



Higher Geography

Course code:	C833 76
Course assessment code:	X833 76
SCQF:	level 6 (24 SCQF credit points)
Valid from:	session 2018–19

This document provides detailed information about the course and course assessment to ensure consistent and transparent assessment year on year. It describes the structure of the course and the course assessment in terms of the skills, knowledge and understanding that are assessed.

This document is for teachers and lecturers and contains all the mandatory information you need to deliver the course.

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Course overview

The course consists of 24 SCQF credit points which includes time for preparation for course assessment. The notional length of time for candidates to complete the course is 160 hours.

The course assessment has three components.

Component	Marks	Scaled mark	Duration
Component 1: question paper 1 — physical and human environments	100	50	1 hour and 50 minutes
Component 2: question paper 2 — global issues and geographical skills	60	30	1 hour and 10 minutes
Component 3: assignment	30	not applicable	1 hour and 30 minutes — see 'Course assessment' section

Recommended entry	Progression
<p>Entry to this course is at the discretion of the centre.</p> <p>Candidates should have achieved the National 5 Geography course or equivalent qualifications and/or experience prior to starting this course.</p>	<ul style="list-style-type: none">◆ Advanced Higher Geography course◆ further study, employment and/or training

Conditions of award

The grade awarded is based on the total marks achieved across all course assessment components.

Course rationale

National Courses reflect Curriculum for Excellence values, purposes and principles. They offer flexibility, provide time for learning, focus on skills and applying learning, and provide scope for personalisation and choice.

Every course provides opportunities for candidates to develop breadth, challenge and application. The focus and balance of assessment is tailored to each subject area.

This course builds on the principles and practices of the social studies and science curriculum areas. Candidates develop important attitudes, including: an open mind and respect for the values, beliefs and cultures of others; openness to new thinking and ideas; and a sense of responsibility and global citizenship.

Through the study of geography, and by gaining geographical analysis techniques, candidates develop an understanding of aspects of the contemporary world. They are challenged to look at the world in new ways, understand more about their sense of identity, and learn about different countries and cultures. Candidates build up a framework of geographical knowledge and understanding with which to understand and respond to global issues.

Candidates gain experience in contributing to group work and working on their own through taking part in investigative and critical-thinking activities. They also progressively develop their skills in literacy and numeracy.

Candidates develop an increased understanding of the environment, sustainability, and the impact of global issues. They are encouraged to develop a sense of responsible citizenship, and to reflect upon the impact of the environment on health and wellbeing. The emphasis on the evaluation of sources, including maps, develops thinking skills.

Purpose and aims

The course develops candidates' understanding of our changing world, its human interactions and physical processes. Practical activities, including fieldwork, provide opportunities for candidates to interact with their environment.

The study of geography encourages positive lifelong attitudes of environmental stewardship, sustainability and global citizenship. The course provides candidates with the skills, knowledge and understanding to contribute effectively to their local communities and wider society.

The contexts for study are local, national, international and global.

Candidates develop:

- ◆ a wide range of geographical skills and techniques
- ◆ an understanding of the complex ways in which people and the environment interact in response to physical and human processes on a local, national, international and global scale

- ◆ an understanding of spatial relationships and of the complexity of the changing world in a balanced, critical and sympathetic way
- ◆ a geographical perspective on environmental and social issues and their significance
- ◆ an interest in, understanding of, and concern for the environment and sustainable development

Who is this course for?

The course is appropriate for a range of candidates, from those who wish to achieve a greater understanding of the environment and their place in it, to those who wish to progress to more specialised training, further education, or entry into a diverse range of occupations and careers.

Course content

Candidates develop a wide range of important and transferable skills, including using, interpreting, evaluating and analysing a wide range of geographical information; interpreting and explaining complex geographical phenomena; using a wide range of maps and other data to process and communicate complex geographical information; and researching skills, including fieldwork.

The course consists of three sections:

Physical environments

Candidates develop and apply knowledge and understanding of the processes and interactions at work within physical environments on a local, regional and global scale. Key topics include: atmosphere; hydrosphere; lithosphere; and biosphere. Personalisation and choice is possible through case studies and areas chosen for study.

Human environments

Candidates develop and apply knowledge and understanding of the processes and interactions at work within urban and rural environments in developed and developing countries. Key topics include: population; rural land degradation and management; and urban change and management. Personalisation and choice is possible through contexts chosen as case studies.

Global issues

Candidates develop and apply knowledge and understanding of global geographical issues which demonstrate the interaction of physical and human factors, and evaluate the strategies adopted to manage these issues. Key topics include: river basin management; development and health; global climate change; and energy. Personalisation and choice is possible through the issues selected for study.

Skills, knowledge and understanding

Skills, knowledge and understanding for the course

The following provides a broad overview of the subject skills, knowledge and understanding developed in the course:

- ◆ developing and applying skills, knowledge and understanding across complex physical, human and global issues
- ◆ researching and evaluating a wide range of information collected from a range of sources about complex geographical issues
- ◆ using a wide range of mapping skills and techniques in geographical contexts which may be familiar or unfamiliar, including the use of Ordnance Survey maps
- ◆ using a wide range of research skills and techniques, including fieldwork skills, in geographical contexts which may be familiar or unfamiliar
- ◆ using a wide range of numerical and graphical skills and techniques in geographical contexts which may be familiar or unfamiliar
- ◆ developing and applying factual and theoretical knowledge and understanding and giving detailed explanations of complex:
 - processes and interactions at work within physical environments on a local, regional and global scale
 - processes and interactions at work within human environments in a range of urban and rural, and developed and developing societies
 - global geographical issues which demonstrate the interaction of physical and human factors

Skills, knowledge and understanding for the course assessment

The following provides details of skills, knowledge and understanding sampled in the course assessment:

Geographical skills

The following skills are assessed in contexts drawn from across the course:

Mapping skills:

- ◆ interpretation and analysis
- ◆ using maps, including Ordnance Survey maps, in association with photographs, field sketches, cross sections/transects

Research skills including fieldwork skills:

- ◆ gathering
- ◆ processing
- ◆ interpreting
- ◆ evaluating

Using numerical and graphical information which may be presented in the following ways:

- ◆ statistical
- ◆ graphical
- ◆ tabular

Physical environments

In relation to physical environments, candidates:

- ◆ develop and apply geographical skills and knowledge and understanding
- ◆ develop and apply knowledge and understanding of the processes at work and interactions with human environments on a local, regional and global scale

Content sampled in this section of the question paper:

Atmosphere

- ◆ global heat budget
- ◆ redistribution of energy by atmospheric and oceanic circulation
- ◆ cause, characteristics and impact of the Intertropical Convergence Zone

Hydrosphere

- ◆ formation of erosional and depositional features in river landscapes:
 - V shaped valley
 - waterfall
 - meander
 - oxbow lake
- ◆ hydrological cycle within a drainage basin
- ◆ interpretation of hydrographs

Lithosphere

- ◆ formation of erosional and depositional features in glaciated landscapes:
 - corrie
 - arête
 - pyramidal peak
 - U shaped valley
 - hanging valley
 - ribbon lake
 - drumlin
 - esker
 - terminal moraine
- ◆ formation of erosional and depositional features in coastal landscapes:
 - wave cut platform
 - headland and bay
 - cave

- arch
- stack
- spit
- bar
- tombolo

Biosphere

- ◆ properties and formation processes of podzol, brown earth and gley soils

Human environments

In relation to human environments, candidates:

- ◆ develop and apply geographical skills and knowledge and understanding
- ◆ develop and apply knowledge and understanding of the processes and interactions at work within urban and rural environments in developed and developing countries
- ◆ evaluate the impact/effectiveness of management strategies

Content sampled in this section of the question paper:

Population

- ◆ methods and problems of data collection
- ◆ consequences of population structure
- ◆ causes and impacts of forced and voluntary migration

Rural

- ◆ impact and management of rural land degradation related to a rainforest or semi-arid area
- ◆ rural land use conflicts and their management related to either a glaciated or coastal landscape

Urban

- ◆ the need for management of recent urban change (housing and transport) in a developed and in a developing world city
- ◆ management strategies employed
- ◆ impact of management strategies

Global issues

In relation to global issues, candidates:

- ◆ develop and apply geographical skills and knowledge and understanding
- ◆ develop and apply knowledge and understanding of significant global geographical issues which demonstrate the interaction of physical and human factors, and evaluate strategies adopted in the management of these issues

Candidates study two of the four global issues. An appreciation of sustainable development should permeate the global issues studied.

Content sampled in this section of the question paper:

River basin management

- ◆ physical characteristics of a selected river basin
- ◆ need for water management
- ◆ selection and development of sites
- ◆ consequences of water control projects

Development and health

- ◆ validity of development indicators
- ◆ differences in levels of development between developing countries
- ◆ a water-related disease: causes, impact, management
- ◆ primary healthcare strategies

Global climate change

- ◆ physical and human causes
- ◆ local and global effects
- ◆ management strategies and their limitations

Energy

- ◆ global distribution of energy resources
- ◆ reasons for changes in demand for energy in both developed and developing countries
- ◆ effectiveness of renewable and non-renewable approaches to meeting energy demands and their suitability within different countries

Skills, knowledge and understanding included in the course are appropriate to the SCQF level of the course. The SCQF level descriptors give further information on characteristics and expected performance at each SCQF level, and can be found on the SCQF website.

Skills for learning, skills for life and skills for work

This course helps candidates to develop broad, generic skills. These skills are based on [SQA's Skills Framework: Skills for Learning, Skills for Life and Skills for Work](#) and draw from the following main skills areas:

1 Literacy

1.1 Reading

2 Numeracy

2.3 Information handling

4 Employability, enterprise and citizenship

4.6 Citizenship

5 Thinking skills

5.3 Applying

5.4 Analysing and evaluating

Teachers and lecturers must build these skills into the course at an appropriate level, where there are suitable opportunities.

Course assessment

Course assessment is based on the information provided in this document.

The course assessment meets the key purposes and aims of the course by addressing:

- ◆ breadth — drawing on knowledge and skills from across the course
- ◆ challenge — requiring greater depth or extension of knowledge and/or skills
- ◆ application — requiring application of knowledge and/or skills in practical or theoretical contexts as appropriate

This enables candidates to:

- ◆ draw on, extend and apply the skills, knowledge and understanding acquired during the course
- ◆ demonstrate breadth of skills, knowledge and understanding from across the course
- ◆ demonstrate challenge and application related to an appropriate geographical topic or issue

Course assessment structure: question paper

Question paper 1: Physical and human environments 100 marks

This question paper has 100 marks out of a total of 190 marks. This is scaled by SQA to represent 46% of the overall marks for the course assessment.

This question paper enables candidates to demonstrate the application of their skills, knowledge and understanding from the physical environments and human environments sections of the course.

In this question paper candidates have an opportunity to demonstrate:

- ◆ using a wide range of geographical skills and techniques
- ◆ describing, explaining, evaluating and analysing complex geographical issues, using knowledge and understanding which is factual and theoretical, of the physical and human processes and interactions at work within geographical contexts on a local, regional and global scale

This question paper has two sections:

Section 1: Physical environments

Section 2: Human environments

Each of these sections is worth 50 marks and consists of extended-response questions. Candidates answer all questions in each section.

Setting, conducting and marking the question paper

This question paper is set and marked by SQA, and conducted in centres under conditions specified for external examinations by SQA.

Candidates have 1 hour and 50 minutes to complete this question paper.

Question paper 2: Global issues and geographical skills 60 marks

This question paper has 60 marks out of a total of 190 marks. This is scaled by SQA to represent 27% of the overall marks for the course assessment.

This question paper enables candidates to demonstrate the application of their skills, knowledge and understanding from across the global issues and geographical skills sections of the course.

In this question paper candidates have an opportunity to demonstrate:

- ◆ using a wide range of geographical skills and techniques
- ◆ describing, explaining, evaluating and analysing complex geographical issues, using knowledge and understanding which is factual and theoretical, of the physical and human processes and interactions at work within geographical contexts on a local, regional and global scale

This question paper has two sections:

Section 1: Global issues is worth 40 marks and consists of extended-response questions. Candidates choose two from the four questions. Each question is worth 20 marks.

Section 2: Application of geographical skills is worth 20 marks and consists of a mandatory extended-response question. Candidates apply geographical skills acquired during the course. The skills assessed in the question include mapping skills and the use of numerical/graphical information.

Setting, conducting and marking the question paper

This question paper is set and marked by SQA, and conducted in centres under conditions specified for external examinations by SQA.

Candidates have 1 hour and 10 minutes to complete this question paper.

The question papers have a greater emphasis on the assessment of knowledge and understanding than the assignment. The remaining marks are awarded for the demonstration of skills.

Specimen question papers for Higher courses are published on SQA's website. These illustrate the standard, structure and requirements of the question papers candidates sit. The specimen papers also include marking instructions.

Course assessment structure: assignment

Assignment

30 marks

The assignment has 30 marks which represents 27% of the overall marks for the course assessment.

The assignment enables candidates to demonstrate the application of their skills, knowledge and understanding within the context of a geographical topic or issue.

Assignment overview

The assignment gives candidates an opportunity to demonstrate:

- ◆ identifying a geographical topic or issue
- ◆ carrying out research, which should include fieldwork where appropriate
- ◆ knowledge of the suitability of the methods and/or reliability of the sources used
- ◆ processing and using a range of information gathered
- ◆ drawing on detailed knowledge and understanding of the topic or issue
- ◆ analysing information from a range of sources
- ◆ reaching a conclusion supported by a range of evidence on a geographical topic or issue
- ◆ communicating information

The assignment has a greater emphasis on the assessment of skills than the question papers. The remaining marks are awarded for the demonstration of knowledge and understanding.

Setting, conducting and marking the assignment

The assignment has two stages:

- ◆ research
- ◆ production of evidence

SQA provides a brief for the generation of evidence to be assessed. Candidates have an open choice of geographical topic or issue. They research the topic or issue and organise and process their findings to address it using the specified resources (Processed Information) collected during their research to support them in the production of evidence. The Processed Information must be no more than two single-sided sheets of A4 or one single-sided sheet of A3 paper.

Teachers and lecturers should provide reasonable guidance on the types of topic or issue which enable candidates to meet all the requirements of the assignment. They may also guide candidates as to the likely availability and accessibility of resources for their chosen topic or issue.

Candidates undertake the research stage at any appropriate point in the course, normally when they have developed the necessary skills, knowledge and understanding. Candidates

complete the production of evidence stage in time to meet the submission date set by SQA. Evidence is submitted to SQA for external marking. All marking is quality assured by SQA.

Assessment conditions

Time

The research stage is completed over a notional period of 8 hours. Candidates have 1 hour and 30 minutes to complete the production of evidence stage. This must be done in one sitting. The evidence must be completed in time to meet a submission date set by SQA.

Supervision, control and authentication

The research stage is conducted under some supervision and control. This means that, although candidates may complete part of the work outwith the learning and teaching setting, teachers and lecturers should put in place processes to monitor progress and ensure that the work is the candidate's own, and that plagiarism has not taken place. For example:

- ◆ interim progress meetings with candidates
- ◆ questioning
- ◆ candidate's record of activity/progress
- ◆ teacher or lecturer observation

Group work approaches are acceptable as part of the research stage. However, there must be clear evidence for each candidate to show that they have met the evidence requirements.

The production of evidence stage is conducted under a high degree of supervision and control and is carried out:

- ◆ independently by the candidate
- ◆ within 1 hour and 30 minutes
- ◆ in one sitting
- ◆ with the use of the two single-sided A4 Processed Information sheets or one single-sided sheet of A3 only
- ◆ in time to meet a submission date set by SQA
- ◆ when the candidate is ready

If the production of evidence is word-processed, centres must ensure that candidates do not have access to the internet or any other files (either on hard drives or portable storage).

During the production of evidence stage, candidates must:

- ◆ be in direct sight of the teacher or lecturer, or other responsible person
- ◆ not communicate with each other
- ◆ have access only to the specified resources (two single-sided A4 Processed Information sheets or one single-sided A3 Processed Information sheet)
- ◆ not receive any assistance from the teacher or lecturer

Resources

There are no restrictions on the resources to which candidates may have access during the research stage.

During the final production of evidence stage, candidates must have access only to the specified resources (Processed Information). This comprises material collected and processed during the research stage on up to two single-sided sheets of A4 or one single-sided sheet of A3 paper. The Processed Information is not assessed. However, it must be submitted to SQA along with the candidate evidence.

Reasonable assistance

Candidates must undertake the assignment independently. However, reasonable assistance may be provided at the research stage and prior to the production of evidence taking place. The term 'reasonable assistance' is used to try to balance the need for support with the need to avoid giving too much assistance. If a candidate requires more than what is deemed to be 'reasonable assistance', they may not be ready for assessment or it may be that they have been entered for the wrong level of qualification.

Reasonable assistance may be given on a generic basis to a class or group of candidates, for example advice on how to develop a project plan. It may also be given to candidates on an individual basis.

When reasonable assistance is given on a one-to-one basis in the context of something the candidate has already produced or demonstrated, there is a danger that it becomes support for assessment. Teachers or lecturers must be aware that this should not go beyond reasonable assistance.

In the research stage, reasonable assistance may include:

- ◆ directing candidates to the instructions for candidates
- ◆ clarifying instructions/requirements of the task
- ◆ advising candidates on the choice of a topic or issue
- ◆ advising them on possible sources of information
- ◆ arranging visits, including fieldwork, to enable gathering of evidence
- ◆ interim progress checks

In preparing for the production of evidence stage, reasonable assistance may include:

- ◆ advising candidates of the nature and volume of specified resources which may be used to support the production of evidence

At any stage, reasonable assistance does not include:

- ◆ providing the topic or issue
- ◆ directing candidates to specific resources to be used
- ◆ providing model answers
- ◆ providing detailed feedback on drafts, including marking

Evidence to be gathered

The following evidence is required for this assessment:

- ◆ candidate evidence
- ◆ Processed Information (two single-sided sheets of A4, or one single-sided sheet of A3 paper)

Volume

There is no word count.

Grading

Candidates' overall grades are determined by their performance across the course assessment. The course assessment is graded A–D on the basis of the total mark for all course assessment components.

Grade description for C

For the award of grade C, candidates will typically have demonstrated successful performance in relation to the skills, knowledge and understanding for the course.

Grade description for A

For the award of grade A, candidates will typically have demonstrated a consistently high level of performance in relation to the skills, knowledge and understanding for the course.

Equality and inclusion

This course is designed to be as fair and as accessible as possible with no unnecessary barriers to learning or assessment.

For guidance on assessment arrangements for disabled candidates and/or those with additional support needs, please follow the link to the assessment arrangements web page: www.sqa.org.uk/assessmentarrangements.

Further information

The following reference documents provide useful information and background.

- ◆ [Higher Geography subject page](#)
- ◆ [Assessment arrangements web page](#)
- ◆ [Building the Curriculum 3–5](#)
- ◆ [Guide to Assessment](#)
- ◆ [Guidance on conditions of assessment for coursework](#)
- ◆ [SQA Skills Framework: Skills for Learning, Skills for Life and Skills for Work](#)
- ◆ [Coursework Authenticity: A Guide for Teachers and Lecturers](#)
- ◆ [Educational Research Reports](#)
- ◆ [SQA Guidelines on e-assessment for Schools](#)
- ◆ [SQA e-assessment web page](#)

The SCQF framework, level descriptors and handbook are available on the SCQF website.

Appendix 1: course support notes

Introduction

These support notes are not mandatory. They provide advice and guidance to teachers and lecturers on approaches to delivering the course. Teachers and lecturers should read these in conjunction with this course specification and the specimen question paper and/or coursework.

Developing skills, knowledge and understanding

This section provides further advice and guidance about skills, knowledge and understanding that teachers and lecturers could include in the course. Teachers and lecturers have considerable flexibility to select contexts that will stimulate and challenge candidates, offering both breadth and depth.

Teachers and lecturers should refer to this course specification for the skills, knowledge and understanding for the course assessment. Where possible, skills should be developed and practised across all sections. Skills may be assessed in any part of the question papers and in the assignment.

A broad overview of the skills, knowledge and understanding that are assessed in the course includes:

- ◆ researching and evaluating information about complex geographical issues
- ◆ using a wide range of mapping, research and information-handling skills in geographical contexts
- ◆ developing and applying factual and theoretical knowledge and understanding and giving detailed explanations of the processes and interactions at work within physical and human environments in a wide range of contexts

The Higher Geography course provides opportunities to reinforce and deepen learning by making links between aspects of knowledge and understanding across the sections, depending on the particular topics and issues studied. For example:

- ◆ The development of geographical knowledge and understanding within the physical environments and human environments sections can be drawn together appropriately in order to provide a basis for the development of knowledge and understanding in the global issues section, depending on the topics studied.
- ◆ Understanding of global climate change within the global issues section can be enhanced by prior learning undertaken in the physical environments section, when candidates study aspects of atmosphere. Centres may choose to organise learning and teaching so that these topics are taught consecutively or concurrently so that candidates are made aware of the links between them.

Learning about Scotland and Scottish culture enriches candidates' learning experience and helps develop skills for learning, life and work. Where there are opportunities to contextualise approaches to learning and teaching to Scottish contexts, teachers and lecturers should consider doing this.

Group work approaches can be used where it is helpful to simulate real-life situations, share tasks and promote team-working skills.

Approaches to learning, teaching and assessment

The Higher Geography course is a study of the interaction of physical and human processes on geographical topics and issues. The application of geographical skills, including Ordnance Survey (OS) mapping skills, is an integral part of the course.

There is no recommended teaching order for the sections of the course. However, candidates should have the opportunity to study a range of topics before they choose a geographical topic or issue for the assignment. The development of skills should be a part of learning and teaching from the outset to help candidates progressively build up their skills throughout the course.

Flexibility is provided in order to allow centres to develop geographical skills and techniques in the most productive context where rich opportunities for fieldwork may exist, and to encourage candidates to make maximum use of their own environment.

Candidates learn best when they:

- ◆ understand clearly what they are trying to learn, and what is expected of them
- ◆ are given feedback about the quality of their work, and what they can do to make it better
- ◆ are given advice about how to make improvements and are fully involved in deciding what needs to be done next
- ◆ know who can help them if they need it

Teachers and lecturers should:

- ◆ encourage and support independent learning
- ◆ help candidates understand the requirements of the course by sharing learning and/or assessment criteria
- ◆ deliver effective feedback
- ◆ encourage candidates to set their own learning objectives
- ◆ encourage candidates to assess the extent of their existing knowledge
- ◆ encourage self- and peer-evaluation
- ◆ question effectively using higher order questioning when appropriate

The use of assessment for formative purposes can help raise attainment by:

- ◆ giving feedback
- ◆ detailing progress
- ◆ identifying candidates' strengths and areas for development

The Higher Geography course has three sections:

- ◆ Physical environments
- ◆ Human environments
- ◆ Global issues

Candidates should develop skills throughout the course and be able to demonstrate these in the question paper. Course content, including skills, are assessed in both familiar and unfamiliar contexts.

Physical environments

This section provides suggestions and examples of how learning and teaching can be approached in the physical environments section.

Revisions valid from session 2018–19

- ◆ Formation of erosional and depositional features in river landscapes has been reintroduced to 'hydrosphere'.
- ◆ Erosional and depositional features have been specified in 'lithosphere'.
- ◆ Rural land-use conflicts and their management related to glaciated and coastal landscapes has been removed from 'lithosphere'.

Further guidance on course content

Skills suited to the physical environments section could include drawing annotated diagrams and interpreting and analysing graphs.

In 'atmosphere', candidates should be able to demonstrate an awareness of the global heat budget; both the effects of the atmosphere on the receipt of radiation at the Earth's surface, and latitudinal variations in energy. They should also be able to demonstrate an understanding of how both the atmosphere and oceans redistribute energy around the globe. Candidates should be able to describe and explain the nature, origin and weather associated with the air masses (continental tropical and maritime tropical). They should be able to explain the causes of the Intertropical Convergence Zone and its impact on rainfall patterns across West Africa.

In 'hydrosphere', candidates should be able to discuss both physical and human factors affecting the movement of water in the hydrological cycle. They should be able to interpret and analyse river hydrographs and be able to offer explanations for the changes shown in a hydrograph. Candidates should be able to explain the stages and processes in the formation of a range of specified river features as outlined in the course specification.

In 'lithosphere', candidates should be able to explain the stages and processes in the formation of a range of specified erosional and depositional glacial and coastal landforms as outlined in the course specification.

In 'biosphere', candidates should be able to describe the main features and properties of podzols, brown earths and gleys, including but not exclusively, horizons, colour, texture and drainage. They should also be able to explain the main soil-forming processes for each, including processes such as podzolisation, gleying, organic and nutrient movement. They should be able to draw an annotated soil profile for each of these soil types.

The following are examples of typical questions. They give an indication to teachers and lecturers of how physical environments may be assessed in the question paper and should

not be considered an exhaustive list. Some of these questions have been adapted from past paper questions.

Atmosphere

- ◆ **a Describe** the factors which affect the amount of energy received at the Earth's surface.
and
- ◆ **b Explain** how these impact on the energy received.
- ◆ **Explain** how atmospheric circulation cells and the associated surface winds assist in redistributing energy around the world.
- ◆ **a Describe** the pattern of ocean currents in the Pacific Ocean or Atlantic Ocean.
and
- ◆ **b Explain** why the ocean currents move in this way.
- ◆ **a Compare** the rainfall patterns across West Africa.
and
- ◆ **b Suggest reasons** for the variations.
Note: for resources to complement this question, refer to the 2016 Higher Geography question paper.
- ◆ **Explain** why there is a surplus of solar energy in the tropical latitudes and a deficit of solar energy towards the poles.

Hydrosphere

- ◆ **Explain**, with the aid of an annotated diagram or diagrams, how a meander is formed.
- ◆ With the aid of an annotated diagram, **describe** the global hydrological cycle.
- ◆ **Explain** how human activities can impact on the hydrological cycle.
- ◆ **a Describe** the changing river levels on the River Nene at Northampton from 29 to 30 April 2012.
and
- ◆ **b Explain** why the river levels change in this way.
Note: for resources to complement this question, refer to the 2014 Higher Geography question paper.

Lithosphere

- ◆ With the aid of annotated diagrams, **explain** the various stages and processes involved in the formation of a stack.
- ◆ **Explain** the formation of **one** erosional landform **and one** depositional glaciated landform.
- ◆ **Explain** the formation of a terminal moraine. You may wish to use diagrams in your answer.

Biosphere

- ◆ **Draw a fully annotated** soil profile of a **brown earth** soil to show its main characteristics (including horizons, colour, texture, soil biota and drainage) and associated vegetation.
- ◆ **Explain** how factors such as natural vegetation, soil organisms, climate, relief and drainage have contributed to the formation and characteristics of a **gley** soil.

Considerations for learning and teaching

Learning and teaching approaches should be candidate focused. The following examples illustrate approaches which may be used.

Example 1 — taking living graphs further to incorporate the ‘atmosphere’ learning

Using annotated living graphs in the hydrosphere topic, candidates can develop an understanding of the Intertropical Convergence Zone (ITCZ) — part of the atmosphere topic. As the ITCZ is responsible for the delivery of precipitation to tropical West Africa, using river flow data from this area in a storm hydrograph, candidates demonstrate their understanding of the cause and impact of the atmospheric system.

Teachers or lecturers may want to develop statements relating to the geographical location of air masses, the zone of maximum precipitation, and the relative position of the thermal equator. By adding these to a storm hydrograph, and justifying their location on the graph, candidates can demonstrate their understanding of what causes the ITCZ to migrate as well as the resulting impact on river flow. Candidates may discuss impacts, other than the impact on river flow, allowing able candidates to show their greater depth of understanding.

Example 2 — interpretation of hydrographs: supporting learning with living graphs

Through a learning and teaching approach that is rooted in the thinking skills strategies of David Leat, candidates can gain knowledge and understanding of hydrographs. After some teacher-led explanation, candidates could be given data (preferably real-life data), gathered on a rainfall event and subsequent response by a river system. Candidates could plot the data and annotate the hydrograph with the necessary labels, such as rising limb, recessional limb, peak flow and basin lag on suitable, large graph paper. Candidates could then write an accompanying paragraph to describe the hydrograph, including some suggestions as to why it exhibits the form it does.

This standard approach to interpreting hydrographs could then be developed by giving candidates a series of descriptive statements (similar to those found in the ‘Thinking through Geography’ approach — see [‘geoworld’](#) website), outlining observations and decisions made by individuals living in the river catchment. The nature of these statements should be broad enough that there may be more than one possible time period that they refer to.

Candidates could add these statements to their annotated hydrographs and add a further section to their write-up justifying why the statements occur when they do. This activity could be individual, but it is often more effective when done in pairs or small groups as candidates must justify their decisions to others.

Candidates could do this exercise in relation to the selected river basin, covering some of the physical characteristics of the basin and the possible needs for water management.

Example 3 — building in challenge and progression through glaciated and coastal landscapes

Candidates study the formation of erosional and depositional features in glaciated and coastal landscapes. These are topics which candidates may have covered previously and it would therefore be appropriate to ensure that, at Higher level, candidates are challenged and that progression in knowledge and understanding is achieved.

An understanding of Earth science would allow candidates to gain a greater understanding of the factors responsible for glacial and coastal erosion. To do this teachers and lecturers could consider some of the following:

Quaternary climate change	Candidates could better understand the cyclical nature of climate changes over the last 2 million years. This would allow candidates to appreciate that features such as U-shaped valleys can take several glacial periods to form. Understanding the different extent of different glacial periods would also allow candidates to appreciate why glacial deposits might be found on the edge of corries as well as in the lowlands.
Role of rock type in erosional processes	By understanding the differences in erosional susceptibility in different rock types, candidates can appreciate why some landscapes appear 'fresher' than others. It would also allow candidates to appreciate different rates of coastal erosion associated with different geologies.
Role of Quaternary sea level change	By having an understanding of eustatic and isostatic sea level change, candidates can better appreciate the rate of change and future potential changes due to predicted sea level and/or climate changes.

Candidates may also benefit from being challenged to use greater specialised vocabulary when describing and explaining processes that result in landforms of erosion and deposition.

Activities could include annotated diagrams, a write-up of their findings, digital presentation to a group involving the use of simple geographic information system (GIS) (such as Google Earth-based approaches), the design of trail packs for tourist markets (similar to the public understanding of science materials used in national parks and geoparks).

Example 4 — using outdoor learning to reinforce understanding of soils

The biosphere topic concerns the properties and formation of three soil types. The learning and teaching of this is often achieved through annotated diagrams of soil profiles. However, there is potential to enhance the learning experience by combining this classroom learning with simple-to-achieve outdoor learning experience.

Centres may have some kind of grass area within their grounds. A shallow soil pit could be created, then either filled in or covered after use. If this is not practical, then coring equipment (such as a soil auger, or a side sampling corer, such as a Russian corer) could be used to extract a soil profile.

Candidates could then sketch the soil, attempting to identify horizons and processes. Although it is unlikely that school or college grounds will contain model profiles, asking candidates to identify how their profile varies from podzols, brown earths and gley profiles,

provides a useful learning experience. By explaining how a real profile varies from a textbook example, there is the potential to improve a candidate's understanding of the properties and processes involved in soil formation. This approach can be achieved in a short period of time at a location close to the centre, or it can be combined with other field activities on a larger-scale outdoor learning experience.

Approaches to the assignment

Candidates should choose an issue or topic for study which develops greater understanding of the issue through research, including fieldwork where appropriate; and they should evaluate and analyse information from a range of sources in order to reach a conclusion.

The physical environments section provides rich opportunities for candidates to choose a range of possible titles for their assignment. However, the strong focus on fieldwork may limit the potential to draw on some of the more global topics, for example much of the atmosphere topic would be challenging to include as the principal focus of the assignment.

The following suggestions of topics and activities, grounded in the physical environments section, may form a focus of the assignment:

- ◆ How a particular river system responds to meteorological conditions.
- ◆ Nature and origin of a particular landform of glacial deposition.
- ◆ Nature and origin of a particular sediment section.
- ◆ Controls on sediment size and shape along a particular coastline.
- ◆ Examination of the rate of longshore drift along a particular coastline.
- ◆ Formation of a soil catena along a particular slope transect.
- ◆ An analysis and classification of a particular soil profile.

Candidates could also combine topics within the physical environments section, for example:

- ◆ Do soil properties affect the response rates of a river to a rainfall event?
- ◆ How do soils vary either side of a moraine ridge?

Candidates could also combine physical and human environment topics, for example:

- ◆ How soil characteristics vary as a result of human land use in rural areas.
- ◆ How human activities have altered the nature of beach sediment.
- ◆ How land use impacts on the response of a river to a rainfall event.
- ◆ How the expansion of an urban area is affected by physical landforms, drainage and soil type.

The topics listed above are for guidance only and would draw on knowledge and understanding primarily from the physical environments section. Greater challenge and application could be achieved by drawing on knowledge and understanding of topics and issues expressed in the global issues and human environments sections.

Human environments

This section provides suggestions and examples of how learning and teaching can be approached in the human environments section.

Revisions valid from session 2018–19

- ◆ Rural land-use conflicts and their management related to either a glaciated **or** a coastal landscape has been relocated to 'rural'.

Further guidance on course content

Skills suited to the human environments section could include interpreting and analysing graphs, flow maps and diagrams, photographs, population pyramids and data tables.

In 'population', candidates should demonstrate an awareness of how population data can be gathered and the problems faced in developing countries of collecting reliable data. They should also be able to explain a range of consequences (positive and/or negative) of population change. This includes the interpretation of a range of graphs including population pyramids. Candidates should be able to explain push and pull factors which lead to both forced and voluntary migration flows and the impacts these have on both the donor and receiving countries.

In 'rural', candidates should be able to explain a range of social, economic and environmental impacts of rural land degradation in either a named semi-arid or a rainforest area. They should also be able to explain and evaluate the effectiveness of a range of management strategies deployed within their case study area.

Candidates should be able to explain a range of rural land-use conflicts in a glaciated or coastal area they have studied. They should be able to explain a range of strategies implemented to manage these conflicts and offer some comment on their success.

In 'urban', candidates should be able to demonstrate an awareness of the need for urban change and the reasons underlying these recent changes. They should also be able to explain management strategies employed to manage traffic and housing changes and offer some comment on the impact of these strategies. The changes studied should be recent rather than historical to ensure the topic remains current and relevant.

The following are examples of typical questions. They give an indication to teachers and lecturers of how human environments may be assessed in the question paper and should **not** be considered an exhaustive list. Some of these questions have been adapted from past paper questions.

Population

- ◆ **Discuss** the possible consequences of the 2050 population structure for the future economy of Malawi and the welfare of its citizens.

Note: for resources to complement this question, refer to the 2013 Higher Geography question paper.

- ◆ **a Describe** the changes projected to take place in Scotland's population structure.
and
- b Suggest problems** that the government may face as a result of these changes.
- ◆ **Discuss** how countries gather accurate population data.
- ◆ **Explain** why it is difficult to gather accurate population data in developing world countries.
- ◆ With reference to a migration flow you have studied:
 - a Explain** the push **and** pull factors for this migration
and
 - b Discuss** the impacts of this migration on **either** the donor **or** the receiving country.

Rural

- ◆ Referring to named examples within the Cairngorms or any other upland or coastal area you have studied:
 - a Describe** the environmental conflicts that have occurred.
and
 - b Explain** why these conflicts have happened.
 - c Describe** the management strategies used for these environmental conflicts, commenting on their effectiveness.
- ◆ **a Explain** techniques employed to manage rural land degradation in a rainforest **or** semi-arid area that you have studied.
and
- b Comment on** the effectiveness of these techniques.
- ◆ **Explain** the socio-economic and environmental impacts of rural land degradation in a rainforest or semi-arid area you have studied.

Urban

- ◆ With reference to a **named** city that you have studied in the developing world:
 - a Explain** the social, economic and environmental problems found in shanty town areas.
and
 - b Explain** the methods the residents and local authorities have used to tackle these problems.
- ◆ **Explain** the strategies employed to combat the problems of traffic congestion in a **developed** world city you have studied. You should refer to specific named examples from your chosen city.
- ◆ **Evaluate** the effectiveness of the strategies used to manage traffic in a developed world city you have studied.

Considerations for learning and teaching

Learning and teaching approaches should be candidate focused. The following example illustrates approaches which may be used.

Example — contrasting approaches to housing redevelopments: decision-making exercise

Candidates could study the need for management of an aspect of recent urban change in a developed world city and in a developing world city. Redevelopment of housing would be an example of such a development. Candidates can use a range of research skills in order to collect information to compare developments in a slum region of the developing world, such as the major cities of India, with the redevelopment of low-cost housing in a UK city, such as the Craigmillar area of Edinburgh.

This exercise creates an opportunity to use decision-making learning approaches to develop candidates' level of understanding and comprehension, as well as address many of the skills for learning, skills for life and skills for work.

Teachers and lecturers might like to consider the following approach:

Background information	Introduce the location of contrasting housing areas in Scotland and India, giving the background to their development. Potential to use atlas skills and Ordnance Survey map skills to support this, so reinforcing key geographic skills.
Address the issues	<p>In many Scottish/UK cities, housing redevelopments have learned from the mistakes of the post-war years and are now upgrading the quality of low-cost housing while trying to retain (and in many cases improve) a sense of community. There is a drive to improve infrastructure and opportunities in these areas, rather than 'rehouse and flatten'.</p> <p>This contrasts with recent suggestions from cities such as Mumbai where local authorities are planning to flatten huge areas of slum housing. These areas have huge welfare issues but benefit from a strong community and entrepreneurial spirit.</p>
Create the scenario	<p>Set the candidates a clear and manageable aim such as 'how can Indian city developers learn from the post-war mistakes of their UK counterparts?'</p> <p>Teachers and lecturers may consider setting this as a research task, giving candidates access to the wealth of information available on slum developments and UK housing developments. This might include recent television programmes on slum developments.</p> <p>There is also another option for this to be teacher-led. This would be less skills-focused but may suit time constraints.</p>

Formative assessment opportunity	Candidates could be given a decision-making task with a clear aim, such as the example given above, that would require them to outline the need for urban management of housing both in developed and developing world cities. It would also need critical examination of the strategies used/proposed in each case study. As there is not a clear right or wrong answer, the decision-making would require critical thinking and clear analysis of source materials.
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Teachers and lecturers may see the potential of building elements of the population topic into the task through the inclusion of population statistics and rural to urban migration information.

Approaches to the assignment

Candidates should choose an issue or topic for study which develops greater understanding of the issue through research, including fieldwork where appropriate, and allows them to evaluate and analyse information from a range of sources in order to reach a reasoned conclusion.

The human environments section provides rich opportunities for candidates to choose a range of possible titles for the assignment. However, the strong focus on fieldwork may limit the potential to draw on some of the more global topics in this section, for example much of the course content that is rooted in a developing world context.

Teachers and lecturers could, however, consider using the developing world context as an opportunity to introduce and consolidate research skills using secondary sources.

The following suggestions of topics and activities, grounded in the human environments section, may form a focus of the assignment:

- ◆ Examination of the population structure within a given locality.
- ◆ Perceived push and pull factors for young people looking to leave a rural community.
- ◆ Opportunities and challenges for generating energy in rural Scotland.
- ◆ Preservation versus conservation: managing environments along dynamic coastlines.
- ◆ Nature and impact of a particular urban development on the local population.
- ◆ Identifying urban priorities — what developments local people perceive are needed in their community.

Candidates could also combine topics within the human environments section:

- ◆ Distribution of migrant workers within an urban area — implications for housing, transport and community integration.
- ◆ Future of greenbelts — protecting rural land or hindering urban development?

Candidates could also combine human and physical environment topics:

- ◆ How soil characteristics are affected by human land use in rural areas.
- ◆ How human activities have altered the nature of beach sediment.

- ◆ How land use impacts on the response of a river to a rainfall event.
- ◆ How the expansion of an urban area is affected by physical landforms, drainage and soil type.

The topics listed above are for guidance only and would draw on knowledge and understanding primarily from the human environments section. Greater challenge and application could be achieved by drawing on knowledge and understanding of topics and issues expressed in the global issues and physical environments sections.

Global issues

This section provides suggestions and examples of how learning and teaching can be approached in the global issues section.

Candidates are expected to study two of the following topics:

- ◆ river basin management
- ◆ development and health
- ◆ global climate change
- ◆ energy

Centres should carefully consider how they select the two topics for study. Where candidates are progressing from National 5, centres may consider balancing breadth of learning with progression. There is also the opportunity for candidate choice in the global issues section.

Revisions valid from session 2018–19

- ◆ Trade, aid and geopolitics has been removed.

Further guidance on course content

Skills suited to the global issues section could include interpreting a range of graphical, tabular and map-based resources.

In 'river basin management', candidates should be able to use a range of sources to discuss the need for water management in a given area. They should also be able to explain the physical and human factors which should be considered when choosing the site for a dam and its associated reservoir, including but not exclusively, factors such as geology, soil, climate, demand and infrastructure. They should demonstrate an understanding, with reference to a named case study, of the social, economic, political and environmental benefits, and adverse consequences of the water management project.

In 'development and health', candidates should demonstrate an understanding of a range of social, economic and composite methods of measuring development (for example, birth rate per 1000, Gross National Income per capita, Human Development Index). They should be able to explain a range of factors which lead to difference in development between countries in the developing world. With reference to a water-related disease, candidates should be able to explain the causes of the disease and its impacts on the people and economy of affected areas. They should also be able to explain management strategies used to control the disease and offer some evaluation on their success. Candidates should also be able to explain a range of primary health care strategies aimed at improving health and the control of disease in developing countries, and their impact.

In 'global climate change', candidates should be able to explain both the physical and human causes of climate change. It is important to focus on change within these factors. They should also be able to explain a range of impacts of climate change; both current and projected, and suggest management strategies used to both reduce greenhouse gas emissions and manage the impacts of climate change.

In 'energy', candidates should be able to explain the global distribution of renewable and non-renewable energy resources. They should be able to explain the changes in energy demand (both increases and decreases as appropriate) across the world, using graphical sources where relevant. Candidates should be able to discuss the effectiveness of both renewable and non-renewable energy sources in meeting demands, and offer some comment as to their success.

The following are examples of typical questions. They give an indication to teachers and lecturers of how global issues may be assessed in the question papers and should **not** be considered an exhaustive list. Some of these questions have been adapted from past paper questions.

River basin management

- ◆ **Explain** why there is a need for water management within the Mississippi River Basin.
Note: for resources to complement this question, refer to the 2013 Higher Geography question paper.
- ◆ **a Describe** the economic, environmental and social benefits of a named water control project.
and
b Explain how these impact on the area.
- ◆ **a Describe** the physical factors which should be considered when selecting the site for a dam and its associated reservoir.
and
b Explain why it is important to consider these factors.
- ◆ **Explain** the human **and** physical factors which need to be considered when selecting a site for a dam and its associated reservoir.
- ◆ Referring to a water control project you have studied, **explain** the **positive** social, environmental **and** economic impacts created by the construction of a major dam and its associated reservoir.

Development and health

- ◆ Referring to named countries you have studied, **suggest reasons** for the wide variations in development which exist **between** developing countries.
- ◆ For a water-related disease you have studied:
 - a Describe** the physical **and** human factors which put people at risk of contracting the disease.
 - b Describe** the measures that can be taken to combat the disease.
and
 - c Explain** the varying effectiveness of these measures.
- ◆ **Explain** why using only **one** development indicator, such as Gross National Income (GNI) per capita, may fail to reflect accurately the true quality of life within a country.
- ◆ Referring to specific primary health care strategies you have studied:
 - a Explain** how these strategies meet the health care needs of the people in a developing country.
and
 - b Comment on** the effectiveness of these strategies.

Global climate change

- ◆ **Explain** the human factors that may lead to climate change.
- ◆ **Discuss** a range of possible effects of climate change. You should support your answer with specific examples.
- ◆ **Explain** the **physical** causes of climate change.
- ◆ **a Explain** possible strategies for managing climate change.
b With reference to strategies you have studied, **comment on** their effectiveness.
- ◆ There has been an increase in the average global temperature in the last 150 years.
a Describe the human factors that may cause the increase in average global temperatures.
b Explain how these factors may lead to climate change.

Energy

- ◆ Using the information in the diagram **suggest reasons** for the different patterns of energy production in the countries shown.
Note: for resources to complement this question, refer to the 2015 Higher Geography question paper.
- ◆ Choose **one** renewable **and one** non-renewable approach to energy production and, for each approach, **evaluate** its effectiveness in meeting energy demands.
Note: for resources to complement this question, refer to the 2015 Higher Geography question paper.
- ◆ **Suggest reasons** for the changes in energy consumption in the UK.
Note: for resources to complement this question, refer to the 2016 Higher Geography question paper.
- ◆ **Discuss** the advantages **and** disadvantages of hydraulic fracturing (fracking).
Note: for resources to complement this question, refer to the 2016 Higher Geography question paper.
- ◆ **Discuss** the effectiveness of Hydro Electric Power (HEP), or any other renewable source of energy you have studied, in meeting energy demands. You may wish to refer to one or more countries in your answer.

Considerations for learning and teaching

Learning and teaching approaches should be candidate focused. The following examples illustrate approaches which may be used.

Example 1 — creating annotated river basin tours

River basin management is a topic that is familiar to many teachers and lecturers. Many have the materials and resources to support teaching this topic. Teachers and lecturers may like to consider integrating some simple GIS.

River basin management is largely case study specific, with candidates developing their knowledge and understanding of a selected river basin. The topic requires candidates to understand:

- ◆ physical characteristics of a selected river basin
- ◆ need for water management
- ◆ selection and development of sites
- ◆ consequences of water control projects

Teachers and lecturers could include both teacher-led sessions and candidate-led research time for this topic. This builds on several skills for learning, skills for life and skills for work.

Rather than using conventional essay/report writing approaches, the spatial nature of the topic lends itself to the use of software such as Google Earth. Candidates (either individually or in small groups) could create a Google Earth tour through their selected river basin. These tours use waypoints within the software which can be added to with text, photographs and other graphics. By saving the tour as a .kmz file, it can be shared with the rest of the group, to support peer-evaluation and peer-teaching.

Teachers or lecturers could adapt this approach depending on the ability of the group and the time constraints of the task. For example, different candidates could be asked to look at different aspects — some looking at physical characteristics while others look at need for management, sites of water management, and consequences of water management. This would greatly support peer-teaching, with candidates accessing each other's tours as a way of developing their knowledge and understanding of the topic.

Alternatively, each candidate could create a tour that examines all elements of the topic, perhaps with different candidates investigating different drainage basins. When the work is shared within the group, greater breadth of knowledge would be achieved.

Using a simple GIS, such as plotting annotated tours in Google Earth, could greatly increase enjoyment and engagement of candidates. It is an approach which produces work that is unique to the candidate and current in nature. It also provides a great opportunity to develop ICT skills, research skills and map skills.

Example 2 — energy topic: using outside agencies to support learning

The energy topic is relevant to modern Scotland and throughout the world. Candidates are expected to develop an understanding of the following:

- ◆ global distribution of energy resources
- ◆ reasons for increase in demand for energy in both developed and developing countries
- ◆ effectiveness of renewable and non-renewable approaches to meeting energy demands and their suitability within different countries

The first two elements are areas that most centres will be confident in delivering and assessing. The final element, examining the effectiveness of energy resources within contrasting countries, lends itself to centres/departments building links with other curricular areas as well as outside agencies.

Science departments often explore these themes and there may be potential for geography teachers and lecturers to team up with science colleagues to develop a teaching environment that draws on individuals' strengths.

Scotland is home to a range of energy providers, many of them parts of multinational companies operating in a global context. Representatives from these companies can often be encouraged to either visit centres or host site visits for candidates. These representatives can be well placed to inform candidates on the nature of energy production around the world and the effectiveness of different approaches in different locations.

Using outside agencies is excellent for school–community partnerships and can contribute to candidates developing their citizenship skills, as well as their analytical skills and critical thinking as they question and digest what they have heard.

This form of learning would also lend itself to a discussion or debate, allowing candidates to build their own arguments (either in a genuine debate or a role-play focused discussion), and demonstrate their knowledge and understanding of the topic. Being challenged by their peer group broadens their understanding as well as developing greater depth of understanding.

Approaches to the assignment

Candidates should choose an issue or topic for study which develops greater understanding of the issue through research, including fieldwork where possible; and they should evaluate and analyse information from a range of sources in order to reach a reasoned conclusion.

This section provides rich opportunities for candidates to choose a range of possible titles for the assignment. However, the strong focus on fieldwork may limit the potential to draw on the global issues as the main element in the assignment. Rather, this section is an excellent method for developing, consolidating and reinforcing research skills associated with secondary sources, including effective library and internet research skills.

This section may be better suited to suggesting general themes, rather than actual topics for the assignment. These themes might include:

- ◆ Water management scheme at a particular location.
- ◆ A comparison of water management approaches between a local case study and a global example.
- ◆ Mapping inequality within Scotland.
- ◆ A study on the effectiveness of Scottish/UK international aid initiatives.
- ◆ Local effects of predicted climate change.
- ◆ Risk to local communities of predicted climate change.
- ◆ Impact of globalisation on local/independent shopkeepers.
- ◆ Feasibility of initiative to have consumers limit their food miles and 'eat local'.
- ◆ Benefits and problems of a local energy development (such as wind farm, power station, or marine project).
- ◆ Success or failure of government initiatives to drive down energy demand in local communities.

Teachers and lecturers and candidates should note that many of the research skills around interviewing and gaining public viewpoints would be relevant for assignments that are rooted in the themes of this section.

The topics listed above are for guidance only and would draw on knowledge and understanding from this section as well as the human environments and physical environments sections. This drawing of knowledge and understanding from across the course facilitates greater challenge and application and has the potential to increase candidates' overall performance, as well as enjoyment, of the course.

Application of geographical skills

This section provides suggestions and examples of how learning and teaching can be approached in the geographical skills section.

This section consists of an extended-response question requiring candidates to apply geographical skills acquired during the course. Candidates are required to interpret and analyse a range of resources including Ordnance Survey maps, photographs, field sketches, cross-sections, transects, statistical/tabular data, and graphs, and apply their skills in an unfamiliar context.

Candidates are expected to:

- ◆ give appropriate map evidence, including six-figure grid references
- ◆ measure distance
- ◆ give detailed descriptions of relief and drainage
- ◆ identify physical landscape features
- ◆ describe and suggest reasons for sites of new developments
- ◆ describe and explain land use
- ◆ suggest reasons for possible land-use conflicts
- ◆ explain both positive and negative impacts of new developments on the area selected

Preparing for course assessment

The course assessment focuses on breadth, challenge and application. Candidates draw on and extend the skills they have learned during the course. These are assessed through two question papers: paper 1 covers the physical environments and human environments sections and paper 2 covers the global issues and application of geographical skills sections.

In preparation for the course assessment, candidates should have the opportunity to:

- ◆ consolidate their knowledge and understanding of geographical content and processes
- ◆ apply knowledge and understanding to new areas and contexts
- ◆ select and apply appropriate Ordnance Survey mapping skills
- ◆ apply geographical skills to new areas and contexts
- ◆ practise interpreting data and graphs
- ◆ identify the command words and key words in questions
- ◆ consolidate their knowledge of specific case studies

The question papers assess a sample of knowledge and skills developed in the course and provide opportunities to apply skills and knowledge in a wide range of contexts, some of which may be new to candidates.

The assignment allows candidates to apply the skills they have developed in the course to a real-life situation which interests them.

Before the course assessment, candidates may benefit from responding to past paper questions.

In addition to this course specification, the following documents provide further information on course assessment:

- ◆ specimen question papers and marking instructions
- ◆ assignment assessment task

These materials are available on SQA's website, and should be referred to when planning for course assessment.

Developing skills for learning, skills for life and skills for work

Teachers and lecturers should identify opportunities throughout the course for candidates to develop skills for learning, skills for life and skills for work.

Candidates should be aware of the skills they are developing and teachers and lecturers can provide advice on opportunities to practise and improve them.

SQA does not formally assess skills for learning, skills for life and skills for work.

There may also be opportunities to develop additional skills depending on approaches being used to deliver the course in each centre. This is for individual teachers and lecturers to manage.

All three sections of the course provide rich and varied opportunities for candidates to develop the following skills:

1 Literacy

1.1 Reading

2 Numeracy

2.3 Information handling

4 Employability, enterprise and citizenship

4.6 Citizenship

5 Thinking skills

5.3 Applying

5.4 Analysing and evaluating

	Opportunities for candidates to develop skills for learning, life and work
Physical environments	<ul style="list-style-type: none"> ♦ mapping skills develops skills of information handling and analysing and evaluating ♦ information handling and analysing can be further developed in the interpretation of, for example, hydrographs
Human and Physical environments	<ul style="list-style-type: none"> ♦ using outside agencies and speakers, as well as by giving candidates the maximum opportunity to engage in fieldwork and other forms of outdoor learning
Global issues	<ul style="list-style-type: none"> ♦ using discussion, debate, partnerships with outside agencies, and meaningful contemporary research

	Opportunities for candidates to develop skills for learning, life and work
Assignment	<ul style="list-style-type: none"> ◆ researching the assignment topic develops reading skills ◆ processing a range of statistical, numerical and graphical information develops information-handling skills ◆ deepening their understanding of issues facing contemporary society, particularly issues concerning sustainable development develops citizenship ◆ applying knowledge to the issue studied, and using analytical and evaluation skills, both in the research process and in preparing findings for the write-up of their assignment

Appendix 2: useful websites

Geographical skills

Research skills

- ◆ <http://www.bbc.co.uk/scotland/landscapes/>
- ◆ <http://maps.nls.uk/>
- ◆ <http://www.alangodfreymaps.co.uk/>
- ◆ <http://www.scottish-places.info/scotland.html>

Map skills

- ◆ <http://www.ordnancesurvey.co.uk/oswebsite/education-and-research/index.html>
- ◆ <http://www.teachnetuk.org.uk/2006%20Projects/Geog-Map%20Skills/index.htm>
- ◆ http://www.nnas.org.uk/index.php?option=com_content&view=article&id=4&Itemid=4

Physical environments

Lithosphere

- ◆ <http://www.northwest-highlands-geopark.org.uk/>
- ◆ <http://www.geography.learnontheinternet.co.uk/topics/glaciation.html>
- ◆ <http://www.geography.learnontheinternet.co.uk/topics/coasts.html>
- ◆ <http://www.sln.org.uk/geography/schools/blythebridge/AnimationsCoastal.htm>
- ◆ <http://www.physicalgeography.net/fundamentals/10af.html>
- ◆ https://www.youtube.com/watch?v=aO_ZtgSJt9g

Atmosphere

- ◆ <http://www.bbc.co.uk/education/topics/zqy9wmn>
- ◆ <http://www.geography-revision.co.uk/pages/climatology/atmospheric-circulation/>
- ◆ <http://www.scienceclarified.com/As-Bi/Atmospheric-Circulation.html>
- ◆ <https://earthobservatory.nasa.gov/IOTD/view.php?id=703>

Hydrosphere

- ◆ <http://www.bbc.co.uk/education/topics/z7vkjxs>
- ◆ <http://www.s-cool.co.uk/a-level/geography/river-profiles/revise-it/storm-hydrographs-and-river-discharge>

Biosphere

- ◆ <http://www.bbc.co.uk/education/topics/zmbd7ty>
- ◆ <http://www.hutton.ac.uk/learning/schools-colleges-and-universities/introduction-to-soils>
- ◆ <http://www.macaulay.ac.uk/soilquality/An%20introduction%20to%20soils%2C%20soil%20formation%20and%20terminology.pdf>

Human environments

Population

- ◆ <http://www.bbc.co.uk/education/topics/z6rjimp3>
- ◆ <https://www.cia.gov/library/publications/the-world-factbook/>
- ◆ <http://www.scotlandscensus.gov.uk/>
- ◆ <http://www.geography.learnontheinternet.co.uk/topics/popn.html>
- ◆ http://www.sln.org.uk/geography/population_and_migration.htm
- ◆ <http://www.populationmatters.org/resources/materials-schools/>
- ◆ <http://www.worldof7billion.org/>
- ◆ <https://soapboxie.com/misc/7-Problems-of-Census>
- ◆ <https://data.worldbank.org/indicator>
- ◆ <http://www.bbc.co.uk/news/world-32912867>

Urban

- ◆ <http://www.sln.org.uk/geography/geoweb/blowmedown/shanty05.swf>
- ◆ <https://www.education.gov.scot>
- ◆ <http://www.bbc.co.uk/education/topics/zh476sq>
- ◆ <https://geographyfieldwork.com/SaoPauloManagement.htm>
- ◆ http://www.edinburgh.gov.uk/downloads/file/3525/local_transport_strategy

Rural

- ◆ <http://www.oxfam.org.uk/education/resources/>
- ◆ <http://www.developmenteducation.ie/media/documents/Desertification.pdf>
- ◆ <http://www.bbc.co.uk/education/topics/ztcqxn timer>
- ◆ <https://cpb-eu-west-2-juc1uqur1qwqqo4.stackpathdns.com/edublog.mgfl.net/dist/a/14/files/2015/05/5.-Lake-District-Conflict-x7eg2j.pdf>

Global issues

Climate change

- ◆ <http://www.bbc.co.uk/education/topics/zfd6n39>
- ◆ <http://www.metoffice.gov.uk/climate-guide/climate-change>
- ◆ <http://www.energyville.com/energyville/>
- ◆ <http://www.greenpeace.org.uk>
- ◆ <https://gisgeography.com/climate-change-effects-maps>

River basin management

- ◆ <http://www.bbc.co.uk/education/topics/znkmhyc>
- ◆ <http://www.internationalrivers.org/the-river-educator%E2%80%99s-toolkit-list-of-resources>
- ◆ <https://greengarageblog.org/list-of-top-16-three-gorges-dam-pros-and-cons>
- ◆ <http://www.waterencyclopedia.com/Ce-Cr/Colorado-River-Basin.html>

Energy

- ◆ <http://www.bbc.co.uk/education/topics/zvqpyrd>
- ◆ <http://www.therenewableenergycentre.co.uk/educational-resources/>
- ◆ http://www.solarschools.net/resources/stuff/advantages_and_disadvantages.aspx
- ◆ <https://yearbook.enerdata.net/total-energy/world-consumption-statistics.html>

Development and health

- ◆ <http://www.bbc.co.uk/education/topics/zs8xpv4>
- ◆ <http://www.who.int/topics/malaria/en/>
- ◆ <http://teachunicef.org/explore/topic/water-and-environment>
- ◆ <http://www.who.int/malaria/areas/elimination/casestudies/en/>
- ◆ http://web.stanford.edu/group/womenscourage/HumBio_129/Malawi.html

General

- ◆ <http://www.gatm.org.uk/>
- ◆ <http://www.globaldimension.org.uk/>
- ◆ <http://www.hutton.ac.uk/>
- ◆ <http://www.snh.gov.uk/>
- ◆ <http://www.cairngorms.co.uk/>

Administrative information

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History of changes

Version	Description of change	Date
2.0	Course support notes added as appendix.	July 2018

Note: you are advised to check SQA's website to ensure you are using the most up-to-date version of this document.

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