



GCE AS MARKING SCHEME

SUMMER 2019

**AS (NEW)
GEOGRAPHY - COMPONENT 2
B110U20-1**

INTRODUCTION

This marking scheme was used by WJEC for the 2019 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

GCE AS GEOGRAPHY
SUMMER 2019 MARK SCHEME
COMPONENT 2: CHANGING PLACES

Guidance for Examiners

Positive marking

It should be remembered that learners are writing under examination conditions and credit should be given for what the learner writes, as opposed to adopting an approach of penalising him / her for any omissions. It should be possible for a very good response to achieve full marks and a very poor one to achieve zero marks. Marks should not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme.

The mark scheme for this component includes both point-based mark schemes and banded mark schemes.

Point-based mark schemes

For questions that are objective or points-based the mark scheme should be applied precisely. Marks should be awarded as indicated and no further subdivision should be made. Each creditworthy response should be ticked in red ink. Annotations must reflect the mark awarded for the question. The targeted assessment objective (AO) is also indicated.

Banded mark schemes

For questions with mark bands the mark scheme is in two parts.

The first part is advice on the indicative content that suggests the range of concepts, processes, scales and environments that may be included in the learner's answers. These can be used to assess the quality of the learner's response. This is followed by an assessment grid advising on bands and the associated marks that should be given in responses that demonstrate the qualities needed in the three AOs, AO1, AO2 and AO3, relevant to this component. The targeted AO(s) are also indicated, for example AO2.1c.

Banded mark schemes are divided so that each band has a relevant descriptor. The descriptor for the band provides a description of the performance level for that band. Each band contains marks. Examiners should first read and annotate a learner's answer to pick out the evidence that is being assessed in that question. Once the annotation is complete, the mark scheme can be applied. This is done as a two-stage process.

Assessment Objective	Strands	Elements
<p style="text-align: center;">AO1</p> Demonstrate knowledge and understanding of places, environments, concepts, processes, interactions and change, at a variety of scales.	N/A	This AO is a single element.
<p style="text-align: center;">AO2</p> Apply knowledge and understanding in different contexts to interpret, analyse and evaluate geographical information and issues.	N/A	1a - Apply knowledge and understanding in different contexts to analyse geographical information and issues.
		1b - Apply knowledge and understanding in different contexts to interpret geographical information and issues.
		1c - Apply knowledge and understanding in different contexts to evaluate geographical information and issues
<p style="text-align: center;">AO3</p> Use a variety of relevant quantitative, qualitative and fieldwork skills to: <ul style="list-style-type: none"> • investigate geographical questions and issues • interpret, analyse and evaluate data and evidence • construct arguments and draw conclusions. 	<p>1 - investigate geographical questions and issues</p> <hr/> <p>2 - interpret, analyse and evaluate data and evidence</p> <hr/> <p>3 - construct arguments and draw conclusions</p>	N/A

Banded mark schemes Stage 1 – Deciding on the band

Beginning at the lowest band, examiners should look at the learner's answer and check whether it matches the descriptor for that band. Examiners should look at the descriptor for that band and see if it matches the qualities shown in the learner's answer. If the descriptor at the lowest band is satisfied, examiners should move up to the next band and repeat this process for each band until the descriptor matches the answer.

If an answer covers different aspects of different bands within the mark scheme, a 'best fit' approach should be adopted to decide on the band and then the learner's response should be used to decide on the mark within the band. For instance if a response is mainly in band 2 but with a limited amount of band 3 content, the answer would be placed in band 2, but the mark awarded would be close to the top of band 2 as a result of the band 3 content.

Examiners should not seek to mark candidates down as a result of small omissions in minor areas of an answer.

Banded mark schemes Stage 2 – Deciding on the mark

Once the band has been decided, examiners can then assign a mark. During standardising (marking conference), the qualities of each mark band will be discussed in detail. Examiners will then receive examples of answers in each mark band that have been awarded a mark by the Principal Examiner. Examiners should mark the examples and compare their marks with those of the Principal Examiner.

When marking, examiners can use these examples to decide whether a learner's response is of a superior, inferior or comparable standard to the example. Examiners are reminded of the need to revisit the answer as they apply the mark scheme in order to confirm that the band and the mark allocated is appropriate to the response provided.

Indicative content is not exhaustive, and any other valid points must be credited. In order to reach the highest bands of the mark scheme a learner need not cover all of the points mentioned in the indicative content but must meet the requirements of the highest mark band. Where a response is not creditworthy, that is contains nothing of any significance to the mark scheme, or where no response has been provided, no marks should be awarded.

The mark scheme reflects the layout of the examination paper. Mark all questions in Section A, and Section B.

Be prepared to reward answers that give **valid and creditworthy** responses, especially if these do not fully reflect the 'indicative content' of the mark scheme.

Section A: Changing Places

1. (a) (i) Justify the choice of the cartographic technique shown in Figure 1 for displaying these data. Skills: 3.5	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	Total
Award up to 2 marks for the development of any of the following points up to a maximum of 3 marks					3	3
<p>Indicative content</p> <p>Advantages:</p> <ul style="list-style-type: none"> • Useful for illustrating differences between many places / easy comparison between places • Visually appealing • Easy to read as each symbol is proportional to its value • Data associated with a specific location. <p>Students may also consider the disadvantages or alternatives:</p> <ul style="list-style-type: none"> • Difficult to calculate actual value (if not shown) • Time-consuming to construct • Size may obscure location or mean less accurate positioning on maps • A bar graph would lose the spatial element • Due to range of data, a logarithmic graph would be needed which some people find hard to interpret. <p>Credit other valid points.</p>						

1. (a) (ii) Explain why government support is an important influence on the distribution of quaternary jobs shown in Figure 1 . Content: 2.1.4 and 2.1.5	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	Total
Award up to 2 marks for the development of any of the following points up to a maximum of 4 marks		4				4
<p>Indicative content</p> <ul style="list-style-type: none"> • Government policies in some deindustrialised urban places have prioritised stimulating growth in quaternary industry e.g. The Engine Shed and Temple Studios in Bristol • Proximity to universities and research institutes have encouraged 'start up' companies with recent graduates / postgraduates from universities, government legislation and planning arrangements facilitate this • Planning regulations and infrastructure have supported change of use of e.g. Custard Factory in Birmingham which now houses creative industries including small digital start-ups • Government support to include e.g. EU funding to help promote and stimulate economic growth in the UK's deindustrialised areas. <p>Credit other valid points.</p>						

1. (b) Outline one social change experienced in central urban places undergoing re-urbanisation. Content: 2.1.5	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
Award up to 3 marks for the development of any one of the following points.	3						3
<p>Indicative content</p> <p>Gentrification and associated social changes in central urban places, these would include changing demographic characteristics, changing ethnic characteristics and introduction of new religious practices as a result of incoming migrant groups. In places, the original working class populations may be forced out due to increased housing costs (rent and purchase) e.g. the Docklands.</p> <p>Credit other valid points.</p>							

1. (c) Examine the factors that have shaped the characteristics of your home place. Content: 2.1.1	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
	7			3			10
<p>This question requires candidates to demonstrate their ability to develop a sustained line of reasoning which is coherent, relevant, substantiated and logically structured.</p> <p>Indicative content</p> <p>The indicative content is not prescriptive and candidates are not expected to cover all points for full marks. Credit other valid points not contained in the indicative content.</p> <p>AO1</p> <p>AO1 content encompasses knowledge and understanding of the candidate's 'home place'. This is defined in the specification as 'a locality, neighbourhood or a small community'.</p> <ul style="list-style-type: none"> • Demographic factors, these would be expected to include reference to: population size and structure (age and gender) ethnicity • Cultural factors, these would be expected to include reference to: heritage, religion and language • Social factors these might be expected to include reference to: amenities, educational attainment and opportunities, health, crime rates, local clubs and societies • Candidates may also refer to economic characteristics such as employment opportunities and income as well as physical characteristics of their home place. Such characteristics are <u>interdependent</u> and to portray their home place effectively, these would be appropriate for inclusion in their answer • Furthermore, a recognition and awareness of associated factors that have shaped and continue to shape the characteristics of the candidate's home place would be appropriate in this context • Physical factors e.g. reference to proximity to port or river amongst others. 							

AO2

AO2 requires candidates to examine this knowledge and understanding in different contexts so that they may demonstrate the application of knowledge and understanding through examination of the dynamic nature of these factors and the way in which continuity and change of these local (to global) factors affect learner's own lives and the lives of others. For example, an analysis of:

- the dynamic nature of demographic change and how these changes reflect growing interdependence between places as a result of migration
- the dynamic nature of socio(-economic) change as a result of the actions of a range of stakeholders, potentially leading to marginalisation of one socio-economic group as a result of a new incoming population e.g. in inner city areas in university towns and cities like Jericho in Oxford or those experiencing in-migration of Polish communities e.g. the Lincoln Road area of Peterborough
- the dynamic nature of cultural characteristics of places with reference to the continued dominance of e.g. Shakespeare dominating the tourist experience of Stratford-upon-Avon; the recent dominance of tourism to the Lake District being based around an identity synonymous with Beatrix Potter
- the dynamic nature of factors related to globalisation and their impact on places with the result that some places become like any other (clone towns e.g. Exeter) meanwhile others are successful in their individuality (home towns e.g. Ludlow)
- an awareness of the potential compromise between dynamic factors and sustainable development.

Marking guidance

Near the lower end (AO1) there may be answers that are at other scales than that anticipated (by the specification) for example, Wales, London, Oxfordshire.

Near the lower end (AO2) there will be limited examination of the factors that have shaped the characteristics and little awareness of the underlying inter-relationships between the factors responsible for the characteristics.

Award the marks as follows:

	AO1 (7 marks)	AO2.1c (3 marks)
Band	<i>Demonstrates knowledge and understanding of the factors that have shaped the characteristics of the candidate's home place.</i>	<i>Applies knowledge and understanding of the factors that have shaped the characteristics of the candidate's home place.</i>
3	<p style="text-align: center;">5-7 marks</p> <p>Demonstrates detailed and accurate knowledge and understanding through the use of appropriate, accurate and well-developed references to the home place.</p> <p>Demonstrates detailed and accurate knowledge and understanding of the demographic, social and cultural characteristics that have shaped the candidate's home place.</p> <p>Demonstrates detailed and accurate knowledge and understanding of the dynamic nature of the demographic, social and cultural characteristics that have shaped the candidate's home place over time.</p> <p>Demonstrates detailed and accurate knowledge and understanding of the influence of physical characteristics in shaping the candidate's home place.</p> <p>Well annotated sketches / diagrams / maps may be used and should be credited.</p>	<p style="text-align: center;">3 marks</p> <p>Applies knowledge and understanding to produce a thorough and coherent examination that is supported by evidence relating to the candidate's home place.</p> <p>Applies knowledge and understanding to produce a thorough and coherent examination of the extent to which demographic, social and cultural characteristics have shaped the candidate's home place.</p> <p>Applies knowledge and understanding to produce a thorough and coherent examination of the extent to which other (economic, physical) characteristics have been influential in shaping the candidate's home place.</p>
2	<p style="text-align: center;">3-4 marks</p> <p>Demonstrates accurate knowledge and understanding of the home place through the use of appropriate and developed examples.</p> <p>Demonstrates accurate knowledge and understanding of the demographic, social and cultural characteristics that have shaped the candidate's home place.</p> <p>Demonstrates accurate knowledge and understanding of the dynamic nature of the demographic, social and cultural characteristics that have shaped the candidate's home place over time.</p> <p>Demonstrates accurate knowledge and understanding of the influence of physical characteristics in shaping the candidate's home place.</p> <p>Sketches / diagrams / maps may be used and should be credited.</p>	<p style="text-align: center;">2 marks</p> <p>Applies knowledge and understanding to produce a coherent but partial examination that is supported by evidence relating to the candidate's home place.</p> <p>Applies knowledge and understanding to produce coherent but partial examination of the extent to which demographic, social and cultural characteristics have shaped the candidate's home place.</p> <p>Applies knowledge and understanding to produce a coherent but partial examination of the extent to which other (economic, physical) characteristics have been influential in shaping the candidate's home place.</p>

<p>1</p>	<p style="text-align: center;">1-2 marks</p> <p>Demonstrates limited knowledge and understanding of the home place through a limited number of undeveloped examples.</p> <p>Demonstrates a limited knowledge and understanding of the demographic, social and cultural characteristics that have shaped the candidate's home place.</p> <p>Demonstrates limited knowledge and understanding of the dynamic nature of the demographic, social and cultural characteristics that have shaped the candidate's home place over time.</p> <p>Demonstrates limited knowledge and understanding of the influence of physical characteristics in shaping the candidate's home place.</p> <p>Basic sketches / diagrams / maps may be used and should be credited.</p>	<p style="text-align: center;">1 mark</p> <p>Applies knowledge and understanding to produce an examination with limited coherence and support from some evidence relating to the candidate's home place.</p> <p>Applies knowledge and understanding to produce a limited examination of the demographic, social and cultural characteristics have shaped the candidate's home place.</p> <p>Limited application of knowledge and understanding to produce a limited examination of the extent to which other (economic, physical) characteristics have been influential in shaping the candidate's home place.</p>
	<p style="text-align: center;">0 marks</p> <p>Response not creditworthy or not attempted</p>	<p style="text-align: center;">0 marks</p> <p>Response not creditworthy or not attempted</p>

2 (a) (i) Using the data in Figure 2 , calculate the range of journey to work travel times in rural districts. Show your working in the box below. Skills: 1.3	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
Award 1 mark for the correct answer and one mark for correct working					2		2
<p>Indicative content</p> <p>Longest commuter time (South Oxfordshire) minus shortest commuter time (Orkney Islands)</p> <p>Range = 32 – 10 = 22 mins (1)</p> <p>Must show working to gain second mark.</p>							

2. (a) (ii) Suggest why the range is a useful measure to analyse the data shown in Figure 2 . Skills: 2.10	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
					1		1
<p>Indicative content</p> <p>The range helps to:</p> <ul style="list-style-type: none"> describe the dispersion of the spread of data (1) includes all the values in the data set including extremes / outliers (1) can be used comparatively (1) to compare with data sets from other places no credit for “difference” <p>Credit other valid points.</p>							

<p>2. (a) (iii) Describe how you would calculate the interquartile range for the data shown in Figure 2.</p> <p>Skills: 2.10</p>	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
Award 1 mark for each of the following points up to a maximum of 4 marks					4		4
<p>Indicative content</p> <p>1 mark for each valid point made in the relation to the sequence. Reserve final mark for the completion of the sequence.</p> <p>Calculation of the interquartile range (IQR)</p> <ul style="list-style-type: none"> • The data has to be first rank ordered from highest to lowest with the highest value ranked as 1. The test can also be performed with the lowest value ranked as 1 (1) • Assuming the highest value is ranked as 1, the upper quartile (UQ) is calculated using the formula $UQ = n+1/4$ <i>th</i> position in the rank order (1) • The lower quartile (LQ) is calculated using the formula $3(n+1)/4$ <i>th</i> position in the rank order. (1) • LQ is then subtracted from UQ to give the IQR. (Note that the 2 formulae are reversed if the lowest value is ranked as 1) (1). <p>Marking guidance</p> <p>Candidates may use the data from the question to illustrate their description, allow up to (1) mark for the correct use of these data: $UQ = (15 + 1)/4 = 4^{\text{th}}$ position (27) $LQ = 3(15 + 1)/4 = 12^{\text{th}}$ position (19) $27-19 = 8$</p> <p>Credit other valid approaches.</p>							

2. (b) Examine the consequences of the loss of traditional industries in urban areas. Content: 2.1.4	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
	7			6			13

Indicative content

This question requires candidates to demonstrate their ability to develop a sustained line of reasoning which is coherent, relevant, substantiated and logically structured.

Indicative content

The indicative content is not prescriptive and candidates are not expected to cover all points for full marks. Credit other valid points not contained in the indicative content.

AO1

AO1 content encompasses knowledge and understanding of the consequences of the loss of traditional industries including the cycle of deprivation, social exclusion and lower pollution levels, as well as the consequences of loss of secondary industries in urban areas including unemployment.

These consequences could be expected to include:

- Recognition that closure of industries means that industrial buildings are left empty, some of which may be polluted and / or a magnet for antisocial behaviour / vandalism
- Local services may close down due to lack of custom / demand as a result of lower disposable income in the community
- Lack of public / private investment / low investor confidence in the area
- Unemployment may lead to social exclusion: most deprived families remain in the area in increasingly deteriorating housing stock
- Low value housing stock is occupied by low income groups including recently arrived migrants awaiting work permits (e.g. Page Hall, Sheffield) and those individuals / families requiring cheap rents.
- Proportion of residents claiming benefits increases, further reducing amount of disposable income within the community
- Wealthiest move out (intra-urban migration) e.g. Speke, Liverpool; Collyhurst, Manchester.

AO2

Candidates demonstrate application of knowledge and understanding through an evaluation of the consequences associated with the loss of traditional industries in urban areas involved including:

- An appreciation that there are both positive and negative consequences to the loss of traditional industries (adaptation)
- That the degree of inequality will affect different places in different ways e.g. redevelopment of Salford Quays
- Changes to manufacturing processes as a result of globalisation e.g. change of ownership and introduction of new technology at Redcar Steelworks has led to deprivation
- An awareness of the associated loss of demand for industries in the supply chain or retail outlets can exacerbate the consequences of loss of traditional industries in urban areas (interdependency).

Marking guidance

Near the lower end, there will be limited examination of the relative importance of factors contributing to the consequences of loss of traditional industries and little discussion of the underlying assumptions contained in the question.

Maximum 4 for AO2 if no substantiated conclusion is present i.e. where no final judgement / viewpoint is reached.

Credit any other valid approaches.

Award the marks as follows:		
	AO1 (7 marks)	AO2.1b (6 marks)
Band	<i>Demonstrates knowledge and understanding of the consequences of the loss of traditional industries.</i>	<i>Applies knowledge and understanding to examine the consequences of the loss of traditional industries.</i>
3	<p>5-7 marks</p> <p>Demonstrates detailed and accurate knowledge and understanding through the use of appropriate, accurate and well-developed examples.</p> <p>Demonstrates detailed and accurate knowledge and understanding of the impact of the cycle of deprivation in urban areas in places experiencing deindustrialisation.</p> <p>Demonstrates detailed and accurate knowledge and understanding of the impact of social exclusion in urban areas in places experiencing deindustrialisation.</p> <p>Demonstrates detailed and accurate knowledge and understanding of the impact of lower pollution levels in urban areas in places experiencing deindustrialisation.</p> <p>Demonstrates detailed and accurate knowledge and understanding of the impact of unemployment in urban areas in places experiencing deindustrialisation.</p> <p>Well annotated sketches / diagrams / maps may be used and should be credited.</p>	<p>5-6 marks</p> <p>Applies knowledge and understanding to produce a thorough and coherent examination that is supported by evidence.</p> <p>Applies knowledge and understanding to produce a thorough and coherent examination of the extent of the impact of the cycle of deprivation in urban areas in places experiencing deindustrialisation.</p> <p>Applies knowledge and understanding to produce a thorough and coherent examination of the extent of the impact of social exclusion in urban areas in places experiencing deindustrialisation.</p> <p>Applies knowledge and understanding to produce a thorough and coherent examination of the extent of the impact of lower pollution levels in urban areas in places experiencing deindustrialisation.</p> <p>Applies knowledge and understanding to produce a thorough and coherent examination of the extent of the impact of unemployment in urban areas in places experiencing deindustrialisation.</p>

<p>2</p>	<p style="text-align: center;">3-4 marks</p> <p>Demonstrates accurate knowledge and understanding through the use of appropriate and well-developed examples.</p> <p>Demonstrates accurate knowledge and understanding of the impact of the cycle of deprivation in urban areas in places experiencing deindustrialisation.</p> <p>Demonstrates accurate knowledge and understanding of the impact of social exclusion in urban areas in places experiencing deindustrialisation.</p> <p>Demonstrates accurate knowledge and understanding of the impact of lower pollution levels in urban areas in places experiencing deindustrialisation. Demonstrates accurate knowledge and understanding of the impact of unemployment in urban areas in places experiencing deindustrialisation.</p> <p>Sketches / diagrams / maps may be used and should be credited.</p>	<p style="text-align: center;">3-4 marks</p> <p>Applies knowledge and understanding to produce a coherent but partial discussion that is supported by evidence.</p> <p>Applies knowledge and understanding to produce coherent but partial examination of the extent of the impact of the cycle of deprivation in urban areas in places experiencing deindustrialisation.</p> <p>Applies knowledge and understanding to produce a coherent but partial examination of the extent of the impact of social exclusion in urban areas in places experiencing deindustrialisation.</p> <p>Applies knowledge and understanding to produce a coherent but partial examination of the extent of the impact of lower pollution levels in urban areas in places experiencing deindustrialisation.</p> <p>Applies knowledge and understanding to produce a coherent but partial examination of the extent of the impact of unemployment in urban areas in places experiencing deindustrialisation.</p>
<p>1</p>	<p style="text-align: center;">1-2 marks</p> <p>Demonstrates limited knowledge and understanding through a limited number of undeveloped examples.</p> <p>Demonstrates limited knowledge and understanding of the impact of the cycle of deprivation in urban areas in places experiencing deindustrialisation.</p> <p>Demonstrates a limited knowledge and understanding of the impact of social exclusion in urban areas in places experiencing deindustrialisation.</p> <p>Demonstrates limited knowledge and understanding of the impact of lower pollution levels in urban areas in places experiencing deindustrialisation.</p> <p>Demonstrates limited knowledge and understanding of the impact of unemployment in urban areas in places experiencing deindustrialisation.</p> <p>Basic sketches / diagrams / maps may be used and should be credited.</p>	<p style="text-align: center;">1-2 marks</p> <p>Applies knowledge and understanding to produce an examination with limited coherence and support from some evidence.</p> <p>Applies knowledge and understanding to produce a limited examination of the impact of the cycle of deprivation in urban areas in places experiencing deindustrialisation.</p> <p>Applies knowledge and understanding to produce a limited examination of the impact of the extent of the impact of social exclusion in urban areas in places experiencing deindustrialisation.</p> <p>Applies knowledge and understanding to produce a limited examination of the impact of lower pollution levels in urban areas in places experiencing deindustrialisation.</p> <p>Applies knowledge and understanding to produce a limited examination of the impact of unemployment in urban areas in places experiencing deindustrialisation.</p>
	<p style="text-align: center;">0 marks</p> <p>Response not creditworthy or not attempted.</p>	<p style="text-align: center;">0 marks</p> <p>Response not creditworthy or not attempted.</p>

Section B: Fieldwork in Physical and Human Geography

3 (a) (i) State the distance from the centre of Cambridge Science Park (X) to Cambridge North Station (4760) giving your answer in km to 1 decimal place. Skills: 1.2 and 1.3	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	Total
Award 1 mark for an answer between 1.4km and 1.6 km				1		1
<p>The straight-line distance to the station is 1.5 km (3 cm), but candidates may identify the Science Park as anywhere between 1.4 km (2.8 cm) and 1.6 km (3.2 cm) from Cambridge Science Park.</p> <p>The answer must be given in km i.e. an answer in cm will access 0 marks.</p>						

3 (a) (ii) Calculate the area occupied by Cambridge Science Park, giving your answer in km ² . (3 marks) Skills: 1.3	AO1	AO2.1a	AO2.1b	AO2.1c	AO3	Total
Award up to 2 marks for the appropriateness of the approach to calculating the area and 1 mark for the correct answer.					3	3
<p>Candidates are expected to be able to calculate the area of a triangle (1/2 base multiplied by height) (1 mark). In this case, the base is 3cm (1.5 km) and the height is 1.4 cm (0.7 km) (1 mark). The area in km² is 1.5 x 0.7 = 0.52 km² (1 mark)</p> <p>Allow 0.1 of flexibility in the measured height of the height – answer could be 0.49 km² or 0.56 km²</p>						

3. (b) Outline the sources of secondary data and information that could be used to support the investigation of this hypothesis. Enquiry Question: 2	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
Award up to 3 marks for the description and up to 3 marks for explanation to a maximum of 5 marks.	5						5
<p>Indicative content</p> <p>Candidates could be expected to describe and explain the suggested sources of secondary data e.g.</p> <ul style="list-style-type: none"> • Data gathered from the most recent Census 2011 • Comparison data from earlier censuses e.g. 2001, 1991 • Information from local authority planning department e.g. City of Cambridge and county transport department Cambridgeshire County Council • Information relating to quality of schools (Ofsted) and healthcare (NHS websites / local health profile) • Information from local media e.g. Cambridge Evening News. <p>Candidates should explain their selections and these suggestions should be linked to the hypothesis under investigation.</p> <p>Credit other valid suggestions of secondary data to support fieldwork investigations.</p>							

Award the marks as follows		
Band	Marks	Credit may include reference to the candidate's own fieldwork.
3	4-5	Clear description and explanation of appropriate suggestions of secondary data for this hypothesis.
2	2-3	Partial description and explanation of appropriate suggestions of secondary data for this hypothesis.
1	1	Simple description and explanation of suggestions of secondary data.
	0 marks	Response not creditworthy or not attempted.

3 (c) (i) Calculate the total score for column '+2'. Insert the total in Figure 4 .							
Skills: 2.2	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
Award 1 mark for the correct answer 22					1		1
Indicative content $2 \times 11 = 22$ Candidates are not required to show their working.							

3. (c) (ii) Using an appropriate graphical technique, draw a graph in the box below to present the data in Figure 4 .							
Skills: 3.6	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
Award 1 mark per feature as per indicative content outlined below up to a maximum of 3 marks – must include a graph of the data in order to access all 3 marks.					3		3
Indicative content <ul style="list-style-type: none"> Choice of appropriate graph (likely bipolar graph) (1) (no credit for line graph) Axis/axes labelled (1) (do not double credit for 2 axes) Data accurately drawn (1) Title (1) Credit other valid features.							

3. (c) (iii) Outline one strength and one weakness of the graphical technique you chose in (c) (ii).							
Skills: 3.6	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
Award up to 2 marks for the development of any of the following points; answer must include both strengths and weaknesses but need not be equally weighted.				4			4
Indicative content Strengths: <ul style="list-style-type: none"> Shows relationship between 2 or more variables Good visual impression of trends and changes Can show positive and negative values Simple to construct and read. Weaknesses: <ul style="list-style-type: none"> Plotting too many bars makes it appear cluttered - less easy to interpret If there is a wide range of data it is difficult to read accurately Becomes more complicated if there are uneven class intervals Using too many or too few classes can mask important patterns in the data Marking guidance Credit other valid suggestions of other graphical techniques i.e. do not double penalise as a result of incorrect suggestions in (c) (ii). Allow reference to actual date in question i.e. it is relevant to state that using the bi-polar graph, it is not clear how the scores are awarded.							

<p>3. (d) The students were told to use one measure of central tendency (mean, median, mode) in analysing this data in Figure 5. Justify which of these measures would be most appropriate.</p> <p>Enquiry Question: 4</p>	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
<p>Award 1 mark for the identification of the appropriate technique and up to 2 marks for the development of any of the justification.</p>				3			3
<p>Indicative content</p> <p>Mean is the most appropriate (1) because it would allow the average (1) of all the data to be calculated which would enable an overview to be analysed and includes the entire data set (1).</p> <p>An alternative approach is that the candidate identifies why mode and median would not be suitable for this analysis i.e. the figures collected during sampling may not enable a median or mode to be identified.</p> <p>Credit other valid points.</p>							

4. With reference to your fieldwork investigation in physical geography, evaluate the primary data collection methods.							
Enquiry Question: 3	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
				4	6		10

Indicative content

The indicative content is not prescriptive and candidates are not expected to cover all points for full marks. Credit other valid points not contained in the indicative content.

AO3

For AO3 marks, responses should show an understanding of the data collection process. The methods used should be appropriately named and sufficient detail should be given to generate interpretation of 'real' fieldwork.

AO2

AO2 element is likely to take a variety of forms. Those who refer to the method being 'quick and easy' to use should be held to Band 1 if nothing more substantive is offered by way of evaluation. Evaluation is likely to consider the advantages of the methods and / or the appropriateness of the methods in relation to the aims of the investigation and / or suitability for data analysis. Some may consider justification by rejecting alternative unsuitable or inappropriate methods.

Marking guidance

Max Band 1 (AO3) for description of data collection methods and / or answer relating to secondary data.

If no direct reference is made to a specific physical geography investigation that candidates have completed, answers should not be credited higher than band 1 in AO2.

Credit any other valid points

Award the marks as follows:		
	AO3 (6 marks)	AO2.1c (4 marks)
Band	<i>Knowledge and understanding of the chosen data collection methods and the strengths and weaknesses and / or suitability of the chosen data collection techniques in the physical geography fieldwork investigation.</i>	<i>Applies knowledge and understanding to appraise / judge through evaluating the chosen data collection methods.</i>
3	<p style="text-align: center;">5-6 marks</p> <p>Detailed knowledge and understanding of a range of appropriate observations and how to record phenomena in the field.</p> <p>Detailed knowledge and understanding of practical approaches taken in the field, including frequency/timing of observation, sampling, and data collection approaches.</p> <p>Detailed knowledge and understanding of how to undertake practical field methodologies appropriate to the investigation of core physical processes.</p> <p>For full marks there must be reference to candidate's own data.</p>	<p style="text-align: center;">3-4 marks</p> <p>Clear detailed justification of the methods chosen, appropriate to the aims of the investigation. May suggest selection based on valid disadvantages of other methods of data collection. For full marks there must be reference to candidate's own data and the aim of the investigation.</p>
2	<p style="text-align: center;">3-4 marks</p> <p>Partial knowledge and understanding of a range of appropriate observations and how to record phenomena in the field.</p> <p>Partial knowledge and understanding of practical approaches taken in the field, including frequency/timing of observation, sampling, and data collection approaches.</p> <p>Partial knowledge and understanding of how to undertake practical field methodologies appropriate to the investigation of core physical processes.</p> <p>Bottom Band 2 may have some obvious error or omission but with a general sense that the methods are understood. Some reference to own data / investigation is expected.</p>	<p style="text-align: center;">2 marks</p> <p>Partial justification of the methods chosen, appropriate to the data collection. Justifies in terms of advantages of the methods and may reject other methods. Limited focus on own data / investigation aim.</p>

<p>1</p>	<p style="text-align: center;">1-2 marks</p> <p>Limited knowledge and understanding of a range of appropriate observations and how to record phenomena in the field.</p> <p>Limited knowledge and understanding of practical approaches taken in the field, including frequency/timing of observation, sampling, and data collection approaches.</p> <p>Limited knowledge and understanding of how to undertake practical field methodologies appropriate to the investigation of core physical processes.</p> <p>The data collection methods may not be correctly named. The answer may focus on description of the methods, with clear gaps in understanding of the relevance of the chosen methods for the investigation.</p>	<p style="text-align: center;">1 mark</p> <p>Response may focus on description of the methods with very little justification beyond perhaps 'quick and easy'. Basic justification which is lacking in detail.</p>
	<p style="text-align: center;">0 marks</p> <p>Response not creditworthy or not attempted.</p>	<p style="text-align: center;">0 marks</p> <p>Response not creditworthy or not attempted.</p>

5. With reference to your initial aim, evaluate the success of your fieldwork investigation in human geography.							
Enquiry Question: 6	AO1	AO2.1a	AO2.1b	AO2.1c	AO3		Total
Candidate is expected to evaluate their human geography investigation.				4	6		10
<p>Indicative content</p> <p>The indicative content is not prescriptive and candidates are not expected to cover all points for full marks. Credit other valid points not contained in the indicative content.</p> <p>Specification requires candidates to: critically reflect on every stage of the investigation in order to appreciate the strengths and limitations of the primary and secondary data, links to original question; note strengths and limitations (accuracy, validity and reliability) and anomalies and / or errors or misuse of data; evaluate the methodology including, if relevant, sampling techniques; suggest improvements for further research.</p> <p>Marking guidance</p> <p>There will be a focus on the success of the investigation and this will be linked to the aim.</p> <ul style="list-style-type: none"> • The success can be evaluated in a number of ways, including reference to the conclusions, the underpinning theory and the choice of the location • The success may be generated from evaluating each stage of the investigation • In addition, there may be reference to the candidate's own perspective on the success of the investigation with regard to their own personal geographical development. <p>If no direct reference is made to a specific human geography investigation that candidates have completed, answers should not be credited higher than band 1 in AO2.</p> <p>Near the lower end, answers will offer limited evaluation of the chosen methods.</p> <p>Credit any other valid points.</p>							

Award the marks as follows:		
	AO3 (6 marks)	AO2.1c (4 marks)
Band	<i>Demonstrates knowledge and understanding of the components of the evaluation process as an intrinsic component of the geographical enquiry process.</i>	<i>Applies (AO2.1c) to appraise / judge the success of the human geography investigation.</i>
3	<p>5-6 marks</p> <p>There will be a well-developed evaluation, with detailed reference to the methods, results and conclusions.</p> <p>Reference to the aims and underpinning theory will be in some detail and the references to location will be well interpreted.</p> <p>Improvements and / or extensions will be detailed.</p> <p>Awareness of the link between methods, results and conclusions is understood.</p> <p>Reference to the candidate's own fieldwork will be detailed and convincing.</p>	<p>3-4 marks</p> <p>Applies knowledge and understanding from their own human geography fieldwork to produce coherent evaluation of the investigation that is supported by evidence. Clear reference to the aim of investigation.</p> <p>Applies knowledge and understanding from their own human geography fieldwork to produce coherent evaluation of the sources of data (primary and / or secondary) and the sampling techniques used.</p> <p>Applies knowledge and understanding from their own human geography fieldwork to produce a coherent evaluation of the results collected (accuracy, validity and reliability).</p> <p>Applies knowledge and understanding from their own human geography fieldwork to produce a coherent evaluation of the conclusions reached with reference to the aim of the investigation.</p>
2	<p>3-4 marks</p> <p>More than one element of the evaluation process is included, e.g. methods, results and / or conclusions</p> <p>The underpinning theory will be related and there may be reference to the location.</p> <p>There may be clear reference to improvements and/or extensions.</p> <p>Awareness of the link between methods, results and conclusions is evident.</p> <p>There will be clear reference to the candidate's own fieldwork.</p>	<p>2 marks</p> <p>Applies knowledge and understanding from their own human geography fieldwork to produce a coherent but partial evaluation of the investigation that is supported by evidence. Sound reference to the aim of investigation.</p> <p>Applies knowledge and understanding from their own human geography fieldwork to produce a coherent but partial evaluation of the sources of data (primary and / or secondary) and the sampling techniques used.</p> <p>Applies knowledge and understanding from their own human geography fieldwork to produce a coherent but partial evaluation of the results collected (accuracy, validity and reliability).</p> <p>Applies knowledge and understanding from their own human geography fieldwork to produce a coherent but partial evaluation of the conclusions reached with reference to the aim of the investigation.</p>

<p>1</p>	<p style="text-align: center;">1-2 marks</p> <p>There may be basic reference to the results, methods and conclusions.</p> <p>The limitations of the results, methods and conclusions may be described in some detail, with suggestions of alternative methods.</p> <p>References to theory will be limited to the upper end of the band and may not be strongly linked to the aims.</p> <p>Awareness of the link between methods, results and conclusions is limited / partial.</p> <p>There will be little evidence of the candidate's own fieldwork.</p>	<p style="text-align: center;">1 mark</p> <p>Applies knowledge and understanding from their own human geography fieldwork to produce limited evaluation of the investigation that is supported by evidence. Limited reference to the aim of investigation.</p> <p>Applies knowledge and understanding from their own human geography fieldwork to produce a limited evaluation of the sources of data (primary and / or secondary) and the sampling techniques used.</p> <p>Applies knowledge and understanding from their own human geography fieldwork to produce a limited but partial evaluation of the results collected (accuracy, validity and reliability).</p> <p>Applies knowledge and understanding from their own human geography fieldwork to produce a limited but partial evaluation of the conclusions reached with reference to the aim of the investigation.</p>
	<p style="text-align: center;">0 marks</p> <p>Response not creditworthy or not attempted.</p>	<p style="text-align: center;">0 marks</p> <p>Response not creditworthy or not attempted.</p>