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General Certificate of Education (A-level)
June 2013

Geography GEO4A

(Specification 2030)

Unit 4A: Geography Fieldwork Investigation

Final

Mark Scheme

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 events which all examiners participate in and is the scheme which was used by them in this examination. The standardisation process 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 standardisation each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, examiners encounter unusual answers which have not been raised 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 from: aqa.org.uk

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General Guidance for GCE Geography Assistant Examiners

The mark 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 is positive and not 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 level 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 the standardisation process. 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 e.g. “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.

- The right hand margin should be used for marks only.
- 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. 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.
- Use a wavy line to indicate weak dubious material (avoiding crossing out).

1 **AO1 - 2** **AO2 - 2** **AO3 - 4**	**Notes for answers** There should be reference to the geographical theory that underpins the investigation. This will include an explanation of links between the theory and other facets related to it. There may be a description of the geographical characteristics of the area selected and reference to the underpinning theory would therefore be relevant. There are likely to be several ways the response can vary; explaining why the theoretical context is related to the aims, why the location was selected to carry out the investigation or why the theory is well suited to the investigation. Other geographical reasons are also valid, such as restrictions of resources (people and/or equivalent), risk assessment, time available, etc., all relevant if linking the geographical reasons to the theory. Does not need to be a named theory. Can be by expectation. **Mark scheme** **Level 1 (1 – 4 marks) (mid-point 3)** Unclear about geographical theory and links to the investigation. Descriptive reference to theory, rather than explanatory. Reference to the candidate's own fieldwork absent at the lower end. Some implicit reference to fieldwork at the upper end of the level. Explanation of theory only, not linked to investigation. **Level 2 (5 – 8 marks) (mid-point 7)** Clear reference to geographical theory and the links to the investigation. Imbalance at the lower end and not at the upper. Explanation for the links between theory and the investigation present. Reference to the candidate's own fieldwork. Greater conviction at the top, less at the bottom of the level.	*8 marks*
2 **AO1 – 2** **AO2 – 2** **AO3 – 4**	**Notes for answers** The method selected will be relevant to the investigation. There should be reference to the method and the aims, links between the two will be developed. Justification will be present and developed in the better answers. Reference to sampling technique(s) used acceptable, in support of data collection. **Mark scheme** **Level 1 (1 – 4 marks) (mid-point 3)** Description of the method selected and/or the aim. Justification will be lacking. Reference to the candidate's own fieldwork is descriptive. Justification not linked to aims. **Level 2 (5 – 8 marks) (mid-point 7)** Method described, demonstrating a clear understanding. Some imbalance between the method and the links to the aims(s). Justification incomplete at the lower end of the level. Clear attempt to show how the method is linked to the aim(s), clear justification at the upper end. Clear reference to the candidate's fieldwork investigation.	*8 marks*

3 **AO1 – 2** **AO2 – 4** **AO3 – 6**	**Notes for answers** Any method of data presentation will be acceptable, as long as it is related to the fieldwork investigation. Although the most common usage is likely to be graphical, cartographical may also feature. Statistical skills would also be acceptable, if used in a presentational format. The focus should be on the method of presentation and evaluation of its suitability in showing the data collected. S & W acceptable where evaluation is present. **Mark scheme** **Level 1 (1-5 marks) (mid-point 3)** Basic identification and description of a method of data presentation. No evaluation of the suitability of showing the data. No reference to the candidate's own fieldwork investigation. **Level 2 (6-10 marks) (mid-point 8)** Clear identification and description of a method of data presentation. Clear evaluation of the suitability of the method of data presentation. Clear reference to the candidate's own fieldwork investigation. Mention of alternative techniques. **Level 3 (11-12 marks) (mid-point 12)** Detailed account of the method of data presentation. Convincing reference to the candidate's own fieldwork. Detailed evaluation of the suitability of the technique, with possibly some reference to alternative presentational methods; the candidate thinks like a geographer.	*12 marks*
4 **AO1 – 2** **AO2 – 4** **AO3 – 6**	**Notes for answers** There will be reference to the conclusions and the implications of the investigation for other geographers and/or other interested parties which can be focused in a number of ways, including the implications arising from the investigation for the candidate, for geographers and/or other parties and/or hydrologists, planners. In addition, there may be reference to the candidate's own perspective as a geographer and/or other interested parties with regard to their own personal geographical development. Can refer to geographers only or interested parties only. **Mark scheme** **Level 1 (1 – 5 marks) (mid-point 3)** Basic, descriptive awareness of the conclusions gained from the investigation. Strong focus on the conclusions/results, described in some detail, without assessment of the potential implications for other geographers and/or other interested parties. Little evidence of the candidate's own fieldwork. **Level 2 (6 – 10 marks) (mid-point 8)** Clear reference to the conclusions and some assessment of the potential implications for geographers and/or other interested parties. Some imbalance between this reference and the assessment. Clear reference to the candidate's own fieldwork, possibly including reference to data. **Level 3 (11-12 marks) (mid-point 12)** Detailed reference both to the conclusions and detailed assessment of the potential implications. Good balance between the conclusions and the assessment. Detailed and consistent reference to the candidate's own fieldwork. Evidence that the candidate is thinking like a geographer.	*12 marks*

5 (a) **AO1 – 1** **AO2 – 4** **AO3 – 3**	**Notes for answers** Each diagram shows geographical data on a radial diagram. The main use of such graphs is to show data in a continuous form. There is depicted in **Figure 1** (an annual hydrograph), and **Figure 2** (a climate graph or Climograph), **Figure 3** (a wind rose), which show mean annual data in a continuous form, so that, December follows seamlessly into January, as such data would in reality for **Figures 1 and 2**. For example, average river flow for December continues into average flow for January in a continuous manner (**Figure 1**). This obviates the need to jump, as on a more usual graphical depiction, from the figure for December on the right of the graph to January on the left. Alternative methods of presenting such data for all three graphs are frequently bar or line graphs or variants, e.g. for **Figure 1**, a line graph is a frequent alternative and for **Figure 2** a climate graph, with bars for precipitation and a line for the temperature; for **Figure 3**, a divided/ compound bar could be used;. **Figures 1**, **2** and **3** would have January data to the left of the graph and December to the right. Generally speaking, bar graphs are best used to depict discontinuous data and line graphs continuous data. Interpretation of graphs must be linked to presentation. **Level 1 (1-4 marks) (mid-point 3)** Generalised descriptive account of data presentation, without assessment of the effectiveness of the diagram(s) in presenting the data. Generic comment – could be any graph. Alternatives offered, but may not be suitable, thus reducing commentary on effectiveness. Descriptive coverage of strengths and weaknesses of techniques. **Level 2 (5-8 marks) (mid-point 7)** Assessment of the effectiveness of the diagram(s) in presenting the data. Focus on strengths and weaknesses linked to the assessment of the effectiveness of these diagram(s). Suitable alternatives offered in the assessment of the effectiveness.	*8 marks*

5 (b) **AO1 – 1** **AO2 – 4** **AO3 – 7**	**Notes for answers** There are a variety of graphical techniques and skills that are relevant here. The specification lists line graphs, bar graphs, scattergraphs, triangular graphs, kite graphs, logarithmic scales and dispersion graphs. Pie charts and proportional divided circles are also listed. A possible answer may include reference to a number of the above techniques. It is likely that candidates will make reference to the varying nature of the data to be presented and then go on to assess the importance of having a variety of graphs to use to depict these data effectively, e.g. continuous data should best be shown on line graphs, discrete on bars. Arithmetic and logarithmic scales could also be covered and assessed. Comment may include reference to the visual effectiveness of the graphs used and the importance of having variety to keep interest alive. **Level 1 (1-5 marks) (mid-point 3)** Basic description of a variety of techniques (T) and what they can be used to show. One technique only. One technique covered more strongly than others, very unbalanced. Little reference to the value of use of a variety of techniques, nor to the furtherance of geographical understanding. **Level 2 (6-10 marks) (mid-point 8)** Clear summary of more than one technique, with an attempt at an assessment of the value of using a variety of techniques for presenting data. Theoretical, rather than referring to examples and some imbalance between an assessment of the value and the links to geographical understanding. Greater knowledge shown on some techniques than others, full range not expected. **Level 3 (11-12 marks) (mid-point 12)** Detailed summary of the value more than one technique to show data, including reference to relevant examples. Detailed assessment of the value of variety and a link to further geographical understanding. Evidence of thinking like a geographer.	*12 marks*