

APPENDIX 1

GUIDELINE DOCUMENT AND INTERIM SYLLABUS FOR GEOGRAPHY FOR GRADES 10, 11 AND 12

328

DEPARTMENT OF EDUCATION AND CULTURE

FREE STATE

GUIDELINE DOCUMENT

AND

INTERIM SYLLABUS

FOR

GEOGRAPHY

GRADES 10 TO 12

IMPLEMENTATION DATE

1996

GRADES 10 TO 12

GEOGRAPHY

GRADES 10 TO 12

1 PRINCIPLES ON WHICH THE SYLLABUS IS BASED

1.1 Nature of Geography

Geography as a subject has many areas of overlap with other subjects, in both the natural and the social fields of study. This syllabus takes into account the essential nature of Geography. It ensures that:

1.1.1 The four major traditions in geography are upheld. These are:

- human-land relationships;
- the spatial perspective;
- the regional viewpoint;
- the earth-science component;

1.1.2 a balance is maintained between Physical Geography and Human Geography;

1.1.3 provision is made for both the theoretical and the practical aspects of the subject;

1.1.4 sufficient flexibility exists to allow for the changing nature of the subject.

1.2 General education of the pupil

Education is concerned with the development of the "whole being", and not merely with imparting knowledge.

1.2.1 The most important aims, in the long term, are for pupils to:

- acquire and develop intellectual skills and abilities which will promote on-going education;
- adjust to a society that is undergoing rapid and far-reaching social, economic

and political changes;

- enter the world-of-work that is becoming increasingly more technologically orientated;
- develop their moral and emotional (affective) attributes.

1.2.2 The teaching of Geography should be neither specifically vocationally orientated nor entirely university orientated. The syllabus should provide for two groups of pupils:

- those who will receive no further instruction in the subject; and
- those who will continue with the study of Geography at a tertiary level.

1.2.3 Although the syllabus is divided into a Junior Secondary Phase and a Senior Secondary Phase, the two phases must be related and must allow for the progressive development of geographical knowledge, skills and attitudes.

2 OBJECTIVES

- In lesson preparation teachers should bear in mind the higher abilities of comprehension, analysis, application, synthesis and evaluation.
- This subject should be taught in such a way that pupils develop an eagerness for further study and individual inquiry.
- Teachers should be aware of the contribution Geography is making to the general education of the pupil. It is this awareness that gives direction to day-to-day teaching.
- Objectives should be meaningful to pupils and teachers alike, and must constitute both realistic and achievable targets.
- The type and number of short-term objectives in Geography are numerous: those selected for a lesson should be closely correlated with the nature of the subject matter and the resources available to the teacher.

Objectives can be classified into four main categories:

2.1 Knowledge

- 2.1.1 Pupils should acquire a fundamental body of knowledge which is meaningful and useful to them and which can be applied and reproduced in whatever form is required.
- 2.1.2 Pupils should recognise the unity of knowledge through the links that Geography has with other subjects.

2.2 Skills

- 2.2.1 No list of skills can be complete. The following should, however, be kept in mind:
- The importance attached to different skills should be related to the abilities and maturity of the pupils.
 - The development of skills should enable pupils to deal with knowledge in an organised manner.
 - Pupils should gain proficiency in the use of skills through repetition and the application of these skills to new situations.
- 2.2.2 Geography can make particular contribution to the following skills:
- Oracy and literacy : thinking logically, writing concisely, speaking with assurance and accuracy;
 - Numeracy: introduce with simple statistical methods, graphs and tables;
 - Graphicacy: the ability to draw, read and interpret;
 - Interpretation : of pictures, photographs, statistics and maps;
 - Fieldwork techniques : using either the traditional (survey) or the scientific approach.

2.3 PERCEPTION

The way in which the environment is "perceived" in reaction to the "actual"

environment influences the pupil's concept of space (spatial conceptualization).

2.3.1 In order to heighten the pupils' perception of their environment, it is necessary for them to :

- recognise the relationships that exist between people and their environment;
- identify spatial patterns, spatial relationships and interaction. (This is closely linked with an understanding of location, distance and accessibility);
- be aware of the underlying processes which act upon spatial patterns and relationships and which bring about change;
- be aware of the world's place-to-place variety; to recognise the uniqueness of place.

2.3.2 Many studies require pupils to examine the spatial aspects of social and economic problems. Such studies provide opportunities for pupils to respond to problem solving and decision-making situations through critical divergent and creative thinking.

2.4 APPRAISAL

2.4.1 Studies in Geography should promote the formation and reinforcement of positive attitudes and values.

- This is an affective objective, because without appealing to the emotions and without sufficient motivation, learning seldom takes place.

2.4.2 Pupils need to develop a social awareness. This means that they are expected to:

- recognise the interdependence of people;
- acquire a tolerant attitudes towards others with different social, economic and political circumstances.

2.4.3 Pupils need to develop an environmental awareness. They need to feel a commitment towards the environment by development a "caring attitude". This

means they are expected to :

- recognise the need for conservation;
- understand that the balance of nature is largely dependent on peoples' wise management of their environment.

They should be aware of how people use/abuse their environment, particularly the resources available to them; the options and constraints that are placed on their actions.

- Realise that quality of life is influenced by the aesthetic aspects of peoples' environment as well as by an appreciation of the grandeur and wonder of creation.

3 TEACHING GUIDELINES

3.1 Teaching approaches

Teachers should make every effort to create effective learning experiences for their pupils. Whatever teaching approach is used, it is essential to develop a sense of reality in the teaching situation.

3.1.1 The holistic of global approach

- It is particularly important that the components of the syllabus are viewed as parts of a whole and not as isolated compartments of knowledge.
- The divisions of the syllabus should merely be regarded as a convenient means of grouping the characteristics of the individual components.
- Wherever possible, the relationship and interaction between components should be stressed.

3.1.2 The descriptive versus the problem-solving approach

- Although there is still room for some of the descriptive techniques of traditional Geography, emphasis should be given to a more problem-orientated skills-based approach.

- Pupils should gain insight into the process of decision-making by participating in exercises such as simulation and games.

3.1.3 The systems approach

- It is recommended that teachers introduce the concept of systems into their teaching.
- Pupils should be aware that Geography encompasses the study of a very complex human-environmental ecosystem. This complex system is broken down into a number of sub-systems to facilitate its study.
- Several components of the syllabus could be taught as sub-systems such as those associated with weather, drainage and urban sub-systems.

3.1.4 The inter-disciplinary approach

- Concepts studies in Geography may overlap with those of other subjects such as Biology, Science and Economics.
- Interdisciplinary studies should form part of the broad teaching strategy. This will enhance the value of both the learning content and the learning objectives.

3.1.5 The scientific approach

- Pupils should be trained in the scientific method of inquiry (statement of hypothesis, followed by the collection and classification of information, and finally the testing of the hypothesis).

3.2 Teaching techniques

It is recommended that, where appropriate, teachers should:

3.2.1 Integrate the reading and analysis of photographs, statistics and maps with the relevant sections of the syllabus. This includes:

- photographs : vertical, oblique and horizontal (i.e. aerial and ordinary);

- statistics: appropriate statistical geographical data;
- maps : such as wall, atlas, topographic maps of Southern Africa (particularly the 1:50 000 SA series) and municipal maps of the local area.

3.2.2 Ensure the pupils become competent in the use of various measuring instruments and other apparatus.

3.2.3 Make use of diagrammatic representation of statistics. For example, climatic figures, economic data and population characteristics can be illustrated by means of line graphs, columns, rectangles, circle segments, dots, colour, pictorial diagrams and isolines.

3.2.4 Introduce quantitative techniques such as means, deviations (range), simple correlations, scattergrams, regression lines and probabilities. Emphasis should be on understanding what the different techniques reflect. Complicated calculations and constructions are not required.

3.2.5 Refer to models. These include:

- Theoretical models (such as urban and economic models) which need to be tested against the real world. These enable Geography to be studied by means of a more problem-orientated approach.
- Physical models (such as globes, tellurions, papermaché and sand-tray models) which provide effective representations of the real world.

3.2.6 Undertake well-planned and meaningful fieldwork:

- This includes observation and measurement in the field and the recording and processing of data; the interpretation of written and graphic information.

3.2.7 Encourage individual and group research techniques:

- Pupil involvement, independent activity, initiative, creativity and independence should constantly be extended.

- Pupils should learn to rely on personal observation in the field (primary source) and to make use of secondary sources such as reference books, maps, photographs and diagrams, films, tapes and slides, as well as television, the radio and the press.
- Pupils need to develop worthwhile attitudes towards learning such as respect for evidence, a critical appraisal of reporting, a suspicion of simplistic explanations and a willingness to engage in rational discussion.
- Pupils need to distinguish between central issues of importance and peripheral issues.

NOTE : Pupils should undertake short, independent study topics throughout the year on work related to the requirements of the syllabus.

3.3 Differentiation

3.3.1 Teachers should not expect the same amount and quality of work from all pupils. Differences in ability must be taken into account. However,

- Layout of paper for the Higher Grade and the Standard Grade:

SECTION A : PHYSICAL GEOGRAPHY

TWO questions set, at least ONE must be answered.

SECTION B : SETTLEMENT GEOGRAPHY

TWO questions set, at least ONE must be answered.

SECTION C : REGIONAL GEOGRAPHY

THREE questions set, at least ONE must be answered

- COMBINED questions may be set in each section; for example, a question in Section A may comprise the Geomorphology, Ecology and Climatology components.
- HIGHER GRADE questions may either be SYSTEMATIC or of the COMPOSITE variety. A composite question in one section (e.g. Section A) may include aspects from one of both the other two sections (B and/or C), provided the marks allocated to aspects from other sections do not exceed

25 % of the total marks for the question.

- STANDARD GRADE emphasis should be on the SYSTEMATIC type of questions

4.4 Differentiation between Higher Grade and Standard Grade, for both internal and external papers, should be achieved through the type of questions set and on their mark allocation.

APPENDIX 2

GRADE 12 GEOGRAPHY LEARNERS' PERFORMANCE IN 1998 AND 1999 EXAMINATIONS IN THE FREE STATE PROVINCE



FREE STATE PROVINCIAL GOVERNMENT

Education

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LEARNERS' PERFORMANCE IN GEOGRAPHY

1. This office regrets to inform you that the only statistics we are able to supply you with are those for 1998 and 1999. If this office obtains earlier information, it will be provided to you.

YEAR	1998	1998	1999	1999
GRADE	HG	SG	HG	SG
% FAIL	49.64	48.7	70.91	55.38
% PASS	50.36	51.3	29.09	44.62

2. Hoping that you will find the information in order

Yours sincerely


HEAD: EDUCATION

DATE 2000.03.29

APPENDIX 3

GEOGRAPHY TEACHER QUESTIONNAIRE



RESEARCH ON THE APPLICATION OF SCIENCE PROCESS SKILLS

Dear geography teacher

I am a PhD research student enrolled at the University of Pretoria. I am involved in a project which is attempting to describe and explain the application of Science Process Skills to the teaching of geography at secondary schools in the Free State Province. Science Process Skills are activities that scientists like geographers do when they study and investigate problems. As such, the project will provide useful information which could be of a supportive nature to geography teachers in general and outcomes-based education in particular.

Attached is a questionnaire which attempts to gain information on inquiry teaching methods applied to geography teaching and learning. Inquiry teaching methods are teaching processes which contribute to learning processes involving the investigation of a question, a problem or an issue, in which the interrelationship between people and their environment is studied. This study assumes that the adoption of inquiry teaching and inquiry learning is likely to lead to the application of Science Process Skills to the teaching of geography. These skills may develop critical understanding of issues and the ability to solve problems.

The survey has the approval of Free State Education Department. The researcher will be grateful for your response and wishes to ensure that your response will remain completely confidential and anonymous.

Kindly answer by circling the appropriate number in the shaded area or write your answer in the shaded block provided.

For Example: 1 What is your gender?

Male	1
Female	2

After completing the questionnaire use the provided envelope to return it to me not later than 23 March 2000.

Thank you for your co-operation.

Mr Awelani Rambuda
 Student

Prof WJ Fraser
 Promoter

GEOGRAPHY TEACHER QUESTIONNAIRE

FOR OFFICIAL USE ONLY

- 1 Questionnaire Type
- 2 Respondent Number
- 3 Card Number 1
- 4 Education District

FOR OFFICE USE ONLY

- V1 1
- V11 2-4
- V3 5
- V4 6-7

PART ONE: PERSONAL DATA

5 What is your gender?

Male	<input type="text" value="1"/>
Female	<input type="text" value="2"/>

V5 8

6 Did you take geography as a school subject to matric?

Yes	<input type="text" value="1"/>
No	<input type="text" value="2"/>

V6 9

7 Did you specialise in geography at tertiary level?

Yes	<input type="text" value="1"/>
No	<input type="text" value="2"/>

V7 10

PART TWO: EXPERIENCE IN THE TEACHING OF GEOGRAPHY

8 How many years of teaching experience do you have?

<input type="text"/>

V8 11-12

9 What is the highest grade do you teach geography?
[Mark ONE category only].

Grade 8	<input type="text" value="1"/>
Grade 9	<input type="text" value="2"/>
Grade 10	<input type="text" value="3"/>
Grade 11	<input type="text" value="4"/>
Grade 12	<input type="text" value="5"/>
Other (Please Specify)	<input type="text"/>

- V9 13
- V10 14
- V11 15
- V12 16
- V13 17
- V14 18-19

10 How long have you been teaching geography at school level?

Less than 5 years	1
5 years and over	2

V15 20

11 Were you interested in teaching geography, on appointment at your present school?

Yes	1
No	2

V16 21

12 Do you find geography easy to teach?

Yes	1
No	2

V17 22

PART THREE: SCHOOL DETAILS

13 What is the location of your school? (Choose one only)

Rural	1
Urban	2

V18 23

14 Which one of the following would classify your school?

Public	1
Independent	2
Farm	3
Church/Missionary	4
Mine	5
Other (Please Specify)	

V19 24

PART FOUR: INQUIRY TEACHING METHOD

In the shaded areas below indicate the **degree** to which you **do** as described in the statement. Please respond by making a cross (X) over the number in the appropriate shaded block.

15 I focus on lessons involving exploration of important problems that can be investigated at many levels of difficulty.

Never	1	Sometimes	2	Often	3	Always	4
-------	---	-----------	---	-------	---	--------	---

V20 25

16 I use learning materials that stimulate learners' interest.

Never	1	Sometimes	2	Often	3	Always	4
-------	---	-----------	---	-------	---	--------	---

V21 26

17 I make available many different learning resources for learners' use.

Never 1 Sometimes 2 Often 3 Always 4

V22 27

18 My lessons present some problems that develop learners' thinking skills.

Never 1 Sometimes 2 Often 3 Always 4

V23 28

19 When I teach, the learners talk more than I do.

Never 1 Sometimes 2 Often 3 Always 4

V24 29

20 Learners are free to discuss their ideas in class.

Never 1 Sometimes 2 Often 3 Always 4

V25 30

21 When I talk, I "question, I do not "tell".

Never 1 Sometimes 2 Often 3 Always 4

V26 31

22 I consciously use the ideas my learners' have raised in class.

Never 1 Sometimes 2 Often 3 Always 4

V27 32

23 I redirect learners' questions in such a way that learners are encouraged to arrive at their own answers.

Never 1 Sometimes 2 Often 3 Always 4

V28 33

24 I consciously base my questions on learners' ideas in class.

Never 1 Sometimes 2 Often 3 Always 4

V29 34

25 Learners are free to interchange their ideas in class.

Never 1 Sometimes 2 Often 3 Always 4

V30 35

26 I encourage the learners to evaluate if their arguments are relevant to the ideas being discussed.

Never 1 Sometimes 2 Often 3 Always 4

V31 36

27 My learners gain understanding in science process skills.

Never 1 Sometimes 2 Often 3 Always 4

V32 37

28 I encourage learners to investigate geographical problems.	
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	V33 <input type="checkbox"/> 38
29 I emphasize learning, rather than classroom discipline when learners are engaged in groupwork activities.	
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	V34 <input type="checkbox"/> 39
30 Class discussions are conducted in an orderly fashion that emphasizes courtesy and willingness to listen to each person's ideas.	
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	V35 <input type="checkbox"/> 40
31 My learners gain practice in scientific process of acquiring knowledge	
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	V36 <input type="checkbox"/> 41
32 I reward the free exchange of ideas in class.	
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	V37 <input type="checkbox"/> 42
33 I allow learners to move freely in the classroom while they are engaged in groupwork activities.	
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	V38 <input type="checkbox"/> 43
34 I encourage the testing of ideas in class.	
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	V39 <input type="checkbox"/> 44
35 I avoid criticising ideas offered by learners in class.	
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	V40 <input type="checkbox"/> 45
36 Each learner's contribution is considered important in class.	
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	V41 <input type="checkbox"/> 46
37 I evaluate learners on growth in many aspects of the learning experience, rather than simply on the basis of facts required.	
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	V42 <input type="checkbox"/> 47
38 All geographical topics are critically examined, not "taught" as closed issues with a single "correct" solution.	
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	V43 <input type="checkbox"/> 48

39 Use of unfounded, emotionally charged language is minimized in guided didactic conversations.

Never 1 Sometimes 2 Often 3 Always 4

V44 49

40 I emphasize that values are permissible areas for discussion.

Never 1 Sometimes 2 Often 3 Always 4

V45 50

41 I allow for maximum learner use of learning materials.

Never 1 Sometimes 2 Often 3 Always 4

V46 51

42 I play a low-key role in directing the learning experience of my learners

Never 1 Sometimes 2 Often 3 Always 4

V47 52

43 What difficulties do you experience when developing inquiry teaching?

V48 53

V49 54

V50 55

V51 56

V52 57

44 State how these difficulties can be solved.

V53 58

V54 59

V55 60

V56 61

V57 62

45 What difficulties do your learners experience when they are involved in inquiry learning?

V58 63

V59 64

V60 65

V61 66

V62 67

46 State how these difficulties can be solved.

V63 68
V64 69
V65 70
V66 71
V67 72

PART FIVE: SCIENCE PROCESS SKILLS

A: Basic Science Process Skills applied to the teaching of geography. Please respond to the following statements by making a cross (X) over the number in the appropriate shaded block.

47 I give my learners many opportunities to **identify** geographical important problems.

Never 1 2 3 4

V68 73

48 I organize classroom activities in which learners **classify** the observed geographical features.

Never 1 2 3 4

V69 74

49 I encourage learners to use any means to **communicate** learned information, i.e. to draw maps, charts, symbols, graphs and diagrams to **communicate** the information.

Never 1 2 3 4

V70 75

50 I link the work in geography on **diagrams** to the everyday life of the learners, i.e. getting learners to bring examples from newspapers and magazines for discussion in class.

Never 1 2 3 4

V71 76

51 I organize activities in which my learners **compare** objects using standardized units of measure and suitable measuring instruments.

Never 1 2 3 4

V72 77

52 I organize my learners to **observe** geographical phenomena, such as the maximum and minimum air temperatures, wind direction and speed, atmospheric pressure, relative humidity, amount and type of rainfall.

Never 1 2 3 4

V73 78

53 I encourage my learners to predict future geographical events based upon their observations.	V74 <input type="text"/> 79
Never <input type="text"/> 1 <input type="text"/> Sometimes <input type="text"/> 2 <input type="text"/> Often <input type="text"/> 3 <input type="text"/> Always <input type="text"/> 4	
54 I encourage learners to use various forms of data to determine the correctness of geographical theory .	V75 <input type="text"/> 80
Never <input type="text"/> 1 <input type="text"/> Sometimes <input type="text"/> 2 <input type="text"/> Often <input type="text"/> 3 <input type="text"/> Always <input type="text"/> 4	

<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px; text-align: center;"> FOR OFFICIAL USE ONLY </div> 55 Questionnaire Type 56 Respondent Number 57 Card Number 2 58 Education District	FOR OFFICE USE ONLY V76 <input type="text"/> 1 V77 <input type="text"/> <input type="text"/> <input type="text"/> 2-4 V78 <input type="text"/> 2 <input type="text"/> 5 V79 <input type="text"/> <input type="text"/> 6-7
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59 I encourage my learners to describe a geographical feature's position in relation to other geographical features.	V80 <input type="text"/> 11
Never <input type="text"/> 1 <input type="text"/> Sometimes <input type="text"/> 2 <input type="text"/> Often <input type="text"/> 3 <input type="text"/> Always <input type="text"/> 4	
60 I give my learners many opportunities to observe geographical important problems.	V81 <input type="text"/> 9
Never <input type="text"/> 1 <input type="text"/> Sometimes <input type="text"/> 2 <input type="text"/> Often <input type="text"/> 3 <input type="text"/> Always <input type="text"/> 4	
61 I encourage learners to use any means to communicate investigated information.	V82 <input type="text"/> 10
Never <input type="text"/> 1 <input type="text"/> Sometimes <input type="text"/> 2 <input type="text"/> Often <input type="text"/> 3 <input type="text"/> Always <input type="text"/> 4	

62 I link the work in geography on **graphs** to the everyday life of the learners, i.e. getting learners to bring examples from newspapers and magazines for discussion in class.

Never 1 Sometimes 2 Often 3 Always 4

V83 11

63 I organize activities in which my learners arrange geographical features in logical **order** according to their structures.

Never 1 Sometimes 2 Often 3 Always 4

V84 12

B: Integrated Science Process Skills applied to the teaching of geography. Please respond to the following statements by making a cross (X) over the number in the appropriate shaded block.

64 I encourage learners to **identify** variables that affect geographical phenomena, e.g. how variables such as air temperature, air pressure, humidity and cloud cover influence the occurrence of rainfall.

Never 1 Sometimes 2 Often 3 Always 4

V85 13

65 I devise exercises in which my learners have to **construct tables of data**.

Never 1 Sometimes 2 Often 3 Always 4

V86 14

66 I devise exercises in which learners have to **construct graphs**.

Never 1 Sometimes 2 Often 3 Always 4

V87 15

67 I devise exercises in which my learners **conduct investigations**.

Never 1 Sometimes 2 Often 3 Always 4

V88 16

68 I devise exercises in which my learners **identify the variables** under study.

Never 1 Sometimes 2 Often 3 Always 4

V89 17

69 I give my learners geographical problems in which they are encouraged to **construct hypotheses**. (*A hypothesis is a tentative answer to a problem*).

Never 1 Sometimes 2 Often 3 Always 4

V90 18

70 I give exercises in which my learners define geographical features by using observable characteristics of the features.	V91 <input type="checkbox"/> 19
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	
71 I give my learners hypotheses and request them to design investigations to test the given hypotheses.	V92 <input type="checkbox"/> 20
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	
72 I devise exercises in which learners have to describe the relationship between variables on a graph.	V93 <input type="checkbox"/> 21
Never <input type="checkbox"/> 1 <input type="checkbox"/> Sometimes <input type="checkbox"/> 2 <input type="checkbox"/> Often <input type="checkbox"/> 3 <input type="checkbox"/> Always <input type="checkbox"/> 4	
73 State problems which you experience when applying Science Process Skills to the teaching of geography.	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	V94 <input type="checkbox"/> 22 V95 <input type="checkbox"/> 23 V96 <input type="checkbox"/> 24 V97 <input type="checkbox"/> 25 V98 <input type="checkbox"/> 26
74 State how these problems can be solved.	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	V99 <input type="checkbox"/> 27 V100 <input type="checkbox"/> 28 V101 <input type="checkbox"/> 29 V102 <input type="checkbox"/> 30 V103 <input type="checkbox"/> 31

THANK YOU FOR YOUR CO-OPERATION

If you have any queries regarding this study, please contact the researcher:

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APPENDIX 4

GEOGRAPHY LEARNER QUESTIONNAIRE



RESEARCH ON THE APPLICATION OF SCIENCE PROCESS SKILLS

Dear geography learner

I am a PhD research student enrolled at the University of Pretoria. I am involved in a project which is attempting to describe and explain the application of Science Process Skills to the teaching of geography at secondary schools in the Free State Province. Science Process Skills are activities that scientists like geographers do when they study and investigate problems. As such, the project will provide useful information which could be of a supportive nature to geography teachers in general and outcomes-based education in particular.

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The survey has the approval of Free State Education Department. The researcher will be grateful for your response and wishes to ensure that your response will remain completely confidential and anonymous.

Kindly answer by circling the appropriate number in the shaded area or write your answer in the shaded block provided.

For Example: 1 What is your gender?

Male	1
Female	2

After completing the questionnaire hand it to your geography teacher who will then return it to me by 23 March 2000.

Thank you for your co-operation.

Mr Awelani Rambuda
Student

Prof WJ Fraser
Promoter

GEOGRAPHY LEARNER QUESTIONNAIRE
FOR OFFICIAL USE ONLY

- 1 Questionnaire Type
- 2 Respondent Number
- 3 Card Number
- 4 Education District

FOR OFFICE USE ONLY

- V1 1
- V2 2-5
- V3 6
- V4 7-8

PART ONE: PERSONAL DATA

5 What is your gender?

Male	<input type="text" value="1"/>
Female	<input type="text" value="2"/>

 V5 9

6 What is your age in completed years?

 V6 10-11

7 Indicate your present grade. (Choose ONE category only)

Grade 8	<input type="text" value="1"/>
Grade 9	<input type="text" value="2"/>
Grade 10	<input type="text" value="3"/>
Grade 11	<input type="text" value="4"/>
Grade 12	<input type="text" value="5"/>

 V7 12

8 Do you find geography easy to learn?

Yes	<input type="text" value="1"/>
No	<input type="text" value="2"/>

 V8 13

PART TWO: SCHOOL DETAILS

9 What is the location of your school? (Choose ONE category only)

Rural	<input type="text" value="1"/>
Urban	<input type="text" value="2"/>

 V9 14

10 Which one of the following would classify your school best?

Public	1
Independent	2
Farm	3
Church/Missionary	4
Mine	5
Other (Please Specify)	

V10 15-16

PART THREE: INQUIRY TEACHING METHOD

In the shaded areas below indicate the degree to which you agree or disagree with the statement. Please respond by making a cross (X) over the number in the appropriate shaded block.

11 My geography teacher focuses on lessons involving the exploration of important problems that can be investigated at many levels of difficulty.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V11 17

12 My geography teacher uses learning materials that stimulate my interest.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V12 18

13 My geography teacher makes available many different learning resources for my use.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V13 19

14 My geography teacher's lessons present some problems that develop my thinking skills.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V14 20

15 When the lesson is in progress, I talk more than my geography teacher.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V15 21

16 I am free to discuss my ideas with other learners in class.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V16 22

17 When my geography teacher talks, (s)he "questions", (s)he does not "tell".

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V17 23

18 My geography teacher consciously uses ideas I have raised in class.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V18 24

19 My geography teacher redirects my questions in such a way that I am encouraged to arrive at my own answers.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V19 25

20 My geography teacher consciously bases his/her questions on my ideas in class.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V20 26

21 I am free to interchange my ideas with other learners in class.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V21 27

22 My geography teacher encourages us to evaluate if our arguments are relevant to the ideas being discussed.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V22 28

23 I gain understanding in the usage of science process skills.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V23 29

24 My geography teacher encourages us to investigate geographical phenomena.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V24 30

25 My geography teacher emphasizes learning, rather than classroom discipline when we are engaged in groupwork activities.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V25 31

26 Class discussions are conducted in an orderly fashion that emphasizes courtesy and willingness to listen to each person's ideas.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V26 32

27 I gain practice in scientific processes of acquiring knowledge.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V27 33

28 My geography teacher rewards free exchange of ideas in class.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V28 34

29 My geography teacher allows us to move freely in the classroom while we are engaged in groupwork activities.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V29 35

30 My geography teacher encourages the testing of ideas in class.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V30 36

31 My geography teacher avoids criticising ideas offered by us in class.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V31 37

32 Our contributions in discussions are considered important in class.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V32 38

33 My geography teacher evaluates us on growth in many aspects of the learning experience, rather than simply on the basis of facts required.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V33 39

34 All geographical topics are critically examined, not "taught as closed issues with a single "correct" solution.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V34 40

35 Use of unfounded, emotionally charged language is minimized in guided didactic conversations.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V35 41

36 My geography teacher emphasizes that values are permissible areas for discussion.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V36 42

37 My geography teacher allows for my maximum use of learning materials.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V37 43

38 My geography teacher plays a low-key role in directing my learning experience.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V38 44

39 What problems does your geography teacher experience when (s)he develops inquiry teaching?

V39 45
V40 46
V41 47
V42 48
V43 49

40 State how these difficulties can be solved.

V44 50
V45 51
V46 52
V47 53
V48 54

41 What problems do you experience when you are involved in inquiry learning?

V49 55
V50 56
V51 57
V52 58
V53 59

42 State how these problems can be solved.

V54 60
V55 61
V56 62
V57 63
V58 64

PART FOUR: SCIENCE PROCESS SKILLS

A: **Basic Science Process Skills** applied to the teaching of geography. Please respond to the following statements by making a cross (X) over the number in the appropriate shaded block.

43 My geography teacher gives us many opportunities to identify geographical important problems.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V59 65

44 My geography teacher organizes classroom activities in which we **classify** the observed geographical features.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V60 66

45 My geography teacher encourages us to use any means to **communicate** learned information, i.e. to draw maps, charts, symbols, graphs, and diagrams to **communicate** the information.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V61 67

46 My geography teacher links the work in geography on **diagrams** to our everyday life, i.e. getting us to bring examples from newspapers and magazines for discussion in class.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V62 68

47 My geography teacher organizes activities in which we **compare** objects using standardized units of measure and suitable measuring instruments.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V63 69

48 My geography teacher organizes us to **observe** geographical phenomena such as the maximum and minimum air temperatures, wind direction and speed, atmospheric pressure, relative humidity, amount and type of rainfall.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V64 70

49 My geography teacher encourages us to **predict** future geographical events based upon our observations.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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V65 71

50 My geography teacher encourages us to use various forms of information to determine the **correctness of a geographical theory**.

Strongly Agree	1	Agree	2	Disagree	3	Strongly Disagree	4
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V66 72

51 My geography teacher encourages us to **describe** a geographical feature's position in relation to other geographical features.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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 V67 73

52 My geography teacher gives us many opportunities to **observe** geographical important problems.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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 V68 74

53 My geography teacher encourages us to use any means to **communicate** investigated information.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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 V69 75

54 My geography teacher links the work in geography on **graphs** to our everyday life, i.e. getting us to bring examples from newspapers and magazines for discussion in class.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
-------------------	---	----------	---	-------	---	----------------	---

 V70 76

55 My geography teacher organizes activities in which we arrange geographical features in logical **order** according to their structures.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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 V71 77

B: Integrated Science Process Skills applied to the teaching of geography. Please respond to the following statements by making a cross (X) the number in the appropriate shaded block.

56 My geography teacher encourages us to **identify** variables that affect geographical phenomena, e.g. how variables such as air temperature, air pressure, humidity and cloud cover influence the occurrence of rainfall.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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 V72 78

57 My geography teacher devises exercises in which we have to **construct tables of data** (tables of information).

Strongly Disagree 1 Disagree 2 Agree 3 Strongly Agree 4

V73 79

58 My geography teacher devises exercises in which we have to **construct graphs**.

Strongly Disagree 1 Disagree 2 Agree 3 Strongly Agree 4

V74 80

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59 Questionnaire Type

60 Respondent Number

61 Card Number

62 Education District

FOR OFFICE USE ONLY

V75 2 1

V76 2-5

V77 2 6

V78 7-8

63 My geography teacher devises exercises in which we **conduct investigations**.

Strongly Disagree 1 Disagree 2 Agree 3 Strongly Agree 4

V79 9

64 My geography teacher devises exercises in which we **identify the variables** under study.

Strongly Disagree 1 Disagree 2 Agree 3 Strongly Agree 4

V80 10

65 My geography teacher gives us geographical problems in which we are encouraged to **construct hypotheses**. (*A hypothesis is a tentative answer to a problem*).

Strongly Disagree 1 Disagree 2 Agree 3 Strongly Agree 4

V81 11

66 My geography teacher gives us exercises in which we are encouraged to **define** geographical features by using observable characteristics of the features.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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 V82 12

67 My geography teacher gives us hypotheses and request us to **design investigations** to test the given hypotheses.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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 V83 13

68 My geography teacher devises exercises in which we have to **describe the relationship between variables** on a graph.

Strongly Disagree	1	Disagree	2	Agree	3	Strongly Agree	4
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 V84 14

69 State problems which you experience when **Science Process Skills** are applied to the teaching of geography.

 V85 15

 V86 16

 V87 17

 V88 18

 V89 19

70 State how these problems can be solved.

 V90 20

 V91 21

 V92 22

 V93 23

 V94 24

THANK YOU FOR YOUR CO-OPERATION

If you have any queries regarding this study, please contact the researcher.

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