

# INTERNATIONAL GCSE

## Geography (9-1)

TOPIC BOOKLET:

Geography Fieldwork Guide

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Pearson Edexcel International GCSE in Geography (4GE1)

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For first teaching September 2017

First examination June 2019



# Fieldwork Guide

## A context and rationale for fieldwork in the Edexcel International GCSE (9-1) Geography

The geography community, the UK Government's Department for Education and Ofqual, the regulator of exams and assessments in England, are in no doubt that fieldwork is an essential experience for all students studying Geography.

*"Fieldwork is an essential aspect of geography, which ensures that students are given the opportunity to consolidate and extend their achievement by relating learning to real experiences of the world."*

**Department for Education**

Fieldwork is at the heart of our specifications, because it's the best way for students to experience geography in action.

Fieldwork can strengthen skills and reach learners that other approaches fail to reach. Fieldwork can be challenging, informative, sometimes messy but frequently fun. Fieldwork has a strong track record of motivating and providing students with the geographical and 21st Century skills they need to progress in the contemporary world. Allowing students to explore issues and questions in a real-world context that frequently produces uncertain or 'grey' outcomes encourages them to question their own findings and nurtures analytical and critical thinking as well as building resilience.

### (1) Introduction

Throughout their course, learners need to acquire a range of geographical skills through fieldwork and linked practical exercises.

Fieldwork and enquiry skills in readiness for assessment must include:

- **pre-fieldwork planning** – designing a fieldwork investigation, as per the qualification content.
- **primary field skills** – undertaking a field investigation; the need for sampling, data collection and recording techniques.
- **presentation and analysis skills** – using a range of data presentation and analytical techniques to illustrate and interpret data. These should include graphs and maps (GIS), as well as statistics, such as calculations of central tendency, spread and cumulative frequency (e.g. median, mean, range and the IQR).
- **conclusions and evaluative skills** – drawing evidence based conclusions and linking these to theories. Identifying implications of the results for people and the environment. Evaluating the reliability and validity of the techniques used and the conclusions drawn.

Fieldwork and enquiry-based learning should also support wider practical skills.

In particular:

- **graphical skills** – the construction of appropriate graphs, including bar charts, pie charts, and pictograms.
- **cartographic (map) skills** – using and understanding grid references, scale, symbols, and contours; on both print and digital maps.
- **photo-interpretation skills** – reading vertical and oblique aerial photographs and satellite images, including GIS.
- **sketching skills** – communicating ideas through simple sketch maps and field sketches.
- **spatial awareness** – identifying the relative locations and relationships between features.

#### Cognitive enquiry skills

- **analysis of findings** – reviewing and interpreting quantitative and qualitative information using appropriate media.
- **use of statistical skills** – the use of simple statistics, including means, medians, percentage changes and ranges; and the ability to describe relations in bivariate data.
- **conflict resolution skills** – identifying the views of interested people (stakeholders), recognising that stakeholders may have strongly different attitudes and feelings towards a particular issue.
- **evaluation of findings** – appraisal and review of data and information, to see if these are accurate, suitable for the purpose or misleading and unreliable.

## (2) Assessment Overview

Fieldwork opportunities are assessed in Section B of both examination papers.

Candidates are required to complete **two** geographical enquiries involving fieldwork and research, related to **one** topic in Paper 1 and **one** topic in Paper 2. On both Papers candidates will have to deal with both “familiar” and “unfamiliar” fieldwork questions.

**Paper 1:** Physical geography:

- River environments
- Coastal environments
- Hazardous environments

**Paper 2:** Human geography:

- Economic activity and energy
- Rural environments
- Urban environments

### Familiar and unfamiliar questions

Here is an example of an **unfamiliar**-style fieldwork question based on resources provided in the exam.

- (e) Study Figure 4 in the Resource Booklet. It presents the data from a student's investigation on the changing use of energy.

The aim of the student's investigation was to investigate the changing use of energy in Dubai, a city in the United Arab Emirates.

The student carried out an environmental quality survey and annotated a digital photograph of transport management at one location in Dubai.

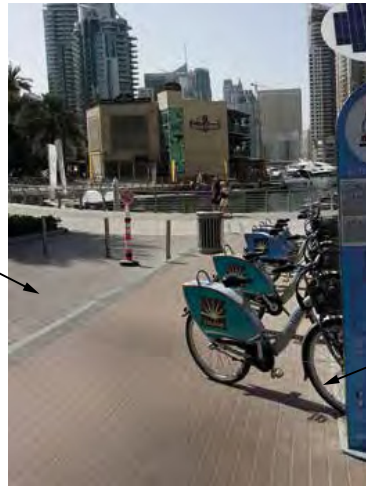
Evaluate the student's methods and results.

(8)

The following resource relates to Question 4.

**Enquiry question:** To what extent is transport in Dubai being managed in a sustainable way?

Area has been pedestrianised to reduce traffic flow



Bikes for hire to discourage car use

**Environmental Quality Survey (EQS) – my results**

Positive features	+2	+1	0	-1	-2	Negative features
Low traffic count	✓					High traffic count
Traffic mainly bicycles	✓					Traffic mainly cars and lorries
Quiet		✓				Noisy
Odourless		✓				Unpleasant smells
Little/no air pollution		✓				Considerable air pollution
Safe for pedestrians	✓					Dangerous for pedestrians

**Figure 4**

Students should do the following to prepare for this style of examination question:

- Study the figure.
- Consider the impacts of using renewable energy sources for transport.
- Apply their fieldwork knowledge and understanding to assess the strengths and weaknesses of the student’s methodology.
- Interpret, analyse and evaluate the student’s findings.
- Use their skills to select and describe information from the resource.
- Communicate their assessment of the strengths and weaknesses of the student’s method and findings.

Examiners will allocate equally weighted marks: 4 marks for A03 and 4 marks for A04. Possible discussions for students to focus on are shown in the indicative content on the next page.

Question number	Indicative content
4(e)	<p style="text-align: center;"><b>A03 (4 marks)/A04 (4 marks)</b></p> <p><b>Marking instructions</b> Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p><b>Indicative content guidance</b> The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include the following.</p> <p><b>A03</b></p> <ul style="list-style-type: none"> <li>• The sampling strategy, e.g. random, stratified and/or systematic, is important when planning data collection for an investigation. For example, if something is either under- or over-represented, results, despite being accurately collected, might not provide valid conclusions.</li> <li>• Recognition of limitations in the data collection/sampling techniques may be flawed in terms of the number of sites (spatial) and the time of year (temporal).</li> <li>• Reliability and accuracy of the student's methods may be evaluated with reference to potential evaluation, including equipment errors and operator errors.</li> <li>• Judgement about limitations of equipment used/operator error in relation to the enquiry question.</li> <li>• An evaluation of how far the student's results can be trusted may be provided (or repeated to obtain the same results – reliability).</li> </ul> <p><b>A04</b></p> <ul style="list-style-type: none"> <li>• The student only carried out a data collection (EQS and annotated digital photograph) at one location in Dubai, therefore variations across the city will not have been measured. The student could have repeated the method at 500 m intervals (systematic sampling) along a transect across the city for a more accurate result that would have possibly identified spatial variations/changes.</li> <li>• The location of the annotated digital photograph is unknown and may be in an area of the city where transport pressures are low. This means that the results may not be representative of the city as a whole and greater sampling is required to obtain valid conclusions.</li> <li>• The EQS does include a broad range of criteria that have been used to assess the location. However, the +2 score for 'safe for pedestrians' could have been explored further, e.g. with a land use map, for more meaningful results.</li> </ul>

A top Level 3 answer should:

- have a balanced argument
- include specific evidence
- be one where the student supports their statements
- refer to all human processes/relevant areas of the enquiry process
- have clear communication, using relevant geographical terminology consistently.

An example of a **familiar**-style question, based on what the students have done themselves.

Here is an example of an **unfamiliar**-style fieldwork question based on resources provided in the exam.

(c) Explain **two** reasons for the technique(s) chosen, for example graph, map or diagram, to present your primary or secondary data/information. (4)

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To answer this style of question, students will need to review the likely impact of any disadvantages they identified in their methods.

- Were there likely equipment and/or human errors?
- Were there any issues with sampling strategies applied?

Question number	Answer	Mark
<b>4(c)</b>	<p style="text-align: center;"><b>A03 (2 + 2 marks)</b></p> <p>NB There is no credit for stating type of graph or diagram.</p> <p>Award 1 mark for the identification of a reason and a further mark for an explanation of the reason, up to a maximum of 2 marks. There are two reasons required in this question.</p> <ul style="list-style-type: none"> <li>A gain-loss graph was used because this showed both the positives and negatives in people’s attitudes (1) and made comparisons between the questions much easier to see (1).</li> <li>A located proportional bar was used for some questions so that changes along the road could be seen (1), as well as the places/sites where most change happened in terms of the development of different attitudes (1).</li> </ul> <p>Reward candidates who give reasons for use of maps/geographic information system (GIS)/photos.</p> <p>Accept any other appropriate response.</p>	<b>(4)</b>

### (3) Fieldwork standards, requirements and the route to enquiry

The table below specifies the minimum types and range of fieldwork (including qualitative, quantitative and secondary data) required for the options in Paper 1 and Paper 2. This is in effect, the route to enquiry.

Enquiry process point	General focus and details of fieldwork
<b>1. Enquiry question</b>	<p>Students must have an opportunity to develop understanding of the kinds of questions that can be investigated through fieldwork for the chosen topic.</p> <p>Students must have an opportunity to develop a question(s) based on their location and the task.</p>
<b>2. Fieldwork methods</b>	<p>Fieldwork data collection must include at least <b>one</b> quantitative and <b>one</b> qualitative method for each of the <b>two</b> investigations, one physical and one human.</p> <p>Students should have an opportunity to consider sample size, sampling strategies and data-collection design to help them understand issues of reliability and accuracy of data. Students need to understand the purpose of each of the data collection methods for the investigation.</p>
<b>3. Secondary data sources</b>	The use of at least <b>two</b> different secondary sources of data.
<b>4. Processing and presenting data</b>	<ul style="list-style-type: none"> <li>Both primary and secondary data should be processed, including the use of tally charts, calculation of means and calculation of percentages.</li> <li>Primary and secondary data should be presented in map form using simple GIS applications.</li> <li>Simple (pie, bar, line) and more complex (compound, radial, scatter) graphs should be used to present primary and secondary data.</li> <li>Appropriate ways should be used to present qualitative data (direct quotes, word clouds).</li> </ul>
<b>5. Analysis and explanation</b>	Primary and secondary data should be analysed for meaning both individually and together, to draw out links, contrasts and comparisons.
<b>6. Coming to conclusions</b>	Conclusions drawn should relate to the extent to which the results from the investigation fit accepted theories and whether there are any further implications of the results for people and the environment. Conclusions must draw on both primary and secondary evidence, and students must consider anomalous and/or unexpected results
<b>7. Reflecting on data, methods and conclusions</b>	Students should include the accuracy and reliability of primary and secondary data and the extent to which conclusions are reliable. They should analyse possible ways to improve results and consider the extent to which these data collection techniques could be used for other fieldwork investigations.



### Exceptional circumstances

Pearson recognises that for some centres and/or individuals, fieldwork (specifically first-hand data collection activities) can be constrained by:

- (i) geographical location/physical nature of the region
- (ii) cultural/religious exceptions
- (iii) illness
- (iv) physical disability; or
- (v) security.

In these rare circumstances, other fieldwork data could be used instead, e.g. from another agency/organisation, books/magazines or from other students who were able to collect the data themselves (including from previous cohorts). All other aspects of the enquiry process should remain unchanged for those learners (Stages 1–3 and 5–7 in the enquiry process) who have not collected their own data. (For further details see p45 of the Specification).

### Virtual Fieldwork

Virtual fieldwork, in the context of this specification, is a term that refers to either:

1. Pre-and/or post fieldwork that supports the main investigation. This might include the use of Google Maps or StreetView as a tool to select appropriate sites, or the use of photographs/video from past visits to allow learners to see the impact of different conditions (e.g. the weather) on a particular feature or process; YouTube may be useful in this respect. Virtual fieldwork may also be used as a tool to help teach field skills before the visit, or to prepare a risk assessment.
2. A simulation exercise, where, because of constrained circumstances, candidates cannot collect the data personally in the field. In this instance, alternative data will need to be sourced from other individuals/providers. See Specification: **Fieldwork and exceptional circumstances**

*It should be stressed that virtual fieldwork is not intended to be used as a way of short-cutting or bypassing the original fieldwork opportunities which are central to the delivery of this specification.*

## (4) Suggested fieldwork opportunities – Physical Geography

Paper 1			
Section A Topic	Geographical Enquiry	Suggested methods of primary data collection (this must include at least <b>one</b> quantitative and <b>one</b> qualitative method)	
Hazardous environments	Investigation of physical processes involved in an extreme weather event through the recording of primary and secondary fieldwork evidence	Quantitative	e.g. recording wind, rain and temperature measurements in a weather diary; hazard mapping
		Quantitative	e.g. annotated field sketches to show key features and/or impacts of an extreme weather event; photographs taken before, during and after the extreme weather event
River environments	Investigation of change in a river channel through primary and secondary fieldwork evidence	Quantitative	e.g. sediment size/shape survey; discharge (velocity, width and depth) measurements
		Quantitative	e.g. annotated field sketches of the river channel and its valley; photographs to show how the channel changes downstream
Coastal environments	Investigation of coastal processes and form through primary and secondary fieldwork evidence	Quantitative	e.g. sediment size/shape measurements; beach profile survey
		Quantitative	e.g. annotated field sketches of cliff geology and structure; coastal protection survey
<b>Secondary sources</b>	The use of at least <b>two</b> different secondary data sources for your chosen environment		

## River environments explored

**Fieldwork focus:** Investigation of change in a river channel through primary and secondary fieldwork evidence.

**Aim:** To explore how and why discharge changes downstream on the River Wyre (Lancashire, UK).



Activity	Fieldwork opportunities	Pre and post fieldwork
<b>Planning</b>	<p>Locating the study area (maps/GIS etc).</p> <p>Designing an investigation:</p> <ul style="list-style-type: none"> <li>• Identification of a question and aims/hypotheses linked to geographical theory</li> <li>• Fieldwork equipment considerations to ensure accuracy and reliability</li> <li>• Discussion of health and safety.</li> </ul>	<p>Contextualising the study area. Understanding the wider significance of the topic.</p> <ul style="list-style-type: none"> <li>• Research into relevant background information, e.g. textbooks, internet and related articles.</li> <li>• Use of past data to understand scale.</li> <li>• Fieldwork design – where and how many sites (justified). Possible development/customisation of recording sheets.</li> </ul>
<b>Possible fieldwork techniques and equipment</b>	<p><b>Channel characteristics</b> – e.g. width, depth, discharge, gradient measurements; bedload samples; sites sketches/photographs.</p>	<p>Discussion of methods to measure and record data (both primary and secondary).</p> <p>Identification of strategies aimed at maximising the accuracy of the collected data.</p>
	<p><b>Equipment</b> – tape measures, rulers, clinometers, flow meters, camera/phone etc.</p>	
<b>Data presentation</b>	<p>The use of a range of graphs, maps, diagrams and annotated images to display collected data (e.g. Flow line to show change in discharge).</p>	
<b>Analysis of information</b>	<p>Undertaking statistical tests - for example, calculating the mean velocity at each site or the percentage increase between sites - to help to identify trends and outliers.</p> <p>Interpreting presentations (e.g. scatter plots) to identify bivariate relationships and to interpolate and extrapolate trends.</p>	
<b>Conclusions and evaluation</b>	<p>Describe the findings, explain possible reasons and make links between patterns etc. Students should return to the original predictions/hypotheses. A review of the fieldwork process (including any additional research information). Comments on the accuracy, validity and reliability of the conclusions.</p>	
<b>Additional resources and sources of information</b>	<ul style="list-style-type: none"> <li>• FSC fold-out key to rivers fieldwork <a href="http://www.field-studies-council.org/publications/pubsinfo.aspx?Code=OP114">http://www.field-studies-council.org/publications/pubsinfo.aspx?Code=OP114</a></li> <li>• BBC Bitesize for a useful introduction to rivers in the landscape <a href="http://www.bbc.co.uk/schools/gcsebitesize/geography/water_rivers/">http://www.bbc.co.uk/schools/gcsebitesize/geography/water_rivers/</a></li> </ul>	

## Coastal environments explored

**Fieldwork focus:** Investigation of coastal processes and form through primary and secondary fieldwork evidence.

**Aim:** To explore the impact of coastal processes on Hendaye beach (Pyrenees Atlantiques, France).



Activity	Fieldwork opportunities	Pre and post fieldwork
<b>Planning</b>	Locating the study area (maps/GIS etc). Designing an investigation: <ul style="list-style-type: none"> <li>• Identification of a question and aims/hypotheses linked to geographical theory</li> <li>• Fieldwork equipment considerations to ensure accuracy and reliability</li> <li>• Discussion of health and safety.</li> </ul>	Contextualising the study area. Understanding the wider significance of the topic. <ul style="list-style-type: none"> <li>• Research into relevant background information, e.g. textbooks, internet and related articles.</li> <li>• Use of past data to understand scale.</li> <li>• Fieldwork design – where and how many sites (justified). Possible development/customisation of recording sheets.</li> </ul>
<b>Possible fieldwork techniques and equipment</b>	<b>Coastal processes</b> – beach width and gradient measurements, beach transects to record gradient and sediment size/shape, cliff and coastal protection surveys.	Discussion of methods to measure and record data (both primary and secondary).  Identification of strategies aimed at maximising the accuracy of the collected data.
	<b>Equipment</b> – sediment shape categorisation charts, tape measures, calipers, clinometers (or phone version), Environment surveys, cameras/phones.	
<b>Data presentation</b>	The use of a range of graphs, maps, diagrams and annotated images to display collected data (e.g. Sequenced pie charts to show the changing proportions of sediment shapes).	
<b>Analysis of information</b>	Undertaking statistical tests - for example, calculating the mean sediment size at each site or the percentage increase between sites - to help to identify trends and outliers. Interpreting presentations (e.g. scatter plots) to identify bivariate relationships and to interpolate and extrapolate trends.	
<b>Conclusions and evaluation</b>	Describe the findings, explain possible reasons and make links between patterns etc. Students should return to the original predictions/hypotheses. A review of the fieldwork process (including any additional research information). Comments on the accuracy, validity and reliability of the conclusions.	
<b>Additional resources and sources of information</b>	<ul style="list-style-type: none"> <li>• FSC Coastal fieldwork website – particularly useful for fieldwork in relation to coasts <a href="https://www.geography-fieldwork.org/coast.aspx">https://www.geography-fieldwork.org/coast.aspx</a></li> <li>• Cliff stability survey</li> <li>• BBC Bitesize - coastal management <a href="http://www.bbc.co.uk/schools/gcsebitesize/geography/coasts/coastal_management_rev1.shtml">http://www.bbc.co.uk/schools/gcsebitesize/geography/coasts/coastal_management_rev1.shtml</a></li> </ul>	

## Hazardous environments explored

**Fieldwork focus:** Investigation of physical processes involved in an extreme weather event through the recording of primary and secondary fieldwork evidence.

**Aim:** To explore the changing weather conditions which occur as a storm passes over Barbados.



Activity	Fieldwork opportunities	Pre and post fieldwork
<b>Planning</b>	Locating the study area (maps/GIS etc). Designing an investigation: <ul style="list-style-type: none"> <li>• Identification of a question and aims/hypotheses linked to geographical theory</li> <li>• Fieldwork equipment considerations to ensure accuracy and reliability</li> <li>• Discussion of health and safety.</li> </ul>	Contextualising the study area. Understanding the wider significance of the topic. <ul style="list-style-type: none"> <li>• Research into relevant background information, e.g. textbooks, internet and related articles.</li> <li>• Use of past data to understand scale.</li> <li>• Fieldwork design – where and how many sites (justified). Possible development/ customisation of recording sheets.</li> </ul>
<b>Possible fieldwork techniques and equipment</b>	<b>Weather data</b> – recording local weather data over time, e.g. pressure, temperature, rainfall etc; microclimate variability. Use of internet for similar data in the local area. Linked to a hazard event.	Discussion of methods to measure and record data (both primary and secondary).  Identification of strategies aimed at maximising the accuracy of the collected data.
	<b>Equipment</b> – thermometer, anemometer, wind vane, barometer, rain gauge, camera/phone etc.	
<b>Data presentation</b>	The use of a range of graphs, maps, diagrams and annotated images to display collected data (e.g. Line charts to show change in pressure as the storm passes).	
<b>Analysis of information</b>	Undertaking statistical tests - for example, calculating the temperature range or the percentage increase/decrease in rainfall between two times - to help to identify trends and outliers. Interpreting presentations (e.g. scatter plots) to identify bivariate relationships and to interpolate and extrapolate trends.	
<b>Conclusions and evaluation</b>	Describe the findings, explain possible reasons and make links between patterns etc. Students should return to the original predictions/hypotheses. A review of the fieldwork process (including any additional research information). Comments on the accuracy, validity and reliability of the conclusions.	
<b>Additional resources and sources of information</b>	<ul style="list-style-type: none"> <li>• Weather underground as a good source of live weather feeds <a href="http://www.wunderground.com/wundermap/">http://www.wunderground.com/wundermap/</a></li> <li>• Royal Horticultural Society – the factors that can influence microclimates <a href="http://apps.rhs.org.uk/advicesearch/Profile.aspx?pid=689">http://apps.rhs.org.uk/advicesearch/Profile.aspx?pid=689</a></li> </ul>	

## (5) Suggested fieldwork opportunities – Human geography

Paper 2			
Section B Topic	Geographical Enquiry	Suggested methods of primary data collection (this must include at least <b>one</b> quantitative and <b>one</b> qualitative method)	
Economic activity and energy	Investigating approaches to developing energy resources through primary and secondary evidence	Quantitative	e.g. environmental quality survey; use of questionnaire to collect quantitative data from different interest groups
		Quantitative	e.g. judgement survey to collect the attitudes and opinions from different groups of people; environmental impact assessment
Rural environments	Investigating the changing use of rural environments through primary and secondary evidence	Quantitative	e.g. environmental quality survey; building (height, age and materials) survey
		Quantitative	e.g. interviews with residents in the rural environment; annotated land use mapping
Urban environments	Investigating the changing use of central/inner urban environments through primary and secondary evidence	Quantitative	e.g. environmental quality survey; land use survey
		Quantitative	e.g. interviews with residents in the urban environment; urban transect survey
<b>Secondary sources</b>	The use of at least <b>two</b> different secondary data sources for your chosen environment		



## Economic activity and energy

**Fieldwork focus:** Investigating approaches to developing energy resources through primary and secondary evidence.

**Aim:** To investigate opinions relating to the enlargement of Scout Moor Windfarm (Rossendale, Lancashire).



Activity	Fieldwork opportunities	Pre and post fieldwork
<b>Planning</b>	<p>Locating the study area (maps/ GIS etc).</p> <p>Designing an investigation:</p> <ul style="list-style-type: none"> <li>• Identification of a question and aims/hypotheses linked to geographical theory</li> <li>• Fieldwork equipment considerations to ensure accuracy and reliability</li> <li>• Discussion of health and safety.</li> </ul>	<p>Contextualising the study area. Understanding the wider significance of the topic.</p> <ul style="list-style-type: none"> <li>• Research into relevant background information, e.g. textbooks, internet and related articles.</li> <li>• Use of past data to understand scale.</li> <li>• Fieldwork design – where and how many sites (justified). Possible development/ customisation of recording sheets.</li> </ul>
<b>Possible fieldwork techniques and equipment</b>	<p><b>Views on energy</b> – questionnaires to various groups plus internet/ newspaper/Twitter/Blog search. Attitude surveys and simplified impacts/landscape assessments.</p>	<p>Discussion of methods to measure and record data (both primary and secondary).</p> <p>Identification of strategies aimed at maximising the accuracy of the collected data.</p>
	<p><b>Equipment</b> – pre-designed questionnaire with correct focus, quality surveys for attitudes.</p>	
<b>Data presentation</b>	<p>The use of a range of graphs, maps, diagrams and annotated images to display collected data (e.g. A word cloud to illustrate the frequency of responses).</p>	
<b>Analysis of information</b>	<p>Undertaking statistical tests - for example, calculating the percentage change in response between two groups of differing opinion - to help to identify trends and outliers. Interpreting presentations (e.g. scatter plots) to identify bivariate relationships and to interpolate and extrapolate trends.</p>	
<b>Conclusions and evaluation</b>	<p>Describe the findings, explain possible reasons and make links between patterns etc. Students should return to the original predictions/hypotheses. A review of the fieldwork process (including any additional research information). Comments on the accuracy, validity and reliability of the conclusions.</p>	
<b>Additional resources and sources of information</b>	<ul style="list-style-type: none"> <li>• Report: attitudes and knowledge about renewables by the public <a href="http://webarchive.nationalarchives.gov.uk/+http://www.berr.gov.uk/files/file15478.pdf">http://webarchive.nationalarchives.gov.uk/+http://www.berr.gov.uk/files/file15478.pdf</a></li> <li>• Energy efficiency/awareness questionnaire <a href="http://www.york.ac.uk/biology/energy/BaseQuestionnaireResponse.pdf">http://www.york.ac.uk/biology/energy/BaseQuestionnaireResponse.pdf</a></li> </ul>	

## Rural environments

**Fieldwork focus:** Investigating the changing use of rural environments through primary and secondary evidence.

**Aim:** To investigate changing land use on Chongming Island (Shanghai, China).



Activity	Fieldwork opportunities	Pre and post fieldwork
<b>Planning</b>	<p>Locating the study area (maps/GIS etc).</p> <p>Designing an investigation:</p> <ul style="list-style-type: none"> <li>• Identification of a question and aims/hypotheses linked to geographical theory</li> <li>• Fieldwork equipment considerations to ensure accuracy and reliability</li> <li>• Discussion of health and safety.</li> </ul>	<p>Contextualising the study area. Understanding the wider significance of the topic.</p> <ul style="list-style-type: none"> <li>• Research into relevant background information, e.g. textbooks, internet and related articles.</li> <li>• Use of past data to understand scale.</li> <li>• Fieldwork design – where and how many sites (justified). Possible development/customisation of recording sheets.</li> </ul>
<b>Possible fieldwork techniques and equipment</b>	<p><b>Views on change</b> – Questionnaires to various groups plus internet/newspaper/Twitter/Blog search. Attitude surveys and simplified building survey assessments.</p>	<p>Discussion of methods to measure and record data (both primary and secondary).</p> <p>Identification of strategies aimed at maximising the accuracy of the collected data.</p>
	<p><b>Equipment</b> – pre-designed questionnaire with correct focus, quality surveys for attitudes, building age and height etc.</p>	
<b>Data presentation</b>	The use of a range of graphs, maps, diagrams and annotated images to display collected data (e.g. Colour coded land use map).	
<b>Analysis of information</b>	Undertaking statistical tests - for example, calculating the percentage change in a particular land use between two contrasting sites - to help to identify trends and outliers. Interpreting presentations (e.g. scatter plots) to identify bivariate relationships and to interpolate and extrapolate trends.	
<b>Conclusions and evaluation</b>	Describe the findings, explain possible reasons and make links between patterns etc. Students should return to the original predictions/hypotheses. A review of the fieldwork process (including any additional research information). Comments on the accuracy, validity and reliability of the conclusions.	
<b>Additional resources and sources of information</b>	<ul style="list-style-type: none"> <li>• RGS fieldwork site, includes a useful section on rural investigations: <a href="http://www.rgs.org/OurWork/Schools/Fieldwork+and+local+learning/.htm">http://www.rgs.org/OurWork/Schools/Fieldwork+and+local+learning/.htm</a></li> </ul>	



## Urban environments

**Fieldwork focus:** Investigating the changing use of central/inner urban environments.

**Aim:** To investigate the impact of Malaga's port regeneration scheme (Andalusia, Spain).



Activity	Fieldwork opportunities	Pre and post fieldwork
<b>Planning</b>	Locating the study area (maps/GIS etc). Designing an investigation: <ul style="list-style-type: none"> <li>• Identification of a question and aims/hypotheses linked to geographical theory</li> <li>• Fieldwork equipment considerations to ensure accuracy and reliability</li> <li>• Discussion of health and safety.</li> </ul>	Contextualising the study area. Understanding the wider significance of the topic. <ul style="list-style-type: none"> <li>• Research into relevant background information, e.g. textbooks, internet and related articles.</li> <li>• Use of past data to understand scale.</li> <li>• Fieldwork design – where and how many sites (justified). Possible development/customisation of recording sheets.</li> </ul>
<b>Possible fieldwork techniques and equipment</b>	<b>Quality and change surveys</b> – questionnaires to various groups plus internet/newspaper/Twitter/Blog search. Attitude surveys and simplified building survey assessments	Discussion of methods to measure and record data (both primary and secondary).  Identification of strategies aimed at maximising the accuracy of the collected data.
	<b>Equipment</b> – pre-designed questionnaire with correct focus, quality surveys for attitudes, land use, possibly building age	
<b>Data presentation</b>	The use of a range of graphs, maps, diagrams and annotated images to display collected data (e.g. Colour coded land use map).	
<b>Analysis of information</b>	Undertaking statistical tests - for example, calculating the percentage change in a particular land use before and after the regeneration scheme - to help to identify trends and outliers. Interpreting presentations (e.g. scatter plots) to identify bivariate relationships and to interpolate and extrapolate trends.	
<b>Conclusions and evaluation</b>	Describe the findings, explain possible reasons and make links between patterns etc. Students should return to the original predictions/hypotheses. A review of the fieldwork process (including any additional research information). Comments on the accuracy, validity and reliability of the conclusions.	
<b>Additional resources and sources of information</b>	<ul style="list-style-type: none"> <li>• FSC urban ecosystems website <a href="http://www.field-studies-council.org/urbaneco/">http://www.field-studies-council.org/urbaneco/</a></li> <li>• FSC fold-out key to CBD fieldwork <a href="http://www.field-studies-council.org/publications/pubs/understanding-geography-fieldwork-2-the-central-business-district.aspx">http://www.field-studies-council.org/publications/pubs/understanding-geography-fieldwork-2-the-central-business-district.aspx</a></li> </ul>	

## (6) Planning and developing an integrated fieldwork strategy.

It is strongly recommended that centres plan their fieldwork opportunities as part of an integrated two-year strategy, making clear the links between the fieldwork and the knowledge/ understanding of the content relevant in the specification.

Fieldwork progression should mean that students are moving more towards an independent enquiry in readiness for the assessment.

	Closed task	Framed enquiry	Independent enquiry
Question	A task is presented. Questions are not explicit.	Enquiry questions are selected by teacher but are explicit.	Students decide enquiry questions, framed by teacher input.
Data	Decisions about fieldwork procedure are made by teachers. Data is presented as authoritative evidence.	Decisions about fieldwork procedure are made largely by teachers, Data is presented as information to be interpreted.	Students are involved in key decisions about fieldwork procedure and data sources.
Making sense	Activities devised by teacher to achieve pre-determined objectives. Students follow instructions.	Methods of representation are open to discussion and choice. Analysis is independent.	Students independently analyse evidence and make decisions/reach conclusions.
Reflection	Predictable outcomes.	Students discuss what they have learnt; different outcomes.	Students consider the validity of evidence/ reliability of data and methods.

**Schools must provide opportunities for at least 1 Topic from Section A and 1 Topics from Section B.** More fieldwork opportunities are always encouraged, developing a range of skills geographical and interpersonal skills that will be nurtured throughout the IGCSE course.

The table below (Model 1) illustrates one example programme of fieldwork that might be used to fulfil the requirements of the Specification and to **allow a choice of questions – as two options are covered for each Section (A&B)**. This provides maximum exam flexibility as the options will be linked to the two topics studied as part of Section A and B.

In this example, the school is located in Shrewsbury, Shropshire, UK. Typically, each taught topic has about ½ - 1 day of fieldwork (including any travel). Each fieldwork session is a stand-alone activity, with follow-up (relevant data presentation, analysis etc) completed in lessons or as homework after the trip. This is often done as a group activity, with shared outcomes available via the school intranet. In this way, the teams can work together to produce work that is then reviewed and shared in preparation for assessment.

## Fieldwork Guide

Pre-fieldwork planning has been used in each case to contextualise the geography of the location and the fieldwork that will be undertaken, in some instances using GIS (e.g. Google Earth and Google Maps) and supporting video material.

**Model 1** – an example of ‘days-out’ fieldwork. **Covers two topics per option**

Topic focus	Example location (UK)	Time of year
River Environments	Cardingmill Valley, Long Mynd, South Shropshire	Yr10 October
Rural environments	Ynylas, West Wales	Yr10 June
Economic Activity and Energy	Telford (Ricoh), Shropshire	Autumn term of Yr11
Hazardous environments	School, grounds (weather)	Variable – Autumn/Winter of Yr11 when there is a depression to track

In this second example (Model 2), a longer 3-day residential trip is used to cover several of the topics. In the example shown, the school has travelled to Nettlecombe Court (Field Studies Council), in Somerset. One of the key advantages that the residential trip has (in this example - two nights away) over Model 1 is that evening following-up time can be used to close the route to enquiry or prepare for the next day’s activity. Residential trips can also be more cost effective in terms of reducing travel costs between field sites.

**Model 2** – an example of a residential trip, supported by additional top-ups. **Covers two topics per option**

Topic focus	Example location (UK)	Time of year
River Environments	Local stream adjacent to field centre	Residential – March Yr10
Rural environments	Saunton Sands, Barnstaple, Devon	Residential – March Yr10
Coastal Environments	Porlock and Minehead, North Somerset	Residential – March Yr10
Economic Activity and Energy	CAT Centre, Machynlleth, Mid Wales	Variable – in Spring term of Yr11

Note 1 - shading indicates Topics completed at the field centre

Example 3 is based on a school in Hong Kong. The order in which they appear is the sequence in which the fieldwork was undertaken during a two-year course.

**Model 3** – An overseas example.

Topic focus	Time of year
Hazardous environments	Schools grounds – track a depression over the region
Urban Environments	Hong Kong Island and Kowloon
Coastal Environments	Discovery Bay and remote areas of Lantau Island
Economic Activity and Energy	Visit to the container port and new airport

Note 2 - shading indicates core topics that could be undertaken to fulfil the requirements of the course

## (7) Generic Sources to support fieldwork and research

A number of these sources may have information to help contextualise the fieldwork and add relevance to the issue / topic being studied.

The **Field Studies Council** have an excellent fieldwork related website - <http://www.geography-fieldwork.org>. They also have a range of specialist identification guides (fold out charts) for many of the fieldwork topics in the specification, e.g. <http://www.field-studies-council.org/publications/pubs/geographical-investigations.aspx>

This is the locations of the FSC centres in the UK <http://www.field-studies-council.org/centres.aspx>. Of course, International GCSE centres can choose other providers either in the UK or overseas.

You may find some useful information from the **Barcelona Field Studies** website <http://geographyfieldwork.com/Fieldwork%20Methodology.htm>. They also run International GCSE field courses.

The **RGS** (Royal Geographical Society) have a directory of international field centres ("World Resister"). <http://www.rgs.org/OurWork/Fieldwork+and+Expeditions/World+Register+of+FieldCentres/World+Register+of+Field+Centres.htm>

**Geofile and Geofactsheet** - These publications regularly cover a range of fieldwork related topics that may be relevant to your investigation. Although aimed an AS / A2 audience, they can provide some useful background reading to contextualise a topic area.

There are many examples of virtual fieldwork tours on the internet, e.g. **Geographical Association** (UK) <http://www.geography.org.uk/projects/makingmyplaceintheworld/virtualfieldwork>. This describes a range of activities and also has a downloadable PowerPoint linked to the topic [http://www.geography.org.uk/download/GA\\_PRMMPVirtualFieldwork.ppt](http://www.geography.org.uk/download/GA_PRMMPVirtualFieldwork.ppt)

The **Digital Explorer** website <http://digitalexplorer.com/ge/adf/advanced-google-earth-manual.pdf> has a manual on virtual fieldwork in the context of Google Earth.

**TopicEye Geography** is a magazine series for students written by leading authors and examiners. There may be some resources in here that help contextualise the course and fieldwork / research <http://crossacademe.co.uk/series/23/a-level-geography>

**Geography Review** and **WiderWorld** are now available online and searchable through an online magazine subscription service.

<https://www.hoddereducation.co.uk/Geography#&pid=2&limit=true&type=0>  
This is the link to their magazines page.

**Newspapers** – especially Independent, Guardian, Telegraph, The Times. Other international papers may also be suitable for contextualising a particular local issue.

Also, search their blogging areas for background opinion. Look at local newspapers for a more in-depth focus on local issues (especially editorial sections).

**BBC website.** Explore your local section for reactions to particular issues or use the bitesize courses for an overview/update of the relating theories.

**YouTube** may provide clips of documentaries as well as uploaded local videos.

For stretch search the online databases of the **Economist**, **Ecologist** and **New Scientist** for some up-to-date and accessible resources.

Also, consider subscribing to relevant **Twitter** and **RSS** feeds.

There are also a number of books and published resources that could be used:

- **A-Z Advancing Geography: Fieldwork**  
Geographical Association. Holmes & Farbrother (2000)
- **Fieldwork Through Enquiry**  
Geographical Association. Widdowson & Parkinson (2013)
- **Methods of Presenting Fieldwork Data**  
Geographical Association. St John & Richardson (1997)
- **Geography Review Practical Fieldwork Articles** can be accessed through an archive back to 1993: <https://www.hoddereducation.co.uk/>

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