



**Republic of Namibia**

## **MINISTRY OF EDUCATION**

**NAMIBIA SENIOR SECONDARY CERTIFICATE (NSSC)**

**GEOGRAPHY SYLLABUS**

**ORDINARY LEVEL**

**SYLLABUS CODE: 4332**

**GRADES 11 - 12**

**FOR IMPLEMENTATION IN 2006  
FOR FIRST EXAMINATION IN 2007**

**DEVELOPED IN COLLABORATION WITH  
UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS**



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## 1. INTRODUCTION

The Namibia Senior Secondary Certificate Ordinary level (NSSCO) syllabus for Geography is designed as a two-year course for examination after completion of the Junior Secondary Certificate. The syllabus is designed to meet the requirements of the Curriculum Guide for Formal Senior Secondary Education for Namibia and has been approved by the National Examinations, Assessment and Certification Board (NEACB).

The National Curriculum guidelines, applicable at a stage of senior secondary education (grades 11 and 12) and the equivalent stages of non-formal education, as part of life long learning, recognise the uniqueness of the learner and adhere to the philosophy of learner-centred education.

### **The Namibia National Curriculum guidelines**

- recognise that learning involves developing values and attitudes as well as knowledge and skills;
- promote self awareness and an understanding of the attitudes, values and beliefs of others in a multilingual and a multicultural society;
- encourage respect for human rights and freedom of speech;
- provide insight and understanding of crucial “ global” issues in a rapidly changing world which affect quality of life: the AIDS pandemic, global warming, environmental degradation, maldistribution of wealth, expanding and increasing conflicts, the technological explosion and increased connectivity;
- recognise that as information in its various forms becomes more accessible learners need to develop higher cognitive skills of analysis, interpretation and evaluation to use information effectively;
- seek to challenge and to motivate learners to reach their full potential and to contribute positively to the environment, economy and society;

Thus the Namibian National Syllabi provide opportunities for developing essential, key skills across the various fields of study. Such skills cannot be developed in isolation and may differ from context to context according to the field of study.

Geography contributes directly to the development of the 8 key skills marked \*.

- Communication skills\*
- Numeracy skills\*
- Information skills\*
- Problem-solving skills\*
- Self-management and Competitive skills\*
- Social and Co-operative skills\*
- Physical skills
- Work and Study skills\*
- Critical and Creative thinking\*

## 2. RATIONALE

Geography is a study of the earth and the interaction between humans and nature; it examines humans in their interdependent relationship with the earth. Geography studies ways in which humans have adapted nature to meet their needs and requirements and to what extent humans are able to utilise their environment in a sustainable manner.

Geography also provides scientific knowledge about physical, environmental and human processes, which form the basis for cross-curricular education.

### 3. AIMS

(Aims are the same for all learners)

The aims are to encourage learners to acquire and develop:

- a knowledge and understanding of the terminology, concepts and systems fundamental to a study of physical and human geography;
- a sense of place and an understanding of relative location on a local, regional and global scale;
- an awareness of spatial distributions of phenomena on the earth's surface and the relationships among the dynamic nature of such distributions;
- an understanding of the relationships and interactions of people and their environment in response to physical and human processes in Namibia and internationally;
- an appreciation of the potentialities and limitations of the physical environment for human activities;
- a critical awareness of different ways of life to foster positive attitudes towards other people, gender and societies with different social, economic and political circumstances;
- a critical awareness of the factors and processes which act upon physical and cultural environmental systems which bring about change;
- an understanding of aspects of the contemporary world which are changing;
- an awareness of societies which are undergoing rapid social and economic changes;
- an appreciation of how human use and abuse of the environment can lead to various forms of environmental enhancement and degradation;
- a caring attitude towards the environment and sustainable management of natural and human resources;
- skills in geographical observation, analysis and communication with the assistance of information technology;
- understanding of HIV and AIDS and the impact of HIV and AIDS on development.

### 4. LEARNING CONTENT

The content is divided into four broad themes:

1. The Physical World
2. Economic Development and the Use of Resources
3. Population and Settlement Studies
4. Research Techniques and Map Reading Skills

The first three themes are subdivided into topics, and presented in a table with general objectives and specific objectives.

NB: Case studies included in the learning content are not prescriptive. Teachers are urged to use other case studies which may be relevant.

Theme 4 summarises skills which may also be assessed in each of Papers 1, 2 and 3.

## 1. THE PHYSICAL WORLD

TOPIC	GENERAL OBJECTIVES <i>Learners will:</i>	SPECIFIC OBJECTIVES <i>Learners should be able to:</i>
<b>1.1 The earth's structure</b>	understand the structure of the earth and plate movements	<ul style="list-style-type: none"> <li>• explain the forces of compression and tension in relation to the theory of plate tectonics</li> <li>• describe the distribution of earthquakes, volcanoes, fold mountains, deep sea trenches, volcanic island arcs, mid-oceanic ridges, margins and plate movements: plates moving away from each other, moving towards each other and sliding past each other</li> <li>• describe three types of volcanoes – ash and cinder, lava, composite cones</li> <li>• describe the main types of intrusions and associated landforms</li> <li>• discuss the environmental and economic impact of and strategies to manage the effects of earthquakes and volcanic eruption</li> </ul> <p><b>Case studies:</b></p> <p>(i) <i>The East Africa Rift Valley in Africa</i></p> <p>(ii) <i>The natural hazard and volcanic eruption: Mount Pinatubo</i></p> <p>(iii) <i>The Kobe Earth Quake, 1995</i></p>
<b>1.2 Landforms and landscape shaping processes</b>	understand weathering, river, wind and marine processes	<p><b>(a) Weathering processes and landforms</b></p> <ul style="list-style-type: none"> <li>• distinguish between weathering and erosion</li> <li>• describe what is meant by different types of weathering - physical/mechanical, chemical and biological weathering and associated landforms</li> <li>• explain the main factors influencing the type and rate of weathering by illustrating why weathering is more rapid in the humid tropical regions of the world than in the temperate regions</li> </ul>



TOPIC	GENERAL OBJECTIVES <i>Learners will:</i>	SPECIFIC OBJECTIVES <i>Learners should be able to:</i>
		<p><b>(b) River processes and landforms</b></p> <ul style="list-style-type: none"> <li>• describe the characteristics of a river valley in terms of the upper, middle and lower course</li> <li>• name and describe the erosional processes of a river system: hydraulic action; corrasion/abrasion; corrosion and attrition; and landforms associated with river erosion e.g. waterfalls, rapids, floodplain, meanders</li> <li>• describe and explain how a river transports its load: traction, saltation, suspension and solution</li> <li>• analyse the reasons why and where in a river's course deposition takes place, with reference to volume and velocity of flow, nature of the load and bed-rock</li> <li>• describe the landforms associated with the deposition of the load by a river: meanders, deltas, levees, marshes, floodplain, inland deltas/oshanas</li> <li>• discuss the benefits associated with utilisation and management of resources in wetland areas such as floodplains and deltas</li> </ul> <p><b>(c) Wind/Aeolian processes and landforms</b></p> <ul style="list-style-type: none"> <li>• name and describe the erosional process of wind action, for example, abrasion, deflation and attrition and associated landforms such as rock pedestals, deflation hollow and desert pavements</li> <li>• name and describe the wind transport processes for example suspension, saltation and surface creep</li> <li>• describe the landforms associated with wind action in Namibia, e.g. linear/seif dunes, star dunes, barchans/crescent dunes</li> </ul> <p><b>(d) Coastal/marine processes and associated landforms</b></p> <ul style="list-style-type: none"> <li>• distinguish the types of waves such as constructive and destructive and explain the energy of the waves, swash and backwash</li> <li>• name and describe the erosional processes of wave action such as corrasion, hydraulic action, corrosion and attrition and associated erosional landforms such as cliffs, stacks, caves, wave-cut notch, wave-cut platform</li> <li>• describe the transportation of materials along the coastline: onshore and offshore movement and longshore drift</li> </ul>

TOPIC	GENERAL OBJECTIVES <i>Learners will:</i>	SPECIFIC OBJECTIVES <i>Learners should be able to:</i>
<b>1.3 Weather</b>	appreciate the elements of weather	<ul style="list-style-type: none"> <li>• distinguish between weather and climate</li> <li>• draw, describe and explain the use and siting needs of weather instruments such as: the rain gauge, minimum and maximum thermometer, wet and dry bulb thermometer (hygrometer), barometer/barograph, anemometer and wind vane</li> <li>• analyse the weather statistics of temperature, rainfall, humidity, air pressure, cloud cover, sunshine, wind speed and wind direction</li> <li>• describe and explain the characteristics, siting and the use of a Stevenson screen</li> <li>• describe factors influencing temperature such as latitude, altitude, ocean current, distance from the sea, prevailing wind, pressure systems</li> </ul>
<b>1.4 Climate and natural vegetation</b>	appreciate the influence of climate on natural vegetation and the relationship between human activities and natural vegetation	<ul style="list-style-type: none"> <li>• identify and locate on a map of Africa the following vegetation regions: <ul style="list-style-type: none"> <li>– tropical rain or equatorial forest (evergreen)</li> <li>– tropical grassland (savannah)</li> <li>– tropical deserts</li> <li>– Mediterranean vegetation</li> </ul> </li> <li>– describe and explain the main features of each of the vegetation regions mentioned above with reference to natural vegetation</li> <li>• describe and explain the main characteristics of the climate in these vegetation regions under the headings temperature – mean temperature of the hottest month, mean temperature of the coldest month, therefore the annual range; rainfall – the amount and seasonal distribution; other climatic features – wind, cloud, humidity, etc.</li> <li>• analyse and interpret the climatic graphs showing the main characteristics of temperatures and rainfall of each of the regions</li> <li>• analyse and discuss the causes and consequences of rapid and progressive clearance of natural vegetation over time</li> <li>• analyse and discuss forest management techniques such as agro-forestry, reforestation, sustainable harvesting, etc.</li> </ul> <p><b>Case studies:</b></p> <ul style="list-style-type: none"> <li>(i) <i>Management of tropical grassland in Kenya</i></li> <li>(ii) <i>How can the vegetation of the Cape Peninsula in S.A. be protected?</i></li> </ul>

## 2. ECONOMIC ACTIVITIES AND THE USE OF RESOURCES

TOPIC	GENERAL OBJECTIVES <i>Learners will:</i>	SPECIFIC OBJECTIVES <i>Learners should be able to:</i>
<b>2.1 Agriculture</b>	understand the different agricultural systems in Namibia and SADC countries	<ul style="list-style-type: none"> <li>• describe farming as a system with reference to inputs, processes and outputs</li> <li>• define subsistence and commercial farming systems</li> <li>• locate on a map of Namibia where dominant areas of small-scale subsistence, small-scale cash-crop farming and large-scale commercial farming are practised and explain the development of these farming systems in Namibia</li> <li>• distinguish between the three main agricultural systems named above with reference to scale of production, methods of organisation and products of each system</li> <li>• discuss the physical (relief, climate, soil) and human (economic, social and political) inputs involved in the processes on a farm to produce outputs of animals and crops</li> </ul> <p><b>Case studies:</b></p> <p>(i) <i>Subsistence farming in Northern Namibia</i></p> <p>(ii) <i>Small scale cash-cropping in Brakelsdal farming in the Stellenbosch area in S.A.</i></p> <ul style="list-style-type: none"> <li>• analyse the strategies to improve the output in large-scale commercial farming by using the case study of <i>Molopo cattle ranching in Botswana or the Orange river project in South Africa</i></li> <li>• discuss the economic and political factors and their effects upon shortages of food, e.g. capital investment, incentives, transport difficulties, war, etc.</li> <li>• discuss shortages of food as related to natural problems such as soil exhaustion, droughts, floods, pests and diseases</li> <li>• discuss the problems which are related to food aid in areas of food shortages</li> <li>• discuss the negative impacts of agriculture on the environment, for example, soil erosion, overgrazing/overstocking, desertification, salination, deforestation and pollution</li> <li>• analyse and discuss the strategies for sustainable agriculture for example, plant breeding, mixed cropping, use of organic fertiliser</li> </ul> <p><b>Case studies:</b></p> <p>(i) <i>Farming practices leading to desertification in Namibia</i></p> <p>(ii) <i>Machakos: Can agriculture be sustainable in Kenya?</i></p>

TOPIC	GENERAL OBJECTIVES <i>Learners will:</i>	SPECIFIC OBJECTIVES <i>Learners should be able to:</i>
2.2 <b>Industrial Systems</b>	understand different types of industries	<ul style="list-style-type: none"> <li>• classify industries into primary, secondary, tertiary activities</li> <li>• describe the factors influencing the location of industries in general: raw materials, labour, energy, capital, transport, markets, siting factors</li> <li>• <b>Understand the role of the fishing industry as a case study in the Namibian economy to illustrate (a), (b) and (c) below.</b></li> </ul> <p><b>(a) Primary activities</b></p> <ul style="list-style-type: none"> <li>• describe the physical factors influencing the availability of raw material such as ocean currents, upwelling, marine food chain, length of the coast</li> <li>• describe the exploitation of the fish resource with reference to demersal and pelagic fish and fishing methods</li> <li>• discuss factors threatening the availability of fish resources such as physical factors (red tides, fluctuating water temperatures), human factors (pollution, over fishing) and management strategies to ensure sustainable use (conservation law/legislation, quotas, net type and size)</li> </ul> <p><b>(b) Secondary activities</b></p> <ul style="list-style-type: none"> <li>• describe the factors influencing the location of fish processing plants such as raw materials, power, labour, capital, transport, markets and siting factors</li> <li>• describe the inputs, processes and outputs of a fish processing plant in Namibia</li> <li>• show an understanding of the agglomeration economic effect of the fishing industry</li> </ul> <p><b>(c) Tertiary activities</b></p> <ul style="list-style-type: none"> <li>• demonstrate an understanding of the services necessary for the effective functioning of the fishing industry with reference to local and foreign markets, supply and maintenance services, transportation, finance</li> <li>• describe the role of the fishing industry as part of policies for sustainable development</li> </ul> <p><b>Case study:</b></p> <p>(i) <i>The fishing sector in the economies of Walvis Bay and Luderitz in Namibia</i></p>

TOPIC	GENERAL OBJECTIVES <i>Learners will:</i>	SPECIFIC OBJECTIVES <i>Learners should be able to:</i>
<b>2.3 Leisure and tourism</b>	appreciate the importance of leisure activities and tourism to the economy of Namibia	<ul style="list-style-type: none"> <li>• define the terms leisure and tourism</li> <li>• describe the types of leisure and tourist activities in Namibia</li> <li>• describe the difference between local/domestic tourism and international tourism</li> <li>• discuss the advantages of the tourist industry such as growth in income, increase in foreign exchange earnings, employment opportunities, the development of infrastructure and facilities and cultural advantages</li> <li>• describe the craft industry as part of the tourist industry</li> <li>• discuss the negative impacts of tourism such as seasonal unemployment, under-use of facilities at certain seasons of the year, increased congestion, pollution, shortage of services (water), damage to the landscape, socio-cultural problems, dependence on imports and price hikes</li> <li>• analyse the problems facing the development of tourism in Namibia and other LEDCs (transport, publicity/marketing, capital, efficient organisation and management, etc.) and suggest possible solutions</li> </ul> <p><b>Case studies:</b></p> <ul style="list-style-type: none"> <li>(i) <i>Etosha National Park in Namibia</i></li> <li>(ii) <i>Development of ecotourism in Namibia, including the need to encourage and protect biodiversity</i></li> </ul>

TOPIC	GENERAL OBJECTIVES <i>Learners will:</i>	SPECIFIC OBJECTIVES <i>Learners should be able to:</i>
<b>2.4 Energy and water resources</b>	understand the different processes involved in the production of power using renewable fuels and non-renewable fossil fuels with reference to SADC.	<ul style="list-style-type: none"> <li>• distinguish between renewable sources and non-renewable fossil sources of energy</li> <li>• describe the significance of non-renewable energy in terms of its availability and the contribution made by coal, oil, natural gas and wood</li> <li>• describe the growing significance of renewable energy supplies to reduce dependence on fossil fuels, geothermal, waves, tides, running water, solar and biogas</li> <li>• locate major hydro-electric power schemes on the map of Southern Africa</li> <li>• describe the factors influencing the location and development of hydro-electric power</li> <li>• describe the process of generating hydro-electric power (H.E.P)</li> <li>• explain the advantages and disadvantages of generating H.E.P.</li> <li>• explain the advantages and disadvantages of generating power from coal</li> <li>• explain the advantages and disadvantages of nuclear power</li> <li>• illustrate the danger of nuclear power by using the examples of nuclear accidents such as that at <i>Chernobyl in Ukraine</i></li> <li>• explain the advantages and disadvantages of solar power</li> <li>• describe and explain Namibia's energy policy on the environment, health and safety with reference to assessment of energy projects, depletion of woodland, household health and safety</li> <li>• describe and explain the economic and development context for Namibia's energy policy</li> <li>• discuss how Namibia's energy sector is integrally linked to the SADC region and global trade in oil</li> </ul>
	develop an appreciation for sustainable utilisation and management of water resources in Namibia	<ul style="list-style-type: none"> <li>• discuss the uses of water for agriculture, domestic and industrial purposes with recognition of competition for the use of water which require careful management in certain areas</li> <li>• identify sources of water in Namibia such as ground water and surface water and explain their significance to human activities</li> <li>• discuss how the processes operating within the water cycle may affect supplies, with special reference to the causes and effects of flooding and drought</li> <li>• explain the causes and consequences of water pollution on the natural and human environment</li> </ul>

TOPIC	GENERAL OBJECTIVES <i>Learners will:</i>	SPECIFIC OBJECTIVES <i>Learners should be able to:</i>
		<ul style="list-style-type: none"> <li>• discuss ways of improving water quantity, quality and access under the following headings: pollution control, improved sanitation, efficient distribution, and desalination</li> <li>• explain why there are problems of water supply in Namibia and describe ways of using water more efficiently</li> </ul>
<b>2.5 Environmental risks and management</b>	understand how human activity can cause changes to the environment	<ul style="list-style-type: none"> <li>• describe the causes, effects of, and strategies to reduce global warming by using a case study: <i>How might global warming affect Bangladesh?</i></li> <li>• describe the process of acid rain formation and explain how this process can destroy an eco-system by using the case study: <i>Acid rain in Scandinavia</i></li> <li>• describe the process of desertification and explain how this process destroys eco-system by using the case study: <i>The Sahel</i></li> <li>• describe the process of deforestation and explain how this process destroys an eco-system by using the case study: <i>Deforestation in Namibia</i></li> </ul>

### 3. POPULATION AND SETTLEMENT

TOPIC	GENERAL OBJECTIVES <i>Learners will:</i>	SPECIFIC OBJECTIVES <i>Learners should be able to:</i>
<b>3.1 Population studies</b>	understand population dynamics and their social, economic and environmental impact	<ul style="list-style-type: none"> <li>• give reasons for the rapid increase in the world's population in recent times, "the population explosion"</li> <li>• define the main components influencing population growth: birth rate, death rate and migration</li> <li>• describe the relationship between population growth and resources and explain why problems may result in some areas of over-population and under-population</li> <li>• identify and discuss reasons for contrasting patterns of population growth in different world areas as influenced by differences in birth rate, death rate and migration. Factors affecting these influences should be considered such as differences in social, economic and other factors, e.g. government policies, and their impact upon birth rates, differences in health care, social and environmental factors influencing death rates. These factors should be illustrated by reference to selected examples</li> <li>• describe the consequences (benefits and problems) of different patterns of population growth. Consideration should be given to variations in the size and nature of dependent population and standard of living</li> <li>• identify and discuss reasons for different types of population structure as shown by age-sex pyramids. Learners should be able to describe population pyramids and relate population change to the different stages of the Demographic Transition Model</li> <li>• identify major influences on population density and population distribution. Reference should be made to physical, economic and human factors</li> <li>• discuss reasons for population movements. Reference should be made to internal movements such as rural-urban migration as well as to international movements, both voluntary and involuntary</li> <li>• analyse and discuss the environmental problems which are associated with population growth</li> <li>• analyse and discuss strategies for managing population growth in relation to the pace of economic development and environmental sustainability</li> </ul> <p><b>Case studies:</b></p> <ul style="list-style-type: none"> <li>(i) <i>Population policy and control in China</i></li> <li>(ii) <i>Population change and structure of population of Walvis Bay in Namibia</i></li> </ul>



<b>TOPIC</b>	<b>GENERAL OBJECTIVES</b> <i>Learners will:</i>	<b>SPECIFIC OBJECTIVES</b> <i>Learners should be able to:</i>
<b>3.2 HIV and AIDS</b>	understand the socio-economic impact of HIV and AIDS in Namibia	<ul style="list-style-type: none"> <li>• define HIV and AIDS</li> <li>• interpret Namibia's HIV and AIDS statistics and account for its spatial distribution</li> <li>• assess the demographic and socio-economic impact of HIV and AIDS in Namibia</li> <li>• discuss the efforts being taken by the government, local authorities, non-governmental organisations, churches, private sector and individuals to address the HIV and AIDS problem in Namibia</li> <li>• investigate how the following measures will have an impact on population growth and structure and the economy of Namibia <ul style="list-style-type: none"> <li>- condom use</li> <li>- introduction of antiretroviral drugs to infected people</li> </ul> </li> </ul>
<b>3.3 Settlement studies</b>	understand the dynamic nature of settlements in: <ul style="list-style-type: none"> <li>- LEDCs (Less Economically Developed Countries)</li> <li>- MEDCs (More Economically Developed Countries)</li> </ul>	<ul style="list-style-type: none"> <li>• describe the patterns of rural settlement such as dispersed, linear and nucleated</li> <li>• explain how physical factors (relief, soil, water supply), accessibility, agricultural land use and political factors influence the size and pattern of rural settlement in LEDCs and MEDCs</li> <li>• discuss the factors which may influence the size, growth and function of rural and urban settlement in LEDCs and MEDCs</li> <li>• discuss the internal structure (morphology) of towns and cities of Less Economically Developed Countries (LEDCs) and More Economically Developed Countries (MEDCs) by focusing on the Central Business District (CBD), residential areas, industrial areas, the provision of open space and transport routes</li> <li>• analyse and discuss problems associated with the growth of urban areas such as congestion in the CBD, housing shortage, informal settlements and traffic congestion and suggest solutions</li> <li>• describe the effects of urbanisation on the environment, for example, pollution (air, water, visual and noise), the results of urban sprawl on surrounding areas such as the growth of out-of-town urban activities like shopping areas, sports facilities and industrial estates</li> </ul>

#### 4 RESEARCH TECHNIQUES AND MAP READING SKILLS

It is important that these skills are not taught in isolation but are integrated into the teaching of other three themes.

TOPIC	GENERAL OBJECTIVES <i>Learners will:</i>	SPECIFIC OBJECTIVES <i>Learners should be able to:</i>
<b>4.1 Research skills</b>	carry out research projects (geographical enquiries)	<ul style="list-style-type: none"> <li>• identify a problem area/research topic and state the objectives</li> <li>• apply methods of data collection such as interviews, questionnaires, sampling, observations, simple surveys (counts and measurements) and document studies</li> <li>• demonstrate the ability to use and access information from Information Technology (where available) for data analysis and interpretation</li> <li>• describe the limitation of the methods used</li> <li>• demonstrate the ability to analyse and present data collected in appropriate form using for instance maps, graphs, tables</li> <li>• make effective conclusions and evaluations, suggesting solutions were appropriate</li> </ul>
<b>4.2 Map reading skills</b>	<ul style="list-style-type: none"> <li>• read and interpret topographic maps of a scale of 1:50 000</li> </ul>	<ul style="list-style-type: none"> <li>• identify the characteristics of a map such as the title, key, scale and direction</li> <li>• demonstrate the ability to use the scale in measuring distance, calculating area and gradient</li> <li>• demonstrate the ability to find direction and calculate bearings</li> <li>• identify landforms on maps using contours and symbols</li> <li>• describe human activities in relation to the features on a map</li> <li>• recognise and interpret horizontal/oblique photographs (landforms, natural vegetation, land-use and settlement)</li> <li>• locate features on a map using a co-ordinate reference system and be able to give and read four and six figure grid references to locate places</li> </ul>

## 5. ASSESSMENT OBJECTIVES

The four assessment objectives for Geography are:

- A. Knowledge with understanding**
- B. Analysis**
- C. Judgement and decision making**
- D. Investigation (enquiry, practical and presentation skills)**

The following are the descriptions of each of the assessment objectives:

### **A. Knowledge with understanding**

Learners should be able to demonstrate a knowledge and understanding of:

- A.1 the wide range of physical and human processes shaping development of:
  - (a) physical, political, economic, social and cultural environments and their associated effects on the landscape;
  - (b) spatial patterns and interactions which are important within such environments;
- A.2 the inter-relationships between people, their activities and the subsequent impacts on the environment and an ability to seek explanations for them;
- A.3 the importance of scale (local, regional or global) and the time at which spatial distributions and the working of the systems are considered;
- A.4 the changes which occur through time in places, landscapes and spatial distribution.

### **B. Analysis**

Learners should be able to demonstrate the ability to:

- B.1 extract and interpret geographical information from maps, graphs, tables, cartoons, diagrams, photographs, computers and other relevant geographical sources;
- B.2 use basic quantitative techniques;
- B.3 analyse geographical information;
- B.4 infer trends and consequences related to socio-geographical interactions;
- B.5 illustrate using labelled sketches.

### **C. Judgement and decision making**

Through their geographical education learners should be able to:

- C.1 reason and make judgements (including evaluation and conclusions) which demonstrate where appropriate:
  - (a) a sensitivity to and concern for landscape and the environment;
  - (b) an aesthetic appreciation of the earth including its people, places, landscapes, natural processes and phenomena;
  - (c) an appreciation of the attitudes, values and beliefs of cultural, economic, environmental, political and social issues which have a geographical dimension;
  - (d) an awareness of the contrasting opportunities and constraints of people living in different places and under different physical and human conditions;
  - (e) a willingness to review their own attitudes in the light of new knowledge and experiences.
- C.2 Recognise the role of decision making within a geographical context as affected by:
  - (a) the physical, cultural, economic and political contexts in which decisions are made;
  - (b) the values and perceptions of groups and individuals;
  - (c) the choices available in the process of decision making and the influences and constraints within which they operate;
- C.3 recognise, analyse, discuss and evaluate strategies for sustainable development.

**D. Investigation (enquiry, practical and presentation skills)**

Learners will be expected to demonstrate the ability to:

- D.1 formulate a research topic;
- D.2 use suitable techniques for observing, collecting, classifying, presenting, analysing and interpreting data;
- D.3 obtain information from a variety of sources such as maps and plans of various scales; audio-visual materials, internet and computer software, documentary materials and statistics;
- D.4 depict the information in appropriate forms using maps, diagrams, etc;
- D.5 make informed judgements and decisions;
- D.6 select, use and present geographical information in an appropriate form and effective manner.



## 7. SPECIFICATION GRID

The following grid summarises the connection between the Assessment Objectives and the Paper.

<b>Assessment Objectives</b>	<b>Weighting%</b>	<b>Paper 1 Marks</b>	<b>Paper 2 Marks</b>	<b>Paper 3 Marks</b>
A	24,6	30	6	12
B	42,3	22,5	48	12
C	20,8	22,5	6	12
D	12,3	-		24
Total	100%	75 marks	60 marks	60 marks

## 8. EXPLANATORY NOTES TO TEACHERS

### PAPER 1 REQUIREMENTS

Questions on the paper will be resource based. The resources will be presented to learners for analysis and interpretation in answering questions or part questions. Some of the information required to answer these part questions will be contained within the resource itself.

The resources offered may be photographic, map extracts, sketch maps, drawings, diagrams, graphs, text extracts, statistics and tables of data. Resource materials may be selected from Namibia, SADC and various world areas. As a result learners may be dealing with areas with which they are not familiar. The resource use does not require specific local or regional knowledge. This should be stressed to the learners as they may be influenced in their question selection by the nature/location of the resource included.

Throughout the study of the learning content for Paper 1, it is stressed that for Paper 1, reference should be made to appropriate case studies to illustrate the themes. It is suggested that much of the preparation of themes could be undertaken by case studies. Some case studies could incorporate a number of concepts and assessment objectives and present learners with an integrated approach to the study of the learning content.

**A case study may be selected because it is related to one or more of the following:**

- the local area;
- national or international illustration;
- a contemporary development such as the occurrence of a natural hazard in part of a world;
- a particular illustration with which the teacher is familiar;
- a presentation in a newspaper, on video, film or a well documented illustration in a textbook.

A case study may also be based upon a field study undertaken as part of the work for Paper 3 (geographical enquiry). Whilst specific questions will not be set in Paper 1 based upon field work, learners may use this information to illustrate answers.

The essence of a good case study is that it provides learners with details of a particular line of enquiry which can be profitably used in answers to certain questions on Paper 1. Some part questions on the paper will request that reference is made to information from specific case studies made by learners and opportunity is also provided for learners to volunteer such details in answering such part questions.

It is important for learners to comply with the rubric. Only **three** questions are to be selected. Sometimes within individual questions a choice is provided, e.g. answer either ...or..... . It is very important that learners make the correct choice and do not answer more than required.

Learners are advised to heed closely the sub marks printed on the question paper. These are included in order to guide learners as to the amount of detail and length of response anticipated.

## PAPER 2 REQUIREMENTS

Paper 2 will be taken by all learners. Learners must answer all questions. The paper will be entirely skills based and will test a learner's ability to handle various ways of depicting geographical information e.g. topographical maps from any SADC country on the scale of 1: 50 000, other maps, diagrams, graphs, tables of data, written material, photographs and pictorial materials. The questions will be neutral in that they will not require specific knowledge of place. Learners will be able to demonstrate the skills of analysis, interpretation and application of graphical and other techniques as appropriate.

**Mapwork questions:** The large scale maps chosen for examination purposes will be on a scale of 1:50 000 and will always contain a full key.

Learners should recognise that one third of the marks available on this paper are awarded to the mapwork question and, therefore, it is essential that they become proficient in map reading skills to enable them to describe and analyse topographical maps.

Learners should be able to use a co-ordinate reference system and be able to give and to read four figure and six figure grid reference/use longitudes and latitudes to locate places. Learners should be able to give compass direction and the bearing from grid north of one place from another. It is, therefore, important that they have protractors in the examination room. They should be able to measure horizontal distances, use linear scale and read contours to calculate differences in height. The information so gained should enable learners to calculate gradients between two places using the formula:

Vertical interval (Difference in height) divided by Horizontal equivalent (Horizontal distance)

It should be noted that both measurements must be made in the same units before the calculation can be made. Cross-sections may be set for interpretation but learners will not be asked to construct them.

Learners should be able to translate the scale of a feature by describing its size and shape in real terms. They should also be proficient in using the key to the map to enable them to identify features on the map.

Learners should be able to draw inferences about the physical and human landscape by interpretation of map evidence such as patterns of relief, drainage, settlement, communications and land-use.

Learners are advised to practise dividing a map into broad areas of markedly differing relief such as low river valleys and steep-sided upland and to give brief descriptions of these using appropriate geographical terms (such as ridge, plateau, scarp, flood plain) and simple adjectives showing an appreciation of their nature (such as broad, flat, steep-sided, deeply cut, gently sloping). To interpret these maps learners should be able to recognise essential differences in density of drainage, patterns of streams and gradients or sizes of streams in relation to the relief.

They should be able to describe the physical features of coastlines and the shape and the form of river channels as they are shown on large scale maps. Like-wise, practice in describing land-use variation in association with differing types of relief should be part of the preparation or the examination.

The interpretation of human features will also require learners to recognise and analyse patterns of settlement (dispersed, nucleated, linear) and learners should be able to draw sketch maps illustrating these patterns. Learners should be able to interpret and describe features of urban morphology as represented on large scale maps. Learners should be able to describe the functions of and services provided by settlements. They should also be able to give reasons for the site and growth of individual settlements. Communication networks should be recognised in terms of their type and density in relation to physical and human features.

Explanation should be based clearly on map evidence showing the interaction between humans and their physical environment e.g. differences in land-use between upland and lowland,



differences between dense settlement on river plains and sparse settlement on steep upland slopes, differences in land-use within a town.

**NOTE:** It must be stressed that all answers to this question must be based on map evidence only.

### **Maps, Diagrams, Graphs, Tables of data, Written Material**

Questions will be set using some or all of these resources. They should be regarded as important ways of representing geographical data. They may be used to illustrate a basic principle and it is essential that learners should be directed towards their interpretation. For example, a population pyramid may be used to illustrate the age and sex structure of a country. With such a resource learners may be required to describe the broad features of the population structure to show comparisons and contrasts between the male and female populations, the working and non-working population and the young and old age groups. Maps based on global and other small scales may be used and learners may be asked to identify and describe significant features of the human and physical landscape on them, e.g. population distribution, population movements, transport networks, settlement layout, relief and drainage. Learners may be asked to recognise patterns and deduce relationships.

Learners will be expected to be able to extract specified geographical information from simple graphs, diagrams, tables of data and written material. Pie graphs may be used and learners may be asked to describe variations and identify trends in information from two dimensional or more complex graphs. Graphs may show, for example, temperature, birth rate, death rate, energy statistics, rainfall distribution and river discharge.

Learners may be required to plot information on graphs when axes and scales are provided.

Data tables may provide information on physical phenomena, economic activities, population/settlement, agricultural and manufacturing output and learners may be asked to describe and analyse features and trends from the data provided. They may be asked to suggest an appropriate form of graphical representation of the data provided. Written material may be extracts from textbooks, periodicals and newspapers and learners will be expected to show an understanding of the material presented.

### **Photographs and pictorial materials (including field sketches)**

Oblique photographs will be used. Learners should be able to describe human and physical landscapes (landforms, natural vegetation, land-use and settlement) and geographical phenomena from photographs. Only simple descriptions will be required. Learners may be expected to add specified details on associated maps or other materials provided, thereby applying geographical knowledge and understanding. Learners may also be asked to use supporting material in conjunction with large scale maps to identify, describe and analyse features and thereby recognise patterns and deduce trends.

**EQUIPMENT:** It is essential that candidates have the following equipment with them in the examination room: a pencil, eraser, ruler, set square and protractor.

### **PAPER 3**

In this paper, learners will be set a series of investigative tasks on issues relating to one or more of the syllabus themes (learning content). Learners must answer all the questions on the paper which provides a complementary assessment of the assessment objectives tested by Papers 1 and 2 with an emphasis on the investigative Assessment Objective D.

#### **Topics to be included for investigative work are:**

THEME 1: landscapes and landform processes (river processes, coastal/marine processes), weather, climate and natural vegetation

THEME 2: agricultural system, industrial system, leisure and tourism, energy and water resources

THEME 3: population studies, HIV and AIDS and settlement studies

#### **RECOMMENDED PROCEDURES FOR STUDY**

Learners should be made aware of the general requirements for this paper before studies of particular topics are introduced. Reference should be made to the range of inputs involved in a geographical study such as formulating aims and hypotheses, using enquiry skills to collect data, using illustrative techniques to present data, making analyses of data and the formulation of conclusions. Reference should also be made to the types of enquiry skills involved in studies. An introduction to this paper could be made by choosing a detailed study from any of the syllabus themes at an appropriate stage after the teaching of a specific topic for paper 1. Each topic which is selected should enable a significant range of the skills relevant to Paper 3 to be considered in depth.

#### **DATA COLLECTION**

An understanding of the range of methods required for data collection should be developed. For some topics it may be possible for learners to have an opportunity to gain some experience, however limited, of the practical aspects involved in data collection. A questionnaire could be a possible example and, depending on the location of a centre, recording data on a form.

#### **FIELD EXERCISES**

Consideration should be given to actual field exercises where enquiry skills may be used to obtain different types of data. In such cases the inter-relationships of phenomena could provide the basis for a study. Pedestrian counts, traffic counts and observation on land-use could, for example, provide the basis for a topic involving a study of competition for space in an urban area or changes in rural land-use (types of farming, afforestation, crops, roads, buildings, water storage and supply).

#### **ILLUSTRATIVE TECHNIQUES**

A knowledge of illustrative techniques is required to present data across topics for Paper 3. This should include for example, various types of graphs, maps and diagrams: line graphs, bar graphs, divided bar graphs, histograms, flow diagrams and scatter graphs.

#### **ENQUIRY SKILLS**

Questions on this Paper will test knowledge and application of the methodology used in the following types of enquiry skills in field work. Methods used to process and to present data obtained by these enquiry skills will also be assessed.

#### **QUESTIONNAIRES**

Reference should be made to the topics across the themes in the syllabus for which questionnaires would be suitable. Consideration should be given to factors such as the following: oral or written questionnaires, layout of a questionnaire, format such as the wording of questions, various lengths of questions, numbers of questions, locations and times to conduct a questionnaire, sampling methods and the size of the sample and the importance of a pilot survey. Studies should be related to the variety of themes in the syllabus for which questionnaires would be suitable, including ways of determining spheres of influence, the use of services, shopping habits, a farm study, a factory or industrial study, leisure activities, tourism and the attitudes of the public to developments associated with environmental issues. Studies should also include the use of questionnaires to obtain information from an individual or small

groups of individuals relating to a particular issue, e.g the impact of building a new road or a by-pass. With reference to items in the Curriculum content this could include pedestrians, motorists, residents, shopkeepers, farmers and hotel owners.

### **OBSERVATION**

Consideration should be given to syllabus themes which would be relevant for Paper 3 when observation is used as the enquiry skill for data collection. Observations based on the inter-relationship of physical and human aspects in a suitable area would be appropriate for Theme 1 such as a study of weather change from season to season and how it affects human activity or how slopes can affect natural vegetation or agricultural land-use. For Theme 2, the topics could include agricultural land-uses in a limited area, the layout of a farm, selected characteristics of a tourist resort, or the competing demands for supplies of water in a locality. For Theme 3, studies could include land-use in urban areas such as layout, types of buildings, characteristics of the Central Business District (CBD), comparative studies of shopping centres including size, range of services and accessibility. As with the other enquiry skills observations of phenomena should be also linked to the collection, presentation and analysis of data. Methods to record data collection such as maps and record sheets as well as the use of different kinds of samples should be considered where relevant.

### **COUNTS**

Pedestrian and traffic counts, especially for studies in urban areas, are two significant types but references should also be made to other aspects in the syllabus where counts are possible. Leisure activities and aspects of tourism are particular examples. Appropriate methods for the collection of data including, for example, instructions to recorders of counts, relating to the collection and type of data should be known. Consideration should be given to the different ways in which data can be represented in various circumstances, such as isoline maps, flow diagrams and scattergraphs. In the collection of data for pedestrian counts, reference should be made to the comparative value of static and moving counts. Studies should also involve analysing and arriving at conclusions from specific data in relation to the aim or aims of a study.

### **MEASUREMENT TECHNIQUES**

River studies should include the methods used and the equipment required to measure the width and depth across the river channel, the gradient of a river's course, the speed of flow, changes in depth over a short period of time and the size and shape of the bedloads. The methods to calculate from relevant data features such as the speed of flow, cross-sectional area of a river channel and discharge should be understood and used if appropriate.

Beach studies should include methods used and the equipment required to establish the profile of a beach, the size and shape of pebbles, the movement of beach material and the direction of the waves. For both river studies and beach studies a knowledge of the equipment is required including, for example, quadrats for selecting pebbles on a beach, a clinometer to determine the angle of slope of a river valley and a pebbleometer or ruler and callipers to measure pebbles.

Methods used at a weather station to record the weather using observation and instruments should be studied in order to describe patterns of weather. Consideration should be given to temperatures, humidity, precipitation, wind strength including application of the Beaufort scale, wind direction, atmospheric pressure, sunshine, cloud amount and cloud type. Factors such as the locations for instruments and the methods used to take recordings should be known. Students should be able to plan a record sheet to show recordings over a number of days and also methods such as temperature graphs and wind- roses to show specific information. Local studies involving weather readings and recordings should provide a useful foundation especially if the practical aspects of data collection are included.

## 9. GLOSSARY

It is hoped that this glossary of terms used in the Geography papers (which are relevant only to Geography) will prove helpful to learners. The glossary has been deliberately kept brief with respect to the descriptions of meanings. Learners should appreciate that the meaning of a term must depend in part on its geographical context. NOTE: Illustrative techniques as quoted in this glossary encompass maps, diagrams, sketches, graphs, etc.

Annotate	Add labels or notes or short comments to meet specific requirements usually on an illustrative technique.
Calculate	Is used when a numerical answer is required. In general, working should be shown, especially where two or more steps are involved.
Compare	Set out the factual details to show how far things either agree or disagree or are alike or unlike. For a comparison of two elements or themes, candidates will be required to identify similarities and differences either in written statements or as shown by illustrative techniques.
Complete	To add the remaining details required to a written statement or an illustrative technique.
Contrast	Identify differences
Define	Describe accurately, giving the meaning of, definition of something. Is often coupled with terms like state the meaning of or what is meant by .....
Describe	Set out the factual details of something. Give a written account to meet a specific requirement, e.g. to give an account of something in terms of size, shape, height, etc. May also be seen as ' <i>give an account of</i> '. Is often coupled with other command words such as : <i>name and describe</i> (name the feature and set out factual details of), <i>Describe and explain</i> (set out factual details and give reasons for). <i>Describe how, when or where</i> (directive toward a particular aspect for which a written account is required)
Devise or plan	Present a particular feature such as a form or questionnaire to meet a specific requirement or requirements.
Draw	Make a sketch of something. Often coupled with a <i>labelled diagram</i> (Draw diagram/illustration with labels to identify its features).
Explain / Account for	Give reasons for a particular feature.
Factor	Characteristics bringing about a certain result.
Feature	A characteristic of something.
Giving your views	Say what you think about something.
How	In what way? To what extent? By what means/method? May be coupled by with show how (prove how, demonstrate how).
Identify	Select, ascertain. Recognise a specific feature/features on an illustrative technique or in a written statement.
Illustrating	

your answer	Account for your answer by using specific examples or diagrams. Often coupled with by a labelled diagram (use of an illustrative technique relating to specific aspect or aspects in a question to include relevant words or terms to identify particular features).
Insert or label	Place specific names or details to an illustrative technique in response to a particular requirement.
List	Identify and name a number of features to meet a particular purpose. Where a given number of features is specified this should not be exceeded.
Locate	Find the place of .....
Mark	Indicate or show on an illustrative technique a particular feature or features.
Match	Identify two or more statements or illustrative techniques in which there is an element of similarity or inter-relationship.
Measure	Implies that the quantity concerned can be directly obtained from a suitable measuring instrument.
Name	State or specify or identify. Give the word or words by which a specific feature is known or give examples which illustrate a particular feature.
Pattern	A particular spatial arrangement or distribution of phenomena e.g. settlements. In another context one may be asked to <i>suggest a pattern</i> or <i>identify a pattern</i> or <i>trend</i> ( recognise a particular sequence or a number of sequences from an illustrative technique or from a written statement).
Reasons	Explain, justify, give the causes of.
Refer to or With reference to	Write an answer which uses some of the ideas provided in an illustrative technique or other additional material such as a case study.
State	Set down in brief detail. To refer to an aspect of a particular feature by a short statement or by words or by a single word.
Study	Examine closely, pay special attention to, look carefully at and interpret.
Suggest	Set down your ideas on or knowledge of. Propose, put forward for consideration. Often coupled with why (requires a statement or an explanatory statement referring to a particular feature or features).
Use or using the information provided	Base your answer on the information provided (on the content of an illustrative technique or a written statement)
With the help of information in	Write an answer which uses some of the information in the illustrative technique as well as additional materials.
What	Used to form a question with selective ideas/details/factors.
What differences	Use comparative statements to assess the changes involved. Factual descriptions are not .

Where                      At what place? To what place? From what place?  
Why                         For what cause or reason?

## 10. GRADE DESCRIPTIONS

Grade descriptions are provided to give a general indication of the standards of achievement likely to have been shown by learners awarded particular grades. The description must be interpreted in relation to the content and skills. The grade awarded will depend in practice upon the extent to which the learner has met the assessment objectives overall. Shortcomings in some aspects of the assessment may be balanced by better performances in others. Learners will be graded on a scale of A\* - G.

Grade descriptions are provided for judgemental grades A, C, E and G.

### A Grade A learner is expected to:

- demonstrate wide knowledge and comprehension of physical and human geography; and a clear understanding of their inter-relationships.
- make an interpretation and analysis of geographical information with a wide usage of quantitative techniques.
- analyse inter-relationships between people and their environment, recognise the dynamic nature of these relationships and how and why they may change through time and space.
- make balanced judgements and show an awareness of the different attitudes and priorities of individuals and groups and the problematical nature of the interaction of people with the environment.
- demonstrate clearly the ability to formulate a research question in relation to a geographical enquiry and apply appropriate methodology.
- communicate effectively the gathering, processing and analysis of information, and if appropriate, recognise that solutions or conclusions may not be readily be drawn from the enquiry.

### A Grade C learner is expected to:

- demonstrate sound knowledge of physical and human geographical phenomena and a comprehension of important geographical ideas, concepts, generalisations and processes.
- interpret and analyse geographical information, using appropriate quantitative techniques, and account for geographical forces and processes, with discussion of similarities and differences.
- analyse inter-relationships between people and the environment and recognise the dynamic nature of these relationships.
- make balanced judgements on economic, political, social and environmental issues which have geographical dimension through recognition of conflicting view points and solutions.
- demonstrate satisfactorily the ability to formulate a research question in relation to a geographical enquiry and apply appropriate methodology.
- apply geographical techniques, interpret maps at different scales and a range of graphical, numerical and pictorial information such as flow-line diagrams, simple census extracts and photographs and come to some conclusions.

### A Grade E learner is expected to:

- demonstrate basic knowledge of physical and human geography and a comprehension of geographical ideas, concepts, generalisation and relationships.
- make an interpretation and analysis of geographical information using basic statistics.
- describe interrelationships between people and their environment and analyse them in simple terms.
- recognise the existence of differing sets of values influencing economic, environmental, political and social issues which have geographical dimension.
- formulate a research question, record, classify geographical data, use source materials, including simple sketch maps and construct diagrams such as bar graphs but make a limited analysis and conclusions.
- communicate the information by brief statements.

A Grade G learner is expected to:

- demonstrate limited knowledge of physical and human geography and some comprehension of basic concepts.
- make a simple interpretation of geographical information to describe inter-relationships between people and their environment without much analysis.
- recognise the existence of differing sets of values influencing economic, environmental, political and social issues which have geographical dimension.
- formulate a research question, collect some data, use one or two research techniques, and use limited materials.
- communicate information in brief but without adequate conclusions.





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