Examinations Council of Zambia

Senior Secondary School Geography Field Project Teacher's Guide

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Preface

The Senior Secondary School Geography field project teacher's guide was prepared by the Examinations Council of Zambia in consultation with the Ministry of General Education and other stakeholders. The document was developed to guide teachers, heads of departments and head teachers to efficiently conduct and manage the Geography field project in senior secondary schools.

The teachers are, therefore, encouraged to read this document carefully in order for them to guide the learners effectively.

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1.0. Introduction

The Senior Secondary School Geography field project Teacher's Guide was prepared by the Examinations Council of Zambia in consultation with the Ministry of General Education and other stakeholders to guide teachers on how to conduct and manage the field project. Teachers are encouraged to research more on how to carry out field projects to supplement the given information where necessary in Geography for the School Certificate Examination.

1.1. The Aim

The aim of field project work in Senior Secondary School Geography is to allow candidates acquire values, attitudes, commitment and practical skills needed to protect, improve and sustain the environment and also enable them understand Geographical Phenomena and appreciate various interrelationships.

1.2. Objectives of the field work

The objectives of fieldwork are to:

1.2.1. amplify and reinforce the geographical knowledge, concepts and skills acquired by candidates in class through the interaction with the environment.

1.2.2. enable candidates develop skills for organization, investigation and presentation through field research,

1.2.3. enable candidates to demonstrate and apply their skills and knowledge in Geography without the time constraints associated with written examinations,

1.2.4. enable candidates acquire fieldwork techniques and report writing skills,

1.2.5. generate interest in the candidates and bring about their awareness of resources in the environment and appreciate the problems of the local area,

1.2.6. turn keen Geography teachers into professionals and provide them with opportunities to write local Geography text books.

1.3. Skills to be acquired

Through fieldwork, the following skills will be imparted to the candidates:

1.3.1. Map reading and drawing techniques,

1.3.2. Techniques for recording data in the field,

1.3.3. Data collection methods such as interviewing, administering questionnaires, etc.

1.3.4. Interpreting Geographical information/ data, processes and events,

1.3.5. Data processing and analytical skills,

1.3.6. The art of report writing and,

1.3.7. Information Communication Technology skills (ICT)

2.0. Administration and Policy

2.1. The field Project is compulsory

2.1.1 For any candidate to have a subject mark in Senior Secondary School Geography, a Field Project must be presented and marked. If the candidate goes on transfer after the project has been marked, the project must be sent to the new school by the administration. If no Project is presented, the candidate will be deemed to have failed the examination in Geography subject even if the candidate scored high marks in Paper 1 and Paper 2.

2.1.2 Each candidate shall maintain and submit for the purpose of the final examination, an exercise book or file containing the project report.

2.2. Responsibility of the teacher

2.2.1 The teacher should play an important role during both the planning stages and while the candidate is working on the report.

2.2.2 Teachers should give advice to candidates on the first draft of an assignment.

2.2.3 Teachers should ensure that projects are marked as soon as they are submitted. When marking relevant comments symbols, marks scored, etc., should be written as feedback on the pupils' project write-up.

2.2.4 Project marks are to be recorded in **triplicate.** The **original** will be sent to the Examinations Council of Zambia through the Provincial Education Officer, the **duplicate** will be kept by the Provincial Education Officer and **triplicate** will be retained by the school.

2.3. Responsibilities of the Head teacher

The Head of the school must ensure that the following are submitted to the Director, Examinations Council of Zambia through the Provincial Education Officer:

2.3.1 Full list of all candidates and their marks for the field project,

2.3.2 Three samples of very good projects, three samples of average projects and three samples of poor projects,

2.3.3 The Examinations Council of Zambia may demand **all** marked candidates' projects in any examination year.

2.3.4 Deadlines for submitting field projects shall be indicated on the circular accompanying the schedules and marks sheets. **However, all field Project mark sheets should be at the Examinations Council of Zambia by 31st October each year.**

2.3.5 It is a requirement that any Senior Secondary School Geography candidate going or coming on transfer carry their field projects and these must be brought to the geography teachers for their scrutiny and advice.

3.0. Planning Field Project Work

3.1. Project work requires planning and execution in a logical sequence. Candidates should therefore, be guided through questions and suggestions by Geography teachers in order to arrive at a project or problem that can be investigated, analysed and conclusions drawn.

3.2. Although it is good for candidates to do the projects individually, certain projects may be carried out in groups to gather data but the analysis of the data collected and the final report must entirely be the candidate's own work.

3.3. The investigation must be related to a theme or topic in the syllabus but need not be restricted by the prescribed content. For example, one approach might be to select an investigation that might focus on slope processes or the effect of the slope processes on a stream. Alternatively another approach might be to integrate the two and investigate the effect of the stream upon the slopes.

3.4. Each investigation should have an aim or clearly defined objectives.

3.5. Teachers should ensure that each report complies with the requirements and meets the criteria for assessment and they should:

3.5.1 Prepare learners by explaining the research guidelines.

3.5.2 Identify the problem (it must start early so that learners have ample time to prepare).

3.5.3 Identify the Areas of study in advance.

3.5.4. Make arrangements /appointments with the relevant authorities for the places to be visited.

3.5.5. Plan for the logistics for field projects (All the activities should be monitored by the teacher:- from start to end-Teacher should check progress from title to references).

4.0. Choice of Fieldwork Projects

4.1. The project chosen must be geographical in nature and discussed with and approved by the Geography teacher.

4.2. Many types of exercises are possible and the choice depends upon the opportunities offered in the local environment (including the school site) or those available on organized field excursions. Take into account the costs that schools may incur during research and take advantage of the location of your school as you identify research topics.

4.3. The Geography Syllabus lists the following areas from which a field project may be picked:

4.3.1 Rural land use zones, farm studies and land use transect.

4.3.2. Settlement characteristics, site, development, farm, land use zones, transects, spheres of influences.

4.3.3. Mining activities such as Mineral extraction/ mineral processing.

4.3.4. Study of local industries (Processing and Manufacturing).

4.3.5. The impact of Road or bridge construction etc.

4.3.6. Traffic studies: - simple network analysis, flow patterns, flow movements of commuters and tourists.

4.3.7. Detailed local study of the impact of people upon a small area through development, dereliction and reclamation.

4.3.8. The study of a river and its valley including direct measurement of velocity, depth, width, load, process of erosion and deposition, catchment area or any aspect of a water system - canal, dam, swamp, dambo, etc.

4.3.9. The examination of soil with particular reference to the collection and analysis of profile samples, soil forming processes, inter-relationship with vegetation and land use.

4.3.10. Weather study, principle and use of rain gauge, wind vane, wet and dry bulb thermometers (hygrometer), Beaufort wind scale and cloud cover recording and use of weather data.

4.3.11. Study of local population to understand its structure and other characteristics.

4.3.12. Study of local landforms, hills, escarpments, gorges and ridges.

5.0. Procedures for carrying out Fieldwork

5.1. Requirements

Candidates are required to undertake an investigation related to a theme or topic in the course. The field project should involve a series of activities including:-

5.1.1. **Preparation** – aims and objectives formulation.

5.1.2. **Data collection** - observing, collecting and recording raw data in the field.

5.1.3. **Data processing**- classification, compiling and arranging data.

5.1.4. **Presentation –** Tables, maps, flow diagrams, pictures, graphs, statistics (mean, median and mode).

5.1.5. **Analysis/ Interpretation** - based on the information collected provide the implications, reasons and meanings of the findings.

5.1.6. **Conclusion/** evaluation- confirmation, contradiction, unearthing of new information**.**

5.1.7. **Writing a report**. (Give word limit e.g. 1500-2000 words) based on the candidate's type of fieldwork.

5.2. Data Collection

5.2.1. **Primary data** - The data for investigations must come from the candidate's own personal observations and measurements, that is, it should be collected in the field by the candidate.

5.2.2. This "primary data "should form the basis of each investigation.

5.2.3. Fieldwork should provide sufficient data to enable adequate analysis and interpretation.

5.2.4 **Secondary data -** Secondary data involves the gathering of data from sources which have already been compiled in written statistical or mapped forms/books.

5.2.5. It would include data from a population census and meteorological offices.

5.2.6. Data collection in the field may not supply all the information required for some investigations and therefore the inclusion of some “secondary data” is important.

5.2.7. Descriptive investigations that rely heavily upon observations without measurement should be encouraged.

5.2.8. It is advisable that pilot surveys are carried out to test the viability of the techniques and equipment used in all types of data collection. This will avoid the collection of inadequate or unsuitable data on the final fieldwork exercise.

5.3. Written Reports

5.3.1. Candidates should produce written reports of their investigations. The teacher should indicate the number of words eg 1500-2000 words in length in order to guide the candidates.

5.3.2. Maps, diagrams, graphs, statistics, analyses and other supplementary information (such as the title and contents, page and references) are not included in the word limit.

5.3.3. No credit should be given for exceeding the word limit.

5.3.4. The candidates’ individual reports should demonstrate the application of rigorous methodology and geographical knowledge.

5.4. Format of a Report

The following format guidelines should be followed:-

5.4.1. Cover page – should have the name of the school and the candidate’s personal details.

5.4.2. Introduction: Identification of field project: topic, historical aspect, statement of the problem including the brief conceptual background which will be related to the Aims and Objectives.

5.4.3. Aims/Objectives

5.4.3.1. The purpose /Intentions of the field research.

5.4.3.2. Aims and objectives should be (SMART) simple, measurable, attainable, realistic and time Bound.

5.4.4. Methods of data collection

5.4.4.1. Identification of target populations: the study area (including the map of the research), respondents / participants,

5.4.4.2. Interviews guides, cameras, questionnaires, note pads, maps,

5.4.4.3. Experiments, observations, recording, taking pictures.

5.4.5. Processing: classification, compiling, arranging of data.

5.4.6. Presentation: use of graphs, tables, flow diagrams, pictures/photographs maps (computer-generated/ hand drawn) statistics, (mean, mode, median)

5.4.7. Interpretation and analysis

5.4.7.1. Description of findings with reference to aims and objectives.

5.4.7.2. Provide balanced and well-reasoned arguments of findings.

5.4.7.3. Explain any anomalies in the findings.

5.4.7.4. Provide references to all maps and illustrations in the discussion.

5.4.8. Evaluation and conclusion

5.4.8.1. Conclusion of results based on it presented data.

5.4.8.2. Confirm or contradict the findings and unearth new information.

5.4.9. Recommendation**:** provide recommendations for the improvements of the situation/ solution to the problem.

5.4.10. References: acknowledge any secondary sources.

6.0 Structure for Geography 2218 Examinations

6.1. Paper 1(1 hour 30 minutes): This carries 40% of the total marks for the subject. It will have 50 multiple choice questions.

6.2 Paper 2 (2 hours) will carry 48% of the total marks for the subject. Twelve questions will be set. Candidates must answer four questions (4 x 12 marks), one from each Section A,B, and C; and the Fourth Question from any of the three Sections A, B and C.

6.3 Paper 3 is a field project that contributes 12% of the total marks for the subject.

6.4 Mark Distribution

Paper 1:	40%
Paper 2:	48%
Project:	12%
	100%

7.0. Geography Field Project Marking Guidelines

S/N	Assessment Criteria	Maximum Mark	Mark Scored	Mark Bands (How To Score)
1	Title of Report	2	0	Title not meaningful, does not match with content
			1	There are no objectives, Title realistic but does not reflect work done, writer steers away from aims
			2	Title clear, realistic and reflects the content of the work done
2	Aims	2	0	There is (are) no aim(s) or key question
			1	The aim(s) are neither realistic nor clearly focused
			2	The aim(s) are well-focused. The locational context and theoretical background are strong and there is a clear link between them
3	Objectives	3	1	The objectives are neither realistic nor clearly focused
			2	The objectives are clearly defined and realistic
			3	The objectives are clearly defined with justification, key question(s) asked
4	Methods	10	0	There is no primary data
			1-3	There is only a brief statement of the methods used for the data collected and these may be inappropriate to the research. As a result, there is little data and very limited knowledge of sampling techniques
			4-6	Some sampling techniques clearly mentioned but briefly, data is still little and most of it is not primary
			7-8	There is primary data mentioned but may not be directly related to the methods mentioned, there is no justification of the methods
			9 -10	There is a clear description and justification of the methods used for the data collected. The methods used are appropriate and accurate, sometimes inspired and produce data of high quality. A good knowledge of sampling techniques is evident – questionnaires, charts, graphs, etc.

5	Data Presentation	10	0	There is no evidence of appropriate data presentation or data processing
			1-2	Data presentation is poor, illustrations, and written work are inadequate. There is an absence of maps or, where these are included, they are limited and reveal a narrow range of mapping skills
			3-4	The use of graphic techniques is limited. Statistical data applied out of context or calculated inaccurately. There is a heavy dependency upon secondary data
			5-6	The presentation of the data, illustrations and written text is good. Maps are included and demonstrate a good variety of mapping skills
			7-10	There is a wide range of relevant and sometimes imaginative graphical techniques. There is a competent and thorough use of statistical techniques – tables, charts, graphs, maps. Mention is made of observable characteristics
6	Interpretation and Analysis	15	0	There is no reference to aims and objectives and no discussion
			1-3	The description of the findings is very brief with little discussion and with little reference to aims, objectives and theory. The report reveals that there is generally little depth of understanding
			4-6	There is an attempt to provide an adequate reference to aims, objectives and theory. The description of the findings presents a simplistic argument either to confirm or contradict with the objectives. The report reveals that there is a limited depth of understanding. There is some reference to maps and illustrations.
			7-10	There is a reasonable attempt to refer to aims, objectives and theory. The description of the findings presents sound arguments either confirms or contradicts the objectives. The report reveals that there is some depth of understanding in the discussion. Attempts are made to explain anomalies in results. There are references to all maps and illustrations used

			11-15	There is very clear interpretation of the results with strong references to aims, objectives and theory. The description of the findings presents well-reasoned, balanced and critical arguments to confirm or contradict the findings with the aims and objectives or theory. The report reveals a good level of understanding and the discussion is sophisticated and detailed. Attempts to explain anomalies in results are very good. There are very clear references to all maps and illustrations used
7	Problems and Limitations	3	0	No problems/limitations mentioned
			1	Problems/limitations mentioned in general terms
			2	Problems/limitations clearly mentioned as they logically appeared
			3	Problems and limitations clearly stated as they logically appeared, clearly shows how they affected the outcome, shows how these problems were solved.
8	Conclusions and Evaluation	8	0	There are no conclusions.
			1-3	The conclusions are very basic, or inconsistent with data presented in the report. There may be attempts to provide a summary of results. There is some attempt to evaluate the methods of data collection and processing. There are no recommendations for improvements or extensions.
			4-6	The conclusions are sound and consistent with the data presented in the report. Methods of data collection and processing have been evaluated clearly.
			7-8	The conclusions match the data and analysis presented. Conclusions are thorough, returns to aims and key questions. Conclusions are logical and lead to tangible recommendations. The conclusions appear in the right place, pointing to the reader that the report is ending.
9	Quality of written work	2	0	Work not organised, conclusions, analysis, aims, methods all jumbled up.
			1	Clean and neat arrangement of paragraphs, ideas flow logically.
			2	Work is thorough, well organised and presented, clean and neat; and bibliography/ references shown.

10	Recommendations	5	0 1-3 4-5	No recommendations Recommendations are weak and not clear; and not borne out of the data. There are some good realisation and sometimes imaginative recommendations for improvements or extensions
	Total	**60**		

8.0 How to calculate final marks

8.1 To get the final mark divide X (the mark scored by the candidate) by 5,

e.g. $(\frac{x}{5})$ = Final mark.

Example:

A candidate scores 50 out 60. His/her final mark is $\frac{50}{5}$ = 10% (This is out of 12% allocated for the Field Project).

8.2 Fractions must not be reflected. For example, if a candidate scores 42, this will be 8.5.

The mark to be entered is 9. If the score is $\frac{41}{5}$, this will mean 8.2. The mark to be entered is 8.

Other examples:

Final Mark Scored	Mark to be entered
6.1	6
6.2	6
6.3	6
6.4	6
6.5	7
6.6	7
6.7	7
6.8	7
6.9	7

Geography Field Project Evaluation Record

Name of Candidate: ..... **Exam. No: .....**

School/Centre..... **School/Centre Code: .....**

S/N	Assessment Criteria	Maximum Mark	Mark Scored
1.	Title of Report	2	
2.	Aims	2	
3.	Objectives	3	
4.	Methods	10	
5.	Data Presentation	10	
6.	Interpretation and Analysis	15	
7.	Problems and Limitations	3	
8.	Conclusions and Evaluation	8	
9.	Quality of Written Work	2	
10.	Recommendations	5	
	Total	**60**	

Final Mark = $\frac{Total\ mark\ scored}{5}$ = ☐

Name of Examiner: .....

Signature: .....

Date: .....

References

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4 Ministry of Education (MoE), (1996), *Educating Our Future: National policy on Education*, Lusaka, Zambia Education publishing House.

5 Ntalasha S. L. et al, (2004) *A High School Geography text book of Zambia and the Sub-Region*, Ndola: Times Print Park (Z) Ltd.