



Practice Papers for GCSE (9–1) OCR B Geography

Component 01: Our Natural World

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Teacher's Introduction

This resource provides four practice exam papers, with full mark schemes, for the **GCSE OCR B (J384) Component 01: Our Natural World** examination. Each paper is divided into two sections: A and B, to mirror the style of the OCR B exam. Students should answer all questions. The papers are write-on, just like the real exam, meaning that students' answers will be retained alongside the question as an aid for revision. Non-write-on versions are provided in the appendices if you wish to reduce photocopying. Students will need to be provided with an answer booklet if using the non-write-on papers.

Remember!

Always check the exam board website for new information, including changes to the specification and sample assessment material.

Figures for each practice paper are provided in a resource booklet format on the pages following each exam. A full colour version of this booklet is available to download from the ZigZag Education free updates system if you wish to produce a class set of full-colour resource booklets for repeated use (see foot of page).

The resource will enable students to gain greater experience of answering questions in preparation for the Component 01 exam. The resource contains a full mark scheme for each question which will enable teachers to set and mark the work with confidence or can be used by students to carry out self-assessment and revision.

On the following page there is an additional answer sheet for students to use with the write-on version where extra space is required. It might be useful to have a number of these sheets readily available for students to use during a mock examination.

April 2019

Free Updates!

Register your email address to receive any future free updates* made to this resource or other Geography resources your school has purchased, and details of any promotions for your subject.

* resulting from minor specification changes, suggestions from teachers and peer reviews, or occasional errors reported by customers

Go to **[zzed.uk/freeupdates](https://www.zzed.uk/freeupdates)**

Additional Answer Sheet

Name

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ZigZag Practice Exam

Supporting GCSE OCR B

GCSE (9–1) Geography B

Component 01: Our Natural World

Practice Paper 1a

Name

Time allowed: 1 hour 15 minutes

Instructions to Candidates:

- You will need to refer to figures in the **Paper 1a Resource Booklet**.
- Answer **all** the questions.
- Answer in the spaces provided.
- If you need more space, use the additional lined paper and write the question number clearly in the left margin.

Information:

- The total number of marks for this paper is 70.
- The number of marks available is shown in brackets [].
- There are 3 marks available for spelling, punctuation and grammar in **Question 5 (f)**.

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Section A

Answer all the questions.

Global Hazards

1. Study the table of rainfall data for the city of Brisbane, Australia during a normal year and an El Niño year.

Month	Rainfall (mm) Normal year	Rainfall (mm) El Niño year
January	136	97
February	118	91
March	100	80
April	76	62
May	74	61
June	71	55
July	29	11
August	39	11
September	33	21
October	72	39
November	97	52
December	126	78

- a) Calculate the difference between the mean rainfall for Australia in an El Niño year and the mean rainfall for Australia in a **normal year**. You must show your working out.

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- b) Explain why Australia experiences below average rainfall in El Niño years.

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- c) Define the term 'drought'.

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d) Case study: Natural hazard

Named heatwave or drought:

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Describe **two** consequences of a heatwave or drought you have studied.

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e) Case study: Natural hazard

Named tropical storm or flood:

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For either a tropical storm or a flood you have studied, evaluate the response.

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Changing Climate

2. a) Explain how **two** human activities have caused global warming.

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- b) Describe how **one** source of evidence tells us about past climate.

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- c) Which of the following does not cause climate change?

- A Increased greenhouse gas emissions
- B Volcanic eruptions
- C Changing orbit of Earth
- D Varying solar output

Write the correct letter in the box.

- d) **Case study: Impacts of climate change on the UK**

Explain how climate change is expected to impact the UK's society, environment and the economy.

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(Continue on an additional answer sheet if necessary)

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Distinctive Landscapes

3. a) Define what is meant by the term 'geomorphic process'.

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- b) Choose the correct definition of the process of attrition.

- A Waves force air into weaknesses in the rock
- B Pebbles crash against each other
- C Pebbles scrape against the side of the coast
- D Rocks are dissolved in acidic water

Write the correct letter in the box.

- c) Study **Figure 1** in the separate resource booklet. Describe the distribution of coastal landforms.

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- d) Explain how headlands and bays are formed.

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- e) **Case study: Coastal landscapes**

Explain how climate can determine the rate of geomorphic processes on the coast.

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(Continue on an additional answer sheet if necessary)

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Sustaining Ecosystems

4. Study the table of climate data for the tropical grasslands ecosystem below

Month	Temperature (°C)	Rainfall (mm)
January	26	66
February	27	66
March	26	57
April	26	32
May	24	20
June	22	10
July	21	7
August	20	10
September	21	15
October	22	45
November	24	55
December	26	62

- a) (i) Calculate the range of rainfall in the tropical grasslands ecosystem

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- (ii) Identify the modal temperature in the tropical grasslands ecosystem

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- b) Which of the following statements best characterises the climate in the

- A There is a wet season and a dry season
B There is a hot season and a cold season
C Climate in tropical grasslands is very similar to climate in tropical rainforest
D Climate is hot and wet all year round

Write the correct letter in the box.

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- c) Study **Figure 2** in the separate resource booklet. Describe the climate, and the factors which characterise the deciduous forest ecosystem.

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- d) **Case study: Tropical rainforest management**
Evaluate the sustainability of one attempt to manage the tropical rainforest.

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Section B

Answer all the questions.

Physical Geography Fieldwork

5. Students are investigating the issue of water use in Cape Town, South Africa.

Aim: To find out whether drought in Cape Town, South Africa, has changed

Use **Figure 3** in the separate resource booklet to answer the following questions.

- a) Suggest a valid data presentation method that could be used to present questionnaire.

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- b) Suggest another primary method to help the students investigate this issue.

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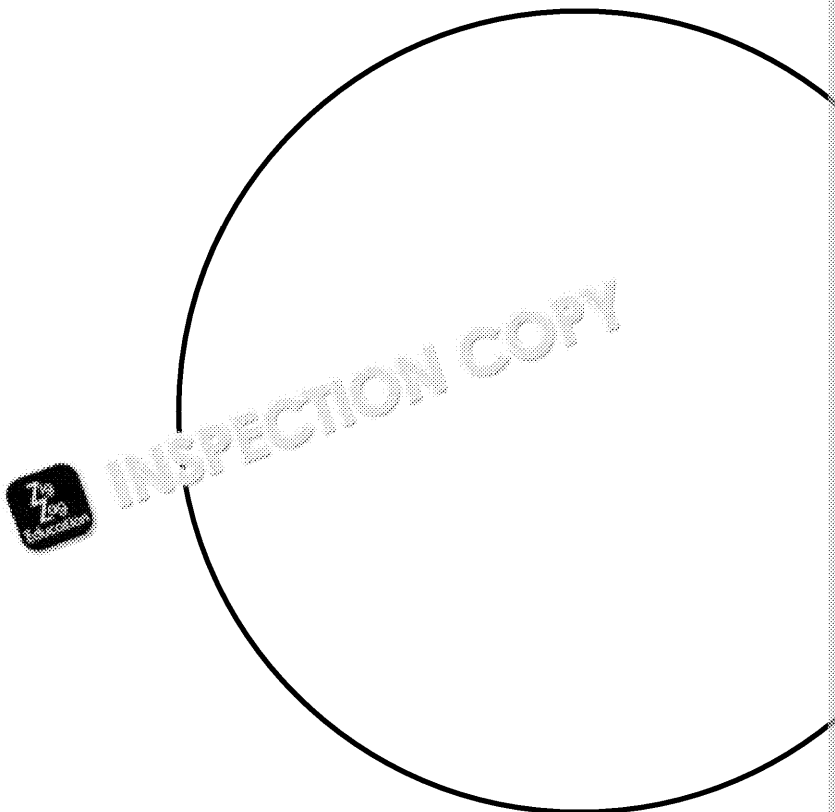
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- c) What percentage of respondents to question 1 have changed their water use?

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- d) Complete a pie chart to show the answers to question 3 of the questionnaire.



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- e)** Assess the reliability of one data collection method you used in a piece of research.

- f) Conclude and evaluate the studies and research on the issue of whether water is scarce in Cape Town or not.

GCSE (9–1) Geography B

Component 01: Our Natural World

Resource Booklet 1a



Time allowed: 1 hour 15 minutes

Instructions to Candidates:

- This is **Resource Booklet 1a** – to be used with **Practice Paper 1a**.
- The questions in the exam paper will let you know which figure to refer to.
- Do not write any of your answers on this booklet – it should be returned to your teacher at the end of the exam.

Contents:

- Fig.1 – Map of glaciated landscapes in the UK.
- Fig.2 – Photo of a deciduous forest ecosystem.
- Fig.3 – The results of students' fieldwork.



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Figure 1: Map showing the distribution of glaciated landscapes in the UK



Figure 2: Photo of a deciduous forest ecosystem

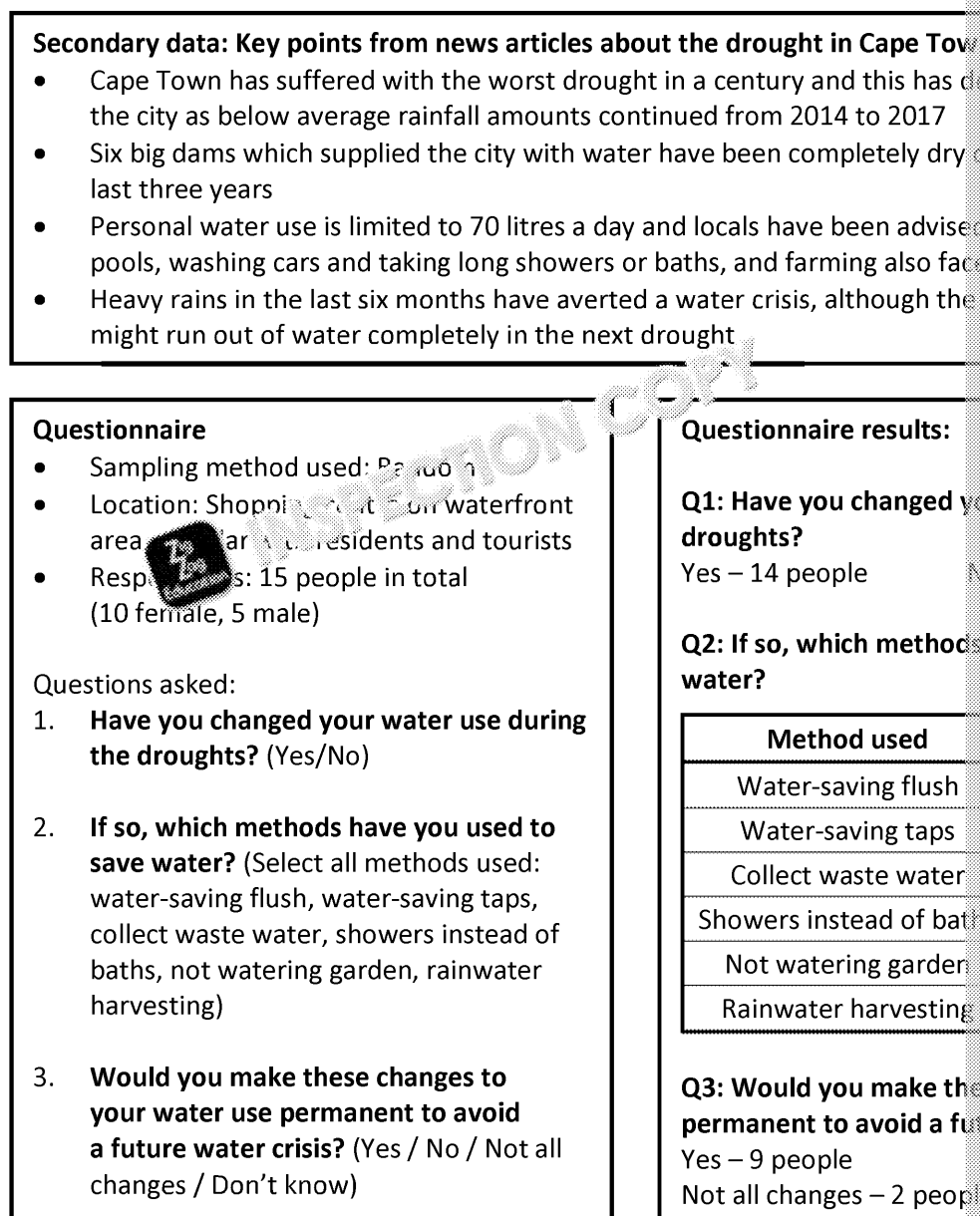


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Figure 3: The results of students' fieldwork into the issue of water use in Cape Town

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Preview of Questions Ends Here

This is a limited inspection copy. Sample of questions ends here to avoid students previewing questions before they are set. See contents page for details of the rest of the resource.

Mark Scheme 1d

Question	Answer	Marks	Guidance
1	a) Study Figure 1 in the separate resource booklet. State which type of plate boundary is shown by the diagram. Destructive plate boundary b) Describe how the frequency of droughts has changed over time. The frequency of droughts has varied over time (✓) but has not increased in frequency since records began (✓). c) Case study: Natural hazard For either a heatwave or a drought you have studied, describe the consequences of the natural hazard. Accept any valid name for heatwave or drought. Look for 4 x ✓ for valid consequences/effects including death toll, effects on agriculture, habitats or animals. d) Describe how the movement of tectonic plates causes contrasting types of earthquakes. Level 3 (5–6 marks) Level 3 answers discuss contrasting earthquakes (shallow and deep focus) with well-explained links to their causes in the movement of tectonic plates. The answer uses accurate terminology and explains in detail. Level 2 (3–4 marks) Level 2 answers discuss contrasting earthquakes, although this is not always linked to the movement of tectonic plates accurately. There is some attempt at using accurate terminology. Level 1 (1–2 marks)	1 2 4 6	1 x (✓) 2 x (✓) 4 x (✓) Level marked answer The answer must relate to <u>earthquakes</u> Level 3 example: Movements of tectonic plates cause contrasting focus earthquakes. At a destructive plate boundary between an oceanic plate and a continental plate there is subduction of the denser oceanic plate – these cause a deep-focus earthquake. When two continental plates move past each other at a transform plate boundary, pressure build up and when this is released, causes shallow focus earthquakes. Level 2 example: There are deep focus earthquakes on destructive plate boundaries because of the movement of two plates towards each other, which causes friction

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Question	Answer	Marks	Guidance
2			
a)	Study Figure 2 in the separate resource booklet. Describe how carbon dioxide emissions have changed over the last century. Carbon emissions have increased in the last century (✓). There is a much faster increase since 1950 (✓) although the recent rates have slowed in pace (✓). Any valid data to support point also credited (✓).	3	3 × (✓)
b)	Explain how climate change leads to an increased amount of extreme weather. Any link to extreme weather events acceptable. Look for two ideas. For example: Higher sea surface temperature (✓) leads to more hurricanes / tropical storms (DEV). The temperature needed to form a tropical storm is around 26 degrees C, which is more likely to happen with warmer temperatures (DEV). Higher temperatures bring more ice melt (✓) or thermal expansion of oceans (✓). This leads to higher sea levels (DEV), which can increase the risk of flooding (DEV).	4	2 × (✓) 2 × (DEV)
c)	Examine the impact of humans on the natural greenhouse effect. Level 3 (5–6 marks) Level 3 answers reflect on human impacts such as burning fossil fuels, agriculture and industry, with effective and well-explained links to the natural greenhouse effect. At the top end, answers at this level may also examine the human activities with the largest impact, and feature accurate use of key terminology. Level 2 (3–4 marks) Level 2 answers reflect on human impacts such as burning fossil fuels, agriculture and industry with some links to the natural greenhouse effect.	6	This question will be marked using three levels Level 3 example: Humans are impacting upon the natural greenhouse effect by burning fossil fuels which release greenhouse gases such as methane and carbon dioxide. This enhances the natural greenhouse effect as more gases enter the atmosphere, which traps more heat in Earth's atmosphere. Level 2 example: Humans are impacting upon the natural greenhouse effect by using fossil fuels which release greenhouse gases. This makes the natural greenhouse effect more intense, and speeds up global warming.

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Question	Answer	Marks	Guidance
3 a)	For one type of weathering, describe how it shapes landscapes. Accept any type of weathering: mechanical, biological or chemical. Explanation should be linked to shaping landscapes. For example: Chemical weathering is when acid dissolved in rain dissolves rock such as limestone (✓). This shapes landscapes as it can form distinctive features such as limestone pavements (DEV).	2	1 × (✓) 1 × (DEV)
b)	Explain how V-shaped valleys are formed in the upper course of a river. V-shaped valleys are formed when rivers erode downwards (✓). This leaves the sides of the valley exposed to weathering (✓). The weathered material abrades the channel further, creating a V-shaped valley (✓).	3	3 × (✓)
c)	Case study: Coastal landscapes For one named coastal landscape you have studied, examine the influence of climate and geology on the landscape. Level 3 (6–8 marks) Level 3 answers examine the influence of both climate and geology in detail, reflecting on the impact they have on the coastal landscape they have studied. Expect coverage of the influence of climate and geology on geomorphic processes and landscapes found in the coastal case study; expect detailed discussion and use of case study knowledge. Level 2 (3–5 marks) Level 2 answers refer to both climate and geology, with reference to the landscape for both. The answer may cover these two elements in varying levels of detail, or the answer is unbalanced between the two. The response may include some examples from the chosen case study at the top end of the level.	8	Expect variety of coastal landscapes studied Level 3 example: Climate on the Jurassic coastline is mild. There are warm summers and mild winters, and this means that the temperature rarely dips below 0 °C and freeze–thaw weathering does not take place here, although biological weathering is a factor here as the mild temperature provides ideal conditions for a variety of plants to grow on the cliffs. This shapes the landscape as there are gently rounded headlands due to the biological weathering. In addition, geology shapes the landscapes, as alternating bands of hard and soft rock are found at Swanage and Studland (hard rock is limestone and the soft rock is clays and chalk) is eroded at different rates, creating distinctive landscape features. Level 2 example: Climate influences processes such as erosion and weathering as it can mean that there is more of a certain type of weathering or change the amounts of erosion found on a coastline. On the Jurassic coastline there is not a lot of freeze–thaw

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Question	Answer	Marks	Guidance
4 a)	Study Figure 3 in the separate resource booklet. Describe the global distribution of hot deserts. Hot deserts are distributed between 23 and 30 degrees N and S of the equator (✓); there are large areas of desert in the Middle East (✓), North Africa (✓), Australia (✓) and North America (✓)	2	2 × (✓)
b)	Which of the following most accurately describes the climate in the hot desert ecosystem. C – Hot temperature and low rainfall	1	1 × (✓)
c)	Study the table. Suggest one reason why tropical rainforests have the most biomass. Rainfall and temperature are high, leading to fast growth (✓)	1	1 × (✓)
d)	Compare the biomass in soil of the tropical rainforest and polar regions. Expect comparative commentary on both biomass and soil, look for development of at least one idea for full marks. For example: More biomass in the tropical rainforest than the polar regions (✓) due to the climate being warmer and wetter, which leads to more plant growth (DEV). Both tropical rainforests and polar regions have poor soils (✓) although in polar regions this is due to low temperatures slowing decomposition and nutrients entering the soil (DEV), while in the tropical rainforest this is due to rapid nutrient use by abundant vegetation (DEV).	3	2 × (✓) 1 × (DEV)
e)	Examine the impact of human activities on the tropical rainforests. Level 3 (5–6 marks) Level 3 answers examine a range of impacts of human activities such as logging, agriculture and mining, including reference to the impact on tropical rainforest such as loss of habitats/biodiversity or impacts on the water cycle or nutrient cycle. Impacts are discussed using detail and are focused on the tropical rainforest.	6	This question will be marked using three levels Level 3 example: Human activities such as logging have a large impact on the tropical rainforest, as logging could decrease habitats for tree dwelling species such as orangutans, which are critically endangered due to the increased rate of logging. Logging of hardwoods such as mahogany or teak – once a tree has been removed, access to the tree is gained by making roads or using heavy machinery, which damages

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Question	Answer	Marks	Guidance
5 a)	Calculate the interquartile range of the data collected by students investigating beach size along a stretch of coast. Show your working out. 1 x (✓) for ordering values by size 1 x (✓) for identifying median (1 m), upper (1.25 m) and lower (0.95 m) quartile values 1 x (✓) for subtracting lower quartile from upper quartile 1 x (✓) for answer 0.3 m	4	4 x (✓)
b)	Explain one primary or one secondary data collection method you used in a piece of physical geography fieldwork. 1 x (✓) for naming an appropriate method to use for named investigation 1 x (✓) for explaining the method	2	2 x (✓)
c)	Explain one technique that you used to present or analyse data collected on your physical geography fieldwork. 1 x (✓) for naming appropriate technique 1 x (✓) for explaining how the technique showed data appropriately	2	2 x (✓)
d)	Evaluate how successful your primary and secondary methods were in helping you to find out about a geographical issue. Level 3 (6–8 marks) Level 3 answers feature both primary and secondary methods used to investigate a relevant physical geography issue, with a reflection on how useful it is in finding out about the issue investigated. Ideas are well explained, using detail, and comment on aspects such as sampling, equipment and ensuring data collection methods are reliable and consistent. Level 2 (3–5 marks) Level 2 answers feature heavier focus on either primary or secondary methods, with some detail and extension in the written answer. Answers explain the methods used, with some links to the fieldwork aims, and reference is made to elements of reliability within the methods carried out.	8 + 3	Expect a range of fieldwork investigation aims and methods to be discussed to reflect variety of fieldwork carried out in centres. Fieldwork referenced MUST be physical fieldwork. Level 3 example: In my physical geography fieldwork, I investigated the issue of flood risk to my local area. One primary technique I used was assessing the value of housing along the river's side to find out what the impact of flooding in each of my study sites would be. I sampled three sites in total using secondary data such as that from property sale websites to estimate the cost of damage if the river flooded, and this helped me to find out where the flood risk was greatest for the place I studied. However, I could have sampled more sites to get a more detailed response for the area in question and averaged my results with other students to make it more reliable. Level 2 example:

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Preview of Answers Ends Here

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