
Getting Started: GCSE (9–1) 2016

Geography A – Geographical Themes and Challenges

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1. Introduction

This Getting Started guide provides an overview of the new GCSE (9–1) 2016 Geography A – Geographical Themes and Challenges specification to help you get to grips with the changes to content and assessment, and to help you understand what these mean for you and your students.

Key features of our GCSE Geography A specification

The specification and Sample Assessment Materials (SAMs) have been developed in consultation with hundreds of fellow teachers who, in focus groups and face-to-face interviews, have provided feedback at each stage; have helped us to redesign a qualification that is engaging and relevant to today's geographers; and to help prepare them to succeed in their chosen pathway.

Drawing on feedback from all parts of the Geography education community, the 2016 GCSE Geography A specification has been built on the following key features.

- **A familiar theme-based approach** with a clear and coherent structure with separate physical, human and skills-based components.
- **Clear question papers, command words and mark schemes** that are accessible for all abilities. There are three externally examined papers that provide gradual progression in demand throughout the topics. Across all three assessments and the qualification as a whole there is consistent use of 13 different command words so that students know what to expect (see page 26 of this guide and page 45 of the specification).
- **Extended writing opportunities** where students can demonstrate what they know.
- **Engaging and manageable fieldwork.** Contexts for fieldwork are aligned with the core content of the course. Fieldwork tasks will remain for the lifetime of the specification so there is less time spent on planning and administration and more time to bring geography to life in the field.
- **An engaging real-world focus.** Students are encouraged to apply their knowledge and understanding to real-life 21st-century UK challenges.
- **Continuous progression** with clear detailed content that tells you what to teach. The new specification content introduces students to physical or human geography first, and then to people–environment processes and interactions in the context of place at a range of scales. Building on this, via geographical investigation, students draw on their wider knowledge and understanding of UK geography to explore geographical issues.
- **Integrated and signposted geographical skills.** Geographical skills are integrated throughout *all* parts of the course so that students use them in context.
- **The appropriate balance between breadth and depth.** Content is written with a clear distinction between geographical overview (larger scale) and geographical depth (smaller scale).
- **Supports progression to A level.** The compulsory and optional topic content provides the opportunity to lay foundations of knowledge and understanding, and develop transferable skills that can be further developed at A level.

We will provide a package of support to help you plan and implement the new specification.

- **Planning:** In addition to the 'Planning' section in this guide (see Section 3), we will provide course planners (for delivery over two or three years) and schemes of work that you can adapt to suit your department.
- **Understanding the standard:** We will supply you with 'real life' exemplars that have been written by students and marked by our examiners, along with examiner commentaries.
- **Tracking learner progress:** Our well-established ResultsPlus service will help you to track student progress, as will our MockAnalysis service.
- **Personal, local support:** Our subject adviser, Jon Wolton, is always on hand to help you; he can be contacted at TeachingGeography@pearson.com. You can sign up to receive emails from Jon and be kept up to date about training events, news and government announcements, deadlines and much more.
- **Teaching and learning support:** We will have a programme of teaching and learning support to help you implement the new specification, particularly with new and unfamiliar content and skills. Additionally, we aim for our qualifications to be supported by high-quality resources produced by a range of publishers, including Pearson, and we'll be working with publishers who are looking towards getting their resources endorsed.
- **Free Getting Ready to Teach events:** Online or face to face, our free events are specifically aimed at centres delivering a three-year KS4 and will be available during the autumn term. They will support those who start teaching the new Edexcel GCSE Geography B (9–1) specification in autumn 2015. Further Getting Ready to Teach events for centres delivering a two-year KS4 will be provided in spring/summer 2016 and will be available for booking in due course. You can book onto a free GRTT event on Pearson's Training page: <http://qualifications.pearson.com/en/support/training-from-pearson-uk.htm>
- Course materials, along with teaching and learning support, will be available on Pearson's GCSE 2016 Geography A qualification pages: <http://qualifications.pearson.com/en/qualifications/edexcel-gcses/geography-a-2016.html>

2. What's changed?

2.1 How has GCSE Geography changed?

Changes to GCSE Geography

- From September 2016, GCSE Geography will be a linear qualification. This means that all examinations must be sat at the end of the course.
- The qualification is only available in the summer series, with the first assessment in summer 2018.
- The course is assessed by 100% external examination with no coursework or controlled assessment units.
- There will no longer be higher and foundation tiers, so all students will take the same exam paper.
- There is a new grading scale, 9–1, with 9 being the top level.

Changes to GCSE Geography subject content requirements

- The content requirements for GCSE Geography have been revised. All awarding organisations' specifications for GCSE Geography must meet these requirements.
- Revised compulsory core content set by the Department for Education:
 - Locational knowledge
 - Geography of the UK
 - Maps, fieldwork and geographical skills
 - Geomorphic processes and landscape
 - Changing weather and climate
 - Global ecosystems and biodiversity
 - Resources and their management
 - Cities and urban society
 - Global economic development issues
- The requirements for carrying out and assessing fieldwork have changed.
- Fieldwork must be carried out in two contrasting environments.
- It must include exploration of physical and human processes, and the interactions between them.
- Fieldwork will no longer be assessed by Controlled Assessment but by externally set questions in Paper 3.
- Students will be assessed on their own experience of fieldwork and fieldwork in unfamiliar contexts.
- There will be an increased emphasis on the geography of the UK.
- There is also an emphasis on locational and place knowledge.
- More emphasis will be placed on geographical skills (cartographic, numerical and statistical).

Changes to Assessment Objectives

The GCSE Geography Assessment Objectives have been revised. There are now four Assessment Objectives, compared with three in the current specification.

Current GCSE Geography A specification (last assessment, 2017)

AO1 30–40%	Recall, select and communicate their knowledge and understanding of places, environments and concepts.
AO2 30–40%	Apply their knowledge and understanding in familiar and unfamiliar contexts.
AO3 30–40%	Select and use a variety of skills, techniques and technologies to investigate, analyse and evaluate questions and issues.

New GCSE 2016 Geography A specification (first assessment, 2018)

AO1 15%	Demonstrate knowledge of locations, places, processes, environments and different scales.
AO2 25%	Demonstrate geographical understanding of: <ul style="list-style-type: none"> • concepts and how they are used in relation to places, environments and processes • the inter-relationships between places, environments and processes.
AO3 35% (10% applied to fieldwork context(s))	Apply knowledge and understanding to interpret, analyse and evaluate geographical information and issues to make judgements.
AO4 25% (5% used to respond to fieldwork data and contexts)	Select, adapt and use a variety of skills and techniques to investigate questions and issues and communicate findings.

At least 10% of the marks must be allocated to the assessment of mathematical and statistical techniques at a level appropriate to the qualification.

The number of marks available to credit the accuracy of learners' spelling, punctuation and grammar, and their use of specialist terminology (SPaG), must be equal to 5% of the subject marks.

2.2 Changes to the specification

Specification overview

The table below provides a brief overview of the subject content in the GCSE Geography A specification.

Component 1: The Physical Environment
37.5% of the GCSE (94 marks) Of the 94 raw marks available, up to 4 marks are awarded for SPaG
1 hour and 30 minutes written external examination
Topic 1: The changing landscapes of the UK Two studies from coastal, river or glaciated landscapes. Topic 2: Weather hazards and climate change Two studies of tropical cyclones (in a named developed and a named emerging or developing country) and two studies of drought (in a named developed and a named emerging or developing country). Topic 3: Ecosystems, biodiversity and management Two studies, one of a tropical rainforest in a named region and one of deciduous woodlands in a named region.

Component 2: The Human Environment
37.5% of the GCSE (94 marks) Of the 94 raw marks available, up to 4 marks are awarded for SPaG
1 hour and 30 minutes written external examination
Topic 4: Changing cities Two studies including a UK city and a city from a developing or emerging country. Topic 5: Global development A study of a developing or emerging country. Topic 6: Resource management A study of energy resources or water resources.

Component 3: Geographical Investigations – Fieldwork and UK Challenges
25% of the GCSE (64 marks) Of the 64 raw marks available, up to 4 marks are awarded for SPaG The UK challenge will be drawn from one or more of the four themes in Topic 8
1 hour and 30 minutes written external examination
Topic 7: Geographical investigations – fieldwork (15%) One physical and one human investigation. Topic 8: Geographical investigations – UK challenges (10%) A study drawing across knowledge and understanding from The Physical Environment (Component 1) and The Human Environment (Component 2).

Assessment overview

Below is a summary of the key changes.

- There are now four Assessment Objectives for GCSE Geography; these are tested across all three components.
- In Components 1 and 2, there are three 30-mark sections. Of the 94 raw marks available, up to 4 marks are awarded for SPaG.
- In Component 3, of the 64 raw marks available, up to 4 marks are awarded for SPaG.
- In each component, the marks for SPaG will be included in the final question in Section C.
- Each exam will include multiple-choice questions, short open, open response, calculations and extended open responses (see page 28).

GCSE Geography A assessment model	
<p>Component 1: The Physical Environment Total marks: 94 Weighting: 37.5% Optionality: Section A Exam time: 1 hour and 30 minutes</p>	<p>Section A: The Changing Landscapes of the UK Students answer Question 1 and choose two from three optional questions (Question 2 Coastal landscapes and processes; Question 3 River landscapes and processes; Question 4 Glaciated upland landscapes and processes).</p>
	<p>Section B: Weather Hazards and Climate Change Students answer all questions from Section B.</p>
	<p>Section C: Ecosystems, Biodiversity and Management Students answer all questions from Section C.</p>
<p>Component 2: The Human Environment Total marks: 94 Weighting: 37.5% Optionality: Section C Exam time: 1 hour and 30 minutes</p>	<p>Section A: Changing Cities Students answer all questions from Section A.</p>
	<p>Section B: Global Development Students answer all questions from Section B.</p>
	<p>Section C: Resource Management Students answer Question 3 and choose one from two optional questions (Question 4 Energy resource management or Question 5 Water resource management).</p>
<p>Component 3: Geographical Investigations: Fieldwork and UK Challenges Total marks: 64 Weighting: 25% Optionality: Sections A and B Exam time: 1 hour and 30 minutes</p>	<p>Section A: Geographical Investigations – Physical Environments Students choose one from two optional questions (Rivers or Coasts)</p>
	<p>Section B: Geographical Investigations – Human Environments Students choose one from two optional questions (Central/Inner Urban Area or Rural Settlements)</p>
	<p>Section C: UK Challenges Students answer all questions from Section C.</p>

3. Planning

3.1 Planning and delivering a linear course

GCSEs in Geography are linear, with all assessments at the end of the course.

The specification has been designed so that the content is clear and that it is manageable for centres to deliver within the guided learning hours, and over a two-year or three-year period.

There is a range of possible ways of planning the delivery of the specification, and centres will need to decide on a delivery model that suits their teaching methods, school timetables and students. Section 3.3 (see page 8) outlines some of the possible routes and there are editable course planners available from Pearson's GCSE 2016 Geography A webpages. These course planners have been designed to support the planning of both a two-year and a three-year course and include opportunities for:

- the integration and development of geographical, mathematical and statistical skills over time
- the integration of fieldwork
- the opportunity to use and refine transferable skills
- regular summative assessment to track the progress of students
- time at the end of the course for revision and further exam preparation.

3.2 Suggested resources and support

Below is a list of free support for Edexcel GCSE Geography A (9–1) 2016.

- Getting Started Guide for GCSE Geography
- Editable two-year and three-year GCSE course planners
- Mapping guides comparing the 2012 and 2016 GCSE Geography specifications
- Editable schemes of work for every topic
- Topic booklet for every topic
- Additional specimen papers
- Student exemplars with commentary
- Mocks marking training
- A teacher guide to planning high-quality fieldwork
- Case studies of good fieldwork practice
- Practical guidance on planning high-quality fieldwork at our Getting Ready to Teach events
- Thinking Geographically: Support for the development of key geographical skills including literacy and numeracy, underpinned by proven Pearson approaches
- Pearson Progression Scale: A free, ready-made and editable Progression Scale and Map, covering ages 11–16, representing how learning progresses in geography and understanding and skills build on each other.
- Free Getting Ready to Teach training events on delivering the GCSE over three years available from November 2015. GRTT events for delivering the GCSE over two years will be available in spring/summer 2016

Pearson's paid for published resources will provide comprehensive support for the Edexcel GCSE Geography specifications. As well as providing engaging materials, the resources will help your students to tackle new, more demanding content and develop the geographical, mathematical and literacy skills that are at the heart of being a good geographer. You can request a free evaluation pack at www.pearsonschools.co.uk/gcse2016launch.

We aim for our qualifications to be supported by resources produced by a range of publishers and we are working with publishers that are looking towards getting their resources endorsed. Endorsed resources from other publishers will be available at www.edexcel.com/resources. You do not need to purchase resources to deliver our qualifications.

3.3 Delivery models

The new GCSE Geography A specification has been designed so that teachers can deliver the content comfortably over 120 guided learning hours and still have adequate time for revision and assessment. Alternatively, many centres have moved to a three-year Key Stage 4, with students starting their GCSE courses in the Year 9; this means they will be delivering the content over a three-year period, with a number starting this in autumn 2015.

Editable two-year and three-year course planners can be downloaded from the Edexcel Geography qualifications page of the website. The course planners have been produced to help you implement this Edexcel specification. They are offered as an example of a possible model that you should feel free to adapt to meet your needs and are not intended to be in any way prescriptive.

Each model covers the content of the whole specification and is based on 2 hours a week of lessons.

The two-year and three-year course planner is briefly summarised below. In both models, Component 1 is delivered first, followed by Component 2; the content for Component 3 (Topics 7 and 8) is embedded into the course rather than being a 'bolt-on' at the end of the course. This way, the content in Component 3 facilitates the application and reinforcement of the geography covered in Components 1 and 2. More detail on each is given in the separate course planners available on our website.

Option 1: Two-year linear course (first teaching autumn 2016)

Year 10	Specification content	Fieldwork
Autumn	Component 1 Topic 1: The changing landscapes of the UK Topic 8.3: The UK's landscape challenges	Topic 7A: Investigating physical environments (rivers or coasts)
Spring	Topic 2: Weather hazards and climate change Topic 8.4: The UK's climate change challenges	
Summer	Topic 3: Ecosystems, biodiversity and management Component 2 Topic 4: Changing cities	Topic 7B: Investigating human landscapes (central/inner urban area or rural settlements)
Year 11	Specification content	Fieldwork
Autumn	Topic 4: Changing cities Topic 8.2: The UK's settlement, population and economic challenges Topic 5: Global development	
Spring	Topic 5: Global development Topic 6: Resource management Topic 8.1: The UK's resource consumption and environmental sustainability challenge	
Summer	Revision / Exam preparation	

Option 2: Three-year course (first teaching autumn 2015)

Year 9	Specification content	Fieldwork
Autumn	Component 1 Topic 1: The changing landscapes of the UK Geographical skills 1: Map skills	
Spring	Topic 1: The changing landscapes of the UK (cont.) Geographical skills 2: Mathematical and statistics skills	
Summer	Geographical skills 3: Investigative skills Topic 8.3: The UK's landscape challenges	Topic 7A: Investigating physical environments (rivers or coasts)
Year 10	Specification content	Fieldwork
Autumn	Topic 2: Weather hazards and climate change Topic 8.4: The UK's climate change challenges	
Spring	Topic 3: Ecosystems, biodiversity and management	
Summer	Component 2 Topic 4: Changing cities Topic 8.2: The UK's settlement, population and economic challenges	Topic 7B: Investigating human landscapes (central/inner urban area or rural settlements)
Year 11	Specification content	Fieldwork
Autumn	Topic 5: Global development Topic 6: Resource management	
Spring	Topic 6: Resource management Topic 8.1: The UK's resource consumption and environmental sustainability challenge	
Summer	Revision / Exam preparation	

4. Geographical, mathematics and statistics skills

These skills are taken from the document Geography GCSE subject content published by the Department for Education (DfE) April 2014; a number of these skills are 'generic' and are assessed across the specification, while some have been identified as being specific to a particular topic – and will only be assessed within this context.

Generic geographical, mathematics and statistics skills

We are committed to supporting you to tackle barriers to progress relating to Mathematics and Statistics, which is important for progression to A level. To achieve this, our free topic packs will include guidance on integrating mathematics skills as well as activities that relate to the specification content and are based on the proven approach of Pearson Maths. Our free support will help students to build confidence to master problem-solving and reasoning activities that model mathematical and statistical concepts in a geographical context.

Students are required to develop a range of geographical skills, including mathematics and statistics skills, throughout their course of study. **These skills may be assessed across any of the examined components.** Examples of generic geographical skills include the construction of graphs to present data (e.g. bar charts and line graphs) and mathematical calculations such as mean and range – generic skills that are not specifically tied to particular subject content. The full list of geographical, mathematics and statistics skills can be found on pages 33 and 34 of the specification.

Integrated geographical skills

Some skills are specific to particular subject content and will only be assessed within these contexts (e.g. OS maps is assessed in 1.2b, 1.5, 1.9 and 1.13); these are indicated in the 'integrated skills' sections within the topics throughout the specification.

Example 1

Topic 3: Ecosystems, biodiversity and management

3.1b: The role of climate and local factors (soils and altitude) in influencing the distribution of different large-scale ecosystems (2)

– In the **integrated skills** box at the end of the subject content for this topic, skill (2) is described as: 'Comparing climate graphs for different biomes'.

Example 2

Topic 4: Changing cities

4.5a: Key population characteristics of the chosen UK city that is available from the Census, and reasons for population growth or decline (4)

– In the **integrated skills** box at the end of the subject content for this topic, geographical skill (4) is described as: 'Using Census output area data for 2011'.

5. Content guidance

The subject content has been written so that Topics 1 and 2 in Component 1 and Topics 4 and 6 in Component 2 are introduced by way of a geographical overview before progressing into geographical depth. Geographical overview content aims to develop students' broad, holistic understanding of the topic at a larger scale. Geographical depth content aims to develop students' detailed knowledge and understanding of processes and interactions in a particular smaller scale place or context.

The Geography GCSE subject content published by the Department for Education (DfE) indicates the requirement to draw on case studies and exemplars from developing, emerging and developed countries. These must relate to *at least* two countries other than the UK. Any case studies and exemplars must be set within the broader contextual knowledge of the country.

The new GCSE Geography A specification has been designed so that all students must study three in-depth case studies:

- Topic 4 Changing cities, a case study of a major UK city
- Topic 4 Changing cities, a case study of a major city in a developing country or an emerging country
- Topic 5 Global development, a case study of development in a developing country or an emerging country.

In addition to the three main case studies, throughout the course it is a requirement to draw on located examples from developing, emerging and developed countries. Any located examples must be set within the broader contextual knowledge of the country. In order to make it clear where a located example should be developed, a globe symbol has been used in the specification. You may wish to develop located examples within the countries selected for the three main case studies.

There are numerous things you may like to consider when planning your course, for example:

- nesting the urban study city in the same country that you choose for the development study
- carrying out fieldwork at the same time as delivering the core content – to reinforce classroom learning
- integrating the UK Challenges content into the teaching of the core UK content
- choosing case studies from countries that have been studied in context at KS3 – fulfilling broader contextual knowledge requirements.

A brief overview of the key ideas is provided in this guide; **topic packs** for every topic, including teaching and learning support and ideas, will also be available to help you deliver the new qualification.

5.1 Component 1 overview: The Physical Environment

This component brings together physical geography and people–environment processes and interactions.

All students are required to study all three topics in this component.

- In Topic 1, students have a choice of **two** landscapes from three – rivers, coasts or glaciated uplands.
- In Topic 2, all students must study tropical cyclones and drought.
- In Topic 3, students must study tropical rainforests and deciduous woodlands.

Each topic starts by developing a knowledge and understanding of the physical processes that interact to form specific landscapes. This is followed by considering how human activities can impact on these processes and the consequential impact that this can have on people and the environment. Each topic finishes with an in-depth study of one named coastal, river or glacial upland landscape – with students having the opportunity to apply their knowledge, understanding and skills to a specific UK landscape.

Topic 1: The changing landscapes of the UK – an overview of the distribution and characteristics of the UK’s changing landscapes and detailed studies of two from three landscapes:

- 1A: Coastal landscapes and processes;
- 1B: River landscapes and processes; **or**
- 1C: Glaciated upland landscapes and processes

Topic 2: Weather hazards and climate change – an overview of the global circulation of atmosphere and climate change over time and two detailed studies of tropical cyclones and drought.

Topic 3: Ecosystems, biodiversity and management – an overview of the distribution and characteristics of global and UK ecosystems and two detailed studies of tropical rainforests and deciduous woodlands.

Topic 1 overview: The changing landscapes of the UK

This topic is introduced by way of a series of lessons that act as an overview of the processes that affect UK landscapes. This is followed by a more detailed study of specific UK landscapes – choosing **two** from: coastal landscapes; river landscapes; **or** glaciated upland landscapes. The specification content has been written to allow comparability between all three options

Key ideas
1.1 There are geological variations within the UK.
1.2 A number of physical and human processes work together to create distinct UK landscapes.

1A: Coastal landscapes and processes

Key ideas
1.3 A variety of physical processes interact to shape coastal landscapes.
1.4 Coastal erosion and deposition create distinctive landforms within the coastal landscape.
1.5 Human activities can lead to changes in coastal landscapes that affect people and the environment.
1.6* Distinctive coastal landscapes are the outcome of the interaction between, physical and human processes.

1B: River landscapes and processes

Key ideas
1.7 A variety of physical processes interact to shape river landscapes.
1.8 Erosion and deposition interacting with geology create distinctive landforms in river landscapes.
1.9 Human activities can lead to changes in river landscapes that affect people and the environment.
1.10* Distinctive river landscapes are the outcome of the interaction between physical and human processes.

1C: Upland glaciated landscapes and processes

Key ideas
1.11 A variety of physical processes interact to shape upland glaciated landscapes.
1.12 Glacial erosion and deposition create distinctive landforms within upland glaciated landscapes.
1.13 Human activities can lead to changes in upland glaciated landscapes.
1.14* Distinctive glaciated upland landscapes are the outcome of the interaction between physical and human processes.

* *These key ideas require a located example.*

Topic 2 overview: Weather hazards and climate change

This topic is introduced by way of a series of lessons that act as an overview of the global circulation of atmosphere, and how global and UK climate change over time. This is followed by a more detailed study of **two** hazards:

1. Tropical cyclones (one in a named developed and one in a named emerging or developing country)
2. Drought (one in a named developed and one in a named emerging or developing country)

Key ideas
2.1 The atmosphere operates as a global system transferring heat and energy.
2.2 The global climate was different in the past and continues to change due to natural causes.
2.3 Global climate is now changing as a result of human activity.
2.4 The UK has a distinct climate which has changed over time.

Tropical cyclones

Key ideas
2.5 Tropical cyclones are extreme weather events that develop under specific conditions and in certain locations.
2.6* There are various impacts of and responses natural hazards caused by tropical cyclones depending on a country's level of development.

Droughts

Key ideas
2.7 The causes of drought are complex with some locations more vulnerable than others.
2.8* The impacts and responses to drought vary depending on a country's level of development.

* *These key ideas require a located example.*

Topic 3 overview: Ecosystems, biodiversity and management

This topic is introduced by way of a series of lessons that act as an overview of the distribution and characteristics of global and UK ecosystems. This is followed by a more detailed study of **two** large-scale ecosystems – one of tropical rainforests and one of deciduous woodlands.

Key ideas
3.1 Large-scale ecosystems are found in different parts of the world and are important.
3.2 The biosphere is a vital system.
3.3 The UK has its own variety of distinctive ecosystems that it relies on.

Tropical rainforests

Key ideas
3.4 Tropical rainforests show a range of distinguishing features.
3.5* Tropical rainforest ecosystems provide a range of goods and services some of which are under threat.

Deciduous woodland

Key ideas
3.6 Deciduous woodlands show a range of distinguishing features.
3.7* Deciduous woodland ecosystems provide a range of goods and services some of which are under threat.

* *These key ideas require a located example.*

5.2 Component 2 overview: The Human Environment

This component brings together human geography and people–environment issues. All students are required to study all three topics in this component.

- In Topic 4, all students must study a UK city and a city in a developing or emerging country (e.g. Mumbai in India). You have the flexibility to choose the city.
- In Topic 5, all students must study development issues in a developing (e.g. Uganda/Kenya) or an emerging country (e.g. India, China, Brazil). You have flexibility to choose the countries. You can nest your city study from Topic 4 within a country, i.e. Topic 4 you do Mumbai and in Topic 5 you do India – or you can increase breadth of place knowledge by offering a city study in a different country to your development country study.
- In Topic 6, students have the choice of studying **either** energy **or** water resource management.

Each topic starts with an overview, developing a knowledge and understanding of the geographical issues that are relevant for each particular topic. This is followed by a depth study(s) which is designed to apply prior learning and provide students with the opportunity to investigate different locations using a range of geographical, mathematics and statistics skills.

Topic 4: Changing cities – this covers an overview of global urban processes and trends and detailed case studies of a major UK city and a major city in a developing or emerging country. Aspects of globalisation are covered within this topic (e.g. in 4.8) which could be taught alongside Topic 5, Global development.

Topic 5: Global development – this covers an overview of the causes and consequences of uneven global development and detailed case studies of challenges that affect a developing or emerging country.

Topic 6: Resource management – this covers an overview of the global and UK distribution of food, energy and water and one detailed study of either energy resource management or water resource management at different scales.

Topic 4 overview: Changing cities

This topic is introduced by way of a series of lessons that act as an overview of global urban processes and trends. This is followed by a more detailed case study of **two** cities – one in the UK and one in a developing or emerging country.

Key ideas
4.1 Urbanisation is a global process.
4.2 The degree of urbanisation varies across the UK.

Case study of a major UK city (a city with a population of at least 200 000 inhabitants)

Key ideas
4.3 The context of the chosen UK city influences its functions and structure.
4.4 The chosen UK city is being managed by movements of people, employment and services.
4.5 Globalisation and economic change create challenges for the chosen UK city that require long-term solutions.

Case study of a major city in a developing country or an emerging country (a country with a low, medium or high Human Development Index score)

Key ideas
4.6 The context of the chosen developing country or an emerging country city influences its functions and structure.
4.7 The character of the chosen developing country or an emerging country city is influenced by its fast rate of growth.
4.8 Rapid growth within the chosen developing country or an emerging country city, results in a number of challenges that need to be managed.

Topic 5 overview: Global development

This topic is introduced by way of a series of lessons that act as an overview of the causes and consequences of uneven global development. This is followed by a more detailed case study of the challenges that affect **one** developing or emerging country.

Key ideas
5.1 Definitions of development vary as do attempts to measure it.
5.2 The level of development varies globally.
5.3 Uneven global development has had a range of consequences.
5.4 A range of strategies has been used to try to address uneven development.

Case study of development in a developing country or an emerging country (a country with a low, medium or high Human Development Index score)

Key idea
5.5 The level of development of the chosen developing or emerging country is influenced by its location and context in the world.
5.6 The interactions of economic, social and demographic processes influence the development of the chosen developing or emerging country.
5.7 Changing geopolitics and technology impact on the chosen developing or emerging country.
5.8 There are positive and negative impacts of rapid development for the people and environment of the chosen developing or emerging country.

Topic 6 overview: Resource management

This topic is introduced by way of a series of lessons that act as an overview of the global and UK distribution of food, energy and water. This is followed by a more detailed study of resource management – choosing **one** from **either** energy resource management **or** water resource management. The specification content has been written to allow comparability between both options.

Key ideas
6.1 A natural resource is any feature or part of the environment that can be used to meet human needs.
6.2 The patterns of the distribution and consumption of natural resources varies on a global and a national scale.

6A: Energy resource management

Key ideas
6.3 Renewable and non-renewable energy resources can be developed.
6.4 To meet demand, countries use energy resources in different proportions. This is called the energy mix.
6.5 There is increasing demand for energy that is being met by renewable and non-renewable resources.
6.6 Meeting the demands for energy resources can involve interventions by different interest groups.
6.7* Management and sustainable use of energy resources are required at a range of spatial scales from local to international

6B: Water resource management

Key ideas
6.8 The supply of fresh water supply varies globally.
6.9 There are differences between the water consumption patterns of developing countries and developed countries.
6.10 Countries at different levels of development have water supply problems.
6.11 Meeting the demands for water resources could involve technology and interventions by different interest groups.
6.12* Management and sustainable use of water resources are required at a range of spatial scales from local to international.

** These key ideas require a located example. Located examples can be nested within any of the three detailed case studies. Our free topic packs will provide suggestions for case studies and located examples.*

5.3 Component 3 overview: Geographical Investigations – Fieldwork and UK Challenges

This component brings together practical geographical enquiry into physical and human processes and environments and the interactions between the two. As mentioned earlier, this component is designed to be embedded within the planning and delivery of Components 1 and 2, rather than be delivered as a separate section.

The component is divided into two sections, as below.

Topic 7: Geographical investigations – fieldwork

There is a choice of one from two environments in 7A and 7B:

- 7A: Investigating physical environments – students choose to do either river landscapes or coastal landscapes
- 7B: Investigating human landscapes – students choose to do either a central/inner urban area or rural settlements.

Topic 8: Geographical investigations – UK challenges

Students are required to draw across their knowledge and understanding of the UK, from the physical and human geography drawn from Components 1 and 2, in order to investigate a contemporary challenge for the UK. Students are required to have a geographical overview of the four UK challenges in Topic 8 from which the assessment context will be drawn

Topic 7 overview: Geographical investigations – fieldwork

The experience of fieldwork helps students to develop new geographical insights into the two contrasting environments required for this qualification and to apply their geographical knowledge, understanding and skills to these environments.

One environment must be chosen from a river landscape or a coastal landscape and one from a central/inner urban area or rural settlement. Fieldwork must be outside the classroom and school/college grounds. It does not have to take place in the UK necessarily, but the examination for this will always treat fieldwork within the context of the UK.

The fieldwork tasks will not change during the lifetime of the qualification.

The DfE has made a requirement that fieldwork must be assessed in familiar and unfamiliar contexts of fieldwork – i.e. the students' own fieldwork experiences and the application of their skills to unfamiliar fieldwork contexts. In order to do this in a fair and manageable way, Pearson has prescribed tasks and data collection methods. These can be found on pages 28 and 29 of this specification.

The prescription of the environments, the tasks and the data collection methods will enable Pearson to know the parameters of fieldwork activities; this means that students can be assessed by means of meaningful questions about their own experience and also through unseen data from a similar fieldwork task in an unfamiliar located context. This approach, adopted by this specification, will mean that teachers have clarity around what is expected from fieldwork.

7A Investigating physical environments – choose one of the following tasks.
River landscapes: Investigation of change in a river channel
Coastal landscapes: Investigation of coastal processes through landscape evidence

7B Investigating human environments – choose one of the following tasks.
Changing city environments: Investigating change in central/inner urban area(s)
Changing rural environments: Investigating change in rural settlements

In each model it is recommended that a minimum of one day of fieldwork for each investigation should be carried out. In addition, three weeks of lesson time should be spent on processing and presenting data, analysis and explanation, and coming to conclusions.

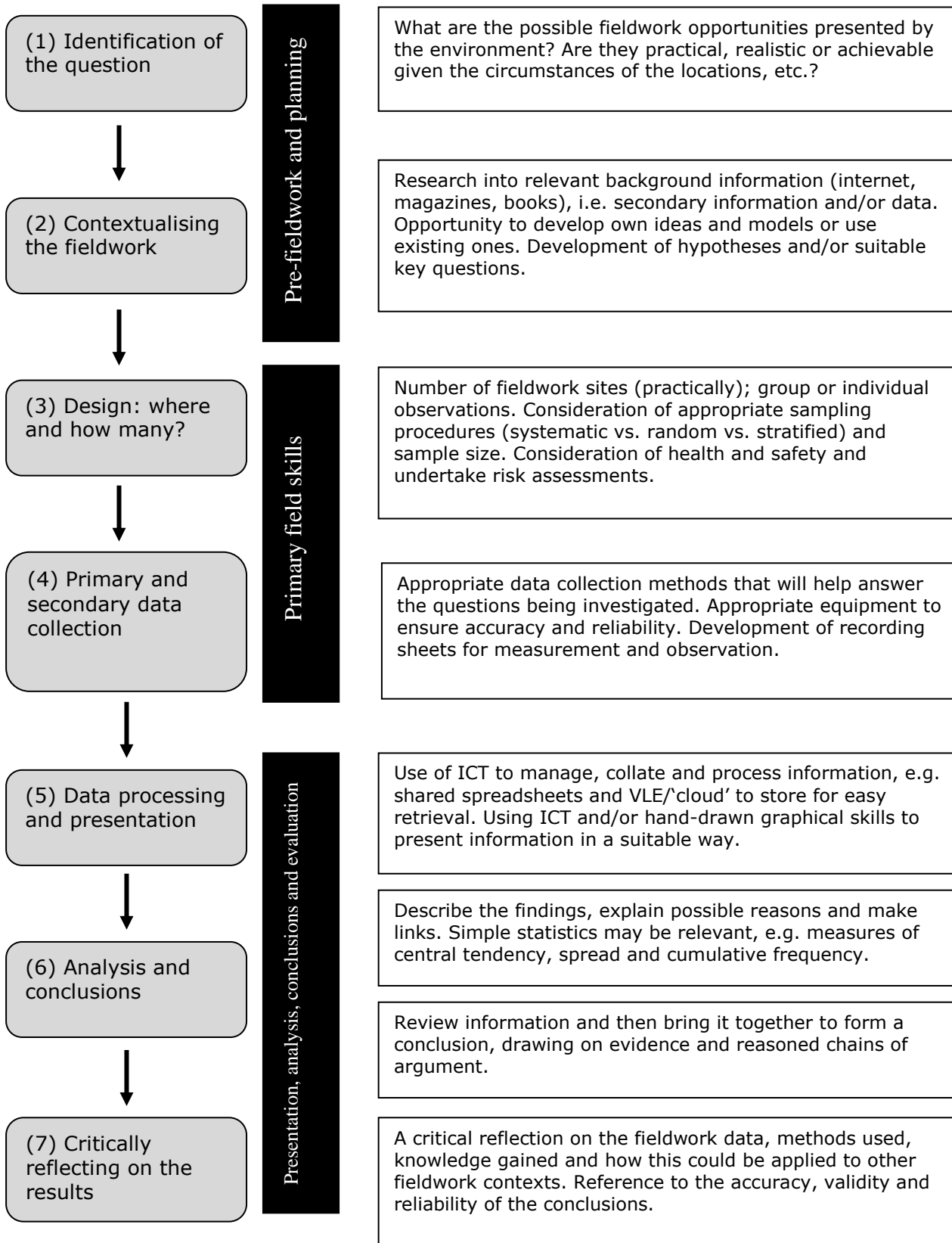
Ideally, fieldwork should be carried out when covering the related content in the specification in order for students to be able to explore the types of questions they could investigate and also to fully understand the purpose of the task, the methods and the broader significance of the investigation. The fieldwork tasks can be completed at any time during the course. The two-year and three-year course planners suggest how the fieldwork might be integrated into the course.

Alternative times to carry out fieldwork

Autumn term	Spring term
Advantages: Students will be new to the course so a good group bonding opportunity. Fieldwork centres likely to quieter.	Advantages: Longer day in the field and more likelihood of better weather conditions. More time to cover the necessary course content.
Disadvantages: A shorter day in the field and a higher likelihood of poor weather. May not have enough time to cover to necessary course content.	Disadvantages: Field centres and field study locations may be busy. Possibly difficult to get students out of school due to other whole school activities. Mock examinations.

The general focus and specific details of fieldwork are provided in full in the specification; however, it is suggested that all fieldwork tasks follow the same stages of enquiry.

A practical geographical enquiry process



Topic 8 overview: Geographical investigations – UK challenges

In this topic, students are required to draw on their knowledge and understanding of the physical and human characteristics of the UK from Components 1 and 2, and use their geographical skills, to investigate a contemporary challenge for the UK. It is within this topic that students can really apply their geographical knowledge and understanding from across the specification and to 'think like a geographer'.

All students will be required to study the four future challenges facing the UK, outlined below. This can be delivered as a separate, standalone topic at the end of the course; alternatively, each of the prescribed challenges can be integrated into the delivery of Components 1 and 2.

The UK challenge questions (Section C in the exam) will be drawn from one or more of these four themes.

Key ideas
<p>8.1 The UK's resource consumption and environmental sustainability challenge.</p> <p>Related topics in the specification: 2.3a; 3.3; 3.6a; 3.6c; 4.1a; 4.4b; 4.5b; 4.5c; 4.5d; 4.5e; 5.2; 6.1; 6.2a</p> <p>When to deliver this topic? After Topic 6: Resource management.</p>
<p>8.2 The UK settlement, population and economic challenges.</p> <p>Related topics in the specification: 4.2b; 4.4a; 4.4b; 4.5b; 4.5c; 4.5d; 4.5e; 5.2; 5.4b</p> <p>When to deliver this topic? After Topic 5: Global development.</p>
<p>8.3 The UK's landscape challenges.</p> <p>Related topics in the specification: 1.5; 1.9; 1.13</p> <p>When to deliver this topic? After Topic 1: The changing landscape of the UK.</p>
<p>8.4 The UK's climate change challenges.</p> <p>Related topics in the specification: 1.4b; 1.7b; 1.11b; 2.3b; 2.4a; 3.3; 3.6b; 4.5b; 6.2</p> <p>When to deliver this topic? After Topic 2: Weather hazards and climate change.</p>

6. Assessment guidance

6.1 Assessment Objectives and weightings

AO1 15%	Demonstrate knowledge of locations, places, processes, environments and different scales.
AO2 25%	Demonstrate geographical understanding of: <ul style="list-style-type: none"> • concepts and how they are used in relation to places, environments and processes • the inter-relationships between places, environments and processes.
AO3 35% (10% applied to fieldwork context(s))	Apply knowledge and understanding to interpret, analyse and evaluate geographical information and issues to make judgements.
AO4 25% (5% used to respond to fieldwork data and contexts)	Select, adapt and use a variety of skills and techniques to investigate questions and issues and communicate findings.

Breakdown of Assessment Objectives

Component	Assessment Objectives				Total for all Assessment Objectives
	AO1%	AO2%	AO3%	AO4%	
1: The Physical Environment	6.5	11.5	10.5	9	37.5%
2: The Human Environment	6.5	11.5	10.5	9	37.5%
3: Geographical Investigations – Fieldwork and UK Challenges	2	2	14	7	25%
Total for GCSE	15%	25%	35%	25%	100%

6.2 Command words

The table below lists the 13 command words (and their definitions) that could be used in the examinations for this qualification.

Command words	Definition	Target AOs
Identify/ State/ Name	Recall or select one or more pieces of information.	AO1
Define	State the meaning of a term.	AO1
Calculate	Produce a numerical answer, showing relevant working.	AO4
Draw/plot	Create a graphical representation of geographical information.	AO4
Label	Add a label/labels to a given resource, graphic or image.	AO4
Describe	Give an account of the main characteristics of something or the steps in a process. Statements in the response should be developed but do not need to include a justification or reason.	AO2
Compare	Find the similarities and differences of two elements given in a question. Each response must relate to both elements, and must include a statement of their similarity/difference.	AO4
Explain	Provide a reasoned explanation of how or why something occurs. An explanation requires a justification/exemplification of a point. Some questions will require the use of annotated diagrams to support explanation.	AO2
Suggest	Apply understanding to provide a reasoned explanation of how or why something may occur. A suggested explanation requires a justification/exemplification of a point.	AO3
Examine	Break something down into individual components/processes and say how each one individually contributes to the question's theme/topic and how the components/processes work together and interrelate.	AO3 and AO4
Assess	Use evidence to determine the relative significance of something. Give consideration to all factors and identify which are the most important.	AO2 and AO3 Resource/ Fieldwork: AO3 and AO4
Evaluate	Measure the value or success of something and ultimately provide a substantiated judgement/conclusion. Review information and then bring it together to form a conclusion, drawing on evidence such as strengths, weaknesses, alternatives and relevant data.	AO2 and AO3 Resource/ Fieldwork: AO3 and AO4
Discuss	Explore the strengths and weaknesses of different sides of an issue/question. Investigate the issue by reasoning or argument.	AO2, AO3 and AO4

6.3 Command words and mark tariffs

The table below shows how different command words are associated with different mark weightings.

Command words	1	2	3	4	8	12
Identify/ State/Name	*	*				
Define	*	*				
Calculate	*	*				
Label	*	*				
Draw/plot		*	*			
Compare			*			
Describe		*	*			
Explain		*	*	*		
Suggest		*	*	*		
Examine					*	
Assess					*	*
Evaluate					*	*
Discuss						*

Key points

- The first two rows of command words in the table target AO1 (knowledge).
- *Calculate*, *Label*, *Draw/plot* and *Compare* target AO4 (skills).
- *Describe* and *Explain* target AO2 (understanding). These are capped at 4 marks because there is no analysis or evaluation expected (which is assessed via AO3).
- *Examine*, *Assess* and *Evaluate* target AO2 and AO3; if there is a stimulus, then AO3 and AO4 will be targeted instead.
- The 12-mark *Discuss* question targets AO2, AO3 and AO4, with 4 marks available for each AO.

6.4 Question types

A range of different question types will be used within all examinations in order to assess a variety of requirements and facilitate differentiation.

The different questions types that are used are as follows.

- **Multiple-choice questions (MCQ):** Students are required to select the correct answer from a choice of four (A, B, C and D). A variation of this that might be used is where students are required to select two correct answers from a choice of five.
- **Short open response:** Usually a single word, up to a couple of sentences, for between 1 and 3 marks.
- **Open response:** Usually a few sentences or a very short paragraph for 4 marks.
- **Calculation:** These could both be short or long, and vary in mark allocations.
- **Extended open response:** Students are required to assess the ability to develop extended written arguments and to draw well-evidenced and informed conclusions about geographical questions and issues. Utilises a levels-based mark scheme.

There is ramped demand within topics and papers, 1 mark to 12 marks. The final question on Paper 3 is 12 marks, plus an additional 4 marks for SPaG. The mark tariff for extended response question types varies across the components, as shown in the table below.

Component	Extended open response questions
Component 1: The Physical Environment	One 8-mark extended writing question in Sections A, B and C. Extended response questions will require students to either make links between concepts within a topic or apply their understanding to a geographical context and/or a resource. In Section C an additional 4 marks will be available for SPaG in the extended response question.
Component 2: The Human Environment	One 8-mark extended writing question in Sections A, B and C. Extended response questions will either require students to make links between concepts within a topic or apply their understanding to a geographical context and/or a resource. The extended response question in Section C will have 4 marks available for SPaG.
Component 3: Geographical Investigations	One 8-mark extended response question in Sections A and B that require students to apply their fieldwork understanding to analyse, evaluate and make judgements, and to communicate their findings from fieldwork investigations. One 12-mark extended writing question in Section C linked to UK Challenges. This question requires students to use information from the Resource Booklet and knowledge and understanding from the rest of their geography course of study to explore different sides of an issue affecting the UK. An additional 4 marks will be available for SPaG.

6.5 Extended response questions, command words and levels-based mark schemes

This table shows the different command words that can be used for extended writing questions (using levels-based mark schemes) with the weightings of marks by assessment objective.

These will remain the same for the lifetime of the specification to ensure consistency year-on-year when meeting the assessment objectives. This means you can also see the proportion of the different skills required of students in extended responses so they can be clear what is required of them for each command word.

	Total	AO2	AO3	AO4
Papers 1 and 2				
Assess/Evaluate	8	4	4	
Examine/Assess/ Evaluate with resource	8		4	4
Paper 3				
Fieldwork Assess/Evaluate	8		4	4
UK Challenges Discuss	12	4	4	4

- not including any additional SPaG marks

The 8-mark extended response questions

In Papers 1 and 2:

- Some 8-mark extended response questions will assess students' ability to make links between concepts within a topic. These questions will use the command word *Assess* or *Evaluate*. 4 marks will be available for demonstrating AO2 (demonstrating understanding) and a further 4 marks will be available for demonstrating AO3 (application of understanding). Questions that use the *Evaluate* command word will require students to provide a substantiated judgement or conclusion whereas questions that use the *Assess* command word require students to give consideration to all factors and identify which are the most important.
- Some 8-mark questions will assess students' ability to apply understanding to a geographical context and/or a resource. These questions will use the command words *Assess*, *Examine* or *Evaluate*. There will be 4 marks available for AO3 (application of understanding) and 4 marks available for AO4 (skills) because students are being tested in their ability to select, adapt and use a variety of skills and techniques to investigate questions and issues and communicate findings. Questions that use the *Examine* command word require students to break something down into the individual components/processes and say how each one contributes to the questions theme or topic and how these components/processes work together and interrelate.

In Paper 3:

- The 8-mark extended response fieldwork question will assess students' ability to apply their fieldwork skills and understanding in order to analyse,

evaluate and make judgements (AO3), and to communicate their findings from fieldwork investigations (AO4). These questions will use the command words *Assess* or *Evaluate*. AO3 and AO4 will be equally balanced. Four marks will be available for applying their understanding to analyse, evaluate and make judgments (AO3) and four marks will be available for using skills in their fieldwork and communicating their findings (AO4).

The 12-mark extended response question

- The final 12-mark extended response question in Paper 3 will be linked to Topic 8 UK Challenges and will assess students' ability to investigate the different sides of an issue affecting the UK. Students will be required to use information from the Resource Booklet and knowledge and understanding from the rest of their geography course of study to support their answer. There is an equal emphasis on AO2, AO3 and AO4 in this question. Students are assessed on their ability to demonstrate understanding of the issue (AO2), application of understanding to provide a balanced, well-developed argument leading to supported judgements (AO3) and using geographical skills to obtain accurate information that supports their argument (AO4).

6.6 Assessment Objectives and mark schemes

This section gives examples of how all four Assessment Objectives will be interpreted within the mark grids. These examples have been taken from Pearson's Sample Assessment Materials (SAMs), which can be found on the Pearson website: <http://qualifications.pearson.com/en/qualifications/edexcel-gcses/geography-a-2016.html>.

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

In this AO, **knowledge** means recall of information. This AO is often targeted by short open response questions, but will also feature in the extended open response questions that use a levels-based mark scheme. Below is an example of how AO1 is rewarded in a short open response question.

The mark scheme is for Component 1, Section A, question 1(a)(ii).

State one example of a sedimentary rock. (1)

Question number	Answers	Mark
1(a)(ii)	<p>Award 1 mark for one of the following, up to a maximum of 1 mark:</p> <p>Rocks formed in layers (1)</p> <p>Idea of compaction/cementation (1)</p> <p>Oldest rocks are at the bottom/youngest at the top (1)</p> <p>May contain fossils of plants and/or animals (1)</p>	1

AO2: Demonstrate geographical understanding of:

- **concepts and how they are used in relation to places, environments and processes**
- **the inter-relationships between places, environments and processes**

This AO has two strands. The first strand of AO2 concerns students' understanding of how geographical concepts relate to, and can be used in relation to places, environments and processes. The application of these is addressed by AO3. The second strand of AO2 is testing the students' understanding of the inter-relationships between places, environments and processes.

AO2 is targeted in both short and extended response questions; In the question paper, some questions may be geared more towards one strand than the other, or may test both together.

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

The emphasis of this AO is on application and will usually relate principally to:

- unseen geographical information presented in resources (novel situations), or
- making links between different parts of a topic.

Below is an example of how AO2 and AO3 are rewarded in an 8-mark extended open response question on Paper 1.

7(d)(iv) Assess the following statement: *Climate change presents a greater threat to tropical rainforests than it does to deciduous woodlands.*
8 marks plus an additional 4 marks for SPaG.

Students need to determine the significance of climate change to these types of ecosystem that will have been studied in Key ideas 3.4–3.7. Students need to use evidence from their case studies they have studied to support their answer. They also need to give a balanced, well-developed argument and to be able to make judgements that are supported by information about both types of ecosystem.

Question number	Indicative content	
7(d)(iv)	<p style="text-align: center;">AO2 (4 marks) / AO3 (4 marks)</p> <p>AO2</p> <ul style="list-style-type: none"> • Climate change will have an impact on soil, temperature, rainfall, and weather events, which could threaten tropical rainforest's and deciduous woodland's structure, function and biodiversity. • Tropical rainforest structure will be threatened by rising sea levels caused by climate change. • Tropical rainforest biodiversity could be threatened by animals migrating because they cannot adapt to the changing climate of their current habitat. • Deciduous woodland structure could be threatened by nutrient and moisture depletion in soils, leading to reduced tree growth. • Deciduous woodland biodiversity could be threatened, as increased pests are introduced into ecosystems through migration. <p>AO3</p> <ul style="list-style-type: none"> • Threats to tropical rainforests and deciduous woodlands are naturally similar, since climate change may bring increase in temperature and decrease in moisture, which will have common effects on vastly different ecosystems. • Attempts to mitigate against climate change threats, for example through sustainable management, can vary significantly for tropical rainforests and deciduous woodlands (judgements will depend on case studies). • A specific ecosystem's natural ability to adapt to climate change can vary, which means impacts of climate change will only be 'threats' to ecosystems that can't adapt. • Climate change will not have the same impact everywhere (e.g. some areas may get colder/wetter rather than hotter), so the degree of threat is dependent on the impacts in the given area. 	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	<p>Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2)</p> <p>Attempts to apply understanding to deconstruct information but understanding and connections are flawed. / An unbalanced or incomplete argument that provides little synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</p>
Level 2	4–6	<p>Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2)</p> <p>Applies understanding to deconstruct information and provide some logical connections between concepts. An unbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</p>

Level 3	7–8	<p>Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2)</p> <p>Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</p>
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Below is an example of how AO2 and AO3 are rewarded in an 8-mark extended open response question on Paper 2.

2(f): Assess the social and economic impacts of private investment by TNCs in a named developing/emerging country. (8)

Students need to determine the significance of the various social and economic impacts of private investment by TNCs that will have been studied in 5.5–5.8. Students need to use evidence from their case study of a named developing/emerging country to support their answer. They also need to give a balanced, well-developed argument and to be able to make judgements that are supported by information about the positive and negative impacts of private investment.

Question number	Indicative content	
2(f)	<p style="text-align: center;">AO2 (4 marks) / AO3 (4 marks)</p> <p>AO2</p> <ul style="list-style-type: none"> • There has been a growth in private investment by TNCs into developing/emerging countries. • This growth is a result of TNCs being attracted by cheap supplies of raw materials, cheap workers, good transport links and infrastructure, proximity to markets and favourable government policies that sometimes offer incentives to TNCs to locate in their country. • Positive social and economic impacts of this growth include the provision of new jobs and skills for local people, local/national economy is improved; sharing of ideas, e.g. in terms of the production of goods or the organization and management of industry. • Negative social and economic impacts of this growth could include the idea of 'exploitation' workers. • Understanding the impacts of changes to economic sectors can benefit a country can have positive and negative impacts on people and the economy. • Social/economic positive impacts are likely to be linked to increased wages / standard of living and the growth of a consumer society. • Social/economic negative impacts are likely to be linked to workers being exploited – low pay – long working hours – poor working conditions. <p>AO3</p> <ul style="list-style-type: none"> • Growth in private investment by TNCs will lead often result in a combination of positive and negative impacts for people and the economy. • Impacts are inter-related, e.g. new jobs are created, which increases disposable income and consumer spending / this contributes to a positive multiplier effect on a larger scale for goods and services, e.g. improved infrastructure, better education, etc.; TNCs exploit cheap labour, which means that workers are often badly paid, they are footloose and move out of a country at any point which creates economic uncertainty for the host country. • Positive impacts can be short term and longer term, and can impact on different groups of people. For example, in the short term jobs are created for locals, which in the longer term could provide them with the skills to set up their own business. Also, short-term improvements in the economy may facilitate the reinvestment of money into education, health and infrastructure. • The negative impacts can also affect different groups of people over different timescales. For example, in the short term labourers may experience low wages and a poor working environment (as the TNC wants to maximise profit), but in the longer term a country may become reliant on a particular TNC – which is not sustainable. 	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	<p>Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2)</p> <p>Attempts to apply understanding to deconstruct information but understanding and connections are flawed / An unbalanced or incomplete argument that provides little synthesis of understanding. Judgements supported by limited evidence. (AO3)</p>

Level 2	4–6	Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) Applies understanding to deconstruct information and provide some logical connections between concepts. An unbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7–8	Demonstrates accurate understanding of concepts and the inter-relationship between places, environments and processes. (AO2) Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)

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

The emphasis of this AO is on the use of skills. Below is an example of how AO4 is rewarded in a calculation question in Paper 2.

2(a)(iii): Calculate the mean GDP for the countries on Figure 2a in 2014. (2)

The calculation of a mean value is a 'generic' skill that could appear in any topic, where there is a data set

Question number	Answer	Mark
2(a)(iii)	Working to show the following. The correct addition of total GDP (\$billions), 37.3. (1) The division of this number by 7, the total number of countries, arriving at a mean of 5.3 – or a number that rounds to 5.3 – US\$ billion. (1)	2

AO4 is also assessed by the familiar and unfamiliar fieldwork 8 mark extended response questions in Paper 3. The familiar fieldwork questions will link to the student's first-hand experience of carrying out a fieldwork investigation. The unfamiliar fieldwork questions will provide students with the opportunity to apply their geographical skills in an unseen context. These questions will equally target AO3 and AO4.

Below is an example of how AO3 and AO4 are rewarded in a fieldwork question – set in a **familiar** context.

**2(e) You have studied a coastal area as part of your own fieldwork.
Evaluate the reliability of your conclusions. (8)**

4 marks are available for AO3 – application of understanding in order to analyse, evaluate and make judgements. 4 marks available for AO4 – using fieldwork skills and communicate their findings from fieldwork investigations.

Question number	Indicative content
2(e)	<p style="text-align: center;">AO3 (4 marks) / AO4 (4 marks)</p> <p>AO3</p> <ul style="list-style-type: none"> • Reliability is about making judgements on how close conclusions are to the actual changes occurring in the coastal stretch/environment. • Reliability will be most likely linked to results via methods – evaluation including equipment errors and operator errors. • How far data collection methods used produced reliable results. • Judgement about limitations of equipment used/operator error. • Recognition of issue in design methodology/ sampling methodology may be flawed in terms of number of sites (spatial) and time of year (temporal). • A supported judgement is reached about the reliability of the results and conclusions. • An evaluation of how far the outcomes can be trusted (or repeated to obtain the same results). <p>AO4</p> <ul style="list-style-type: none"> • There is evidence of using different skills and techniques to identify coastal processes. • There is evidence of using different skills and techniques to reach conclusions about changes occurring at the coast. • There is evidence of own fieldwork conclusions linked to data and information.

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	<p>Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</p> <p>Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)</p>
Level 2	4–6	<p>Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</p> <p>Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)</p>
Level 3	7–8	<p>Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</p> <p>All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)</p>

Below is an example of how AO3 and AO4 are rewarded in a fieldwork question – set in an **unfamiliar** context.

4(d) Evaluate the student’s methods and findings. (8)

Figure 4 in the Paper 3 Resource Booklet shows the results from a student’s research into types of transport used throughout the day in Keswick, a rural market town in the Lake District. The student surveyed vehicle types at 6 points near the town centre and had 7 categories of vehicle, to find out their variation at different times of the day.

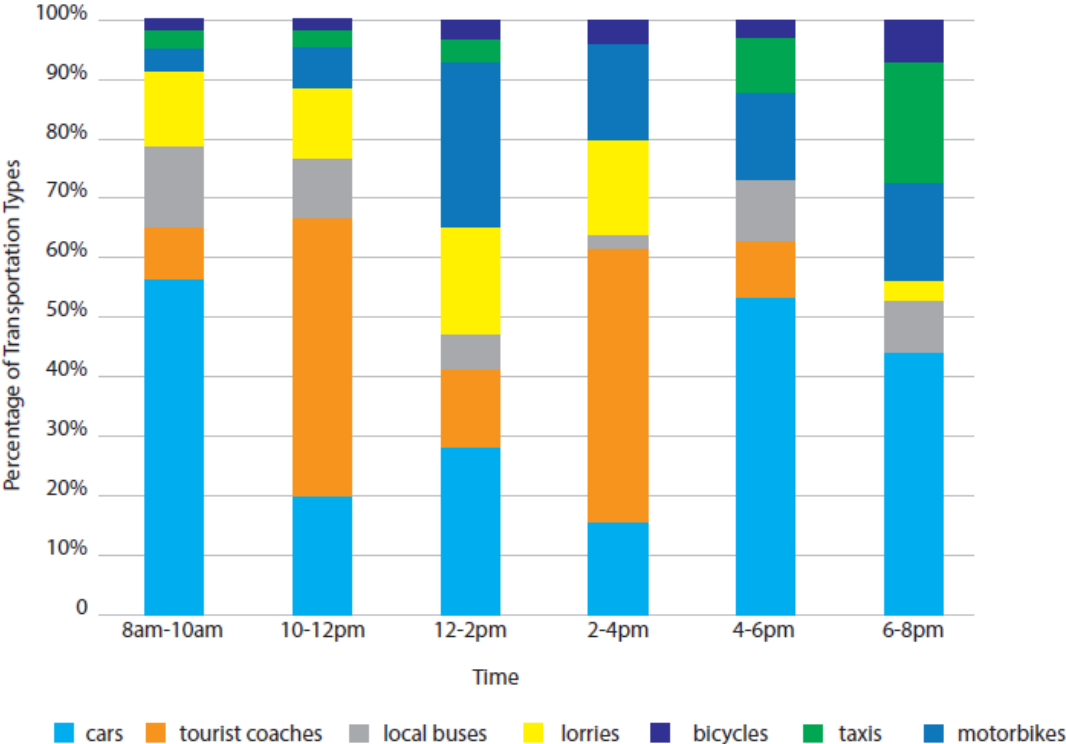


Figure 4

Question **4(d)** provides a summary of the student's findings:

My findings

- *Cars are the dominant transportation type throughout the day.*
- *Local buses run an inconsistent service.*
- *Motorbikes are the smallest proportion of traffic for each time period.*
- *Tourist coaches represent the highest proportion of traffic between the hours of 12pm to 2pm and 2pm to 4pm.*

Question **4(d)** asks the following.

4(d) Evaluate the student's methods and findings. (8)

Half the marks are awarded for AO3 – application of understanding in order to evaluate and make a judgement about the student's methods and findings. The remaining marks are awarded for AO4 – using skills to obtain information from Figure 4 in the Resource Booklet and the summary of the student's findings in the question paper to support their evaluation and to communicate their findings. As the command word *Evaluate* is used students will be required to make substantiated judgement and conclusion drawing on evidence from Figure 4 and the summary of the student's findings.

Question number	Indicative content
4(d)	<p style="text-align: center;">AO3 (4 marks) / AO4 (4 marks)</p> <p>AO3</p> <ul style="list-style-type: none"> • The student only presented data within six broad time categories, therefore patterns of variation may be hidden within the time 8am–8pm. • The selection of sites is unknown and could be clustered in one specific area producing a degree of bias/not representative of the traffic within the whole of the town. • The student has only used six locations next to roads and the patterns of traffic may differ in other road locations, e.g. bigger or smaller roads. • The student only used seven categories of vehicle which meant some transport types may not fit within the categories used. • The student's results give a generalised pattern of traffic but lack fine grain that would be useful if comparing to a comparable market town for instance. <p>AO4</p> <ul style="list-style-type: none"> • Overall, cars are the modal class, for the whole day, but tourist coaches are the modal class from 10am–12pm and 2pm–4pm, and bicycles are 12pm–2pm. • Buses could run a consistent service, but their proportion of total traffic could vary, depending on the volume of traffic on the road. • Motorbikes always have a small proportion, but taxis have no representation from 2pm–4pm and lorries have no representation from 4pm–6pm. • Tourist coaches are their highest proportion from 10am–12pm and 2pm–4pm.

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	<p>Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</p> <p>Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)</p>

Level 2	4–6	<p>Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</p> <p>Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity using relevant geographical terminology occasionally. (AO4)</p>
Level 3	7–8	<p>Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</p> <p>All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)</p>

The final question on Paper 3 is the 12-mark extended writing question on UK Challenges, which will assess students' ability to investigate the different sides of an issue affecting the UK. Students will be required to use a range of resources provided in the Resource Booklet as well as their knowledge and understanding from the rest of their geography course of study.

The example used in the SAMs is given below, accompanied by the mark scheme; marks are awarded for AO2, AO3 and AO4 (12 marks in total), plus 4 further marks are available for SPaG. There is an equal emphasis on AO2, AO3 and AO4 in this question.

5(d) Use information from the resource booklet and knowledge and understanding from the rest of your geography course of study to support your answer.

Discuss the view that UK population growth and net migration will create pressures on the UK's ecosystems. (16)

In order to fully discuss the view, students must consider the different impacts that population growth and immigration might have on UK ecosystems and establish a clear argument about whether the long-term impact will be good or bad. Students are assessed on their ability to demonstrate understanding of the pressures of population growth on the UK's ecosystems (AO2), application of understanding to provide a balanced, well-developed argument leading to supported judgements about the view that UK population growth and net migration will create pressures on the UK's ecosystems (AO3) and using geographical skills to obtain accurate information from the resources to support their argument (AO4).

There is no preferred view – credit is awarded for the depth, breadth and balance of the discussion.

Question number	Indicative content
5(d)	<p>A02</p> <ul style="list-style-type: none"> • The UK's population has been increasing over the past 50 years and particularly in the last 15 years. • One of the main causes of the UK's population growth has been the large net migration (more people moving to the UK to live compared with the number of those leaving to live in a different country). • Population growth will lead to social, political, economic and environmental challenges. • The term 'environmental' can be defined to include aspects of both natural and man-made features. • The demand for resources, in particular land to build homes, of a growing population with exerts ever-increasing pressure on the ecosystems and their goods and services. • Development can threaten ecosystems by disrupting the cycling of nutrient and interdependence of biotic and abiotic conditions they need to function. • Other factors, such as climate change, can also contribute to the increased pressure on the UK's ecosystems. • Distribution and characteristics of the UK's main terrestrial ecosystems means that they are not all in suitable locations/land for development . <p>A03</p> <ul style="list-style-type: none"> • Many of the UK's most valuable ecosystems are already heavily protected from development and new housing, so the impact of population growth will vary across the UK. • Many of the migrants to the UK are economic migrants and will therefore only be attracted to certain parts of the country where employment opportunities exist. This means that the demand for resources and the resultant pressure on UK ecosystems will be unevenly distributed. For example, more economic migrants will be attracted to the London and the surrounding area compared to northern Scotland. • Population growth may have indirect impacts on UK ecosystems. For example, a rise in the population in one area may increase levels of noise and air pollution and exasperate waste disposal challenges – which can have a knock-on effect on the local ecosystems. • The UK's ecosystems are not wholly natural: they are part of a managed landscape; it is possible to adapt approaches to managing ecosystems in response to our growing population and the associated pressures and challenges that this brings. However, the capacity to manage an ecosystem to completely mitigate the threats posed by population growth vary across the UK and are often dependent on funding available from local councils,

	<p>the presence of conservation groups and discussions linked to cost–benefit analysis.</p> <ul style="list-style-type: none"> • The future trends of population growth and net migration are unknown, as are trends of natural increase. This may lead to different scenarios in terms of how much land is required for new housing. Also, figures for inbound and outbound migration are very unreliable so more secure data on this issue is required for the modelling and planning for different scenarios to be accurate. <p>AO4</p> <ul style="list-style-type: none"> • Figure 5a shows that England has the largest percentage of people living in urban areas already; England also has the smallest percentage of woodland (only about 10%). • Figure 5b shows that population growth is uneven: The largest population increases are in London (13.8%), SE England (8-9%), SW England (7.4%) and Northern Ireland (7.3%) whereas Wales (4.9%), Scotland (5.1%), NW England (4.2%) and NE England (2.8%) experience a smaller increase. • Figures 5a and 5b together indicate that highest levels of population growth are in England and Northern Ireland where farming is the largest ecosystem. Also, Figure 5e indicates that a large proportion of these farming areas are unproductive, e.g. 8.5% of farmland in SE England unproductive. • Figure 5c shows that the areas of high population growth (5b) are also areas with highest levels of greenbelt. For example, SE England has 2 520 ha. and the SW has 2 780 ha. • Figure 5d doesn't provide evidence that net migration will continue increase in the future.
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Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–4	<p>Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2)</p> <p>Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</p> <p>Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (A04)</p>
Level 2	5–8	Demonstrates elements of understanding of concepts and the interrelationship between places, environments and

		<p>processes. (AO2)</p> <p>Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</p> <p>Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)</p>
Level 3	9–12	<p>Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2)</p> <p>Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</p> <p>Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)</p>