



**General Certificate of Education**

**Geography 2030**

**GEO4A      Geography Fieldwork  
Investigation**

**Mark Scheme**

*January 2010 examination*

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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## **GEO4A and GEO4B General Guidance for GCE Geography Assistant Examiners**

As required by QCA, the marking scheme for this unit includes an overall assessment of quality of written communication. There are no discrete marks for the assessment of written communications but where questions are "Levels" marked, written communication will be assessed as one of the criteria within each level.

**Level 1:** Language is basic, descriptions and explanations are over simplified and lack clarity.

**Level 2:** Generally accurate use of language; descriptions and explanations can be easily followed, but are not clearly expressed throughout.

**Level 3:** Accurate and appropriate use of language; descriptions and explanations are expressed with clarity throughout.

### **Marking – the philosophy**

Marking should be positive rather than negative.

### **Mark schemes – layout and style**

The mark scheme for each question will have the following format:

- a) Notes for answers (nfa) – exemplars of the material that might be offered by candidates
- b) Mark scheme containing advice on the awarding of credit and levels indicators.

### **Point marking and Levels marking**

- a) Questions with a mark range of 1-4 marks will be point marked.
- b) Levels will be used for all questions with a tariff of 5 marks and over.
- c) Two levels only for questions with a tariff of 5 to 8 marks.
- d) Three levels to be used for questions of 9 to 15 marks.

### **Levels Marking – General Criteria**

Everyone involved in the levels marking process (examiners, teachers, students) should understand the criteria for moving from one level to the next – the “triggers”. The following general criteria are designed to assist all involved in determining into which band the quality of response should be placed. It is anticipated that candidates’ performances under the various elements will be broadly inter-related. Further development of these principles will be discussed during Standardisation meetings. In broad terms the levels will operate as follows:

#### **Level 1: attempts the question to some extent (basic)**

An answer at this level is likely to:

- display a basic understanding of the topic
- make one or two points without support of appropriate exemplification or application of principle
- give a basic list of characteristics, reasons and attitudes
- provide a basic account of a case study, or provide no case study evidence
- give a response to one command of a question where two (or more) commands are stated eg “describe and suggest reasons”
- demonstrate a simplistic style of writing perhaps lacking close relation to the terms of the question and unlikely to communicate complexity of subject matter
- lack organisation, relevance and specialist vocabulary
- demonstrate deficiencies in legibility, spelling, grammar and punctuation which detract from the clarity of meaning.

**Level 2: answers the question (well/clearly)**

An answer at this level is likely to:

- display a clear understanding of the topic
- make one or two points with support of appropriate exemplification and/or application of principle
- give a number of characteristics, reasons, attitudes
- provide clear use of case studies
- give responses to more than one command eg “describe and explain..”
- demonstrate a style of writing which matches the requirements of the question and acknowledges the potential complexity of the subject matter
- demonstrate relevance and coherence with appropriate use of specialist vocabulary
- demonstrate legibility of text, and qualities of spelling, grammar and punctuation which do not detract from the clarity of meaning.

**Level 3: answers the question very well (detailed)**

An answer at this level is likely to:

- display a detailed understanding of the topic
- make several points with support of appropriate exemplification and/or application of principle
- give a wide range of characteristics, reasons, attitudes
- provide detailed accounts of a range of case studies
- respond well to more than one command
- demonstrate evidence of discussion, evaluation, assessment and synthesis depending on the requirements of the assessment
- demonstrate a sophisticated style of writing incorporating measured and qualified explanation and comment as required by the question and reflecting awareness of the complexity of subject matter and incompleteness/ tentativeness of explanation
- demonstrate a clear sense of purpose so that the responses are seen to closely relate to the requirements of the question with confident use of specialist vocabulary
- demonstrate legibility of text, and qualities of spelling, grammar and punctuation which contribute to complete clarity of meaning.

**Mechanics of marking**

- Various codes may be used such as: ‘rep’ (repeated material), ‘va’ (vague), ‘NAQ’ (not answering question), ‘seen’, etc.
- Unless indicated otherwise, always mark text before marking maps and diagrams. Do not give double credit for the same point in text and diagrams.

The aim(s) of the investigation are expected to be set out clearly. No credit is allocated for this statement.

<p><b>1</b></p> <p><b>AO1 - 3</b> <b>AO2 - 5</b> <b>AO3 - 4</b></p>	<p><b>Notes for answers</b></p> <p>Two elements are required for the response; the location and its relevance to the choice of the aim(s). The location is expected to be suitable to investigate the aim(s) and, thus, there must be a clear description of the location. This is likely to include information about the situation (to locate at a broader scale) and the specific site characteristics (to give detail). The relevance of the location to the aim(s) will be explained and this is likely to be related to the underpinning theory. All links to opening aims will be credited. Accessibility factors only = Level 1. Accept suitability of e.g. river characteristics.</p> <p><b>Mark scheme</b></p> <p><b>Level 1 (1 - 5 marks)</b></p> <p>The candidate is unable to set out the aim(s) in full; much confusion may be apparent at the lower end of the band. The approach will be descriptive, with a limited attempt to link to aims. Towards the upper end of the band, there may be appropriate background to the location, with some links to the aim(s). Alternatively, the aim(s) may be relevant but there may be a descriptive, rather than explanatory, reference to the location. There will be the odd, simplistic reference to the candidate's own fieldwork investigation at the upper end, whilst this may be absent at the lower end of the mark band.</p> <p><b>Level 2 (6 - 10 marks)</b></p> <p>There will be clear reference to both location and aim(s), but there is likely to be an imbalance. Although explanation will be present, there may be only tentative links to the aims. This will be very marked at the lower end, perhaps with linked reference to the aim(s), whereas, at the upper end, the imbalance will be less and there will be reference to the appropriateness of the location, relevant to the aim(s). There will be reference to the fieldwork investigation undertaken, increasing up through the band.</p> <p><b>Level 3 (11 - 12 marks)</b></p> <p>There will be detailed reference to both location and its relevance to the aim(s) and this will be consistently explained. The explanation will be integrated to show the relevance of the aim(s) to the appropriateness of the location for the investigation. There will be detailed and increasingly convincing reference to the candidate's fieldwork undertaken. There will be thorough and consistent links to aims.</p>	<p><b>(12 marks)</b></p>
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<p><b>2 (a)</b></p> <p><b>AO3 - 6</b></p>	<p><b>Notes for answers</b></p> <p>The method selected must relate to the investigation. Only one method is required. Any relevant method is acceptable. Allow more than one method if linked, (e.g. river discharge). For discrete methods take best one.</p> <p><b>Mark scheme</b></p> <p><b>Level 1 (1 - 4 marks)</b></p> <p>There is likely to be a description of the method selected. This will be basic at the lower end, more structured at the upper end of the band. There will be no reference to the fieldwork undertaken at the lower end, with some, perhaps basic, reference at the upper end of the band. There will be little, if any, attempt to explain the relevance of the method selected.</p> <p><b>Level 2 (5 - 6 marks)</b></p> <p>There will be a clear explanation of the relevance of the method selected, increasing up through the band. There will be increasingly clear and convincing reference to the fieldwork undertaken.</p>	<p><b>(6 marks)</b></p>
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<p><b>2 (b)</b></p> <p><b>AO1 - 2</b> <b>AO2 - 4</b> <b>AO3 - 6</b></p>	<p><b>Notes for answers</b></p> <p>Any relevant method can be used. Reference to one or more improvements must be made and these can be of any type. A link to the experience in the field must be recognised. Piloting or pre-testing may be part of the response. Breadth versus depth should be recognised and an appropriate trade-off made. Can be a different method to (a).</p> <p><b>Mark scheme</b></p> <p><b>Level 1 (1 - 5 marks)</b></p> <p>There will be a basic reference to one or more improvements to the method. There is likely to be a descriptive approach, with a straightforward use of expression. The improvements are likely to be theoretical, rather than based on experience. The candidate's own fieldwork experience is unlikely to be mentioned. Piloting or pre-testing may be mentioned. Max 3 for limitations only.</p> <p><b>Level 2 (6 - 10 marks)</b></p> <p>There will be a clear reference to one or more improvements to the method. There will be a clear attempt at justification, with appropriate expression. Reference to the fieldwork experience undertaken may be implicit, rather than explicit. Theoretical and changes based on experience may be present. Piloting and pre-testing may be clearly covered.</p> <p><b>Level 3 (11 - 12 marks)</b></p> <p>There will be a detailed reference to one or more improvements to the method. Justification will be detailed, with relevant expression. There will be detailed reference to the fieldwork experience undertaken which will be explicit. Changes may be based on fieldwork experience. Piloting and/or pre-testing may be covered in some detail.</p>	<p><b>(12 marks)</b></p>
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<p><b>3</b></p> <p><b>AO1 - 3</b> <b>AO2 - 4</b> <b>AO3 - 3</b></p>	<p><b>Notes for answers</b></p> <p>There will be reference to the conclusions and their implications in the light of the fieldwork experience. For example, the results of a river study could be of use to geographers, town planners, farmers, hydrologists and politicians. Further extensions may be suggested. Practical experience will be essential for developing the implications. Implications that link to theory are valid.</p> <p><b>Mark scheme</b></p> <p><b>Level 1 (1 - 4 marks)</b></p> <p>There will be basic, probably descriptive, awareness of the conclusions gained from the investigation. There is likely to be a strong focus on the conclusions, rather than any assessment of the implications. Reference to the fieldwork experience will be limited, if present.</p> <p><b>Level 2 (5 - 8 marks)</b></p> <p>There will be clear reference to the conclusions and there will be some evaluation of the conclusions, and some consideration of the implications, but there is likely to be an imbalance. This will be more apparent at the lower end, perhaps with implicit links, whereas, at the upper end, the imbalance will be less and there will be clear reference to the conclusions and the implications. A clear reference to the fieldwork experience undertaken, increasing up through the band, is expected.</p> <p><b>Level 3 (9 - 10 marks)</b></p> <p>There will be detailed reference to the conclusions and there will be a meaningful evaluative theme. This will be consistently referenced to the aims of the investigation and the underpinning geographical theory. There will be detailed and increasingly convincing reference to the fieldwork undertaken and consideration of the implications.</p>	<p><b>(10 marks)</b></p>
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<p><b>4 (a)</b></p> <p><b>AO2 - 4</b></p> <p><b>AO3 - 4</b></p>	<p>Tick mark. The calculated value of +0.576 exceeds the critical value of 0.564 at the 95% level of significance. The expected hypothesis should be accepted. However, the calculated value does not exceed the critical value of 0.745 at the 99% level of significance. In this case, the expected hypothesis is rejected. There is a significant relationship between the 2 variables at the 95% level only. Credit "positive relationship".</p> <p>1 mark for each point, max 2 if well developed.</p> <p>Candidates may make reference to the implied null hypothesis though this is not actually stated. Any reference to accepting or rejecting a hypothesis must be justified with evidence to gain credit.</p>	<p><b>(4 marks)</b></p>
<p><b>4 (b)</b></p> <p><b>AO2 - 2</b></p> <p><b>AO3 - 2</b></p>	<p>Tick mark. The most likely alternative is the scattergraph, though other techniques, if appropriate, should be credited where possible. Answers may refer to the dependent and independent variables, typical patterns found,</p> <p>e.g. linear, positive, negative, clustered, plotting of best fit lines.</p> <p>1 mark per point, 2 marks for link between presentation and analysis. Must be related to presentation.</p>	<p><b>(4 marks)</b></p>
<p><b>4 (c)</b></p> <p><b>AO1 - 2</b></p> <p><b>AO2 - 4</b></p> <p><b>AO3 - 6</b></p>	<p><b>Notes for answers</b></p> <p>Statistical techniques are used to interpret and analyse data collected in fieldwork investigations and this will aid improved understanding of the phenomena under investigation. Graphical, such as a scattergraph, allow the data to be plotted to show the arrangement of the data. Some comment on distribution and trends will be relevant, as well as the importance of a best fit line to show the trend line. This can be expressed as an objective equation to measure the gradient and enable further comparisons to be made. Interpretation can be undertaken, using the skill to see the evidence. The use of a statistical test provides an objective figure at a significance level. Other quantitative techniques enable sorting and classification. The reliability of the data with regard to sample size and the significance of the statistical techniques is also assessed. The most commonly used are measures of central tendency and dispersion. In addition, Spearman's rank correlation co-efficient, Chi-squared and Mann Whitney represent inferential and comparative tests. A hypothesis/null hypothesis should be established in order to fully exploit the latter techniques. The result of the tests should be tested for significance against relevant tables. If the result exceeds the critical value at the 5% and/or 1% levels, the result is significant and the hypothesis can be accepted/null hypothesis rejected. This is a reliable result and can then be explained/justified to increase understanding. If the result is not significant, the null hypothesis is accepted/ hypothesis rejected. In this case, further geographical explanations should be sought to understand this outcome. The skills and techniques can be used with presentational techniques to further develop geographical understanding (e.g. scattergraphs with Spearman's rank).</p> <p>Candidates should be credited for reference to t-test though it is not on the specification skills checklist.</p>	<p><b>(12 marks)</b></p>

	<p><b>Level 1 (1 - 5 marks)</b></p> <p>There will be a basic awareness of such techniques, graphical and/or statistical. The response will be limited, with a strong focus on description of the techniques, rather than their assistance in analysis. Links to the candidates own fieldwork will be limited. There will be uncertainty about the links to geographical understanding.</p> <p><b>Level 2 (6 - 10 marks)</b></p> <p>There will be clear reference to the graphical and statistical techniques, but there may be some imbalance. There will be increasing detail toward the upper end of the band and the explanation of the usefulness in analysis will become more apparent. References to the candidate's own fieldwork and geographical understanding may be present, but probably inconsistent and/or imbalanced. There may be some reference to synopticity. Analysis only – Top Level 2.</p> <p><b>Level 3 (11 - 12 marks)</b></p> <p>There will be consistent, detailed reference to graphical and statistical techniques. There will be consistent evidence of explanation of the usefulness of the techniques in analysis. This may be linked in some detail to the individual fieldwork investigation. The role in developing geographical understanding will be consistently referenced. Synopticity will be apparent.</p>	
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