



**General Certificate of Education**

**Geography 2030**

**GEO4A      Geography Fieldwork  
Investigation**

**Post-standardisation**

**Mark Scheme**

*2011 examination – June series*

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.

Further copies of this Mark Scheme are available to download from the AQA Website: [www.aqa.org.uk](http://www.aqa.org.uk)

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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 communication 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 e.g. “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.

**Annotation of Scripts**

It is most important that Examiners mark clearly, according to the procedures set out below.

- All marking should be done in red (except online marking).
- The right hand margin should be used for marks only.
- The overall mark for a question must be ringed at the end of the answer.
- The total mark for the question must be transferred to the front of the script.
- Where an answer is marked using a levels response scheme, the examiner should annotate the scripts with 'L1', 'L2', or 'L3' at the point where that level has been reached in the left hand margin. At each point where the answer reaches that level, the appropriate levels indicator should be given. In addition, examiners may want to indicate strong material by annotating the script as "Good Level... ". Further commentary may also be given at the end of the answer. The consequent mark should then appear in the right hand column. Where an answer fails to achieve Level 1, zero marks should be given.
- Where answers do not require levels of response marking, the script should be annotated to show that one tick equals one mark. The tick should be positioned in the part of the answer which is thought to be creditworthy. For point marked question where no creditworthy points are made, zero marks should be given.

**Other mechanics of marking**

- All errors and contradictions should be underlined.
- Various codes may be used such as: 'rep' (repeated material), 'va' (vague), 'NAQ' (not answering question), 'seen', etc.
- Use a wavy line to indicate weak dubious material (avoiding crossing out).
- If the rubric is contravened, then all answers should be marked, but with the best answer being counted and the mark transferred to the front of the script. Then cross out the material which has been discounted.
- Unless indicated otherwise, always mark text before marking maps and diagrams. Do not give double credit for the same point in text and diagrams.

Underlining indicates key words for links and identification of levels.

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 - 2</b></p> <p><b>AO2 - 2</b></p> <p><b>AO3 - 4</b></p>	<p><b>Notes for answers</b></p> <p>There should be reference to the location and reasons for its selection with regard to theory/concept/issue; this is likely to develop to include an explanation of the relevance of the location, what made it relevant to theory/concept/issue and why this was so. Reference to underpinning theory/concept/issue would, therefore, be essential to explain why the location was selected. Reasons for the relevance of the location to the choice of theory/concept/issue are likely to include the nature of the location, its characteristics and geographical attributes, and why it is suitable for the testing of theory/concept/issue.</p> <p>A named theory/concept/issue is not required; it can be by reference to what is being studied. Comment on location/accessibility/risk assessment with links to location are also acceptable.</p> <p><b>Mark scheme</b></p> <p><b>Level 1 (1 – 4 marks) Mid point 3</b></p> <p>The candidate will be unclear about the location and why it was selected. There will be some reference to location and/or theory/concept/issue, though this will be <u>descriptive</u>, rather than explanatory.</p> <p>Reference to the candidate’s own fieldwork will be absent at the lower end, though there may be some implicit reference at the upper end of the band.</p> <p><b>Level 2 (5 – 8 marks) Mid point 7</b></p> <p>There will be clear reference to an <u>explanation</u> for the use of the <u>location</u>, with reference to <u>theory/concept/issue</u>. The reasons for the selection of the location will be well covered at the upper end. There will be reference to the candidate’s own <u>fieldwork</u>, with confidence at the upper end of the band.</p>	<p><b>(8 marks)</b></p>
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<p><b>2</b></p> <p><b>AO1 - 1</b> <b>AO2 - 4</b> <b>AO3 - 7</b></p>	<p><b>Notes for answers</b></p> <p>Both description and justification are required to gain the highest marks. There is likely to be reference to the reasons for the need to obtain accurate and reliable data, focusing on the integrity of the investigation. There may also be some comment on 'accurate' and 'reliable' as distinct terms and the steps taken to look for accuracy as opposed to reliable data. There will be varying detail on the rigour with which data is collected. Comment and details on the use of sampling is relevant here, but it is not required by the specification. There are other means of collecting accurate and reliable data which will be covered in the responses, which may include whole populations. Reference to the candidate's own work will be present at the higher levels. Reference to improvements/limitation is not relevant unless linked specifically to data collection in the field at the time.</p> <p><b>Mark scheme</b></p> <p><b>Level 1 (1 – 5 marks) Mid point 3</b> <u>Basic identification</u> and <u>description</u> of a technique of data collection. There is no clear justification for the steps taken to ensure accuracy and reliability in the investigation. No explicit reference to the candidate's own fieldwork investigation.</p> <p><b>Level 2 (6 – 10 marks) Mid point 8</b> <u>Clear description</u> of measures taken to ensure accurate and reliable data collection. <u>There is a clear reference to justification</u> for these measures, though there may be some imbalance between <u>justification, accuracy and/or reliability</u>. There is (clear) reference to the candidate's <u>own fieldwork</u> investigation.</p> <p><b>Level 3 (11 – 12 marks) Mid point 12</b> There is a <u>detailed account</u> of the measures taken to ensure <u>accuracy and reliability</u>, with <u>detailed justification</u>. There will be convincing reference to the candidate's own <u>fieldwork experience</u>. Evidence of thinking like a geographer.</p>	<p><b>(12 marks)</b></p>
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<p><b>3</b></p> <p><b>AO1 - 1</b> <b>AO2 - 3</b> <b>AO3 - 8</b></p>	<p><b>Notes for answers</b></p> <p>Any method of data presentation will be acceptable, as long as it is used in the investigation. Although the most common usage is likely to be graphical, cartographical may also feature. Tabular/statistical formats would also be acceptable, justified in a presentational format. A description of the method is not required, but the focus should be on the reasons for its use (which could include some evaluative comment) and an evaluation of its effectiveness in showing the data collected. The use for analysis is acceptable, but <b>not</b> comment on further analysis.</p> <p><b>Mark Scheme</b></p> <p><b>Level 1 (1 – 5 marks) Mid point 3</b> <u>Basic identification and description</u> of a technique of data presentation. Can use diagram. There is either no or simplistic explanation for its use in the investigation and no or simplistic evaluation of the effectiveness in showing the data. No explicit reference to the candidate's own fieldwork investigation.</p> <p><b>Level 2 (6 – 10 marks) Mid point 8</b> <u>Clear identification</u> of a technique of data presentation. Diagram can be used. There is a clear <u>explanation</u> of the reasons for the use of the technique of data presentation and an attempt to <u>evaluate</u> its use in the investigation. There is clear reference to the candidate's own fieldwork investigation. Imbalance explanation v evaluation.</p> <p><b>Level 3 (11 – 12 marks) Mid point 12</b> There may be a detailed account of the technique of data presentation and an <u>explanation</u> for its use in the investigation. A diagram can be used. There will be convincing reference to the candidate's <u>own fieldwork</u>. There will be a <u>detailed evaluation</u> of the effectiveness of the technique. Credit reference to alternative presentational techniques, permitting a <u>synoptic element to the assessment</u>. This involves an assessment of the candidate's ability to draw on their understanding of the connections between the different aspects of the subject represented in the specification and demonstrate their ability to 'think like a geographer'.</p>	<p><b>(12 marks)</b></p>
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<p><b>4</b></p> <p><b>AO1 - 2</b> <b>AO2 - 2</b> <b>AO3 - 4</b></p>	<p><b>Notes for answers</b></p> <p>The focus here is on the development of the investigation beyond the results and/or conclusions. There is likely to be reference to set the scene for the further development and possible extension (these references may be limited or implicit). Candidates may focus on development, rather than extension, or vice versa. References may include collection of more data by the use of more time or different locations (methodology). More sophisticated responses may focus on well considered geographical development and/or extension. Extended analysis is acceptable.</p> <p><b>Mark Scheme</b></p> <p><b>Level 1 (1 – 4 marks) Mid point 3</b> There will be a <u>basic reference</u> to the results, with little, if any reference to extension and/or development. The results may be described in some detail, but extension and/or development will be lacking. There will be no evidence of the candidate’s own fieldwork. There may be straightforward reference to improvements and/or extensions at the upper end of the band.</p> <p><b>Level 2 (5 – 8 marks) Mid point 7</b> There will be a <u>clear attempt at extension and/or development</u>, including more data/changed location, with reference to the results. There will be clear reference to the candidate’s <u>own fieldwork</u>. There may well be a trade off between breadth and depth.</p>	<p><b>(8 marks)</b></p>
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<p><b>5 (a)</b></p> <p><b>AO1 - 2</b> <b>AO2 - 6</b> <b>AO3 - 4</b></p>	<p><b>Notes for answers</b></p> <p>There are four possible sources to be referenced. One approach would be to study each resource in turn to comment on the information shown. Other candidates will take a comparative approach. It is likely that a summary comment will focus on the rejection of the null and acceptance of the hypothesis.</p> <p>The tables show great differences between the observed and the expected populations and this is reflected in the Chi<sup>2</sup> result. The result is very large and thus will be significant at both the 95% and 99% levels, thus permitting the null to be rejected and the hypothesis to be accepted – there is a difference in the distribution of population in different ethnic groups within selected wards in Leicester.</p> <p>Figure 1 shows the map of the selected wards, depicting locations from the centre to the urban fringe. Reference to scale is creditworthy.</p> <p>Figure 2a shows the actual data. Comment could be made on the variations in the pattern of the individual ethnic groupings away from the centre. Castle and Thurncourt have the greatest white populations, whilst Spinney Hills has the greatest Asian and black populations, but the numbers are very different. Black and other numbers are low in comparison with white and Asian groups. Total population is highest in Spinney Hills and the lowest in Thurncourt. White and Asian total populations are very similar, and comprise 85% approx of the total population of the four wards. The relative size of each ward and differences in density and amount of dwellings are also acceptable.</p> <p>Figure 2b shows the expected distributions given the distributions in 2a. Comment can be made on the Figures in 2b, but a more productive approach is to compare the expected with the observed. Thus, there is more white population in Castle and Thurncourt than expected, with Spinney Hills and Coleman showing the reverse. Asian population shows the opposite pattern for the same wards. Numbers of black population are lower than expected in Coleman and Thurncourt, greater in Spinney Hills and about the same in Castle. Other population is greater in Castle, but lower than expected in the other wards.</p>	<p><b>(12 marks)</b></p>
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	<p><b>Mark Scheme</b></p> <p><b>Level 1 (1 – 5 marks) Mid point 3</b> There is a <u>basic description</u> of the figures and what they show. One figure may be covered more strongly than others, so there will be some imbalance. There will be little comment on the distributions and the variations shown. Hence, there may be a concentration on the Figures 1 and 2a, with less on Figure 2b and the Chi<sup>2</sup> test result or vice versa. There will be little or no reference to data.</p> <p><b>Level 2 (6 – 10 marks) Mid point 8</b> There will be a <u>clear summary of the figures</u> with an attempt at comment on the <u>distribution of population shown</u>. There may still be some imbalance between the <u>coverage of the figures</u> and <u>Chi<sup>2</sup> results</u>. There may be greater knowledge shown on some figures than others, but a full range is not necessary in this band. Reference will be made to data.</p> <p><b>Level 3 (11 – 12 marks) Mid point 12</b> There will be a detailed summary, including balanced reference to all <u>figures</u> and the <u>Chi<sup>2</sup> result</u>. Comment will be full on the information shown about the <u>distribution of ethnic populations</u> and/or on the Chi<sup>2</sup> figure. There will be a detailed understanding of the <u>Chi<sup>2</sup> result</u>. There will be detailed <u>reference to the data provided</u>. Thinking like a geographer.</p>	
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<p><b>5 (b)</b></p> <p><b>AO1 - 2</b> <b>AO2 - 3</b> <b>AO3 - 3</b></p>	<p><b>Notes for answers</b></p> <p>Statistical techniques are used to help interpret and analyse data, in this case, census data. In this particular case, Chi-squared is the most appropriate technique. This enables the large amounts of data to be divided into cells by data type and then tested to show whether there is a significant difference between the sets of data available. The division into cells (O) allows preliminary analysis as, in this case, it can be seen that the distribution of each ethnic group is not uniform. The calculation of the expected frequencies (E) shows how the ethnic groups would be expected to be found, given the original data in (O).</p> <p>Reference to other census data at ward level is equally acceptable.</p> <p>The establishment of the hypothesis/null hypothesis and the subsequent testing of the latter allows the strength of the statistical links between the data to be calculated. The result should be tested for significance against relevant tables. Reference to t-test can be credited. 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 in relation to the aims of the geographical investigation. If the result is not significant, the null hypothesis is accepted/hypothesis rejected. In both scenarios, geographical explanations should be sought to explain this.</p> <p>In this case, for example, the result is a very high value and shows significance at the 95% and 99% levels. Thus the distributions of ethnic groups are unlikely to have occurred by chance and the geographical reasons and other influences explaining this result can be further investigated.</p> <p>Other statistical techniques, such as Spearman, can be used if the ward data is presented differently. For example, the totals from the centre to the margin of the settlement can be ranked for each ethnic group and the technique applied to show the degree of change. Again reference to the null hypothesis and significance would be appropriate. Alternative techniques are acceptable, e.g. central tendency.</p>	<p><b>(8 marks)</b></p>
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	<p><b>Mark Scheme</b></p> <p><b>Level 1 (1 – 4 marks) Mid point 3</b>          There will be a <u>basic awareness of the usefulness</u> of statistical technique(s) in analysing census data, but without a focus on ward level. There is likely to be a <u>description</u> of the statistical technique(s), rather than an assessment of their usefulness. Reference to analysis will be lacking. Reference to any census data will be basic, if present.</p> <p><b>Level 2 (5 – 8 marks) Mid point 7</b>          There will be a <u>clear awareness of the usefulness of statistical</u> technique(s) in analysing census data, with a <u>clear focus on ward level</u> at the top of the band. There will be an <u>assessment of the usefulness</u> of the statistical technique(s) and reference to the ways in which <u>such data can be analysed and used by others</u>. Reference to census will be clear and focused at the top of the band. More than one technique will be expected at the top of the band.</p>	
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