

Geography

Upper Secondary Syllabus



Papua New Guinea
Department of Education

Issued free to schools by the Department of Education

Published in 2008 by the Department of Education, Papua New Guinea

© Copyright 2008, Department of Education, Papua New Guinea

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted by any form or by any means electronic, mechanical, photocopying, recording or otherwise without the prior written permission of the publisher.

ISBN 978-9980-9921-6-1

Acknowledgements

The Upper Secondary Geography Syllabus was written, edited and formatted by the Curriculum Development Division of the Department of Education. The development of the syllabus was coordinated by Tobias Gena.

Writers from schools, tertiary institutions and non-government organisations across the country have contributed to the writing of this syllabus through specialist writing workshops and consultations. Quality assurance groups and the Geography Subject Advisory Committee have also contributed to the development of this syllabus.

This document was developed with the support of the Australian Government through the Education Capacity Building Program.

Contents

Secretary's message	iv
Introduction	1
Rationale	2
Aims	3
Strands	4
Learning outcomes	5
Unit sequence and content	6
Grade 11 units	7
Grade 12 units	15
Assessment components, weighting and tasks	21
Assessment, examinations and certification.....	22

Secretary's message

This Geography syllabus is to be used by teachers to teach Upper Secondary students (Grades 11 and 12) throughout Papua New Guinea. This syllabus builds upon concepts, skills and attitudes learnt in Lower Secondary and provides a sound foundation for further learning.

The Upper Secondary Geography Syllabus contributes to integral human development as it is based on the students' physical environments, societies and cultures. It links to the National Education Plan's vision, which is that secondary education enables students to achieve their individual potential to lead productive lives as members of the local, national and international community.

The Geography syllabus develops in students the knowledge, skills, attitudes and values to become informed, critical and responsible citizens who can make sound judgements and take appropriate actions that will contribute to equitable and sustainable development of Papua New Guinea and the global society.

Geography enables students to explain processes and spatial patterns to make well-informed judgements about changing environments and contexts. It enhances students' ability to think more critically and creatively about what it means to live sustainably, and to recognise how values and attitudes influence and affect the environment.

The Geography syllabus encourages students to challenge and address social and environmental injustices by taking appropriate action where possible.

I commend and approve this syllabus as the official curriculum for Geography to be used in all schools with Grades 11 and 12 students throughout Papua New Guinea.



DR JOSEPH PAGELIO

Secretary for Education

Introduction

This syllabus is based on the curriculum principles from the National Curriculum Statement. It has been designed using learning outcomes that identify the knowledge, skills, attitudes and values that all students achieve or demonstrate by the end of Grade 12. It is linked to the national curriculum learning area Culture and Community and builds on the knowledge and skills students have learnt since elementary grades. This Geography syllabus offers a number of pathways to post-secondary study and the workforce. It has specialised and general applications in both areas.

Lower Secondary Social Science Strands	Lower Secondary Social Science Units	Upper Secondary Geography Units
Time, continuity and change People, place and space Civics and citizenship Environment and sustainability	Places in the Pacific Region Population Change, Resources and Migration Investigating Papua New Guinea Geography Civics and Citizenship Resource Development and Management Environment Change, Pollution and Solutions Papua New Guinea and the Global Community	The Structure of the Earth Natural Processes and Disasters Oceanography Population Studies Resource Use and Management Urbanisation and Industrialisation Comparative Case Studies

Geography is a specialised subject that requires a high level of English competency. Students need to be fluent in reading, writing and speaking English for research, report writing and oral and written presentations.

Geography is the study of patterns and interactions between people and their environment. It incorporates active inquiry and research skills using maps, graphs, texts and fieldwork. It enables students to develop knowledge and understanding of topical issues in their society and of the interactions and consequences of spatial decisions.

Students develop and apply skills as they investigate society, explore issues, make decisions and work cooperatively with others. Local, national and global examples focus on questions of 'what', 'where', 'why', 'how' and 'what if'? Geography encourages students to develop skills in critical analysis and to become better-informed decision makers. These understandings and skills enable students to participate in society as informed, confident and responsible citizens.

Geography builds on learning from Lower Secondary Social Science, continuing with the strands 'Time, continuity and change', 'Place, space and environment', and including 'Social systems'. The strands are the basis for development of the units.

Geography is to be timetabled for 240–250 minutes per week in Grade 11 and Grade 12.

Rationale

Geography is a science that studies patterns, processes and spatial interrelationships of people, places and environment. It examines the spatial distribution of people and their activities, physical and human-made features, ecosystems and interactions between people and the environment in a dynamic context. Geography also introduces students to current events or issues such as resource use and sustainability, climate change and rural urban drift.

The study of Geography enables students to explain processes and spatial patterns to make well-informed judgements about changing environments and contexts, to think more critically and creatively about what it means to live sustainably, to recognise how values and attitudes influence and affect the environment, and to apply a range of geographical skills and techniques to issues, situations and challenges in a rapidly changing world.

Geography prepares students to become informed, critical and responsible citizens who can make sound judgements and take appropriate actions that will contribute to equitable and sustainable development of Papua New Guinea and the global society. Students studying geography learn to become responsible and competent decision makers and agents, living and working both in Papua New Guinea and as part of the global community.

It further encourages students to challenge and address social and environmental injustices. Students develop attitudes and values that enable them to take appropriate action where possible.

Students studying geography can continue tertiary studies in many fields such as environmental sciences, demography, agriculture, anthropology, geology, surveying and town planning, economics and commerce, architecture, social work and land studies.

The study of Geography allows students to develop knowledge and understanding, skills, attitudes and values using subject matter and inquiry methods that suit their interests. It benefits students when they pursue further education and training, employment and active participation in their communities.

Aims

Geography aims to enable students to develop:

- an understanding of the patterns and processes which shape the natural and human environments
- skills appropriate for geographical inquiry such as field work, mapping and map interpretation, the organisation and analysis of data and the formulation of hypotheses
- an understanding of the ways in which rational geographical analysis and explanation arising from the study of one place may be applied to other situations and places
- a critical sensitivity towards the sustainable use of the environment and resources
- an awareness, understanding and appreciation of other cultures and places.

Strands

The study of Geography is described in the following strands:

Time, continuity and change

This strand deals with understanding patterns and processes of spatial change over time. Geography involves examining how and why natural and human environments change in response to events, and what provides resilience. Through the study of climate, landforms, or demographics, for example, students become aware that change may lead to conflicting natural and human activities, and that there may be varied views on the changes. This strand emphasises the use of critical thinking about the present and the future. Students develop the skills to evaluate and explain processes of change and expand their perspectives on current geographical issues so that they understand how things were done in the past and make informed decisions in order to achieve preferred and possible futures.

Place, space and environment

This strand deals with understanding the complex interconnections and interactions of people and the natural and built environments in local, regional and global settings. Insight into the relationships between people and environments, and their effect on each other, is achieved by examining the spatial associations between them. It is essential for Geography students to appreciate changing human perceptions of the environment. In doing this, they develop a critical understanding of past and present management of the environment and the importance of ecologically sustainable practices. Students investigate geographical issues, examining a variety of opinions from a range of perspectives that encourage balanced decision making. This strand requires students to develop inquiry skills, and to collect, display, and analyse spatially located social and environmental data and their distribution patterns, using images, maps and spatial information systems. Information and communication technologies, including geographic information systems (GIS), enable students to manipulate and present these powerful data in a meaningful way.

Social systems

This strand deals with social justice issues, especially those relating to quality of human life and environmental sustainability. Geography requires students to take into account the social, economic, equity-related, political, ethical, moral, environmental and technological aspects of issues. One focus of geographical inquiry is the critical examination of decision making. For any specific issue, students will learn to recognise who has the greatest power and control of resources and the ability to maintain or change society, and how that influence is exercised. They will develop an awareness of how those involved in each issue seek to influence the outcome. Students are encouraged to take positions they can justify and to propose strategies to achieve preferred futures.

Learning outcomes

The learning outcomes for Geography identify the knowledge, skills, attitudes and values all students achieve or demonstrate at the end of Grade 12. These learning outcomes are listed below.

Students can:

1. describe and differentiate between the internal and external processes that shape the surface of the earth
2. describe and explain the relationships between landforms, climate and vegetation and human activities
3. explain and analyse factors influencing population change and its effect on the environment
4. compare and contrast the factors that influence urbanisation and industrialisation
5. identify and investigate resource management and environmental issues affecting Papua New Guinea and the world
6. demonstrate an understanding of key geographical concepts and ideas
7. choose and apply a range of geographical skills
8. communicate geographical information, ideas and issues using appropriate written and/or oral, cartographic and graphic forms and geographical information systems (GIS) if available.

Learning outcomes mapped against units							
Learning outcomes	Units						
	11.1	11.2	11.3	11.4	12.1	12.2	12.3
1. Describe and differentiate between the internal and external processes that shape the surface of the earth	✓	✓	✓				
2. Describe and explain the relationships between landforms, climate and vegetation and human activities		✓					✓
3. Explain and analyse factors influencing population change and its effect on the environment				✓	✓	✓	✓
4. Compare and contrast the factors that influence urbanisation and industrialisation					✓	✓	✓
5. Identify and investigate resource management and environmental issues affecting Papua New Guinea and the world			✓	✓	✓		
6. Demonstrate an understanding of key geographical concepts and ideas	✓	✓	✓	✓	✓	✓	✓
7. Choose and apply a range of geographical skills	✓	✓	✓	✓	✓	✓	✓
8. Communicate geographical information, ideas and issues using appropriate written and/or oral, cartographic and graphic forms	✓	✓	✓	✓	✓	✓	✓

Unit sequence and content

Grade 11 units	Grade 12 units
<p>11.1 The Structure of the Earth <i>10 weeks</i></p> <ul style="list-style-type: none"> • Composition of the Earth • Geomorphic processes <p>11.2 Natural Processes and Disasters <i>10 weeks</i></p> <ul style="list-style-type: none"> • Air pressure and global wind systems • Climates of the world • Natural vegetation • Natural disasters: Cause, impact and mitigation • Disaster management <p>11.3 Oceanography <i>10 weeks</i></p> <ul style="list-style-type: none"> • Features of the world's oceans • Ownership and control of oceans and marine resources • Issues relating to the use of oceans <p>11.4 Population Studies <i>10 weeks</i></p> <ul style="list-style-type: none"> • Population change • Population trends in Papua New Guinea and the world • Socioeconomic issues affecting population 	<p>12.1 Resource Use and Management <i>10 weeks</i></p> <ul style="list-style-type: none"> • Climate change and energy use • Farming and food security • Mineral resources • Logging and related issues <p>12.2 Urbanisation and Industrialisation <i>10 weeks</i></p> <ul style="list-style-type: none"> • Nature, character, structure and spatial distribution of world cities • Case study: Cities in developing and developed countries • Industrial growth • Impact of industrial growth <p>12.3 Comparative Case Studies <i>10 weeks</i></p> <ul style="list-style-type: none"> • Case Study 1: Comparison of Papua New Guinea and one developed country • Case Study 2: Comparison of Papua New Guinea and one developing country • Case Study 3: A transect study

Grade 11 units

11.1 The Structure of the Earth

10 weeks

This unit introduces students to the processes and forces that shape the landforms on the earth surface. They also develop an understanding of the nature, functions and complex interactions that exist between the four components: atmosphere, hydrosphere, lithosphere and biosphere. Students develop an understanding of how geomorphic and tectonic processes construct and alter landforms and the human and natural environments.

Learning outcomes

Students can:

1. describe and differentiate between the internal and external processes that shape the surface of the earth
6. demonstrate an understanding of key geographical concepts and ideas
7. choose and apply a range of geographical skills
8. communicate geographical information, ideas and issues using appropriate written and/or oral, cartographic and graphic forms and geographical information systems (GIS) if available.

To achieve the outcomes, students:

- identify and describe the internal and external processes and their interactions with the four components: lithosphere, biosphere, hydrosphere and atmosphere
- investigate geomorphic processes and the resulting landforms
- describe and interpret geographical information about plate tectonics and their boundaries from a number of sources
- plan field work and assess the impact of humans on weathering, erosion and mass movement
- identify, collect and record data about erosion, weathering, mass movement and tectonic activities
- construct and interpret flow charts and diagrams describing the key biophysical processes operating within a given area
- interpret and identify plate boundaries and major landforms from maps and diagrams
- examine landforms resulting from geomorphic processes and tectonic activities through fieldwork
- record findings using maps, diagrams, field notes, sketches and so on.

Content

Students acquire knowledge and skills through the learning and teaching of this content.

Composition of the earth

- the four spheres or components of the biophysical environment
 - atmosphere
 - hydrosphere
 - lithosphere
 - biosphere
- the earth's layered structure
 - core
 - mantle
 - crust
- rocks and soil-forming processes
 - rock and soil types and properties
 - rock cycle

Geomorphic processes

- erosion, transportation and deposition
 - agents of erosion and deposition (running water, glaciers, sea waves and wind)
- mass movements
 - soil creep
 - solifluction
 - earth or mud flows
 - slumps
 - landslides
- weathering: types and processes
 - biological
 - physical
 - chemical

Internal forces and plate tectonics

- theory and evidence
 - plate tectonics theory
 - continental drift theory
 - theory of isostasy
- tectonic plate movements
 - faulting, folding and resultant landform features
- earthquakes, volcanism and associated hazards

11.2 Natural Processes and Disasters

10 weeks

This unit introduces students to two aspects of the study of physical geography at the Upper Secondary level. First the unit looks at the elements of natural processes. The major component of the study focuses on climate and the processes associated with it. Secondly, this unit requires students to do individual and group research and/or field studies. Schools must provide an avenue for students to fully participate in this educational project, to make sure students demonstrate their potential and geographical talents through information communication technology (ICT) and geographical information systems (GIS). Finally, the unit attempts to equip students with knowledge about natural disasters so they can make better decisions on the issue in future. Students learn about global air circulation and weather patterns. They also become familiar with issues related to atmospheric processes and climatic variations and changes.

Learning outcomes

Students can:

- 1 describe and differentiate between the internal and external processes that shape the surface of the earth
- 2 describe and explain the relationships between landforms, climate and vegetation and human activities
- 6 demonstrate an understanding of key geographical concepts and ideas
- 7 choose and apply a range of geographical skills
- 8 communicate geographical information, ideas and issues using appropriate written and/or oral, cartographic and graphic forms and geographical information systems (GIS) if available.

To achieve the outcomes, students:

- describe and explain world climate types
- describe global climatic patterns and processes and analyse climatic data from a variety of sources
- comprehend and interpret weather maps, charts and diagrams
- use available data and information to predict climatic conditions
- interpret atlas and topographic maps
- discuss the impact of a natural hazard and suggest ways to mitigate the impact, with emphasis on Papua New Guinea and the Pacific
- conduct field work and report on the nature and dangers of natural disasters; for example, earthquakes, volcanoes, flooding.

Content

Students acquire knowledge and skills through the learning and teaching of this content.

Air pressure and global wind systems

- differential heating and cooling of the earth's surface
- factors influencing air pressure
- air pressure belts
- land and sea breezes
- prevailing and seasonal winds

Climates of the world

- introduction to Papua New Guinea's climate
- global distribution and characteristics of climate zones: polar, temperate, tropical

Natural vegetation

- global distribution and characteristics of vegetation zones: forests, grasslands, deserts

Natural disasters: Cause, impact and mitigation

- definition of a natural hazard
- earthquakes and volcanic activities
- tsunamis
- extreme weather conditions
- landslides
- sea level rise

Disaster management

- government response
- international and non-government organisation (NGO) aid
- local government and community response

11.3 Oceanography

10 weeks

Students learn that oceans make up about 70 per cent of the earth's surface and that Papua New Guinea is located in the Pacific Ocean, the largest ocean in the world. Oceans have many ecosystems and provide many resources that sustain human life directly and indirectly. Students also learn that oceans help regulate atmospheric cycles that are essential for life on Earth. Students learn how to appreciate the importance of oceans to life and to address issues related to ownership and care of the ocean as a resource.

Learning outcomes

Students can:

- 1 describe and differentiate between the internal and external processes that shape the surface of the earth
- 5 identify and investigate resource management and environmental issues affecting Papua New Guinea and the world
- 6 demonstrate an understanding of key geographical concepts and ideas
- 7 choose and apply a range of geographical skills
- 8 communicate geographical information, ideas and issues using appropriate written and/or oral, cartographic and graphic forms and geographical information systems (GIS) if available.

To achieve the outcomes, students:

- describe the physical features and influences of oceans around the world
- demonstrate an understanding of the importance of the ocean as a resource
- outline the economic and social importance and ownership of the sea areas and resources
- describe and compare marine ecosystems
- interpret and create maps and diagrams that illustrate aspects of oceanography
- examine coastal land use through field work or research
- investigate and explain issues related to the use of oceans.

Content

Students acquire knowledge and skills through the learning and teaching of this content.

Features of the world's oceans

- location of each ocean of the world and the countries that border it
- sea bed landforms
- major ocean currents in the world and how they influence climate
- ocean ecosystems and habitats

Ownership and control of oceans and marine resources

- oceans as a global concern
- international treaties and agreements: exclusion zones, surveillance, international waters
- indigenous rights to sea areas and resources

Issues relating to the use of oceans

- fishing methods and their sustainability
- impact of waste disposal on oceans
- nuclear testing in the Pacific
- oil and mineral exploration of the ocean floor
- effects of shipping on the oceans
- impact of tourism on coastal regions
- depleting ocean resources
- navigation

11.4 Population Studies

10 weeks

Where is the world's population? Why is the population of the world rapidly increasing? Why is population distribution varied? This unit answers these questions and provides students with the opportunity to explore and understand how birth and death rates and migration lead to population changes. The populations of Papua New Guinea and the world are increasing dramatically, leading to many challenges. These include issues such as HIV and AIDS, poverty, unemployment, economic inequalities and the shortage of arable land. Once students understand the challenges, they can begin to develop strategies to deal with these problems.

Learning outcomes

Students can:

- 3 explain and analyse factors influencing population change and its effect on the environment
- 5 identify and investigate resource management and environmental issues affecting Papua New Guinea and the world
- 6 demonstrate an understanding of key geographical concepts and ideas
- 7 choose and apply a range of geographical skills
- 8 communicate geographical information, ideas and issues using appropriate written and/or oral, cartographic and graphic forms and geographical information systems (GIS) if available.

To achieve the outcomes, students:

- identify and describe population structure and distribution
- examine and discuss the socioeconomic conditions affecting population
- communicate population information, ideas and issues using appropriate written and/or oral, cartographic and graphic forms
- interpret, compare and examine population statistics and population pyramids
- construct and interpret choropleth maps
- analyse media articles and reports on population
- analyse and interpret statistics and data regarding population composition, structure and distribution
- compare world population growth and distribution by regions or countries

Content

Students acquire knowledge and skills through the learning and teaching of this content.

Population change

- population distribution

- vital rates
 - birth rates
 - death rates
 - infant mortality rates
 - fertility rates
 - rates of natural increase
- global population trends
- the demographic transition model and its limitations
- internal and external migration; for example, urban drift, refugees

Population trends in Papua New Guinea and the world

- population patterns and growth in Papua New Guinea
- comparisons of population structure and problems of Papua New Guinea with at least one developed country—Australia, New Zealand or Japan
- population policies and control; for example, China's 'one child' policy, Malaysia, Papua New Guinea

Socioeconomic issues affecting population

- impact of HIV and AIDS on population growth
- socioeconomic inequality; for example, poverty, standards of living, unemployment
- impact of over-population and under-population; for example, carrying capacity, resource use and availability.

Grade 12 units

12.1 Resource Use and Management

10 weeks

Resource use and environmental issues have been concerns of all countries, including Papua New Guinea. This unit enables students to appreciate and acknowledge the availability of the earth's resources, both locally and globally, and to consider how the resources should be used sustainably for future generations. Students develop an understanding of the impact of unsustainable use of resources on the environment and develop an awareness of the need to make well-informed decisions about resource use and management. Students also develop an understanding of the negative effects of energy use on global climatic patterns.

Learning outcomes

Students can:

- 3 explain and analyse factors influencing population change and its effect on the environment
- 4 compare and contrast the factors that influence urbanisation and industrialisation
- 5 identify and investigate resource management and environmental issues affecting Papua New Guinea and the world
- 6 demonstrate an understanding of key geographical concepts and ideas
- 7 choose and apply a range of geographical skills
- 8 communicate geographical information, ideas and issues using appropriate written and/or oral, cartographic and graphic forms and geographical information systems (GIS) if available.

To achieve the outcomes, students:

- identify the different ways in which fossil fuel and energy resources are used or abused
- identify the impacts of resource abuse on the environment and the climate
- identify traditional Melanesian knowledge of wildlife utilisation
- demonstrate an understanding of appropriate farming methods and sustainable ways of food production
- examine and present issues relating to logging in Papua New Guinea.

Content

Students acquire knowledge and skills through the learning and teaching of this content.

Climate change and energy use

- fossil fuels and their use
- causes and effects of global warming: increase in temperature, melting ice, rising sea levels
 - the 'greenhouse effect'
 - carbon trade
- alternative energy sources: geothermal, hydroelectricity, wind, solar, nuclear

Farming and food security

- farming in developed and developing countries
- sustainable farming methods and techniques
- the 'green revolution' and genetic modification of crops
- inequality of production and distribution of food (poverty and affluence)

Mineral resources

- metallic and non-metallic minerals
- types of mineral deposition and major deposits
- methods of extraction
- mine waste management: the Papua New Guinean experience
- land degradation and rehabilitation
- carbon trading
- socioeconomic impact of mining: royalties, infrastructure

Logging and related issues

- logging policies
- major logging sites in Papua New Guinea
- logging and land degradation
- carbon trading and practices such as forest sequestration

12.2 Urbanisation and Industrialisation

10 weeks

Students learn about the historical perspective of urban growth, which has set the pace for different theories of urban place. The students gather information on urbanisation as a vehicle that generates economic growth, and creates an avenue for urban places to be seen as centres of great social and cultural diversity. As urban places continue to evolve, the structures and functions of parts of them are changing. Students examine, identify, compare and explain the location of industries and their impact. They analyse and describe the basic concepts in urbanisation and industrialisation. Further study of this unit takes place through case studies, field visits and report writing.

Learning outcomes

Students can:

- 3 explain and analyse factors influencing population change and its effect on the environment
- 4 compare and contrast the factors that influence urbanisation and industrialisation
- 6 demonstrate an understanding of key geographical concepts and ideas
- 7 choose and apply a range of geographical skills
- 8 communicate geographical information, ideas and issues using appropriate written and/or oral, cartographic and graphic forms and geographical information systems (GIS) if available.

To achieve the outcomes, students:

- demonstrate the understanding of the patterns, character and spatial distribution of the world's urban settlements
- gather, analyse and present findings on urban growth and industrial growth from a number of sources
- interpret urban land use zoning models
- construct and interpret graphs, maps, diagrams and photographs
- observe, record and report on various urban land uses in the local setting.

Content

Students acquire knowledge and skills through the learning and teaching of this content.

Nature, structure, character and spatial distribution of world cities

- urban concepts
 - urban renewal
 - urban decay
 - decentralisation

- the first cities in the world; for example, Sparta, Athens, Rome, Jerusalem

Case study: Cities in developing and developed countries

- compare and contrast one city from a developing country and one from a developed country, using the following:
 - internal patterns, structure and functions
 - stages of urbanisation (historical overview)
 - spheres of influence
 - challenges of living in the city
 - population

Industrial growth

- industrial revolution
- industrial growth in developing and developed countries
- key industries
 - motor vehicle industry; for example, Japan and South Korea
 - small-scale industries in Papua New Guinea; for example, coffee, biscuit making, tea, soft drinks, beverages, furniture making, craft making

Impact of industrial growth

- multinational corporations
- trade protection
- welfare of workers
 - exploitation
 - unionism
 - unemployment
- factors that either enhance or hinder rapid industrial growth
- effects on people and the natural environment

12.3 Comparative Case Studies

10 weeks

This unit focuses on comparative case studies involving developed and developing countries. Selected developing and developed countries are compared to Papua New Guinea. Students learn about the similarities and differences between the selected countries and Papua New Guinea. Students examine the effect altitude has on climate, vegetation, land use, settlement patterns and so on, and relate this to their own society. Students develop understandings by interacting with one another and asking questions; and by observing, critically evaluating and analysing the comparative factors between these nations and locations. By using investigation, reasoning, participation and communication skills, students learn to become purposeful, tolerant and active members of the local, national and global community.

Learning outcomes

Students can:

- 2 describe and explain the relationships between landforms, climate and vegetation and human activities
- 3 explain and analyse factors influencing population change and its effect on the environment
- 4 compare and contrast the factors that influence urbanisation and industrialisation
- 6 demonstrate an understanding of key geographical concepts and ideas
- 7 choose and apply a range of geographical skills
- 8 communicate geographical information, ideas and issues using appropriate written and/or oral, cartographic and graphic forms and geographical information systems (GIS) if available.

To achieve the outcomes, students:

- use case studies to compare and contrast developed and developing countries with Papua New Guinea
- describe the impact of changing altitude on vegetation and land use
- interpret and apply graph and map skills
- communicate ideas in a variety of ways
- analyse media articles and reports
- locate physical features using lines of latitude and longitude
- use topographic maps to locate natural or built features
- draw cross-sections between two map locations.

Content

Students acquire knowledge and skills through the learning and teaching of this content. Students participate in outdoor activities to observe, sketch and map geographical features of the local environment to compare with those of

the country selected; describe the physical features, land use, climate and settlement patterns that contrast with their own environment; use atlases extensively; and complete three case studies.

Case Study 1

Comparison of Papua New Guinea with one developed country, selected from: Australia, New Zealand, Japan, USA or Germany

Students compare and contrast the following:

- brief overview of history
- climate, vegetation and landforms
- population trends and social indicators
- settlement types and patterns
- land use and transport
- major economic activities and trade.

Case Study 2

Comparison of Papua New Guinea with one developing country, selected from: Indonesia, Brazil, Mexico, Nigeria, China

Students compare and contrast the following:

- brief overview of history
- climate, vegetation and landforms
- population trends and social indicators
- settlement types and patterns
- land use and transport
- major economic activities and trade.

Case Study 3: A transect study

Comparison of Papua New Guinea along latitude 6 °S with either:

- *a country along latitude 40 °N; or*
- *a country along the Tropic of Capricorn*

Students compare and contrast the following along the transect line:

- topography
- vegetation
- settlement patterns
- land use.

Assessment components, weighting and tasks

The internal assessment mark for Geography is to be based on the Grade 11–12 syllabus only. Final assessment must be based on the assessment components detailed below and a range and balance of assessment tasks.

Components, weightings and tasks for Grade 11 units

Component	Weighting	Tasks
Tests and examinations	100	These may include multiple-choice items, short answers and extended responses
Course work including individual or group investigations or research	150	This assessment component is designed to assess all the learning outcomes Assessment tasks may include oral presentations and reports, audiovisual presentations, multimedia presentations, web pages, interviews, debates, essays, role plays and other suitable tasks
Field trip and report	50	Observation, use of charts, diagrams and so on to complete report
Marks	300	

Components, weightings and tasks for Grade 12 units

Component	Weighting	Tasks
Tests and examinations	100	These may include multiple-choice items, short answers and extended responses
Course work including individual or group investigations or research	150	This assessment component is designed to assess all the learning outcomes Assessment tasks may include oral presentations and reports, audiovisual presentations, multimedia presentations, web pages, interviews, debates, essays, role plays and other suitable tasks
Case study	50	Compare and contrast the geography of two countries
Marks	300	

Assessment, examinations and certification

The assessment and reporting practices described here are detailed further in the *National Assessment and Reporting Policy for Papua New Guinea* (2003) and in other support materials produced by the Department of Education.

Assessment

The main purpose of assessment is to improve student learning.

Assessment needs to be *for* learning as well as *of* learning. It is used to evaluate and improve learning and teaching, report achievement and provide feedback to students on their progress.

Assessment measures students' achievement of learning outcomes as described in the syllabus. It is the ongoing process of identifying, gathering and interpreting information about students' achievement of the learning outcomes.

Teaching and learning using an outcomes approach requires teachers to plan their teaching and assess learner performance in relation to outcomes using criteria derived from those outcomes. Assessment involves focusing less on whether a learner has 'passed' or 'failed' and more on what outcomes a learner has achieved and in which areas further support is required.

Assessment in Geography

A student's achievement in Geography at the end of Grade 12 will be assessed against the learning outcomes. Assessment of student progress towards achieving these learning outcomes is cumulative throughout Grades 11 and 12.

It is important that teachers plan the learning and teaching sequence so that there is a balanced spread of assessment during the year. Some tasks, such as investigations or case studies, can be designed so that they are completed over a period of time rather than at the end of the unit. Other tasks can be done immediately the relevant section of the unit or topic has been covered.

Assessment for certification

A student's overall achievement in Geography will be both internally and externally assessed. The final mark awarded to each student will be a combination of the internal assessment mark provided by the school and the examination mark.

Internal assessment

Internal assessment provides a measure of a student's achievement based on a wider range of syllabus content and outcomes than may be covered by the external examination alone.

For Geography, the internal assessment marks will provide a summation of each student's achievements in Grades 11 and 12. The tasks must comply with the components, weightings and types of tasks specified in the tables on page 21. A variety of tasks gives students the opportunity to demonstrate all the learning outcomes in different ways to improve the validity and reliability of the assessment.

All schools must meet the requirements for internal assessment as specified in the *Grade 12 Assessment, Examination and Certification Handbook*.

External examination

The external examination provides a measure of student achievement of those aspects of the learning outcomes that can be reliably measured in an examination setting. Questions for the external examination in Geography will be developed using the outcomes, knowledge and skills in the syllabus.

Recording

All schools must meet the requirements for maintaining and submitting student records as specified in the *Grade 12 Assessment, Examination and Certification Handbook*.

Certification

Students will be awarded the national certificate only if they meet all requirements for internal and external assessment. Eligibility rules for the award of certificates are specified in the *Grade 12 Assessment, Examination and Certification Handbook*.