Natural Environment and People

Module One: River Environments

- 12 Hydrological Cycle
- 13 Running Water and the Development of Land Forms
- 14 The Uses of Water
- 15 Differences in Water Quality

Virtual Fieldwork Opportunity: Measuring Water Quality

- 16 Flooding

Tutor-marked Assignment C

- 17 Measuring Channel Features: Fieldwork

Tutor-marked Assignment D: Practical Fieldwork 1

Module Two: Coastal Environments

18 Physical Processes and Coastal Landforms

Virtual Fieldwork Opportunity: Measuring Beach Profile

19 Ecosystems and Coastlines

20 Coastal Ecosystems and the Threat of Development

21 The Conflict between Development and Conservation

22 Coasts as a Natural System

Virtual Fieldwork Opportunity: Surveying People's Views on the Management of Pressured and/or Retreating Coastlines

Tutor-marked Assignment E

Section B: People and their Environments

Module Three: Economic Activity and Energy

23 Employment

24 Location and Growth of Employment Sectors

Virtual Fieldwork Opportunity: Reasons for the Location of Factories or Services

25 Energy Efficiency

26 Renewable vs Non-Renewable Energy Sources

Virtual Fieldwork Opportunity: Investigating People's Views on the use of Renewable and Non Renewable Energy

Tutor-marked Assignment F

Module Four: Urban Environments

27 The Nature of Urbanisation

28 Problems of Rapid Urbanisation

Virtual Fieldwork Opportunity: Environmental Quality Survey

29 Urban Land Use

Tutor-marked Assignment G: Practical Fieldwork 2:

Land Use Transect Plotting:

30 Urban Change

31 Social Deprivation, Poverty and Urban Regeneration

Tutor-marked Assignment H

Section C: Global Issues

Module Five: Fragile Environments

- 32 Fragile Environments, Sustainability, Soil Erosion and Desertification
- 33 Deforestation
- 34 Causes, Consequences, and Management of Global Warming and Climate Change

Tutor-marked Assignment I

Module Six: Revision and Mock Exam

- 35 Revision and Mock Exam

Tutor-marked Assignment J

- 36 Appendix: Fieldwork Guidance and Exemplars

The Specification Content and General Structure of the Course

The Examination

This course prepares you for the Edexcel IGCSE Geography examination, 4GEO. This syllabus requires candidates to take one written exam paper of 2 hours 45 minutes. The examination is untiered (which means there are the same questions for candidates of all abilities) and is graded from A* to G. It consists of three sections. Candidates will answer two questions in Section A; two questions in Section B, and one question in Section C. The single tier of entry will contain a variety of questions types, such as multiple-choice questions, short and extended answer questions, graphical and data questions and fieldwork questions. Each question is worth 30 marks.

The examination includes nine questions on nine topics. You will need to answer five questions on the five topics included in this course. Do not try to answer questions on topics you have not studied!

The topics included in this course are:

Section A

1. River environments
2. Coastal environments

Section B

3. Economic Activity and Energy
4. Urban Environments

Section C

5. Fragile Environments

Your course includes lessons on each of the five topics listed above, and also eight fieldwork opportunities, of which two, one in Section A and one in Section B, are practical, 'out-of-classroom' investigations. The other six may include virtual fieldwork involving research based on secondary sources such as books, articles or the internet. In the examination, questions may be asked on **all eight** fieldwork opportunities. The fieldwork is therefore an important part of the course.

Course Aims

The course is structured around the aims set out in the Edexcel syllabus:

- that coverage should touch, in a selective manner, the main subject areas which are appropriate at this level: the natural

environment; resources and production; population and settlement, as well as the related topics of globalisation, human welfare and sustainability

- emphasis should be placed on the relationship between people and the environment
- that geography be recognised as a dynamic discipline in continuous change
- that content should be specified in such a way that students can explore the geography of their own countries
- that case studies are used to exemplify key ideas
- that students should be encouraged to undertake local fieldwork and other practical exercises to underpin knowledge and understanding as well as to illustrate content themes
- that students should become competent in the use of a range of skills and techniques.

The course includes activities that give practice in a range of geographical skills that students will need to acquire for their examination. The following list includes the range of skills you will need to learn in a practical way through fieldwork and other practical exercises:

Practical Skills

Specifically, students should be able to:

- undertake fieldwork investigations and other forms of out-of-classroom learning
- use a range of secondary source materials (including statistical data, maps, diagrams, photographs, satellite images)
- depict information in various forms (sketches, simple maps, diagrams, tables)
- use appropriate geographical vocabulary in their written work.

In undertaking such practical work, students should acquire and apply the following:

- planning — designing a fieldwork investigation, as per the specification content
- field skills — implementing a field investigation; measuring and recording data
- analysis and evaluation skills — analysing data and drawing conclusions; evaluating the techniques used and the conclusions drawn
- map skills — with particular reference to topographic maps: using grid references;
- understanding scales; understanding symbols; recognising landforms and human features of the landscape
- atlas skills — using an atlas wherever relevant to the course

- graphic skills — compiling graphs and flow lines; using proportional symbols; annotating maps; diagrams and photographs
- photo-interpretation skills — reading vertical and oblique aerial photographs and satellite images
- sketching skills — communicating ideas through simple sketch maps and field sketches
- statistical skills — using simple measures and undertaking simple tests.

The main skills that you will learn are map reading and interpretation, together with the interpretation of geographical data (i.e. facts). You will also learn how to construct a variety of graphs and diagrams. These skills will form the basis of many of the activities in the course.

Course Links to Online Resources

The course has been written specifically with the demands of the IGCSE specification in mind and no supporting textbook is required for you to be able to follow the course successfully. The course has the advantage that it covers all important aspects of the Edexcel specification. Given the advantages that online resources offer to the study of geography, some of the course activities will require you to go online to access, for example, videos of geographical processes or other communities, interactive maps, or photographic material. It is assumed, therefore, that students will be able to access a computer either at home or in your local library. Some of the course activities ask you to access the GeographyAlltheWay website at <http://www.geographyalltheway.com/>.

Inserted into your course folder you will find two copies of a letter that include your password to GeographyAlltheWay. Please sign and return a copy of this letter in the envelope provided **before** you go online. The resources on this website have been compiled by a teacher of Geography IGCSE and are specifically designed to support the course specification. The resources include videos, simulations, maps, diagrams, graphs, tables, activities, and 'mysteries'. They provide excellent support materials for the course, and it is expected that all students will be able to access the materials as a means to consolidate, explore further, and enjoy the course.

Further Resources

To supplement your study we recommend that you explore a wide range of sources, to which the following is a brief guide:

Paul Guinness and Garrett Nagle, *IGCSE Geography* (Hodder & Stoughton, 2009)

Google Earth: <http://earth.google.co.uk/>

<http://www.ordnancesurvey.co.uk/oswebsite/>

<http://www.bbc.co.uk/schools/gcsebitesize/geography/>

Many geographical processes can now be viewed on video and image websites such as:

You Tube: <http://www.youtube.com/>

Flickr: <http://www.flickr.com/>

Google Images: <http://images.google.com/>

Google Maps: <http://maps.google.co.uk/>

The Royal Geographical Society website includes photographic images and other resources useful to project work:

<http://www.rgs.org/HomePage.htm>

Edexcel include lists of resources for IGCSE geography on their website at:

<http://www.edexcel.com/quals/igcse/igcse09/geography/Pages/default.aspx>

Click on the link and scroll to the section called 'Resources'.

The Cambridge examining board also include a list of resources for Geography IGCSE at:

<http://www.cambridgestudents.org.uk/subjectpages/geography/igcsegeography/>

Lesson activities will refer you to specific resources both in print and online.

n.b. Google offer schools and young people tutorials on how to use their sites at:

<http://www.google.co.uk/intl/en/schools/index.html>

The short quizzes offer an excellent introduction to online searching and provide a useful introduction to searching not only geography, but all sorts of other subjects as well. The short tutorial will help you search accurately and save lots of time later on. Have a go!

It is important to look at a variety of different approaches to key topics. One easy way to buy supporting texts is through the OOL website (www.ool.co.uk).

Some of the activities in the lessons may require you to use your initiative in hunting out information either online, in your atlas or (via your local library) in other textbooks. Such initiative is one of the skills you are supposed to be learning and the more sources you refer to the better your work is likely to be.

The Method of Study

The OOL course is contained in five main sections or modules to match the five course topics.

Each module is divided into a number of lessons with specific aims grouped under a key idea. These aims are mainly achieved through **activities** in which much of your learning is gained by doing specific tasks some using external sources.

Self-assessment is part of the learning process so when you have completed each activity you check your results against the model answers before you proceed to the next stage. It is most important that you do not proceed to the next lesson till you have mastered and understood all the activities of a lesson. Answers to a lesson's activities, and to its self-assessment tests, are included **at the end of the lesson**.

Self-Assessment Tests follow some of the lessons. They should be completed under test conditions and then checked against the model answers. They are *not* to be sent to your Tutor.

Tutor-marked Assignments follow the completion of a major theme within a Section. They are more searching and are designed to test skills, knowledge and understanding at various levels of ability and over a wider area of the syllabus. Again, these tests must be completed under strict test conditions. When completed, they should be **sent to your Tutor** who will then assess them before they are returned to you with comments and suggested answers.

The final part of the learning and assessment process comes at the end of the Course when you sit the mock exam. Since this paper covers the whole course it is essential that you allow a period of revision beforehand. Again, the answers to these papers must be sent to your Tutor for detailed assessment and final comments.

It is your responsibility to plan out a lesson timetable bearing in mind the date of your actual examination. You should therefore aim to complete the course at least a month before the examination. This will allow time for revision and for sorting out any aspects of the syllabus about which you are not sure.

Fieldwork: the Geographical Enquiry

Fieldwork is an important part of the Geography syllabus and needs to be borne in mind right from the beginning of the course. Guidance for the practical skills and techniques required for fieldwork will be found particularly in Lessons 17 and 22, but almost every part of the course should prove useful. Do not hesitate to ask for your tutor's advice about this crucial aspect of your studies.

The specification states that questions may be asked about all eight fieldwork opportunities in the exam. It is recommended that you carry out a minimum of one fieldwork activity from Section A and one from Section B. These two pieces of fieldwork comprise TMA D and TMA G in your course. It is also recommended that the remaining six fieldwork opportunities also involve practical learning outside a classroom environment. However, the exam board appreciate that this may be difficult, and therefore, these can be virtual fieldwork (i.e. done on computer or on paper).

All fieldwork studies **must** involve the consideration of an argument or problem or an assertion to be tested. First-hand data collection (e.g. a questionnaire, stream survey or pedestrian count), recording and use should take place within the two (minimum) practical investigations.

NB. In December 2010, Edexcel released further guidance and exemplars of fieldwork opportunities to enable students to gain further understanding of examination requirements. Their guidance is included in the Appendix to this course.

The Skills You Need for Fieldwork

Fieldwork will be assessed in the examination. You will be assessed according to five clearly defined criteria:

- applied understanding (of what you aim to do)
- methodology (how you go about it)
- data presentation
- data interpretation
- evaluation (how successful your study was)

The course provides guidance on each of these aspects. Take particular note of the last of these requirements and include a specific section called “Limitations”. Your survey is unlikely to provide absolutely conclusive proof of any proposition and you should always be aware of the circumstances in which you might have reached a different result, e.g. “had I asked more people ...” or “had conditions been different”. Mention what went right as well as what went wrong.

You would be well advised to follow the above sequence of investigation and presentation exactly and show, through your section headings, etc, that you are aware of the various criteria that will be used in marking you.

Every aspect of your study will play a part in preparing you for fieldwork but two lessons are particularly crucial.

Lessons 17 and 22 focus on the special skills which are required to plan a suitable fieldwork project, carry out the practical fieldwork and present your results satisfactorily. Do not underestimate the time it will take to plan, implement and report a project satisfactorily.

There are 8 fieldwork opportunities in this folder. Two of them have been designated as opportunities that you must actually undertake in the field, (see above). The other six have been highlighted as ‘virtual fieldwork topics’. This means that you do not have to go out into the field to collect data but you should know how you might do it if you had to. When you get to a virtual fieldwork section in the pack you should use the fieldwork form provided there to help you think about how you might undertake fieldwork of this kind if you were to do it for real. (A copy of the form is shown below, as an example.) Some of the fieldwork opportunities may have sample data attached. If that is the case then you can have a go at displaying it in an appropriate graph or diagram and then interpreting the results and drawing conclusions. You can attach the diagrams to your form and use it later in your revision. If there is no data attached then you can only go as far as to plan the sorts of graphs and diagrams that might be appropriate for the sort of data you might get from such an enquiry. For example, if you are asked to write a questionnaire to assess what form of transport people use to shop in a town, you could suggest that drawing a pictogram would be appropriate to show the results. If you are actually given the results of the questionnaire you can actually draw the pictogram. If not you can still suggest that a pictogram would be appropriate for data of this sort when you fill in your form.

The fieldwork form (see below) is designed to help you organise your thoughts about fieldwork. You can use it for the practical fieldwork, too, if it helps. In the exam there will be questions about using fieldwork to support the theory. The questions may range from those asking you to suggest a suitable hypothesis or title, to those asking

you about appropriate equipment, methods or data display. They may give you data and ask you to draw a suitable diagram to display it. They may describe a method and ask you to suggest limitations. They may show you graphs and charts and ask you to draw conclusions. The questions will always be in the context of the topics that you will be studying but it is very important that you spend time thinking about the fieldwork elements of each topic even if you are not going to do them for real.

The fieldwork form gives you some ideas of the sorts of things you should think about in each section. A blank copy is also shown. You will also find one with each fieldwork opportunity in the folder. Remember this form is not an assessed piece of work although your tutor may ask to see it to help you with future fieldwork planning. When you have finished it you can keep it with your work on that topic as you will need it to revise from later. The more you put into this element the easier the practical fieldwork will be and the better you will do in the exam.

Your tutor is still there to help and advise if you need it, but the two fieldwork tasks are a chance for you to develop your practical skills.

Presentation

Each of the two Fieldwork TMAs should be completed and compiled into a folder. This should be presented on A4 paper (any larger material must be folded to this size). Each sheet must be numbered and secured together and must be identified with your name.

Investigations may be handwritten or word processed, but remember that in the exam you will need to do everything by hand! The quality of presentation and range of skills used, regardless of the methods employed, will be assessed.

The total fieldwork investigations should be between 2000-2500 words. Candidates exceeding this by more than 500 words should edit their fieldwork down!

Virtual fieldwork planner

<p>Title: this is usually quite vague. It may start with 'An investigation into...' or 'a study of...' It will draw our attention to the geographical theory behind the study and may mention the location.</p>
<p>Introduction: This will locate the study area using maps (secondary data, map drawing skills) and may outline the theory behind the study. It will also include:</p> <p>Aim(s): these tell us what you are trying to achieve with your study. Are you comparing something in real life to theory (a model perhaps?) or are you using existing theory to try to find something new in real life? Use terms like 'to assess the size and shape of...' or 'to identify typical features of...' or 'to compare...'</p> <p>Hypotheses or key questions: these give you statements to test. Don't have too many. One may be enough. Three or four are plenty. Look at your title and your aims. Make sure they don't contradict each other. If you are looking for channel features in a river then think about the features you expect to find and write a hypothesis to match <i>eg that typical river features will be change with distance downstream</i>. Keep the wording simple. You can justify your hypotheses underneath if you wish. For example:</p> <ol style="list-style-type: none"> <i>That age of buildings will decrease with distance from the town centre.</i> This is likely as the first buildings are usually found where development of the town began and successive building was forced to take place in concentric circles around them.
<p>Method and equipment: now you know what you are trying to find out, this is where you describe the methods you would use to achieve your aims and test your hypotheses. Be specific. The examiner would want to know how you would do it, why you would do it that way, how that method would address your aims and hypotheses. We need to know the mechanics of the study. If you plan a questionnaire, how many people would you need to ask? When would you do it? How would you make it fair? Where would you stand? If you are planning a beach study what equipment would you need? How would you record the results? How would you make sure you are safe?</p>
<p>Data presentation and interpretation: this is where virtual fieldwork gets really virtual! If you are not actually planning to go out and do this and you have not been given any data to display you will have to plan the <i>sorts</i> of display tools you could use given the data you would expect to receive. If this is a river quality survey and you expect to have ph data for several stations downstream you might suggest a visual display to show ph change in colour on a graph with stations along the bottom axis and ph levels up the side. You could sketch suggestions. Remember that the examiner is looking for variety of appropriate skills. Suggest what you might write in an analysis of such diagrams. Could you spot trends? Anomalies? Good analysis is objective. It doesn't try to twist results to fit expectations but you can try to account for what you see.</p>
<p>Statistical tests: you need to be familiar with a few of these. <i>Nearest neighbour analysis</i> is useful for anything from clustering of shops or snails on a beach. <i>Spearman's rank correlation co-efficient</i> is good for spotting statistical significance of data that you might draw on a scattergraph. Suggesting appropriate tests and knowing how to use them is a high order skill.</p>
<p>Conclusions: These are very tricky without real data but if you do have data, either given to you for a virtual piece of fieldwork or from your own real fieldwork then conclusions are important. Good conclusions are not black and white. You will not 'prove' anything. You may 'have evidence to support or negate your hypotheses.' You should refer to your hypotheses. You may be able to modify them for a future study. If you can show your conclusions visually, on a map for example (break point analysis or spheres of influence), then do.</p>
<p>Evaluation and bibliography: this is where you suggest limitations to your method or indeed any other part of your study. Maybe a different use of shading in your display would have led you to a different conclusion? Maybe you should have asked more questionnaires? Maybe you should have gone back and done it again in a different season? Maybe your choice of location was flawed? Were there other ways of achieving the same aim? Real fieldwork would always have a bibliography. Do some research to see if anyone else has done similar work. Secondary data will give you credit if you credit using it. If you don't it is plagiarism. Be careful.</p>

Virtual Fieldwork Planner

Fieldwork title:
Introduction: Aim(s): Hypotheses or key questions:
Method and equipment:
Data presentation and interpretation:
Statistical tests:
Conclusions:
Evaluation and bibliography:

Studying the Syllabus

You should be sure to acquire your own copy of the specification or syllabus from the Edexcel website at:

<http://www.edexcel.com/quals/igcse/igcse09/geography/Pages/default.aspx>

We advise that you download a copy of the syllabus so that you can assess which topics you have covered in the most detail and which ones you will feel happiest about in the exam. Edexcel also provides a handbook for private candidates at:

<http://www.edexcel.com/iwantto/I%20want%20to%20%20Tasks/Private%20Candidate%20Handbook.pdf>

Closer to your exam you may also find useful tips on Edexcel's Examzone at:

<http://www.edexcel.com/i-am-a/student/examzone/Pages/home.aspx>

You should also use past exam papers as part of your revision. You can access these at:

<http://www.edexcel.com/i-am-a/head-department/Pages/PastPaperSearch.aspx>

Using the Internet

All students benefit from access to the Internet. You will find a wealth of information on all the topics in your course. As well as the Edexcel website (www.edexcel.com), you should get into the habit of checking the Oxford Open Learning site (www.ool.co.uk) where you may find news, additional resources and interactive features as time goes by. If you have not already done so, you may register for your free copy of *How to Study at Home*, our 200-page guide to home learning, or enrol on further courses. Put it on your Favourites list now!

Web links in your Course Folder

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