

Social Science

Junior High

Grade 9

Teacher Guide

Standards-Based



Papua New Guinea

Department of Education

**'FREE ISSUE
NOT FOR SALE'**

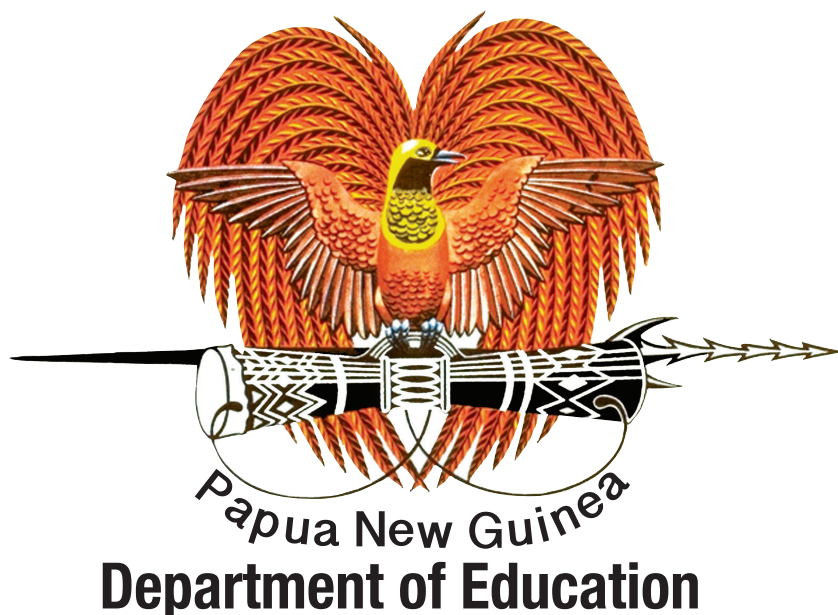
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Issued free to schools by the Department of Education

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Curriculum Panel (CP), Subject Advisory Committee (SAC) and Board of Studies (BOS) members are acknowledged for consideration and endorsement of the teacher guide.

Acronyms

AAL	Assessment AS Learning
AFL	Assessment FOR Learning
AOL	Assessment OF Learning
BOS	Board Of Studies
CDD	Curriculum Development Division
CP	Curriculum Panel
DA	Diagnostic Assessment
IHD	Integral Human Development
GoPNG	Government of Papua New Guinea
KSVA	Knowledge Skills Values and Attitudes
MTDG	Medium Term Development Goals
NDoE	National Department of Education
OBC	Outcomes-Based Curriculum
OBE	Outcomes-Based Education
PNG	Papua New Guinea
SAC	Subject Advisory Committee
SBC	Standards-Based Curriculum
SBE	Standards-Based Education
SCG	Subject Curriculum Group
STEAM	Science, Technology, Engineering, Arts and Mathematics

Secretary's Message

The ultimate aim of Standards-Based Education (SBE) in Papua New Guinea is to prepare students for careers, higher education, and citizenship. SBE will therefore focus on providing students with careers, higher education, and citizenship preparedness knowledge, skills, values and attitudes that they can use to work, study and live in the 21st century.

Standards-Based Curriculum (SBC) in PNG is closely aligned to and is key to achieving this aim and its related operational goals. The curriculum is underpinned by four key pillars:

- morals, values and attitudes;
- cognitive, reasoning, decision-making, problem-solving, high level and 21st century skills;
- Science, Technology, Engineering, Arts and Mathematics (STEAM),
- core curriculum.

Social Science is a significant curriculum framework for teaching children and enabling them to progressively develop proficiency on fundamental ideas of Geography, History, Political Science Economics and Environment. This curriculum addresses Social Science skills and processes of geography, civic and cultural literacy, historical and economical literacy and global awareness.

Thus, students will be able to make informed decisions and will be equipped with problem – solving and management knowledge, skills, values and attitudes in Social Science. This enables them to function effectively in the work and higher education environments as productive and useful citizens of a culturally diverse and democratic society in an interdependent world.

Social Science teachers are expected to effectively plan, teach, and assess these knowledge, skills, values, and attitudes. This teacher guide describes what teachers are expected to know and do to enable all their students to effectively learn and demonstrate the expected levels of proficiency in all the grade level Social Science knowledge, skills, values and attitudes, and attain the national content standards.

I commend and approve this Grade 9 Social Science Teacher Guide to be used by teachers in all high schools throughout Papua New Guinea.



UKE W. KOMBRA, PhD.
Secretary for Education

Introduction

Social Science aims to develop and instill in students the ability to gauge views from all spectrums of life and be able to analyse and make proper judgments and statements to resonate and promote peace and harmony for all people. As individuals, they must be aware of issues of paramount importance affecting their daily lives such as their social groupings and institutions, governance and the natural world surrounding them. Thus, they are able to create and foster great cohesion within their locality which should have an impact on the world and over to sustain and maintain life.

The study of Social Science enhances students' understanding of inter-disciplinary concepts and issues in relation to geography, history, politics, economics and environment within PNG and globally.

Social Science aims to provide a meaningful pedagogical framework for teaching and learning essential and in demand knowledge, skills, values, and attitudes that are required for the preparation of students for careers, higher education and citizenship in the 21st century.

Students should be prepared to gather and understand information, analyse issues critically, learn independently or collaboratively, organize and communicate information, draw and justify conclusions, create new knowledge, and act ethically.

Students' employability will be enhanced through the study and application of STEAM principles. STEAM is an integral component of the core curriculum. All students are expected to study STEAM and use STEAM related skills to solve problems relating to both the natural and the physical environments. The aim of STEAM education is to create a STEAM literate society. It is envisioned that the study of STEAM will motivate students to pursue and take up academic programs and careers in STEAM related fields. STEAM has been embedded in the Social Science curriculum. Equal opportunities should be provided for all students to learn, apply and master STEAM principles and skills.

Social Science is to be timetabled for 200 minutes per week in grade 9.

Structure of the Teacher Guide

This teacher guide comprises of three main sections that provide essential information that all teachers should know and do to effectively implement the Social Science curriculum.

1. General Information

- Purpose of the teacher
- How to use the teacher guide
- Syllabus and teacher guide alignment
- Learning and performance standards
- Core Curriculum
- STEAM
- Curriculum Integration
- Essential KSVAs

2. Teaching and Learning

- Teaching and learning strategies
- Strands, Units and Topics
- Standards-Based Lesson Planning

3. Assessment

- Performance Assessment
- Performance Standards

The above components are linked and closely aligned. They should be connected to ensure that the intended learning outcomes and the expected quality of education standards are achieved. The close alignment of planning, instruction and assessment is critical to the attainment of learning standards.

Purpose of the Teacher Guide

This teacher guide describes what all teachers should know and do. The overarching purpose is to help teachers to effectively plan, teach, assess, evaluate, report and monitor students' learning and mastery of national and grade-level expectations. That is, the essential knowledge, skills, values and attitudes (KSVAs) described in the content standards and grade-level benchmarks, and their achievement of the national and grade-level proficiency standards.

Thus, the teacher is expected to:

- understand the significance of aligning all the elements of Standards-Based Curriculum (SBC) as the basis for achieving the expected level of education quality;
- effectively align all the components of SBC when planning, teaching, and assessing students' learning and levels of proficiency;
- effectively translate and align the Social Science syllabi and teacher guide to plan, teach and assess different Social Science units and topics, and the KSVAs described in the grade-level benchmarks;
- understand the Social Science national content standards, grade-level benchmarks, and evidence outcomes;
- effectively make sense of the content (KSVAs) described in the Social Science national content standards and the essential components of the content described in the grade-level benchmarks;
- effectively guide students to progressively learn and demonstrate proficiency on a range of Social Science knowledge, skills, processes, concepts, ideas, principles, practices, values and attitudes.
- confidently interpret, translate and use Social Science content standards and benchmarks to determine the learning objectives and performance standards, and plan appropriately to enable all students to achieve these standards;
- embed the core curriculum in their Social Science lesson planning, instruction, and assessment to permit all students to learn and master the core KSVAs required of all students;
- provide opportunities for all students to understand how STEAM has and continues to shape the social, political, economic, cultural, and the environment contexts and the consequences, and use STEAM principles, skills, processes, ideas and concepts to inquire into and solve problems relating to both the natural and physical (man-made) worlds as well as problems created by STEAM;
- integrate cognitive skills (critical, creative, reasoning, decision-making, and problem-solving skills), high level thinking skills (analysis, synthesis

and evaluation skills), values (personal, social, work, health, peace, relationship, sustaining values), and attitudes in lesson planning, instruction and assessment;

- meaningfully connect what students learn in Social Science with what is learnt in other subjects to add value and enhance students' learning so that they can integrate what they learn and develop in-depth vertical and horizontal understanding of subject content;
- formulate effective SBC lesson plans using learning objectives identified for each of the topics;
- employ SBC assessment approaches to develop performance assessments to assess students' proficiency on a content standard or a component of the content standard described in the grade-level benchmark;
- effectively score and evaluate students' performance in relation to a core set of learning standards or criteria, and make sense of the data to ascertain students' status of progress towards meeting grade-level and nationally expected proficiency standards, and use evidence from the assessment of students' performance to develop effective evidence-based intervention strategies to help students' who are making inadequate or slow progress towards meeting the grade-level and national expectations to improve their learning and performance.

How to use the Teacher Guide

Teacher Guide provides essential information about what the teacher needs to know and do to effectively plan, teach and assess students learning and proficiency on learning and performance standards. The different components of the teacher guide are closely aligned with SBC principles and practice, and all the other components of PNG SBC. It should be read in conjunction with the syllabus in order to understand what is expected of teachers and students to achieve the envisaged quality of education outcomes.

The first thing teachers should do is to read and understand each of the sections of the teacher guide to help them understand the key SBC concepts and ideas, alignment of PNG SBC components, alignment of the syllabus and teacher guide, setting of content standards and grade-level benchmarks, core curriculum, STEAM, curriculum integration, essential knowledge, skills, values and attitudes, strands, units and topics, learning objectives, SBC lesson planning, and SBC assessment. A thorough understanding of these components will help teachers meet the teacher expectations for implementing the SBC curriculum, and therefore the effective implementation of Grade 9 Social Science Curriculum. Based on this understanding, teachers should be able to effectively use the teacher guide to do the following:

Determine Learning Objectives and Lesson Topics

Topics and learning objectives have been identified and described in the Teacher Guide. Lesson objectives are derived from topics that are extracted from the grade-level benchmarks. Lesson topics are deduced from the learning objectives. Teachers should familiarise themselves with this process as it is essential for lesson planning, instruction and assessment. However, depending on the context and students' learning abilities, teachers would be required to determine additional learning objectives and lesson topics. Teachers should use the examples provided in this teacher guide to formulate additional learning objectives and lesson topics to meet the educational or learning needs of their students.

Identify and Teach Grade Appropriate Content

Grade appropriate content has been identified and scoped and sequenced using appropriate content organisation principles. The content is sequenced using the spiraling sequence principles. This sequencing of content will enable students to progressively learn the essential knowledge, skills, values and attitudes as they progress further into their schooling. What students learn in previous grades is reinforced and deepens in scope with an increase in the level of complexity and difficulty in the content and learning activities. It is important to understand how the content is organised so that grade appropriate content and learning activities can be selected, if not already embedded in the benchmarks and learning objectives, to not only help students learn and master the content, but ensure that what is taught is rigorous, challenging, and comparable.

Integrate the Core Curriculum in Lesson Planning, Instruction and Assessment

Teachers should use this teacher guide to help them integrate the core curriculum – values, cognitive and high-level skills, 21st century skills, STEAM principles and skills, and reading, writing, and communication skills in their lesson planning, instruction and assessment. All students in all subjects are required to learn and master these skills progressively through the education system.

Integrate Cognitive, High Level, and 21st Century Skills in Lesson Planning, Instruction and Assessment

Teachers should integrate the cognitive, high level and 21st century skills in their annual teaching programs, and give prominence to these skills in their lesson preparation, teaching and learning activities, performance assessment, and performance standards for measuring students' proficiency on these skills. Social Science addresses the skills and processes of geography, civic and cultural literacy, historical and economical literacy and global awareness. Thus, students will be able to make informed decisions, problem – solving and management knowledge, skills, values and attitudes in Social Science. This enables them to function effectively in the work and higher education environments as productive and useful citizens of a culturally diverse and democratic society in an interdependent world.

In addition, it envisages all students attaining expected proficiency levels in these skills and will be ready to pursue careers and higher education academic programs that demand these skills, and use them in their everyday life after they leave school at the end of Grade 12. Teachers should use the teacher guide to help them to effectively embed these skills, particularly in their lesson planning and in the teaching and learning activities as well as in the assessment of students' application of the skills.

Integrate Social Science values and attitudes in Lesson Planning, Instruction and Assessment

In Social Science, students are expected to learn, promote and use work, relationship, peace, health, social, personal, family, community, national and global values in the work and study environments as well as in their conduct as community, national and global citizens. Teachers should draw from the information and suggestions provided in the syllabus and teacher guide to integrate values and attitudes in their lesson planning, instruction, and assessment. They should report on students' progression towards internalizing different values and attitudes and provide additional support to students who are yet to reach the internalization stage to make positive progress towards this level.

Integrate Science, Technology, Engineering, Arts and Mathematics (STEAM) Principles and Skills in Lesson Planning, Instruction and Assessment

Teachers should draw from both the syllabus and teacher guide in order to help them integrate STEAM principles and skills, and methodologies in their lesson planning, instruction and assessment. STEAM teaching and learning happens both inside and outside of the classroom. Effective STEAM teaching and

learning requires both the teacher and the student to participate as core investigators and learners, and to work in partnership and collaboration with relevant stakeholders to achieve maximum results. Teachers should use the syllabus, teacher guides and other resources to guide them to plan and implement this and other innovative and creative approaches to STEAM teaching and learning to make STEAM principles and skills learning fun and enjoyable and, at the same time, attain the intended quality of learning outcomes.

Identify and Use Grade and Context Appropriate, Innovative, Differentiated and Creative Teaching and Learning Methodologies

SBC is an eclectic curriculum model. It is an amalgamation of strengths of different curriculum types, including behavioural objectives, outcomes, and competency. Its emphasis is on students attaining clearly defined, measurable, observable and attainable learning standards, i.e., the expected level of education quality. Proficiency (competency) standards are expressed as performance standards/criteria and evidence outcomes, that is, what all students are expected to know (content) and do (application of content in real life or related situations) to indicate that they are meeting, have met or exceeded the learning standards. The selection of grade and contextually appropriate teaching and learning methodologies is critical to enabling all students to achieve the expected standard or quality of education. Teaching and learning methodologies must be aligned to the content, learning objective, and performance standard in order for the teacher to effectively teach and guide students towards meeting the performance standard for the lesson. They should be equitable and socially inclusive, differential, student-centred, and lifelong. They should enable STEAM principles and skills to be effectively taught and learned by students. Teachers should use the teacher guide to help them make informed decisions when selecting the types of teaching and learning methodologies to use in their teaching of the subject content, including STEAM principles and skills.

Plan Standards-Based Lessons

SBC lesson planning is quite difficult to do. However, this will be easier with more practice and experience over time. Effective SBC lesson plans must meet the required standards or criteria so that the learning objectives and performance standards are closely aligned to attain the expected learning outcomes. Teachers should use the guidelines and standards for SBC lesson planning and examples of SBC lesson plans provided in the teacher guide to plan their lessons. When planning lessons, it is important for teachers to ensure that all SBC lesson planning standards or criteria are met. If standards are not met, instruction will not lead to the attainment of intended performance and proficiency standards. Therefore, students will not attain the national content standards and grade-level benchmarks.

Use Standards-Based Assessment

Standards-Based Assessment has a number of components. These components are intertwined and serve to measure evaluate, report, and monitor students' achievement of the national and grade-level expectations, i.e., the essential knowledge, skills, values and attitudes they are expected to master and demonstrate proficiency on. Teachers should use the information

and examples on standards-based assessment to plan, assess, record, evaluate, report and monitor students' performance in relation to the learning standards.

Make informed Judgments About Students' Learning and Progress Towards Meeting Learning Standards

Teachers should use the teacher guide to effectively evaluate students' performance and use the evidence to help students to continuously improve their learning as well as their classroom practice.

It is important that teachers evaluate the performance of students in relation to the performance standards and progressively the grade-level benchmarks and content standards to make informed judgments and decisions about the quality of their work and their progress towards meeting the content standards or components of the standards. Evaluation should not focus on only one aspect of students' performance. It should aim to provide a complete picture of each student's performance. The context, inputs, processes, including teaching and learning processes, and the outcomes should be evaluated to make an informed judgment about each student's performance. Teachers should identify the causal factors for poor performance, gaps in students learning, gaps in teaching, teaching and learning resource constraints, and general attitude towards learning. Evidence-based decisions can then be made regarding the interventions for closing the gaps to allow students to make the required progress towards meeting grade-level and national expectations.

Prepare Students' Performance Reports

Reporting of students' performance and progress towards the attainment of learning standards is an essential part of SBC assessment. Results of students' performance should be communicated to particularly the students and their parents to keep them informed of students' academic achievements and learning challenges as well as what needs to be done to ensure the students' make positive progress towards meeting the proficiency standards and achieving the desired level of education quality. Teachers should use the information on the reporting of students' assessment results and the templates provided to report the results of students' learning.

Monitor Students' Progress Towards Meeting the National Content Standards and Grade-Level Benchmarks

Monitoring of students' progress towards the attainment of learning standards is an essential component of standards-based assessment. It is an evidence-based process that involves the use of data from students' performance assessments to make informed judgments about students' learning and proficiency on the learning standards or their components, identify gaps in students' learning and the causal factors, set clear learning improvement targets, and develop effective evidence-based strategies (including preplanning and re-teaching of topics), set clear timeframes, and identify measures for measuring students' progress towards achieving the learning targets.

Teachers should use the teacher guide to help them use data from students' performance assessments to identify individual students' learning weaknesses

and develop interventions, in collaboration with each student and his/her parents or guardians, to address the weaknesses and monitor their progress towards meeting the agreed learning goals.

Develop additional Benchmarks

Teachers can develop additional benchmarks using the examples in the teacher guide to meet the learning needs of their students and local communities. However, these benchmarks will not be nationally assessed as these are not comparable. They are not allowed to set their own content standards or manipulate the existing ones. The setting of national content standards is done at the national level to ensure that required learning standards are standardised, maintained and monitored to sustain the required level of education quality.

Avoid Standardisation

The teaching and learning strategies by means of lesson plans, lesson objectives and assessment should not be standardised when implementing the Social Science curriculum. SBC does not mean that the content, lesson objectives, teaching and learning strategies, and assessment are standardised. This is a misconception and any attempt to standardise the components of curriculum without due consideration of the teaching and learning contexts, children's backgrounds and experiences, and different abilities and learning styles of children will be counterproductive. It will hinder students from achieving the expected proficiency standards and hence, high academic standards and the desired level of education quality. That is, they should not be applied across all contexts and with all students, without considering the educational needs and the characteristics of each context. Teachers must use innovative, creative, culturally relevant, and differentiated teaching and learning approaches to teach the curriculum and enable their students to achieve the national content standards and grade-level benchmarks. And enable all students to experience success in learning the curriculum and achieve high academic standards.

The teaching and learning and assessment strategies provided in this teacher guide are not fixed and can be changed. Teachers should use the information and examples provided in the teacher guide to guide them to develop, select, and use grade, context, and learner appropriate content, learning objectives, teaching and learning strategies, and performance assessment and standards. SBC is evidence-based hence decisions about the content, learning outcomes, teaching and learning strategies, students' performance, and learning interventions should be based on evidence. Teaching and learning should be continuously improved and effectively targeted using evidence from students' assessment and other sources.

Syllabus and Teacher Guide Alignment

A teacher guide is a framework that describes how to translate the content standards and benchmarks (learning standards) outlined in the syllabus into units and topics, learning objectives, lesson plans, teaching and learning strategies, performance assessment, and measures for measuring students' performance (performance standards). It expands the content overview and describes how this content identified in the content standards and their components (essential KSVAs) can be translated into meaningful and evidence-based teaching topics and learning objectives for lesson planning, instruction and assessment. It also describes and provides examples of how to evaluate and report on students' attainment of the learning standards, and use evidence from the assessment of students' performance to develop evidence-based interventions to assist students who are making slow progress towards meeting the expected proficiency levels to improve their performance.

Grade 9 Social Science comprises of the Syllabus and Teacher Guide. These two documents are closely aligned, complimentary and mutually beneficial.

They are the essential focal points for teaching and learning the essential Social Science knowledge, skills, values and attitudes.

Syllabus and teacher guide alignment	
Syllabus	Teacher Guide
<p>Outlines the ultimate aim and goals, and what to teach and why teach it</p> <ul style="list-style-type: none"> - Overarching and SBC principles - Content overview - Core curriculum - Essential knowledge, skills, values and attitudes - Strands and units - Evidence outcomes - Content standards and grade-level benchmarks - Overview of assessment, evaluation, and reporting 	<p>Describes how to plan, teach, and assess students' performance</p> <ul style="list-style-type: none"> - Determine topics for lesson planning, instruction and assessment - Formulate learning objectives - Plan SBC lesson plans - Select teaching and learning strategies - Implement SBC assessment and evaluation - Implement SBC reporting and monitoring

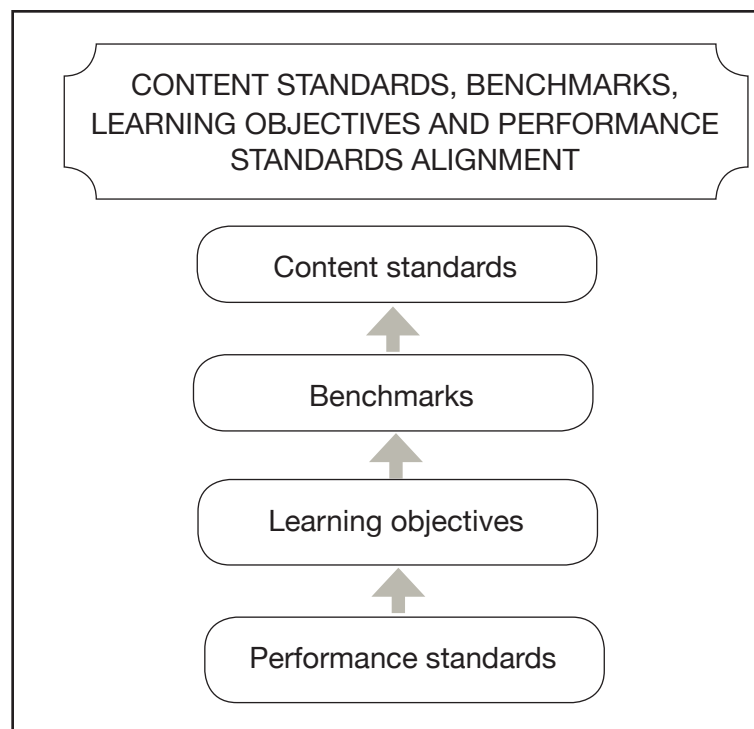
The syllabus outlines the ultimate aim and goals of SBE and SBC, what is to be taught and why it should be learned by students, the underlying principles and articulates the learning and proficiency standards that all students are expected to attain. On the other hand, the teacher guide expands on what is outlined in the syllabus by describing the approaches or the how of planning, teaching, learning, and assessing the content so that the intended learning outcomes are achieved.

This teacher guide should be used in conjunction with the syllabus. Teachers should use these documents when planning, teaching and assessing Grade 9 Social Science content.

Teachers will extract information from the syllabus (e.g., content standards and grade-level benchmarks) for lesson planning, instruction and is for measuring students' attainment of a content standard as well as progress to the next grade of schooling.

Learning and performance standards alignment

Content standards, benchmarks, learning objectives, and performance standards are very closely linked and aligned. There is a close linear relationship between these standards. Students' performance on a significant aspect of a benchmark (KSVA) is measured against a set of performance standards or criteria to determine their level of proficiency using performance assessment. Using the evidence from the performance assessment, individual student's proficiency on the aspect of the benchmark assessed and progression towards meeting the benchmark and hence the content standard are then determined.



Effective alignment of these learning standards and all the other components of PNG SBE and SBC (ultimate aim and goals, overarching, SBC and subject-based principles, core curriculum, STEAM, and cognitive, high level, and 21st century skills) is not only critical but is also key to the achievement of high academic standards by all students and the intended level of education quality. It is essential that teachers know and can do standards alignment when planning, teaching, and assessing students' performance so that they can effectively guide their students towards meeting the grade-level benchmarks (grade expectations) and subsequently the content standards (national expectations).

Learning and Performance Standards

Standards-Based Education (SBE) and Standards-Based Curriculum (SBC) are underpinned by the notion of quality. Standards define the expected level of education quality that all students should achieve at a particular point in their schooling. Students' progression and achievement of education standard(s) are measured using performance standards or criteria to determine their demonstration or performance on significant aspects of the standards and therefore their levels of proficiency or competency. When they are judged to have attained proficiency on a content standard or benchmark or components of these standards, they are then deemed to have met the standard(s). That is, achieved the intend level of education quality.

Content standards, benchmarks, and learning objectives are called learning standards while performance and proficiency standards (evidence outcomes) can be categorised as performance standards. These standards are used to measure students' performance, proficiency, progression and achievement of the desired level of education quality. Teachers are expected to understand and use these standards for lesson planning, instruction and assessment.

Content standards

Content standards are evidence-based, rigorous and comparable regionally and globally. They have been formulated to target critical social, economic, political, cultural, environmental, and employable skills gaps identified from a situational analysis. They were developed using examples and experiences from other countries and best practice, and contextualized to PNG contexts.

Content standards describe what (content - knowledge, skills, values, and attitudes) all students are expected to know and do (how well students must learn and apply what is set out in the content standards) at each grade-level before proceeding to the next grade. These standards are set at the national level and thus cannot be edited or changed by anyone except the National Subject-Based Standards Councils. Content Standards:

- are evidence-based;
- are rigorous and comparable to regional and global standards;
- are set at the national level;
- state or describe the expected levels of quality or achievement;
- are clear, measurable and attainable;
- are linked to and aligned with the ultimate aim and goals of SBE and SBC and overarching and SBC principles;
- delineate what matters, provide clear expectations of what students should progressively learn and achieve in school, and guide lesson planning, instruction, assessment;
- comprise knowledge, skills, values, and attitudes that are the basis for quality education;
- provide teachers a clear basis for planning, teaching, and assessing

lessons;

- provide provinces, districts, and schools with a clear focus on how to develop and organise their instruction and assessment programs as well as the content that they will include in their curriculum.

Benchmarks

Benchmarks are derived from the content standards and benchmarked at the grade-level. Benchmarks are specific statements of what students should know (i.e., essential knowledge, skills, values or attitudes) at a specific grade-level or school level. They provide the basis for measuring students' attainment of a content standard as well as progress to the next grade of schooling.

Grade-level benchmarks:

- are evidenced-based;
- are rigorous and comparable to regional and global standards;
- are set at the grade level;
- are linked to the national content standards;
- are clear, measurable, observable and attainable;
- articulate grade level expectations of what students are able to demonstrate to indicate that they are making progress towards attaining the national content standards;
- provide teachers a clear basis for planning, teaching, and assessing lessons;
- state clearly what students should do with what they have learned at the end of each school-level;
- enable students' progress towards the attainment of national content standards to be measured, and
- enable PNG students' performance to be compared with the performance of PNG students with students in other countries.

APPROACH FOR SETTING NATIONAL CONTENT STANDARDS AND GRADE-LEVEL BENCHMARKS

Strands



Content standards

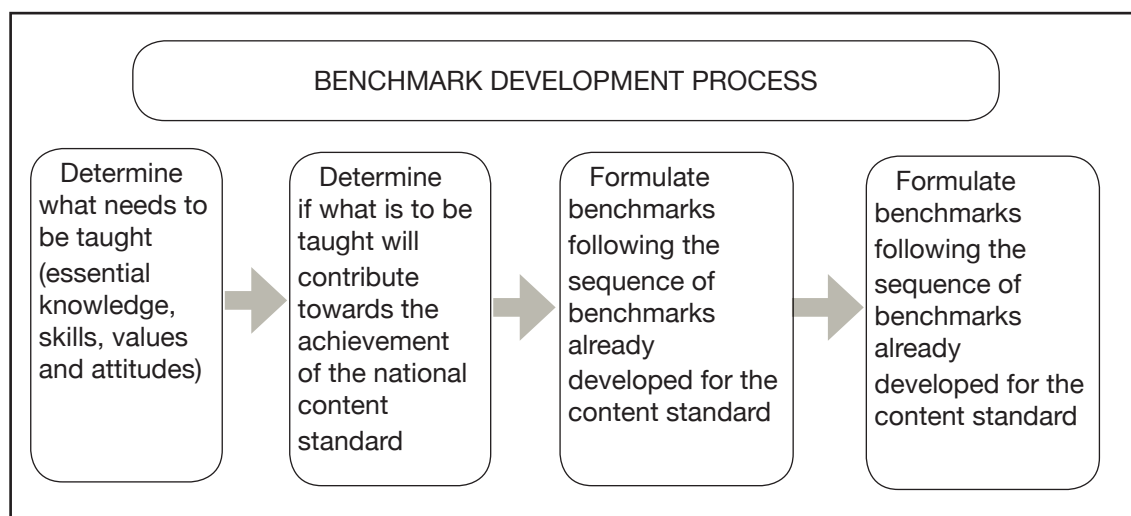


Grade-level Benchmarks

Development of additional benchmarks

Teachers should develop additional benchmarks to meet the learning needs of their students. They should engage their students to learn about local, provincial, national and global issues that have not been catered for in the grade-level benchmarks but are important and can enhance students' understanding and application of the content. However, it is important to note that these benchmarks will not be nationally examined as they are not comparable. Only the benchmarks developed at the national level will be

tested. This does not mean that teachers should not develop additional benchmarks. An innovative, reflect, creative and reflexive teacher will continuously reflect on his/her classroom practice and use evidence to provide challenging, relevant, and enjoyable learning opportunities for his/her students to build on the national expectations for students. Teachers should follow the following process when developing additional grade-level benchmarks.



Learning objectives

Learning or instructional objectives are precise statements of educational intent. They are formulated using a significant aspect or a topic derived from the benchmark, and is aligned with the educational goals, content standards, benchmarks, and performance standards. Learning objectives are stated in outcomes language that describes the products or behaviours that will be provided by students. They are stated in terms of measurable and observable student behaviour.

For example, students will be able to identify all the main towns of PNG using a map.

Performance standards

Performance Standards are concrete statements of how well students must learn what is set out in the content standards, often called the “**be able to do**” of “**what students should know and be able to do.**” Performance standards are the indicators of quality that specify how competent a student’s demonstration or performance must be. They are explicit definitions of what students **must do to demonstrate proficiency or competency at a specific level on the content standards.**

Performance standards:

- measure students’ performance and proficiency (using performance indicators) in the use of a specific knowledge, skill, value, or attitude in real life or related situations
- provide the basis (performance indicators) for evaluating, reporting and monitoring students’ level of proficiency in use of a specific knowledge, skills, value, or attitude

- are used to plan for individual instruction to help students not yet meeting expectations (desired level of mastery and proficiency) to make adequate progress towards the full attainment of benchmarks and content standards
- are used as the basis for measuring students' progress towards meeting grade-level benchmarks and content standards

Proficiency standards

Proficiency standards describe what all students in a particular grade or school level can do at the end of a strand, or unit. These standards are sometimes called evidence outcomes because they indicate if students can actually apply or use what they have learnt in real life or similar situations. They are also categorized as benchmarks because that is what all students are expected to do before exiting a grade or are deemed ready for the next grade.

Core Curriculum

A core set of common learnings (knowledge, skills, values, and attitudes) are integrated into the content standards and grade-level benchmarks for all subjects. This is to equip all students with the most essential and in-demand knowledge, skills, and dispositions they will need to be successful in modern/postmodern work places, higher-education programs and to be productive, responsible, considerate, and harmonious citizens. Common set of learnings are spirally sequenced from Preparatory - Grade 9 to deepen the scope and increase the level of difficulty in the learning activities so that what is learned is reinforced at different grade levels.

The core curriculum includes:

- cognitive (thinking) skills;
- reasoning, decision-making and problem-solving skills
- high level thinking skills (analysis, synthesis and evaluation skills);
- 21st century skills (refer to illustrative list in the Appendix);
- reading, writing and communication skills (literacy skills);
- STEAM principles and skills;
- essential values and attitudes (Core personal and social values, and sustaining values), and
- spiritual values and virtues

The essential knowledge, skills, values and attitudes comprising the core curriculum are interwoven and provide an essential and holistic framework for preparing all students for careers, higher education and citizenship.

All teachers are expected to include the core learnings in their lesson planning, teaching, and assessment of students in all their lessons. They are expected to foster, promote and model the essential values and attitudes as well as the spiritual values and virtues in their conduct, practice, appearance, and their relationships and in their professional and personal lives. In addition, teachers are expected to mentor, mould and shape each student to evolve and possess the qualities envisioned by society.

Core values and attitudes must not be taught in the classroom only; they must also be demonstrated by students in real life or related situations inside and outside of the classroom, at home, and in everyday life. Likewise, they must be promoted, fostered and modeled by the school community and its stakeholders, especially parents. A whole school approach to values and attitudes teaching, promoting and modeling is critical to students and the whole school community internalising the core values and attitudes and making them habitual in their work and school place, and in everyday life. Be it work values, relationship values, peace values, health values, personal and social values, or religious values, teachers should give equal prominence to all common learnings in their lesson planning, teaching, assessment, and learning interventions. Common learnings must be at the heart of all teaching and

Science, Technology, Engineering, Arts and Mathematics

STEAM education is an integrated, multidisciplinary approach to learning that uses science, technology, engineering, arts and mathematics as the basis for inquiring about how STEAM has and continues to change and impact the social, political, economic, cultural and environmental contexts and identifying and solving authentic (real life) natural and physical environmental problems by integrating STEAM-based principles, cognitive, high level and 21st century skills and processes, and values and attitudes.

Social Science is focused on both goals of STEAM rather than just the goal of problem-solving. This is to ensure that all students are provided opportunities to learn, integrate, and demonstrate proficiency on all essential STEAM principles, processes, skills, values and attitudes to prepare them for careers, higher education and citizenship.

Objectives

Students will be able to:

- i. examine and use evidence to draw conclusions about how STEAM has and continues to change the social, political, economic, cultural and environmental contexts.
- ii. investigate and draw conclusions on the impact of STEAM solutions to problems on the social, political, economic, cultural and environmental contexts.
- iii. identify and solve problems using STEAM principles, skills, concepts, ideas and process.
- iv. identify, analyse and select the best solution to address a problem.
- v. build prototypes or models of solutions to problems.
- vi. replicate a problem solution by building models and explaining how the problem was or could be solved.
- vii. test and reflect on the best solution chosen to solve a problem.
- viii. collaborate with others on a problem and provide a report on the process of problem solving used to solve the problem.
- ix. use skills and processes learnt from lessons to work on and complete STEAM projects.
- x. demonstrate STEAM principles, skills, processes, concepts and ideas through simulation and modelling.
- xi. explain the significance of values and attitudes in problem-solving.

Content overview

STEAM is a multidisciplinary and integrated approach to understanding how science, technology, engineering, arts and mathematics shape and are shaped by our material, intellectual, cultural, economic, social, political and environmental contexts. And for teaching students the essential and in-demand cognitive, high level and 21st century skills, values and attitudes, and empower them to effectively use these skills and predispositions to identify and solve problems relating to the natural and physical environments as well as the impact of STEAM-based solutions on human existence and livelihoods, and on the social, political, economic, cultural, and environmental systems.

STEAM disciplines have and continue to shape the way we perceive knowledge and reality, think and act, our values, attitudes, and behaviours, and the way we relate to each other and the environment. Most of the things we enjoy and consume are developed using STEAM principles, skills, process, concepts and ideas. Things humans used and enjoyed in the past and at present are developed by scientists, technologists, engineers, artists and mathematicians to address particular human needs and wants. Overtime, more needs were identified and more products were developed to meet the ever changing and evolving human needs. What is produced and used is continuously reflected upon, evaluated, redesigned, and improved to make it more advanced, multipurpose, fit for purpose, and targeted towards not only improving the prevailing social, political, economic, cultural and environmental conditions but also to effectively respond to the evolving and changing dynamics of human needs and wants. And, at the same time, solutions to human problems and needs are being investigated and designed to address problems that are yet to be addressed and concurred. This is an evolving and ongoing problem-solving process that integrates cognitive, high level, and 21st century skills, and appropriate values and attitudes.

STEAM is a significant framework and focal point for teaching and guiding students to learn, master and use a broad range of skills and processes required to meet the skills demands of PNG and the 21st century. The skills that students will learn will reflect the demands that will be placed upon them in a complex, competitive, knowledge-based, information-age, technology-driven economy and society. These skills include cognitive (critical, synthetic, creative, reasoning, decision-making, and problem-solving) skills, high level (analysis, synthesis and evaluation) skills and 21st century skills (see Appendix 4). Knowledge-based information and technology driven economies require knowledgeable workers and not technicians. Knowledge workers are lifelong learners, are problem solvers, innovators, creators, critical and creative thinkers, reflective practitioners, researchers (knowledge producers rather than knowledge consumers), solutions seekers, outcomes oriented, evidence-based decision makers, and enablers of improved and better outcomes for all.

STEAM focuses on the skills and processes of problem solving. These skills and processes are at the heart of the STEAM movement and approach to not only problem solving and providing evidence-based solutions but also the development and use of other essential cognitive, high level and 21st century skills. These skills are intertwined and used simultaneously to gain a broader understanding of the problems to enable creative, innovative, contextually

relevant, and best solutions to be developed and implemented to solve the problems and attain the desired outcomes. It is assumed that by teaching students STEAM-based problem-solving skills and providing learning opportunities inside and outside the classroom, more students will be motivated to pursue careers and academic programs in STEAM related fields thus, closing the skills gaps and providing a pool of cadre of workers required by technology, engineering, science, and mathematics-oriented industries.

Although, STEAM focuses on the development and application of skills in authentic (real life) contexts, for example the use of problem-solving skills to identify and solve problems relating to the natural and physical worlds, it does not take into account the significant influence values and attitudes have on the entire process of problem-solving. Values and attitudes are intertwined with knowledge and skills. Knowledge, skills, values and attitudes are inseparable. Decisions about skills and processes of skills development and application are influenced by values and attitudes (mindset) that people hold. In the same light, the use of STEAM principles, processes and skills to solve problems in order to achieve the outcomes envisaged by society are influenced by values and the mindset of those who have identified and investigated the problem as well as those who are affected by the problem and will benefit from the outcome.

STEAM problem-solving methods and approaches

Problem-solving involves the use of problem-solving methods and processes to identify and define a problem, gather information to understand its causes, draw conclusions, and use the evidence to design and implement solutions to address it.

Even though there are many different problem-solving methods and approaches, they share some of the steps of problem-solving, for example:

1. identifying the problem;
2. understanding the problem by collecting data;
3. analysing and interpret the data;
4. drawing conclusions;
5. using data to consider possible solutions;
6. selecting the best solution;
7. testing the effectiveness of the solution by trialling and evaluating it, and
8. reviewing and improve the solution.

STEAM problem-solving processes go from simple and technical to advance and knowledge-based processes. However, regardless of the type of process used, students should be provided opportunities to learn the essential principles and processes of problem-solving and, more significantly, to design and create a product that addresses a real problem and meets a human need.

The following are some of the STEAM problem-solving processes.

Engineering and technology problem-solving methods and approaches

Engineering and technology problem-solving methods are used to identify and solve problems relating to the physical world using the design process. The following are some of the methods and approaches used to solve engineering and technology related problems.

Parts substitution

It is the most basic of the problem-solving methods. It simply requires the parts to be substituted until the problem is solved.

Diagnostics

After identifying a problem, the technician would run tests to pinpoint the fault. The test results would be used either as a guide for further testing or for replacement of a part, which also need to be tested. This process continues until the solution is found and the device is operating properly.

Troubleshooting

Troubleshooting is a form of problem-solving, often applied to repair failed products or processes.

Reverse engineering

Reverse engineering is the process of discovering the technological principles underlying the design of a device by taking the device apart, or carefully tracing its workings or its circuitry. It is useful when students are attempting to build something for which they have no formal drawings or schematics.

Divide and conquer

Divide and conquer is the technique of breaking down a problem into sub-problems, then breaking the sub-problems down even further until each of them is simple enough to be solved. Divide and conquer may be applied to all groups of students to tackle sub-problems of a larger problem, or when a problem is so large that its solution cannot be visualised without breaking it down into smaller components.

Extreme cases

Considering “extreme cases” – envisioning the problem in a greatly exaggerated or greatly simplified form, or testing using extreme condition – can often help to pinpoint a problem. An example of the extreme-case method is purposely inputting an extremely high number to test a computer program.

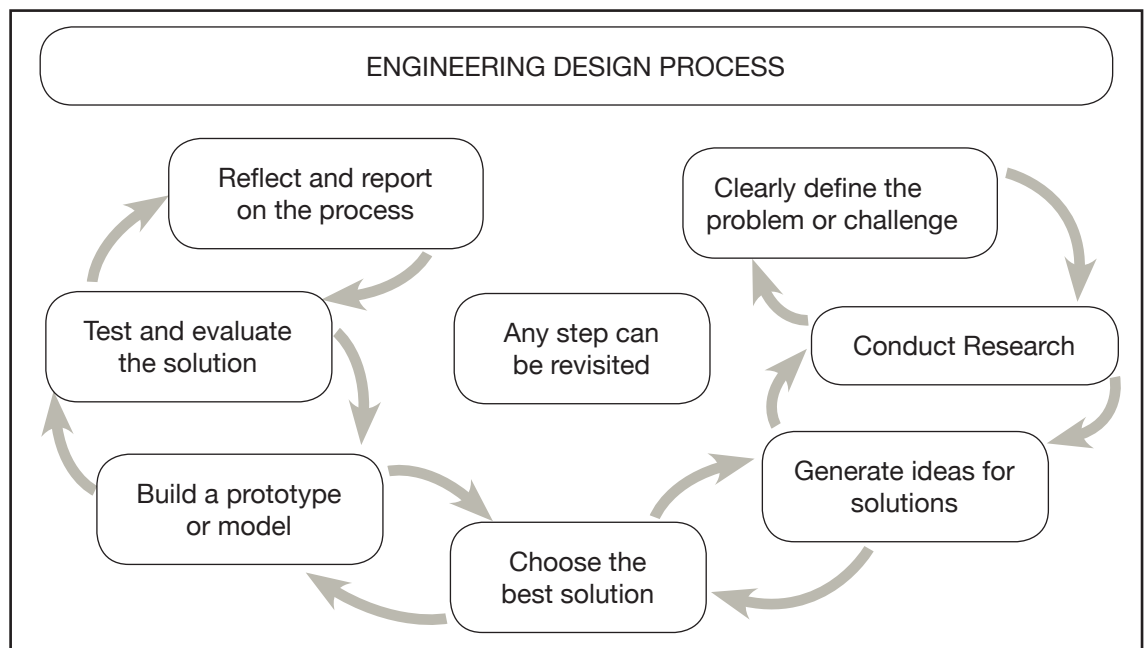
Trial and error

The trial and error method involves trying different approaches until a solution is found. It is often used as a last resort when other methods have been exhausted.

Engineering design process

Technological fields use the engineering design process to identify and define the problem or challenge, investigate the problem, collect and analyse data, and use the data to formulate potential solutions to the problem, analyse each of the solutions in terms of its strengths and weaknesses, and choose the best solution to solve the problem. It is an open-ended problem-solving process that involves the full planning and development of products or services to meet identified needs. It involves a sequence of steps such as the following:

1. Analysing the context and background, and clearly defining the problem.
2. Conducting research to determine design criteria, financial or other constraints, and availability of materials.
3. Generating ideas for potential solutions, using processes such as brainstorming and sketching.
4. Choosing the best solution.
5. Building a prototype or model.
6. Testing and evaluate the solution.
7. Repeating steps as necessary to modify the design or correct faults.
8. Reflecting and report on the process.



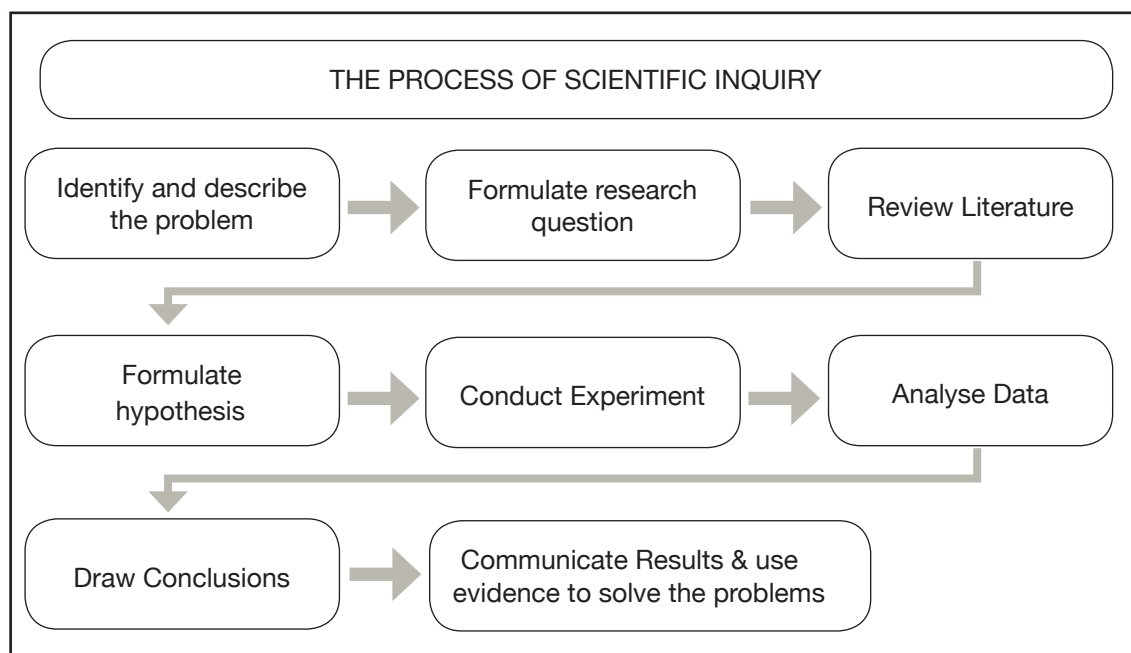
The scientific method and approach to problem-solving

Science uses predominantly the quantitative-scientific inquiry process to investigate, understand, and make informed decisions about problems relating to the natural world. The steps in the process vary, depending on the purpose of the inquiry and the types of questions asked.

There are six basic science process skills:

1. Observation
2. Communication
3. Classification
4. Measurement
5. Inference
6. Prediction

These processes are at the heart of the scientific inquiry and problem-solving process.



The steps above should be taught and demonstrated by students separately and jointly before they implement the inquiry process. Students should be guided through every step of the process so that they can explain it and its importance, and use the steps and the whole process proficiently to identify, investigate and solve problems. A brief explanation and examples of each step are provided below to help teachers plan and teach each step. Students should be provided with opportunities to practice and reflect on each step until they demonstrate the expected level of proficiency before moving on to the next one.

Step 1: Identify and describe the problem

Problems are identified mainly from observations and the use of the five senses – smell, sight, sound, touch and taste. Students should be guided and provided opportunities to identify natural and physical environment problems using their five senses and describe what the problem is and its likely causes.

Example - Observation

When I turn on a flashlight using the on/off switch, light comes out of one end.

Step 2: Formulate research question

After the problem is identified and described, the question to be answered is then formulated. This question will guide the scientist in conducting research and experiments.

Example - Question

What makes light comes out of a flash light when I turn it on?

Step 3: Review literature

It is more likely that the research problem and question have already been investigated and reported by someone. Therefore, after asking the question, the scientist spends some time reading and reviewing papers and books on past research and discussions to learn more about the problem and the question asked to prepare him/her for his own research. Conducting literature review helps the scientist to better understand his/her research problem, refine the research question and decide on the experiment/research approach before the experiment is conducted,

Example - Literature review

The scientist may look at the flashlight's instruction manual for tips or conduct online search on how flashlights work using the manufacturer's or relevant websites. The scientist may even analyse information and past experiments or discoveries regarding the relationship between energy and light.

Step 4: Formulate hypothesis

With a question in mind, the researcher decides on what he/she wants to test (The question may have changed as a result of the literature review). The research will clearly state what he/she wants to find out by carrying out the experiment. He/She will make an educated guess that could answer the question or explain the problem. This statement is called a hypothesis. A hypothesis guides the experiment and must be testable.

Example – Hypothesis

The batteries inside a flashlight give it energy to produce light when the flashlight is turned on.

Step 5: Conduct experiment

This step involves the design and conduct of experiment to test the hypothesis. Remember, a hypothesis is only an educated guess (a possible explanation), so it cannot be considered valid until an experiment verifies that it is valid.

Example - Experimental procedure

1. Remove the batteries from the flashlight, and try to turn it on using the on/off switch.
Result: The flashlight does not produce light
2. Re-insert the batteries into the flashlight, and try to turn it on using the on/off switch.
Result: The flashlight does produce light.
3. Write down these results

In general, it is important to design an experiment to measure only one thing at a time. This way, the researcher knows that his/her results are directly related to the one thing he/she changed. If the experiment is not designed carefully, results may be confusing and will not tell the researcher anything about his/her hypothesis.

Researchers collect data while carrying out their experiments. Data are pieces of information collected before, during, or after an experiment. To collect data, researchers read the measuring instruments carefully. Researchers record their data in notebooks, journals, or on a computer.

Step 6: Analyse data

Once the experiment is completed, the data is then analysed to determine the results. In addition, performing the experiment multiple times can be helpful in determining the credibility of the data.

Example - Analysis

1. Record the results of the experiment in a table.
2. Review the results that have been written down.

Step 7: Draw conclusions

If the hypothesis was testable and the experiment provided clear data, the scientist can make a statement telling whether or not the hypothesis was correct. This statement is known as a conclusion. Conclusions must always be backed up by data. Therefore, scientists rely heavily on data so they can make an accurate conclusion.

If the data support the hypothesis, then the hypothesis is considered correct or valid. However, if the data do not support the hypothesis, the hypothesis is considered incorrect or invalid.

Example - Valid hypothesis

The flashlight did not produce light without batteries. The flashlight did produce light when batteries were inserted. Therefore, the hypothesis that batteries give the flashlight energy to produce light is valid, given that no changes are made to the flashlight during the experiment.

Example - Invalid hypothesis

The flashlight did not produce light when the batteries were inserted. Therefore, the hypothesis that batteries give the flashlight energy to produce light is invalid. In this case, the hypothesis would have to be modified to say something like, "The batteries inside a flashlight give it energy to produce light when the batteries are in the correct order and when the flashlight is turned on." Then, another experiment would be conducted to test the new hypothesis.

An invalid hypothesis is not a bad thing! Scientists learn something from both valid and invalid hypotheses. If a hypothesis is invalid, it must be rejected or modified. This gives scientists an opportunity to look at the initial observation in a new way. They may start over with a new hypothesis and conduct a new experiment. Doing so is simply the process of scientific inquiry and learning.

Step 8: Communicate findings

Scientists generally tell others what they have learned. Communication is a very important component of scientific progress and problem-solving. It gives other people a chance to learn more and improve their own thinking and experiments. Many scientists' greatest breakthroughs would not have been possible without published communication or results from previous experimentation.

Every experiment yields new findings and conclusions. By documenting both the successes and failures of scientific inquiry in journals, speeches, or other documents, scientists are contributing information that will serve as a basis for future research and for solving problems relating to both the natural and physical worlds. Therefore, communication of investigative findings is an important step in future scientific discovery and in solving social, political, economic, cultural, and environmental problems.

Example - Communication of findings

Write your findings in a report or an article and share it with others, or present your findings to a group of people. Your work may guide someone else's research on creating alternative energy sources to generate light, additional uses for battery power, etc.

Artistic design

Science uses predominantly the quantitative-scientific inquiry process to investigate, understand, and make informed decisions about problems. The steps in the process vary, depending on the purpose of the inquiry and the types of questions asked. There are six basic science process skills:

The equipping and enabling of students to become proficient in a broad range of STEAM skills, processes and predispositions can also lead to the attainment of many other societal goals, including national and global development goals and aspirations. These goals include:

- sustainability goals;
- peace related goals;
- work related goals;
- academic goals;
- relationship goals;
- health goals;
- adoption and internalisation of values and attitudes accepted by society, and
- improved social, political, economic outcomes.

Even though the original purpose and the drive of STEAM was to develop a pathway to engage students in learning about, experiencing, and applying STEAM skills in real life situations to motivate and hopefully get them to pursue careers in STEAM related fields and undertake STEAM related higher education programs to meet the demand for STEAM workers, STEAM education can also be used to teach and engage students to study more broadly the impact of

STEAM on the social, economic, political, intellectual, cultural and environmental contexts. This line of inquiry is more enriching, exciting, empowering and transformative.

STEAM-based lesson planning

Effective STEAM lesson planning is key to the achievement of expected STEAM outcomes. STEAM skills can be planned and taught using separate STEAM-based lesson plans or integrated into the standards-based lesson plans. To effectively do this, teachers should know how to write effective standards and STEAM-based lesson plans.

Developing STEAM-based lesson plans

Teachers should integrate STEAM content and teaching, learning and assessment strategies into their standards-based lesson plans.

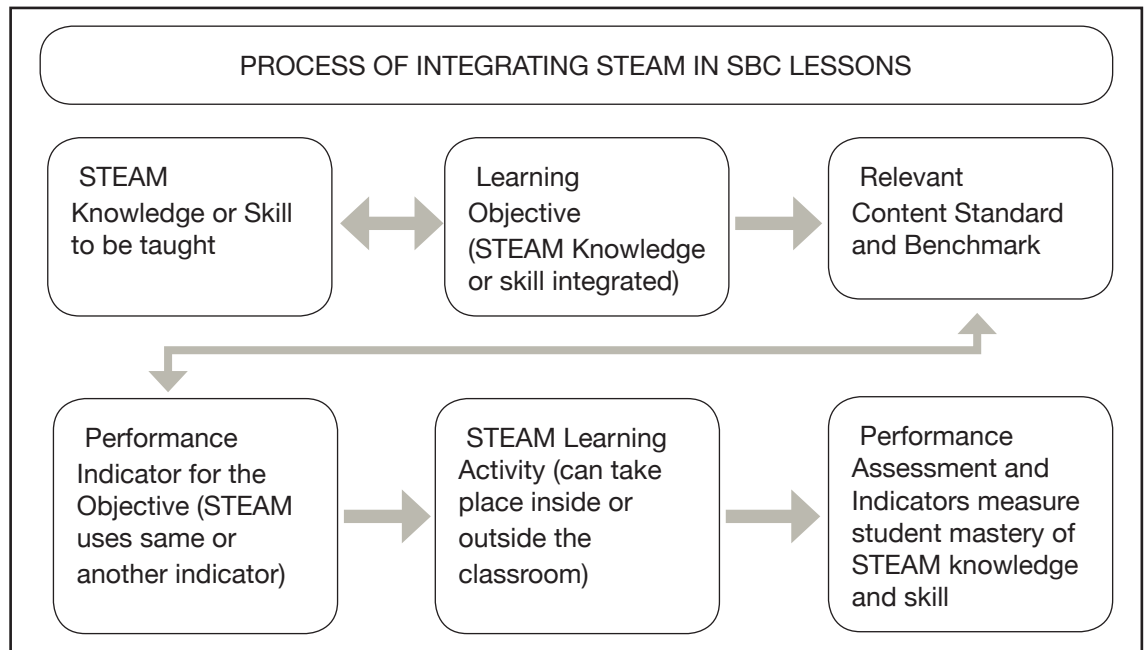
Integration of STEAM problem-solving skills into standards-based lesson plans

Knowing how to integrate STEAM problem-solving skills, principles, values and attitudes as well as STEAM teaching, learning, and assessment strategies into the standards-based lesson plans is essential for achieving the desired STEAM learning outcomes. When integrating STEAM problem-solving skills into the standards-based lesson plans, teachers should ensure that these skills are not only effectively aligned to the learning objective and performance standards, they must also be effectively taught and assessed.

STEAM principles and problem-solving skills are integrated into the content standards and grade-level benchmarks. A list of these skills, including 21st century skills, is provided in the grade 9 syllabus. Teachers should ensure that these skills are integrated in their standards-based lesson plans, taught and assessed to determine students' level of proficiency on each skill or specific components of the skill. Teachers should use the following process as guide to integrate STEAM principles and problem-solving skills into the standards-based lesson plans.

Teachers are expected to integrate the essential STEAM principles, processes, skills, values and attitudes described in the grade 9 benchmarks when formulating their standards-based lesson plans. Opportunities should be provided inside and outside of the classroom for students to learn, explore, model and apply what they learn in real life or related situations. These learning experiences will enable students to develop a deeper understanding of STEAM principles, processes, skills, values and attitudes and appreciate their application in real life to solve problems.

Process for integrating STEAM principles and problem-solving skills into standards-based lessons



Teachers should follow the steps given below when integrating STEAM problem-solving principles and skills into their standards-based lesson plans.

- Step 1:** Identify the STEAM knowledge or skill to be taught (From the table of KSVAs for each content standard and benchmark). This could already be captured in the learning objective stated in the standards-based lesson plan.
- Step 2:** Develop and include a performance standard or indicator for measuring student mastery of the STEAM knowledge or skill (e.g. level of acceptable competency or proficiency) if this is different from the one already stated in the lesson plan.
- Step 3:** Develop student learning activity (An activity that will provide students the opportunity to apply the STEAM knowledge or skill specified by the learning objective and appropriate statement of the standards). Activity can take place inside or outside of the classroom, and during or after school hours.
- Step 4:** Develop and use performance descriptors (standards or indicators) to analyse students' STEAM related behaviours and products (results or outcomes), which provide evidence that the student has acquired and mastered the knowledge or skill of the learning objective specified by the indicator(s) of the standard(s).

STEAM teaching strategies

STEAM education takes place in both formal and informal classroom settings. It takes place during and after school hours. It is a continuous process of inquiry, data collection, data analysis, making decisions about interventions, and implementing and monitoring interventions for improvements.

There are a variety of STEAM teaching strategies. However, teaching strategies selected must enable teachers to guide students to use the engineering and artistic design processes to identify and solve natural and physical environmental problems by designing prototypes and testing and refining them to effectively mitigate the problems identified. The following are some of the strategies that could be used to utilise the STEAM approach to solve problems and coming up with technological solutions.

1. Inquiry-Based Learning
2. Problem-Based Learning
3. Project-based Learning
4. Collaborative Learning

Collaborative learning involves individuals from different STEAM disciplines and expertise in a variety of STEAM problem solving approaches working together and sharing their expertise and experiences to inquire into and solve a problem.

Teachers should plan to provide students opportunities to work in collaboration and partnership with experts and practitioners engaged in STEAM related careers or disciplines to learn first-hand about how STEAM related skills, processes, concepts, and ideas are applied in real life to solve problems created by the natural and physical environments. Collaborative learning experiences can be provided after school or during school holidays to enable students to work with STEAM experts and practitioners to conduct inquiry and solve problems by developing creative, innovative and sustainable solutions. Providing real life experiences and lessons, e.g., by involving students to actually solve a scientific, technological, engineering, or mathematical, or Arts problem, would probably spark their interest in a STEAM career path.

Developing STEAM partnerships with external stakeholders e.g., higher education institutions, private sector, research and development institutions, and volunteer and community development organizations can enhance students' learning and application of STEAM problem solving principles and skills.

1. Participatory Learning
2. Group-Based Learning
3. Task Oriented Learning
4. Action Learning
5. Experiential Learning
6. Modeling
7. Simulation

STEAM learning strategies

Teachers should include in their lesson plans STEAM learning activities. These activities should be aligned to principle or a skill planned for students to learn and demonstrate proficiency at the end of the lesson to expose students to STEAM and giving them opportunities to explore STEAM-related concepts, they will develop a passion for it and, hopefully, pursue a job in a STEAM field. Providing real life experiences and lessons, e.g., by involving students to actually solve a scientific, technological, engineering, or mathematical, or arts

problem, would probably spark their interest in a STEAM career path. This is the theory behind STEAM education.

STEAM-based assessment

STEAM-based assessment is closely linked to standards-based assessment where assessment is used to assess students' level of competency or proficiency of a specific knowledge, skill, value, or attitude taught using a set of performance standards (indicators or descriptors). The link also includes the main components such as the purpose, the assessment principles and assessment strategies and tools.

In STEAM-based assessment, assessments are designed for what students should know and be able to do. In STEAM learning students are assessed in a variety of ways including portfolios, project/problem-based assessments, backwards design, authentic assessments, or other student-centered approaches.

When planning and designing the assessment, teachers should consider the authenticity of the assessment by designing an assessment that relates to a real world task or discipline specific attributes (such as simulation, role play, placement assessment, live projects, debates) which should make the activity meaningful to the students, and therefore be motivating as well as developing employability skills and discipline specific attributes.

Effective STEAM-based assessment strategies

The following sections describe six assessment tools and strategies shown to impact teaching and learning as well as help teachers foster a 21st century learning environment in their classrooms:

1. Rubrics
2. Performance-Based Assessments (PBAs)
3. Portfolios
4. Student self-assessment
5. Peer-assessment
6. Student Response Systems(SRS).

Although the list does not include all innovative assessment strategies, it includes what we think are the most common strategies, and ones that may be particularly relevant to the educational context of developing countries in this 21st century. Many of the assessment strategies currently in use fit under one or more of the categories discussed. Furthermore, it is important to note that these strategies also connect in a variety of ways.

1. Rubrics

Rubrics are both a tool to measure students' knowledge and ability as well as an assessment strategy. A rubric allows teachers to measure certain skills and abilities not measurable by standardized testing systems that assess discrete knowledge at a fixed moment in time. Rubrics are also frequently used as part of other assessment strategies (portfolios, performances, projects, peer-review and self-assessment). They will be discussed in those sections as well.

2. Performance-Based Assessments

Performance-Based Assessments (PBA), also known as project-based or authentic assessments, are generally used as a summative evaluation strategy to capture not only what students know about a topic, but if they have the skills to apply that knowledge in a “real-world” situation. By asking them to create an end product, PBA pushes students to synthesize their knowledge and apply their skills to a potentially unfamiliar set of circumstances that is likely to occur beyond the confines of a controlled classroom setting.

The implementation of performance-based assessment strategies can also impact other instructional strategies in the classroom.

3. Portfolio Assessment

Portfolios are a collection of student work gathered over time that is primarily used as a summative evaluation method. The most salient characteristic of the portfolio assessment is that rather than being a snapshot of a student’s knowledge at one point in time (like a single standardized test), it highlights student effort, development, and achievement over a period of time; portfolios measure a student’s ability to apply knowledge rather than simply regurgitate. They are considered both student-centred and authentic assessments of learning.

4. Self-assessment

While the previous assessment tools and strategies listed in this report generally function as summative approaches, self-assessment is generally viewed as a formative strategy, rather than one used to determine a student’s final grade. Its main purpose is for students to identify their own strengths and weaknesses and to work to make improvements to meet specific criteria. Self-assessment occurs when students judge their own work to improve performance as they identify discrepancies between current and desired performance. In this way, self-assessment aligns well with standards-based education because it provides clear targets and specific criteria against which students or teachers can measure learning.

Self-assessment is used to promote self-regulation, to help students reflect on their progress and to inform revisions and improvements on a project or paper. In order for self-assessment to be truly effective four conditions must be in place: the self-assessment criteria is negotiated between teachers and students, students are taught how to apply the criteria, students receive feedback on their self-assessments and teachers help students use assessment data to develop an action plan.

5. Peer assessment

Peer assessment, much like self-assessment, is a formative assessment strategy that gives students a key role in evaluating learning. Peer assessment approaches can vary greatly but, essentially, it is a process for learners to consider and give feedback to other learners about the quality or value of their work. Peer assessments can be used for a variety of products like papers, presentations, projects, or other skilled behaviours. Peer assessment is understood as more than only a grading procedure and is also envisioned as

teaching strategy since engaging in the process develops both the assessor and assessee's skills and knowledge.

The primary goal for using peer assessment is to provide feedback to learners. This strategy may be particularly relevant in classrooms with many students per teacher since student time will be more plentiful than teacher time. Although any single student's feedback may not be rich or in-depth as teacher's feedback, the research suggests that peer assessment can improve learning.

6. Student Response System

Student response system(SRS), also known as classroom response system (CRS) or audience response system (ARS) is a general term that refers to a variety of technology-based formative assessment tools that can be used to gather student-level data instantly in the classroom through the combination of hardware, (voice recorders, PC, internet connection, projector and screen) and software.

Teachers can ask students a wide range of questions (both closed and open ended), where students can respond quickly and anonymously, and the teacher can display the data immediately on graphs. The use of technology also includes a use of video which examines how a range of strategies can be used to assess students' understanding.

The value of SRS comes from teachers analyzing information quickly and then devising real-time instructional solutions to maximize student learning. This includes a suggested approach to help teachers and trainers assess learning.

Curriculum Integration

What is Curriculum Integration?

Curriculum integration is making connections in learning across the curriculum. The ultimate aim of curriculum integration is to act as a bridge to increase students' achievement and engage in relevant curriculum (*Susan M. Drake and Rebecca C. Burns 2008*).

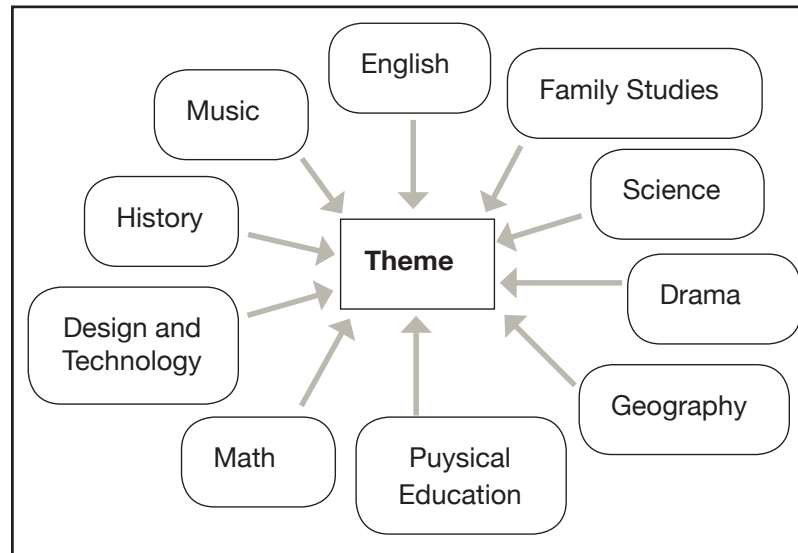
Teachers must develop intriguing curriculum by going beyond the traditional teaching of content based or fragmented teaching to one who is knowledge based and who should be perceived as a 21st century innovative educator. Curriculum integration is a holistic approach to learning thus curriculum integration in PNG SBC will have to equip students with the essential knowledge, skills, values and attitudes that are deemed 21st century.

There are three approaches that PNG SBC will engage to foster conducive learning for all its children whereby they all can demonstrate proficiency at any point of exit. Adapting these approaches will have an immense impact on the lives of these children thus they can be able to see themselves as catalyst of change for a competitive PNG. Not only that but they will be comparable to the world standards and as global citizens.

Engaging these three approaches in our curriculum will surely sharpen the knowledge and ability of each child who will foresee themselves as assets through their achievements and thus contribute meaningfully to their country. They themselves are the agents of change. Integrated learning will bear forth a generation of knowledge based populace who can solve problems and make proper decisions based on evidence. Thus, PNG can achieve its goals like the Medium Term Development Goals (MTDG) and aims such as the Vision 2050 for a happy, healthy and wealthy society whereby, all its citizens should have access to and fair distribution to income, shelter, health, education and general goods and services thus improving the general standard of living for PNG in the long run.

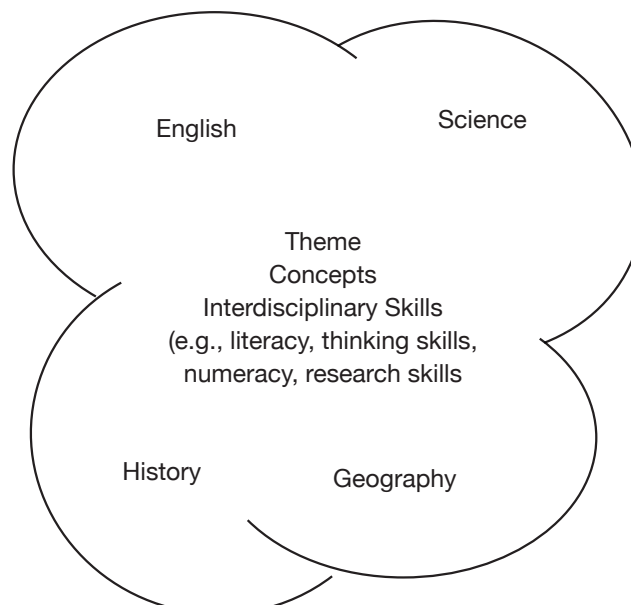
1. Multidisciplinary approach

In this approach, learning involves a theme or concept that will be taught right across all subject areas of study by students. That is, content of a particular theme will be taught right across all subjects as shown in the diagram below. For instance, if the theme is global warming, subject areas create lessons or assessment as per their subjects around this theme. Social Science will address this issue and Science and all other subject will do likewise.



2. Interdisciplinary approach

This approach addresses learning similarly to the multidisciplinary approach of integrated learning whereby learning takes place within the subject area. However, it is termed interdisciplinary in that the core curriculum of learning is interwoven into each subject under study by the students. For instance; in Social Science geography strand, students write essay on internal migration however, apart from addressing the issues of this topic, they are to apply the skill of writing text types in their essay, such as; argumentative, informative, explanatory, descriptive, expository and narrative essay. They must be able to capture the mechanics of English skills such as grammar, punctuation and so forth.



Though these skills are studied under English, they are considered as core skills that cut across all subjects. For example; if Science students were to write about human development in biology, then the application of writing skills has to be captured by the students in their writing. It is not seen as an English skill but a standard essential skill all students must know and do regardless.

Therefore, essential knowledge, skills, values and attitudes comprising the core curriculum are interwoven and provide an essential and holistic framework for preparing all students for careers, higher education and citizenship in this learning.

3. Intra-disciplinary approach

This approach involves teachers integrating sub disciplines within a subject area. For instance, within the subject Social Science, the strands (disciplines) of geography, environment, history and political science will all be captured studying a particular content for Social Science. For example, under global warming, students will study the geographical aspects of global warming, environmental aspect of global warming and likewise for history, political science and economics. Thus, children are well aware of the issues surrounding global warming and can address it confidently at each level of learning.

4. Trans-disciplinary approach

In this approach, learning goes beyond the subject area of study. Learning is organized around students' questions and concerns. That is, where there is a need for change to improve lives, students develop their own curriculum to effect this need.

The trans-disciplinary approach addresses real-life situations thus giving the opportunity to students to attain real life skills. This learning approach is more to do with Project-Based Learning which is also referred to as problem-based learning or place-based learning.

The three steps to planning project based curriculum (*Chard 1998*).

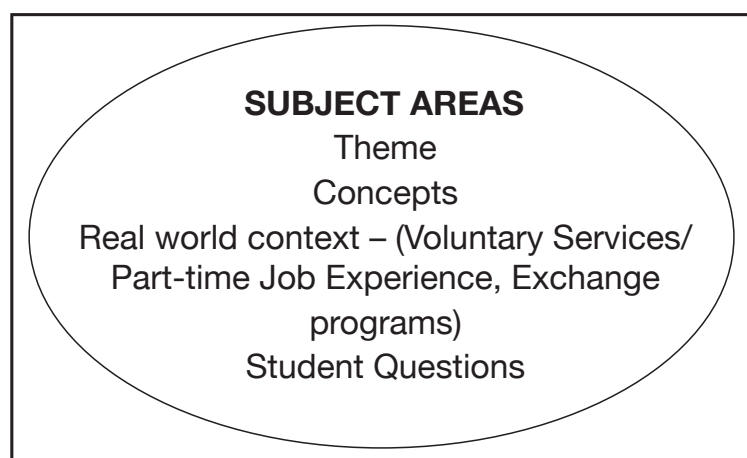
1. Teachers and students select a topic of study based on student interests, curriculum standards, and local resources
2. The teacher finds out what the students already know and helps them generate questions to explore. The teacher also provides resources for students and opportunities to work in the field
3. Students share their work with others in a culminating activity. Students display the results of their exploration and review and evaluate the project.

For instance; students may come up with slogans for school programs such as 'Our culture – clean city for a healthier PNG'. The main aim could be to curb betel nut chewing in public areas especially around bus stops and local markets. Here, students draw up their own instructions and criteria for assessment which is; they have to clean the nearest bus stop or local market once a week throughout the year. They also design and create posters to educate the general public as their program continues. They can also involve the town council and media to assist them especially to carry out awareness.

Studies (*Susan M. Drake and Rebecca C. Burns 2008*). have proven that Project based-programs have led to the following:

- Students go far beyond the minimum effort
- Make connections among different subject areas to answer open-ended questions
- Retain what they have learnt
- Apply learning to real-life problems
- Have fewer discipline problems
- Lower absenteeism (*Curtis, 2002*)

These integrated learning approaches will demand for teaches to be proactive in order to improve students learning and achievements. In order for PNG Standards-Based Curriculum to serve its purpose fully, these three approaches must be engaged for better learning for the children of Papua New Guinea now and in the future.



Essential Knowledge, Skills, Values, and Attitudes

Students' level of proficiency and progression towards the attainment of content standards will depend on their mastery and application of essential knowledge, skills, values, and attitudes in real life or related situations.

Social Science has 5 broad areas (strands) which contain essential knowledge captured in the national content standards and benchmarks. Knowledge is 'what students must know and understand' in Social Science. The fundamental concepts in Social Science are outlined below.

Geography

- The examination, description, and explanation of the earth - its variability from place to place, how places and features change over time, and the processes responsible for these variations and changes.
- Human geography (population, migration,)

History

- Historical roots and how past events have shaped Papua New Guinea and the world.
- Reconstructing and interpreting historical events

Political Science

- Political ideologies and systems (power, authority, governance and functions of different political systems)

Economics

- The concept of scarcity (limited resources & unlimited needs & wants)
- Satisfying needs and wants
- Decision making

Environment

- Physical systems and processes of the environment
- Relationship between people and the environment
- Impact of the exploitation of the natural environment
- Good stewards of the environment

Social Science requires 'inquiry-based learning'. The inquiry-based learning 'is an approach that emphasises the role of the student in the learning process, rather than the teacher telling the students what they need to know. It encourages the students to explore a topic, ask questions and share ideas. Therefore, the skills outlined here are essential for 'inquiry-based learning'.

Research Skills

- Access information
- Organise information
- Evaluate sources
- Use information
- Align solution with task
- Cite all sources accurately

Collaborating Skills

Working effectively with peers, listen and share ideas and compromise to create good products

- Show independent initiative
- Assume shared responsibility
- Assist others in their roles
- Contribute ideas
- Keep an open mind
- Apply strategies
- Take a variety of roles
- Tolerate different view points

Critical Thinking

Create products that demonstrate abilities to justify arguments, asking questions, analyse complex systems, evaluate evidence, draw conclusions, reflect on learning and explain how to solve problems

Creative and Innovative Skills

- Think creatively
- Generate ideas
- Work creatively with others
- Implement innovations

Communicating Skills

- Ability to listen, read, write, present, comprehend, share and express ideas and thoughts between different audiences and use multiple forms of media

Thinking is problem solving. Critical thinking is motivated by a problem. Teachers are advised to raise the level of higher thinking skills for the students. The 'inquiry-based learning' is a process where students are engaged in;

1. Identify the problem
2. Develop an action plan
3. Research/gather/collect data
4. Analyse/organise data and form conclusions
5. Report the results/presentation

Moreover, Social Science is driven by values. These values and attitudes must be emphasised and reinforced in the teaching and learning process.

Values & Attitudes

Curiosity
Initiative
Adaptability
Leadership
Collaboration & teamwork
Participation
Passion for exploring & learning
Appreciation of the awesomeness of nature, events, people etc
Being patriotic and responsible
Show consideration
Respect the environment and people
Embrace diversity
Maintain positive values

Teaching and Learning Strategies

Social Science emphasises and embraces the use of cognitive, reasoning, decision-making, problem solving and higher-level thinking skills to teach to enhance students' understanding of inter-disciplinary concepts and issues in relation to environment, geography, history, politics and economic within PNG and globally. It aims to provide a meaningful pedagogical framework for teaching and learning essential and in-demand knowledge, skills, values, and attitudes that are required for the preparation of students for careers, higher education and citizenship in the 21st century.

Students must be prepared to gather and understand information, analyse issues critically, learn independently or collaboratively, organize and communicate information, draw and justify conclusions, create new knowledge, and act ethically.

These teaching and learning strategies will help teachers to;

1. familiarize themselves with different methods of teaching in the classroom
2. develop an understanding of the role of a teacher for application of various methods in the classroom

Successful teachers always keep in view that teaching must “be dynamic, challenging and in accordance with the learner’s comprehension. He/she does not depend on any single method for making his/her teaching interesting, inspirational and effective”.

Please find a list of the different teaching and learning strategies in Appendix 3.

These strategies;

- make learning more engaging
- make learning more effective
- make learning fun
- encourage higher motivational level
- improve attention spans
- develop higher order thinking and reflective skills
- improve communication skills
- develop the spirit of teamwork/collaboration
- develop leadership skills and qualities
- encourage discovery learning

Therefore, teachers are encouraged to utilise the suggested strategies as well as others.

Strands, Units and Topics

This section of the teacher guide contains the Social Science content to be taught in grade 9. It consists of the;

- strands
- units
- topics

Social Science is organized around five main strands – Geography, History, Political Science, Economics, and Environment. These strands embed the content that students are expected to learn and master at each grade and school level.

The table below outlines the strands, units and topics in the study of Social Science in an academic year. This is a sample to guide teachers to plan and teach Social Science in a school year.

Terms	Strands	Units	Topics
One (1)	GEOGRAPHY/ENVIRONMENT	Geography Skills	Topic 1: Weather instruments Topic 2: Interpreting weather information Topic 3: Presentation of weather data Topic 4: Temperature Topic 5: Rainfall Topic 6: Predicting weather Topic 7: Unpredictable weather patterns
		People and Places	Topic 1: World's climatic regions Topic 2: World's vegetation regions Topic 3: Climate and vegetation Topic 4: Climate and agricultural activities Topic 5: Climate and agriculture in PNG Topic 6: Climate and vegetation in PNG
		People and Resources	Topic 1: Types of migration Topic 2: Categories of migrants Topic 3: Reasons for migration Topic 4: Impact of migration Topic 5: Impact of Global migration
		People and Environment	Topic 1: Land use Topic 2: Landforms Topic 3: Natural disasters Topic 4: Human settlement and structures

Terms	Strands	Units	Topics
Two (2)	HISTORY	Making Sense of History	Topic 1: German and Britain colonisation of Papua and New Guinea. Topic 2: Australia colonisation of Papua (1906-1914) Topic 3: Australia's administration in PNG - WW2-1975
		Systems of Power, Authority and Governance	Topic 1: Roles of Europeans in Papua and New Guinea Topic 2: Colonial administration in Papua and New Guinea Topic 3: Policies of colonial governments in Papua and New Guinea Topic 4: Impacts of World War Two (WWII) Topic 5: United Nations role in Papua and New Guinea
		Culture and Society	Topic 1: Culture transmission Topic 2: Culture of dominant and minority groups Topic 3: Cultural practices in PNG Topic 4: Cultural influence
		Development and Sustainability of Societies	Topic 1: Governments and changes in PNG Topic 2: Impact of foreign government actions in PNG Topic 3: Governments' reactions and contributions to change and sustainability in PNG Topic 4: Agents of change in Papua New Guinea Topic 5: Religions and change in PNG Topic 6: Military force and change in PNG Topic 7: Plan and policies of change and sustainability in PNG Topic 8: Foreign government and change in PNG
		Economic Needs and Wants	Topic 1: Early explorers and economic activities Topic 2: Motives for colonisation in PNG and the Pacific region Topic 3: Economic motives for migration into PNG and the Pacific. Topic 4: Reasons for migration PNG – Case Study Topic 5: Multinational corporations in PNG – Case Study
		Geographical influences on Historical Events, People, Places and Environment	Topic 1: Prehistoric migration Topic 2: Geographical challenges in the early exploration of PNG Topic 3: Significance of war tracks during World War Two (WWII) Topic 4: Tidal waves and tsunamis
		Historical Inquiry	Topic 1: Historical events and issues in PNG Topic 2: Causes and effects of historical events in PNG Topic 3: Prominent Papua New Guineans Topic 4: Interpretation and documentation of significant historical events in PNG

Terms	Strands	Units	Topics
Three (3)	POLITICAL SCIENCE	Government Systems	Topic 1: Principles of democracy Topic 2: History of democracy in PNG Topic 3: Purpose of democratic governments Topic 4: Structure of democratic governments Topic 5: Roles and responsibilities of democratic governments Topic 6: Processes in changing of democratic governments Topic 7: Processes of decision and law making in democratic government Topic 8: Citizens' demand and democratic government processes Topic 9: Commonwealth and republic democratic countries
		Political Ideologies and Systems	Topic 1: National symbols of democratic nations Topic 2: Patriotism in democratic nations Topic 3: Democratic alliances and groupings Topic 4: Leaders of democratic countries
		International Relations	Topic 1: PNG's multilateral and bilateral relations Topic 2: Purpose, impact and outcomes of international relations Topic 3: PNG's international trade relations Topic 4: Conflicts in international relations Topic 5: PNG's trade agreements Topic 6: Factors affecting PNG's bilateral and multilateral relations Topic 7: Role of the media in international relations
		Civic and Citizenship	Topic 1: Citizenship Topic 2: Features of citizenship Topic 3: Application of good citizenship Topic 4: Key ideals of democratic governments Topic 5: Constitution as the basis for citizenship

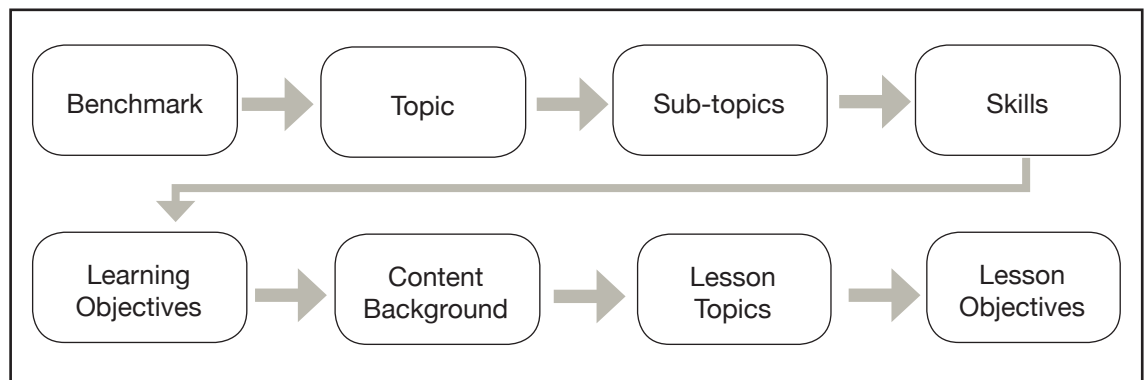
Terms	Strands	Units	Topics
Four (4)	ECONOMICS	Factors of Production and Consumption	Topic 1: Types of tax Topic 2: Tax systems and regulations in PNG Topic 3: Tax revenue
		Methods of Production and Distribution	Topic 1: Financial markets and institutions Topic 2: Roles of businesses, financial institutions and the government Topic 3: Circular flow of income Topic 4: Economic systems
		Regulation of Production, Distribution and Consumption	Topic 1: Regulating money supply in the economy Topic 2: Bank of Papua New Guinea Topic 3: Fiscal policy (Budgetary Policy) Topic 4: impact of wages and salaries on government budget Topic 5: Wage control in the economy Topic 6: Printing money
		Satisfying Needs and Wants	Topic 1: Importance of trade Topic 2: Types of trading systems Topic 3: Patterns of trade Topic 4: impacts of trade Topic 5: Impact of changes in transportation and communication on trade and economic activities Topic 6: Globalization and economic dependence
		Economic Ideologies	Topic 1: PNG's National Goals and Directive Principals Topic 2: Inclusive development Topic 3: Socio-economic policies of the PNG Topic 4: Inclusive production, distribution and consumption of resources Topic 5: Inequality and non-inclusive development Topic 6: Manifestation of PNG's National Goals and Directive principles Topic 7: PNG's development policies Topic 8: Impact of global socio-economic trends on PNG's development plans
Term 1 (1)	ENVIRONMENT	Resources and Environments	Topic 1: Rocks as a resource Topic 2: Soil and soil forming processes Topic 3: Common fuels Topic 4: Effects of using fossil fuels Topic 5: Alternative fuels
		The Earth and Its Systems	Topic 1: Heat transfer and meteorological processes Topic 2: Characteristics of oceans Topic 3: Life in the oceans
		Biological Dynamics of Earth	Topic 1: Impact of interrupting natural cycles Topic 2: The interdependence of ecological and socio-economic systems Topic 3: Sustainability Topic 4: Specific adaptations in different environments
		Environmental Change and Sustainability	Topic 1: Air pollution Topic 2: Soil degradation Topic 3: Biodiversity and habitat loss Topic 4: Sustainable Development Goals 2030

How were the topics developed?

The topics given in the table were derived from the benchmarks. That is, National content standards are benchmarked at each grade level, which allows for essential KSAVs to be reinforced and expanded throughout the grades. Benchmarks show grade level expectations of what students are able to do to demonstrate that they are making progress towards attaining the content standard. These grade-level benchmarks were then unpacked to identify the topics. From the topics, teachers should be able to develop sub-topics and learning objectives and of course the lesson topics and lessons objectives to be achieved per lesson.

When we unpack a benchmark, we are identifying what students will know and be able to do when they have mastered the benchmark.

1. Write out the benchmark
2. Write the verbs (skills/actions) – Higher order thinking skills
3. Underline or highlight the big idea (content) in the benchmark. The big idea (content) is the topic derived from the benchmark
4. Develop sub-topics from the big idea (topic)
5. Write learning objectives according to the sub-topics
6. Derive lesson topics from the learning objectives.



Unit of Work

The unit of work outlines the topics, sub-topics and the learning objectives for each of the five (5) strands derived from the content standard and the benchmarks. It basically presents what the teacher is expected to teach. Teachers are advised to use the learning objectives to create lesson topics and lesson objectives in preparing lessons. Brief content background of each topic is provided to support teacher's lesson preparation.

Strand 1: Geography

This strand consists of 4 units. They are;

1. Geography Skills
2. People and Places
3. People and Resources
4. People and Environment

Units	Topics
1. Geography Skills	Topic 1: Weather instruments Topic 2: Interpreting weather information Topic 3: Presentation of weather data Topic 4: Temperature Topic 5: Rainfall Topic 6: Predicting weather Topic 7: Unpredictable weather patterns
2. People and Places	Topic 1: World's climatic regions Topic 2: World's vegetation regions Topic 3: Climate and vegetation Topic 4: Climate and agricultural activities Topic 5: Climate and agriculture in PNG Topic 6: Climate and vegetation in PNG
3. People and Resources	Topic 1: Types of migration Topic 2: Categories of migrants Topic 3: Reasons for migration Topic 4: Impact of migration Topic 5: Impact of global migration
4. People and Environment	Topic 1: Land uses Topic 2: Landforms Topic 3: Natural disasters Topic 4: Human settlement and structures

Unit 1: Geography Skills

Content Standard 1.1: Students will be able to use geographical tools to locate and interpret information about people, places and environment.

Benchmark 9.1.1.1: Identify and explain the use of weather instruments and unit of measurements used in measuring weather.

Topic 1: Weather instruments

Sub-topics:

- Uses of weather instruments
- Units of measurements used in measuring weather

Skills: Analysis (identify and explain).

Learning Objectives: By the end of the topic, students will be able to:

- Identify weather instruments and the elements of weather measured.
- Identify the elements of weather being measured.
- Explain the uses of weather instruments.
- Identify and explain the units of measurements used in weather instruments.
- Create models of weather instruments (STEAM).

Content Background

Weather is the day to day condition of the atmosphere. It involves elements such as temperature, precipitation, humidity, cloud cover, wind direction and speed and air pressure. There are instruments used to measure various elements of weather. Given below are the elements of weather and the instruments used to measure them.

Elements	Instrument	Purpose	Unit of measurement
Temperature	Thermometer	Measures how hot or cold the atmosphere is	Degrees Celsius (°C)
Rainfall	Rain Gauge	Measures the amount of rainfall collected in a specific time	Millimeters (mm)
Humidity	Hygrometer	Measures the amount of water vapor in the air	Percentage (%)
Wind Speed	Anemometer	Measures the wind speed, how fast the wind is travelling in an hour.	Kilometers per hour (Km/hr.)
Wind Direction	Wind vane	Measures the wind direction	By compass direction
Air pressure	Barometer	Measures air pressure, Whether high or low pressure	In hectopascals (hPa)

Suggested Resources

1. Brian Parker, (2008). *Geography for Global Citizens (3rd edition)*. South Yarra (Victoria). Macmillan Education Australia.
2. Rob Berry, (2006). *Thinking Geography (1st edition)*. South Yarra (Victoria). Macmillan Education Australia.

STEAM Activity

Learning Objective: By the end of the topic, students will be able to;

- Create models of weather instruments (STEAM)

Making Thermometers

Students work in groups of 5 to create models of thermometers or other weather instruments. Review what students learned about thermometers and the uses of thermometers. Show the students a thermometer and have them explain how they think thermometers work to measure temperature.

Explain to students that, when the water in the bulb begins to heat up, it expands and goes up the tube. The warmer it gets the higher it goes. Tell them that they are going to make thermometers to see how they work on a larger scale. Make one thermometer as a class demonstration before allowing students to go into groups to make one for the group.

Materials Needed

Water bottle with lid, hollow balloon stick, food colouring, 4 X 6 cards, white glue, hammer, nail, tape, marker and a large classroom thermometer.

Steps

1. Pass out materials and provide directions to make homemade thermometers.
2. Fill the containers with cold water. Add two drops of red food coloring to the water.
3. Punch holes in the center of the lids with a nail and hammer.
4. Place the lids on the containers and slide the balloon sticks through the hole.
5. Place white glue around the balloon sticks to seal them in place and make them airtight.
6. Have students write their names on the back of their index cards. Carefully tape the cards vertically to the balloon sticks.
7. Have the bottles stand for a day for the water to adjust to the temperature of the room. As the water in the containers get warmer, the water will rise in the balloon sticks.
8. After the water has adjusted to the temperature of the room, mark the height of the column of water on the card. Use a thermometer to find the current room temperature and write it next to the mark you made.
9. Place the containers on the plate (in case of spills) in different places throughout the classroom, school, and/or outside where the air temperature can be measured.
10. Check regularly to see if the liquid in the balloon sticks change over the next few days. Have the students record any changes in their journals.
11. Teacher should develop an appropriate scoring method and performance standards to be used to score student's performances.

Benchmark 9.1.1.2: Interpret weather information using maps, tables, graphs, text and charts.

Topic 2: Interpreting weather information

Sub-topics:

- Weather data on maps
- Weather data on tables
- Weather data on graphs
- Weather texts
- Weather data on charts

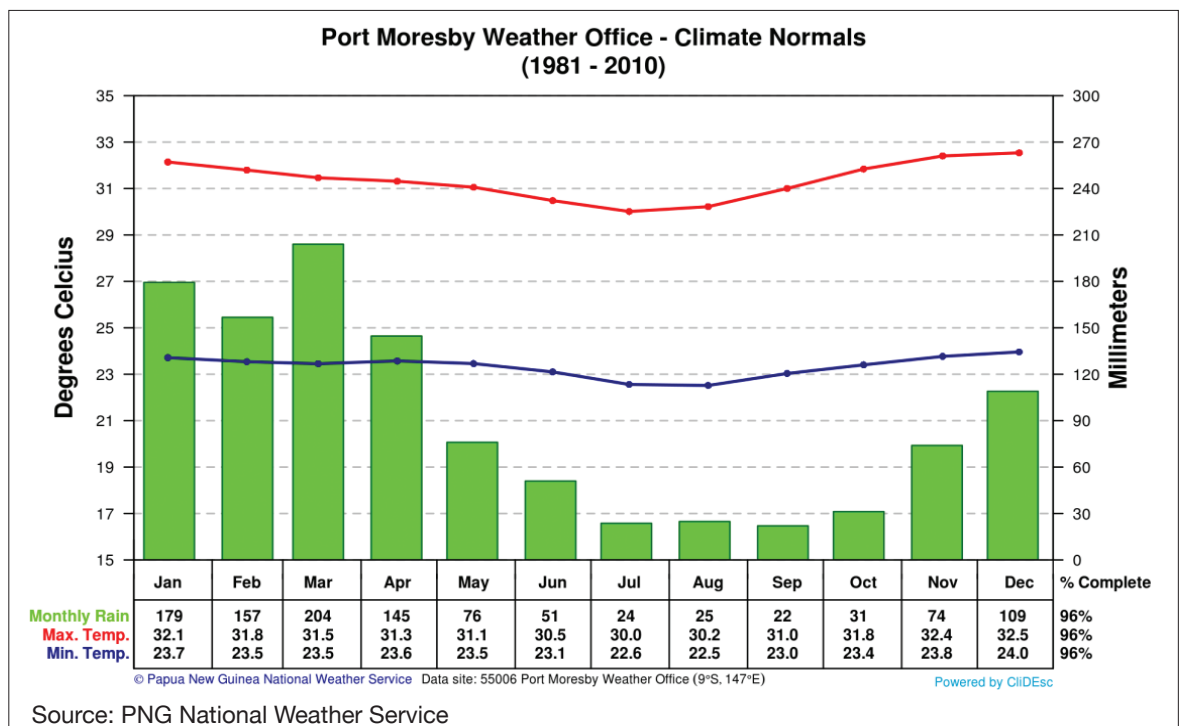
Skills: Evaluation (interpret).

Learning Objectives: By the end of this topic, students will be able to:

- Interpret weather information using maps.
- Interpret weather information using tables.
- Interpret weather information using graphs.
- Interpret weather information using text.
- Interpret weather information using charts.

Content Background

Weather information is presented using geographic tools such as maps, tables, graphs, text and charts. Below is an example of a climate graph showing the rainfall and temperature for Port Moresby?



Suggested Resources

1. Lynn Scott & Kevin Laws, (1991). *Mapping and Statistical Skills for Secondary Students (2nd edition)*. Milton, QLD, Australia. John Wiley & Sons Australia Ltd.

2. PNG National Weather Service, *Port Moresby Climate Graph*.
Retrieved from: <https://.google.com>
3. Stephen B. Codrington & C. Chittenden, (1989). *The Geography Skills Book (2nd edition)*. Port Melbourne, Australia. Harcourt Education.

Benchmark 9.1.1.3: Construct and present weather information using tables, graphs and charts.

Topic 3: Presentation of weather data

Sub-topics:

- Construction of tables using weather data
- Construction of graphs using weather data
- Construction of charts using weather data
- Presentation of weather information on tables
- Presentation of weather information on graphs
- Presentation of weather information on charts

Skills: Synthesis/Creative (construct & present).

Learning Objectives: By the end of this topic, students will be able to:

- Construct tables, graphs and charts using available weather data.
- Present weather information on texts, tables, graphs and chart.

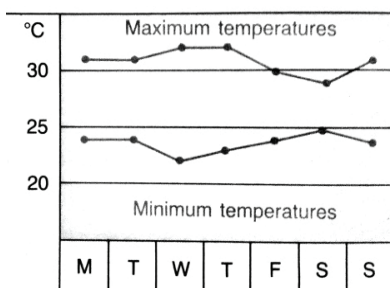
Content Background

Weather data collected from weather instruments are used to construct and present weather information on tables, graphs and charts. Examples of ways in which weather information can be presented are shown below.

Weather Recordings for Kokopo in one week

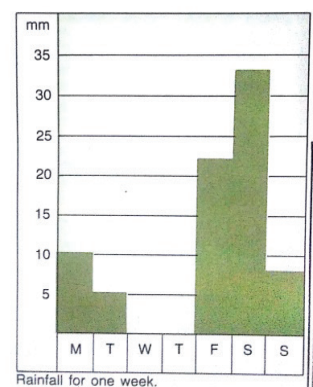
Day	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Min Temp °C	24	24	22	23	24	25	24
Max Temp °C	31	31	32	32	30	29	31
Ave Temp °C	27	27	27	27.5	27	27	27
Rainfall mm	10	5	-	-	22	33	8
Wind Direction	NW	NW	No Wind	No wind	NW	NW	N

Temperature and rainfall graphs of Kokopo



Temperature readings can best be shown as line graphs

Rainfall measurements can best be shown as column graphs



(Source: People and Places in the Pacific, 1987)

Synoptic Chart or Weather Map

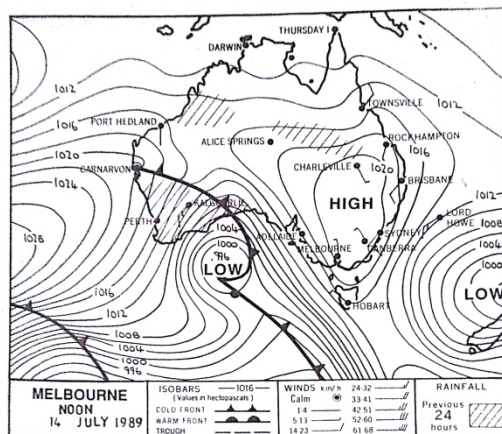


Figure 4.6(a): Synoptic charts, 14 July 1989

(Source: Stephen B. Codrington & C. Chittenden, (1989). *The Geography Skills Book (2nd edition)*).

Suggested Resources

1. Brian Parker, (2008). *Geography for Global Citizens (3rd edition)*. South Yarra (Victoria). Macmillan Education Australia.
2. Rob Berry, (2006). *Thinking Geography (1st edition)*. South Yarra (Victoria). Macmillan Education Australia.

Benchmark 9.1.1.4: Record daily maximum and minimum temperature over two weeks and construct a temperature graph and calculate the average daily temperature over two weeks as well as the average maximum and average daily temperature.

Topic 4: Temperature

Sub-topics:

- Recording temperature
- Minimum and maximum temperatures
- Temperature graph
- Average temperatures

Skills: Analysis (record)/Creative (construct & calculate).

Learning Objectives: By the end of this topic, students will be able to:

- Record daily maximum and minimum temperature over two weeks.
- Construct temperature line graph.
- Calculate the average daily temperature over two weeks.
- Calculate average maximum and average minimum temperature.

Content Background

The maximum temperature refers to the highest temperature recorded and the minimum temperature refers to the lowest temperature recorded over specific period of time.

Below are samples of tables that can be used to record temperature data.

1. Recording Daily Temperature

Time	Mon	Tue	Wed	Thu	Fri
8 am	27				
10 am	29				
12 pm	30				
3 pm	31				
Daily Average	29				

- The daily average temperature is calculated by dividing the sum of the recorded temperatures within a day by the number of times recordings were recorded in a day.
- The average minimum temperature is calculated by dividing the sum of lowest temperatures by the number of times the temperatures were recorded
- Temperature graphs (line or column) are constructed using the temperatures recorded as shown in the tables.
- Minimum temperatures are normally read at 2am while maximum temperatures are read at 2pm daily by meteorological services.

2. Recording Weekly Temperature

Week 1	Mon	Tue	Wed	Thu	Fri
High (max)	31				
Low (min)	27				
Daily Average	29				
Week 2	Mon	Tue	Wed	Thu	Fri
High (max)					
Low (min)					
Daily Average					

- The average maximum temperature is calculated by dividing the sum of highest temperatures recorded by the numbers of times the highest temperatures were recorded.
- The average minimum temperature is calculated by dividing the sum of lowest temperatures by the number of times the temperatures were recorded.

Suggested Resources

1. Brian Parker, (2008). *Geography for Global Citizens (3rd edition)*. South Yarra (Victoria). Macmillan Education Australia.
2. Rob Berry, (2006). *Thinking Geography (1st edition)*. South Yarra (Victoria). Macmillan Education Australia.

Benchmark 9.1.1.5: Record daily rainfall over two weeks and use the information to construct a rainfall graph and calculate the average rainfall over two weeks.

Topic 5: Rainfall

Sub-topics:

- Recording rainfall
- Rainfall graphs
- Average rainfall

Skills: Analysis (record)/Creative (construct & calculate).

Learning Objectives: By the end of this topic, students will be able to:

- Record daily rainfall over two weeks.
- Construct rainfall graph.
- Calculate the average rainfall over two weeks.
- Compare and contrast the amount of rainfall over two weeks using text.

Content Background

Rainfall data are collected by using a circular funnel or a tipping bucket known as rain gauge over a specific period of time. The rain gauge should be placed out in the open, away from buildings and trees, which could interrupt the fall of rain. The readings should be taken at a regular interval over the period of two weeks. The rainfall readings can be recorded in a table as shown below.

Rainfall data is best presented in a column graph. To construct a column graph, a suitable scale is determined depending on the available figures for the vertical and horizontal axes. Columns are then drawn according to the readings recorded in the table. To calculate the average rainfall for two weeks, divide the sum of all the rainfall readings taken over the two weeks by 14 days.

Rainfall Data

Week 1	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Rainfall (mm)	10	5	7	11	15	15	10
Week 2	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Rainfall (mm)	12	10	2	1	3	5	10

Average rainfall over two weeks: $10+5+7+11+15+15+10+12+10+2+1+3+5+10 = 116/14 = 8 \text{ mm}$

According to the rainfall data, week 1 had 73mm of rainfall while week 2 had 43mm of rainfall. Week 1 was wetter than week 2.

Suggested Resources

1. Lynn Scott & Kevin Laws, (1991). *Mapping and Statistical Skills for Secondary Students (2nd edition)*. Milton, QLD, Australia. John Wiley & Sons Australia Ltd.
2. Rob Berry, (2006). *Thinking Geography (1st edition)*. South Yarra (Victoria). Macmillan Education Australia.
3. Stephen B. Codrington & C. Chittenden, (1989). *The Geography Skills Book (2nd edition)*. Port Melbourne, Australia. Harcourt Education.
4. Use other relevant resources available

Benchmark 9.1.1.6: Use available information to predict the weather over seven days period.

Topic 6: Predicting weather

Sub-topic:

- Weather prediction

Skills: Being creative (predict).

Learning Objectives: By the end of this topic, students will be able to:

- Predict weather over a seven day period using available information from weather stations.
- Predict weather using nature.

Content Background

Predicting weather accurately is quite difficult. Predicting weather forecasts days, weeks and months in advance involves an incredible number of sensors and simulations. Modern meteorologists would not be nearly so accurate without numerical forecasting, which uses mathematical equations to predict the weather. Such forecasting requires powerful computers and lots of observational data collected from the land, sea and the air. Traditionally, weather can be generally predicted using things in nature such as wind direction, animals' behavior, plants and sky observation including cloud cover.

Suggested Resources

1. Lynn Scott & Kevin Laws, (1991). *Mapping and Statistical Skills for Secondary Students (2nd edition)*. Milton, QLD, Australia. John Wiley & Sons Australia Ltd.
2. Stephen B. Codrington & C. Chittenden, (1989). *The Geography Skills Book (2nd edition)*. Port Melbourne, Australia. Harcourt Education.
3. Use other relevant resources available.

Benchmark 9.1.1.7: Ascertain and analyse the contributing factors and the consequences of unpredictable weather patterns.

Topic 7: Unpredictable weather patterns

Sub-topics:

- Factors contributing to unpredictable weather patterns
- Consequences of unpredictable weather patterns

Skills: Analysis (ascertain/analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Identify factors contributing to unpredictable weather patterns.
- List the consequences of unpredictable weather patterns.

Content Background

Unpredictable weather patterns are caused by human induced climate change which is largely attributed to human activities such as farming, logging and burning of fossil fuels. It affects people's activities and contributes to extreme weather conditions such as cyclones, storm surge, drought, bush fires, heat waves or cold snaps and winter storms.

Weather is becoming unpredictable these days due to constantly changing land, sea and atmospheric temperatures. For example, the rising water vapour that condenses to form clouds may not reach the point of complete condensation known as the 'dew point', because atmospheric temperature at every 100m is not steady for cooling to occur to induce precipitation. In urban areas, especially large built-up areas, there is a build-up of heat known as the urban heat island. Weather blizzards like hailstorms are also becoming frequent due to drastic decline in atmospheric temperature in temperate regions during precipitation. Cyclones and hurricanes (typhoons) are also becoming more frequent as the ocean surface water heats up from global warming. These severe wind systems are normally generated over warm ocean surface waters of 26 °C due to air rapidly rising into the atmosphere.

Suggested Resources

1. Stephen B. Codrington & C. Chittenden, (1989). *The Geography Skills \ Book (2nd edition)*. Port Melbourne, Australia. Harcourt Education.
2. Use other relevant resources available

Unit 2: People and Places

Content Standard 1.2: Students will be able to explain how geographic and human characteristics create culture and define places.

Benchmark 9.1.2.1: Examine the different climatic regions of the world.

Topic 1: World's climatic regions

Sub-topics:

- Climatic regions of the world
- Types of world climates
- Global distribution of world's climate

Skills: Analysis (examine)

Learning Objectives: By the end of this topic, students will be able to:

- Differentiate between climate and weather.
- Identify the different climate regions of the world.
- Explain the different types of climate in each climatic region.
- Describe the global distribution of the world's climate.
- Plot the different climate regions on maps.

Content Background

Weather refers to the 'daily conditions of the atmosphere'. Weather involves such elements as temperature, rainfall, humidity (moisture in the air), cloud cover, and wind and air pressure.

Climate is a measure of the conditions of the atmosphere over a long period, for example; one year or 20 years. Climate is concerned with seasonal changes that occur over time. The two main features of climate are; the average rainfall and temperature of an area. We refer to climate when we say 'PNG is always hot and wet', or 'Our rainy season will start soon'.

World' climate regions

Climatic zones are divisions of the earth's climates according to average rainfall and temperature. It is a region with a particular climate with respect to average rainfall and temperature.

According to Koeppen, there are five (5) major climatic groups. The climate groups are then sub-divided into types based on the rainfall and temperature characteristics.

This table shows Koeppen's classification of climate.

Climate group	Climate Type	Characteristics
Tropical Humid Climate	Tropical wet Tropical Monsoon Tropical wet & dry	No dry season Monsoonal, short dry season Winter dry seasons
Dry Climate	Sub-tropical steppe Sub-tropical desert Mid-latitude steppe Mid-latitude desert	Low-latitude semi-arid or dry Low-latitude arid or dry Mid-latitude semi-arid or dry Mid-latitude arid or dry
Warm Temperate	Humid sub-tropical Mediterranean Marine west coast	No dry season, warm summer Dry hot summer No dry season, warm and cool summer
Cold Snow Forest Climates	Humid continental Subarctic	No dry season, severe winter Winter dry and very severe
Cold Climates	Tundra Polar ice cap	No true summer Perennial ice
Highland Climates	Highland	Highland with snow cover

(Source: <http://www.pmfias.com/climatic-regions-of-india-koeppen's-classification>)

Climatic regions can also be classified according to three broad categories based on the factor of latitude. Such classification will yield three (3) broad climatic regions;

- i. Tropical climates
- ii. Temperate climates
- iii. Polar climates

Suggested Resources

1. R B Bunnet, (2003). *General Geography in Diagrams (2nd edition)*. First Lok Yang Road: Longman.
2. Use other relevant resources available

Benchmark 9.1.2.2: Examine the different vegetation regions of the world.

Topic 2: World's vegetation regions

Sub-topics:

- Types of vegetation
- Global distribution of vegetation

Skills: Analysis (examine).

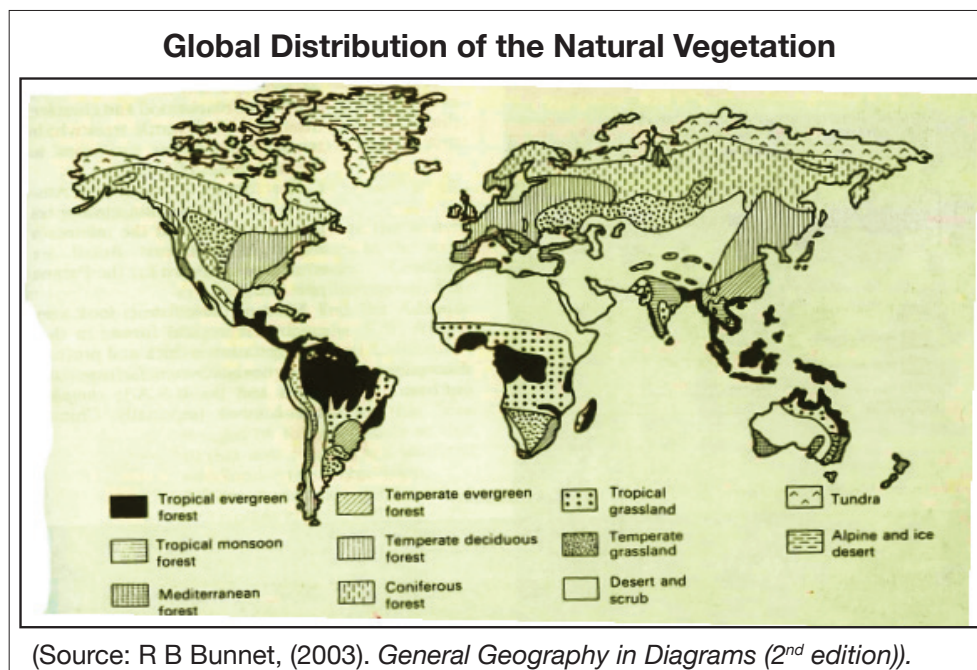
Learning Objectives: By the end of this topic, students will be able to:

1. Explain the different types of vegetation.
2. Identify the different vegetation regions of the world.
3. Describe the global distribution of the world's vegetation.
4. Draw a vegetation profile.

Content Background

Vegetation of an area is made up of plants that grow there. Vegetation refers to plants considered collectively, especially those found in a particular area. Vegetation refers to a community of plants. Geographers divide the world's vegetation into a number of types according to the appearance of the plants. The type of vegetation found in a place is mainly determined by the type of climate. Other factors such as the type of soil or the height above sea level are also important. Temperature and water or precipitation influence vegetation distribution.

The basic types are; 1. Forest 2. Grassland 3, Desert and 4. Tundra 5. Ice sheet



Suggested Resources

1. Chris Bonnor & Brian Ralph, (1929). *Key Skills in Geography (2nd edition)*. South Melbourne, Longman.
2. R B Bunnet, (2003). *General Geography in Diagrams (2nd edition)*. First Lok Yang Road: Longman.
3. Use other relevant resources available

Benchmark 9.1.2.3: Examine the relationship between climate and vegetation.

Topic 3: Climate and vegetation

Sub-topics:

- Relationship between climate and vegetation
- Changing relationship between climate and vegetation and landforms
- Altitude and vegetation
- Vegetation profile

Skills: Analysis (examine).

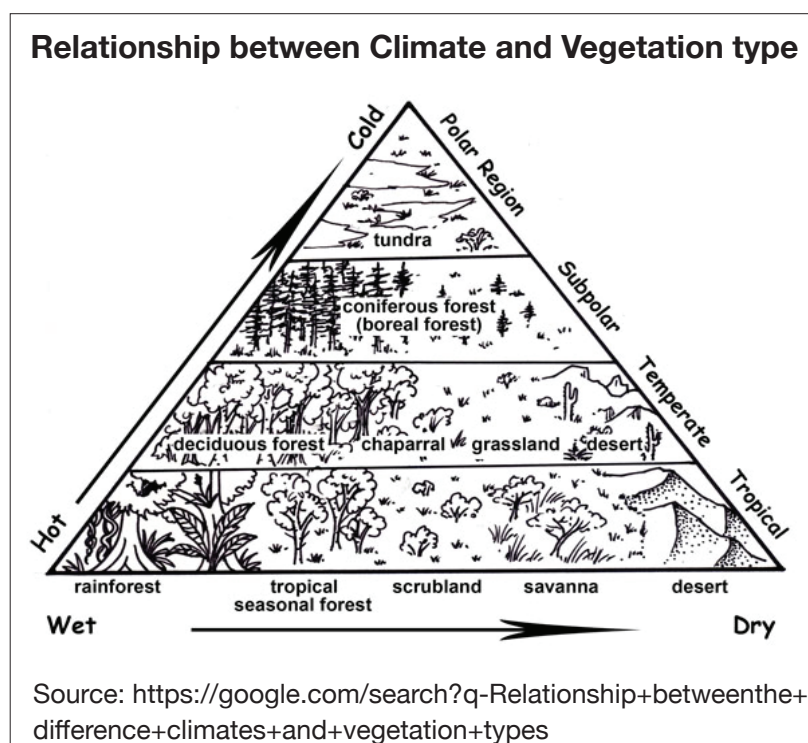
Learning Objectives: By the end of this topic, students will be able to:

- Investigate and explain the relationship between climate and vegetation.
- Describe the changing relationship between climate and vegetation and landforms.
- Describe and explain how vegetation differs from place to place with height above sea level (altitude) due to temperature change.
- Construct a vegetation profile of your school – STEAM.

Content Background

The climate of a place primarily determines the vegetation types. For instance, generally Papua New Guinea's vegetation is Tropical rainforest. Tropical rainforests are very dense and luxuriant because the climate is hot and very wet all year round. Tropical rainforests thrive along the equator due to maximum solar radiation for plant photosynthesis and high average annual rainfall. Moreover, deserts are places which have very little or no rainfall. Not many plants are able to grow in deserts.

The diagram below shows the relationship between the different climates and the vegetation type.



Suggested Resources

1. National Department of Education, (1991). *People and places in the Pacific*. Port Moresby, NDoE.

regions.

Topic 4: Climate and agricultural activities

Sub-topics:

- Types of agricultural activities
- Climatic regions and agricultural activities

Skills: Analysis (examine).

Learning Objectives: By the end of this topic, students will be able to:

- Identify the main types of agricultural activities (farming types).
- Explain the main types of agricultural activities.
- Identify the type of agricultural activity common in different climatic regions.
- Compare agricultural activities in different parts of the world.
- Identify types of agricultural activities in PNG.

Content Background

As we have seen, climate affects the type of vegetation that is found in an area which in turn determines the type of land use activities. Examples of land use activities are agriculture, settlement, and businesses, logging mining, roads, gardening, leisure and so on.

Agriculture is a very important human activity. The type of agricultural activity carried out in an area will depend on the climate, soil type and the land form of that particular area.

Agriculture Type	Characteristics	Products	Countries
Shifting cultivation	Subsistence crop grown in small clearings in forests, consumed by farmers & their families		Brazil Northern Thailand PNG
Intensive rice dominant	Rice growing where, land is irrigated and & carefully worked	Rice	China, Indonesia, India
Commercial grain dominant	Large farms where usually one main crop is grown for sale	Wheat	Canada
Commercial mixed crop & livestock	Large farms with both crops & animals Crops may be fed to animals	Wheat Sheep Corn	South-east Australia USA
Specialised plantation & market gardening	Farms can be large or small Concentration on one crop	Coffee Tea	Brazil PNG
Dairying	Small farms carefully worked		Eastern USA Western Europe
Normadic herding	Subsistence economy where animals are raised and herders live off animal products	Cattle	Kenya (Masai) Scandinavia (Lapp) Sinai Peninsula
Extensive livestock herding	Large properties. Animal products sold at commercial markets.	Cattle	South Africa, Argentina, Australia

(Source: R B Bunnet, (2003). General Geography in Diagrams.)

Suggested Resources

1. Charles, Hayes. (2015). *Complete Geography (5th edition)*. Gill & Macmillan Education,
2. Department of Education, (1999). *Papua New Guinea Secondary School Atlas*. Australia & New Zealand Oxford University Press.

a climatic justification for the distribution pattern of these agricultural activities.

Topic 5: Climate and agriculture in PNG

Sub-topics:

- PNG's main agricultural crops
- PNG's climate and agricultural crops

Skills: Creative/synthesis (plot/draw), evaluation (justification).

Learning Objectives: By the end of this topic, students will be able to:

- Identify the main agricultural crops in PNG.
- Associate climate and major crops distribution pattern in PNG.

Content Background

Agriculture in PNG dates back to the prehistoric times. Kuk, in the Western Highlands Province was one of the sites known for agriculture. More than half of the population in PNG lives off agricultural activities. Agriculture is the foundation of the rural economy. Smallholders are involved in growing cash crops like coffee, cocoa, oil palm, rubber, tea and food crops such as sweet potatoes and fresh vegetables to earn an income.

Major agricultural crops



Coffee is PNG's major agricultural crop. It grows well in high altitudes. Eastern Highlands and Western Highlands provinces dominate coffee production in PNG, while Simbu and Morobe are next highest in production. Coffee exports earn the highest foreign exchange in the agriculture sector.



Cocoa is as important as coffee which is an export in PNG. Cocoa is grown in East New Britain, East Sepik, Madang, West New Britain, New Ireland, and Bougainville. Cocoa sustains the livelihood of many Papua New Guineans and contributes to the economy of the nation.



Oil palm is Papua New Guinea's top agricultural export. It is the leading agricultural export earner and is continuing to grow. It provides income for many Papua New Guinean families in the rural areas. Major oil palm productions are found in West New Britain, New Ireland etc.

PNG's agricultural operations provide employment, rents and royalties to local communities. The projects also provide significant infrastructure investments, and health and education services for the benefit of local families.

(Source: <https://www.agriculture.gov.pg/>)

Suggested Resources

1. High Commission of Papua New Guinea, (2001). Canberra.
Retrieved from: <https://www.pngcanberra.org/aboutpng/agriculture>
2. Papua New Guinea Country Report; *Plant Genetic Resources*, (1996). Port Moresby.
Retrieved from: <http://www.fao.org/>
3. Use other local books, articles, magazines and people available

Guinea.

Topic 6: Climate and vegetation in PNG

Sub-topics:

- Papua New Guinea's climate
- Papua New Guinea's vegetation

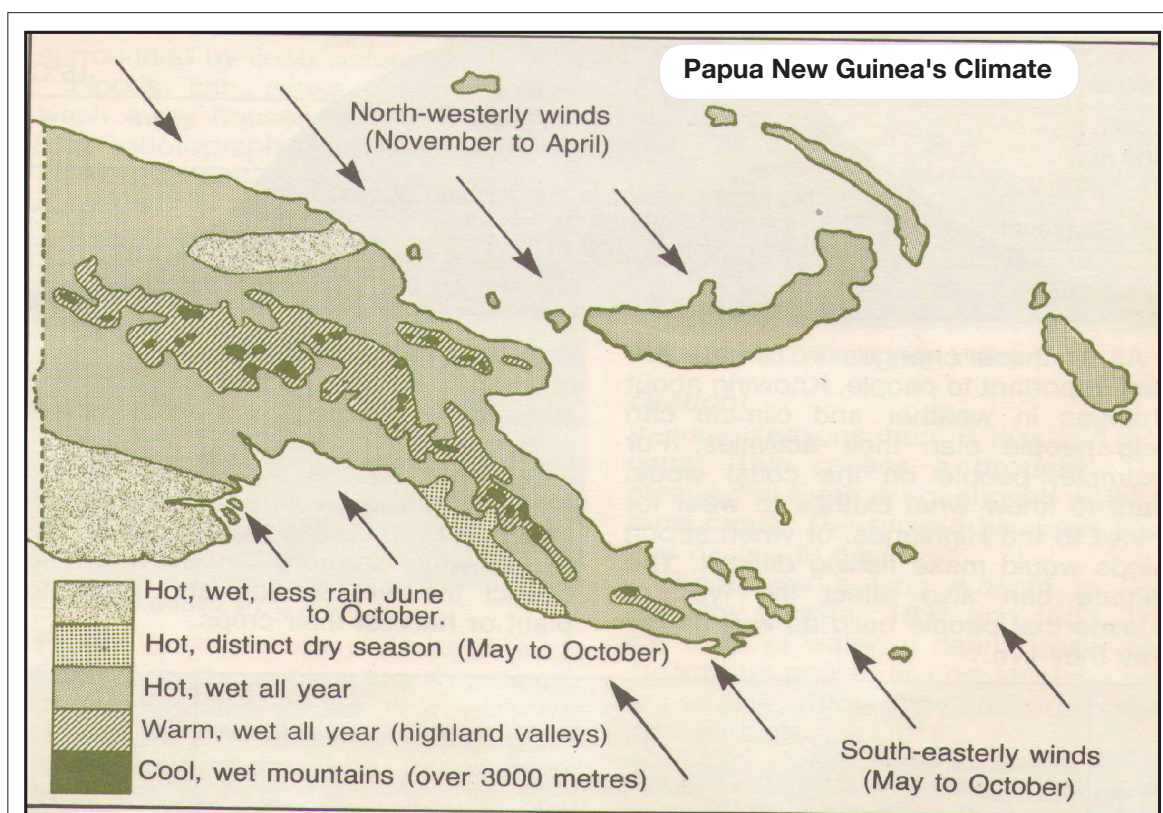
Skills: Analysis (describe).

Learning Objectives: By the end of this topic, students will be able to:

- Describe PNG's climate.
- Show Papua New Guinea's climate on a map.
- Describe the vegetation of PNG.
- Map Papua New Guinea's vegetation.
- Compare and outline the main observations between climate and vegetation in PNG.

Content Background

Papua New Guinea has a tropical climate. The coastal plains have an average temperature of 28°C, the inland and mountain areas averaging 26°C, and the higher mountain regions, 23°C. It is generally hot and wet all the year round. However, the weather varies from place to place. Differences in winds and landforms cause weather to vary from one place to another.

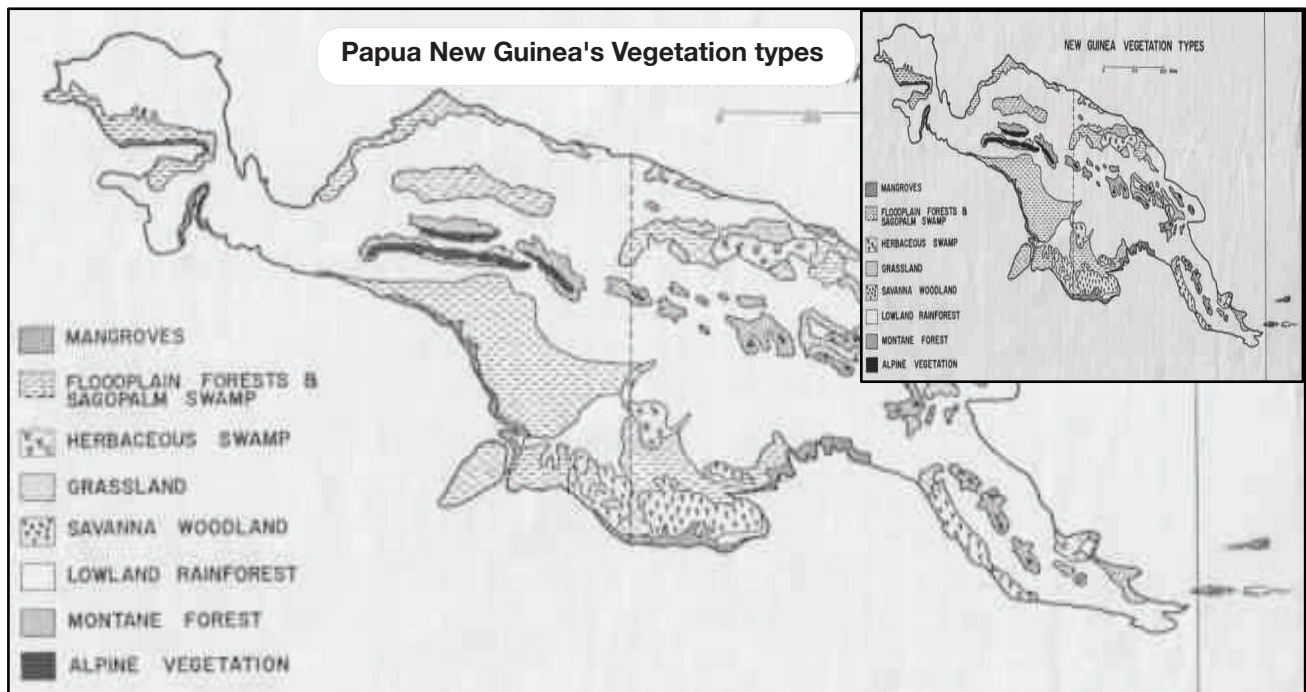


(Source: PNG, its land and its people -1978)

The type of vegetation that grows in a particular place depends on the climate and the landform of that area.

Papua New Guinea has a variety of forest types ranging from savannah

woodlands, swamps and mangroves to lowland rainforests, hill forests and montane forests. Extensive areas of grasslands are found in the highlands and in the south-west, in parts of Western, Gulf and Central Provinces.



(Source: PNG Secondary School Atlas, 1999, Oxford University Press)

When you compare climate and vegetation maps, patterns can be seen, for example:

- Mangroves, swamp vegetation and forest all grow in hot, wet climates
- Grassland is associated with cool, mountain climates
- Savannah is found only where there is a distinct season

Likewise, when we compare vegetation map and landforms we can see similar patterns. For example,

- Mangrove vegetation is found only in coastal lowlands
- Swamp vegetation is found in lowland areas particularly in river valleys such as Fly and the Sepik
- Forest is found in both lowland areas and highland areas
- Grassland is found mainly in areas of very high land.

Suggested Resources

1. Department of Education (FODE), (2017). *Environment and Resources; Grade 8, Strand 1*. Port Moresby, Department of Education.
2. Department of Education, (1987). *PNG – Its Land and its People*. Port Moresby, NDoE.
3. Department of Education, (1999). *Papua New Guinea Secondary School Atlas*. Australia & New Zealand Oxford University Press.
4. Department of Education, (1999). *Papua New Guinea Primary School Atlas*. Australia & New Zealand Oxford University Press.

Content Standard 1.3: Students will be able to analyse and discuss various human factors and the distribution of resources that affect the development of places and the movement of populations.

Benchmark 9.1.3.1: Explain the different types of migration.

Topic 1: Types of migration

Sub-topics:

- Internal migration
- External migration

Skills: Analysis (explain).

Learning Objectives: By the end of this topic, students will be able to:

- Identify the different types of migration.
- Explain the different types of migration.
- Identify the different types of migration common in PNG.
- Propose solutions to minimise the mass movement of people from rural areas to urban areas in PNG (STEAM).

Content Background

Migration is the movement of people from one place to another.

Types of migration

1. Internal migration - The movement of people from one defined area to another within a country.
2. External/International migration - International or external migration occurs when a person or group of people immigrate to a country from another country.

Examples of migration

1. Voluntary migration is where the migrant has a choice whether or not to migrate.
2. Forced migration is when people are made to leave their home or homeland. It is usually caused by violence, persecution, danger, or because an authority (such as a government) has told people to move. People are removed either by force or because of a threat or command.
3. Rural-urban migration is the movement of people from the rural regions within a country to the urban centres or towns and cities.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. May. Ronald. (2017). *Change and Movement; Readings on internal migration in PNG*. Australia, Australian National University Press. Retrieved From: <https://openresearch-repository.anu.edu.au/>
3. Rob Berry, (2006). *Thinking Geography (1st edition)*. South Yarra (Victoria). Macmillan Education Australia
4. Use other sources (newspapers, magazines, articles, reports,)

STEAM Activity

Learning Objective: By the end of this topic, students will be able to;

- Propose solutions to minimise the mass movement of people from rural areas to urban areas in PNG (STEAM)

Rural-urban migration

The movement of people from rural centres has increased to more than 3 million. This was stated by executive director for urbanisation, Max Kep. "It is an irreversible tide; one way traffic into the cities", he said. He pointed out the urban issues and challenges in the urban centres. He said, "the best description for urbanisation in PNG is chaos".

Source: <http://www.looppng.com/png-news/office-records-rise-urban-migration-68578>

Students will use analytical thinking skills to analyse the statement made by the urbanisation director and identify the problem and propose ways to solve the problem identified.

Steps

1. Identify and define the problem (*is there a problem, what is the problem, how serious is the problem?*)
2. Gather data through research (*what do I know,*)
3. Analyse the problem (*what are the causes of this problem, why is the problem occurring,*)
4. Choose best strategies/ways to address the problem (*what can we do about it*)
5. Develop a plan (*how do we go about or address the problem,*)
6. Implement and monitor the plan
7. Evaluate the plan (*is it working, is the problem solved*)

Teacher should develop an appropriate scoring method and performance standards to be used to score students' performances.

Benchmark 9.1.3.2: Examine the different categories of migrants (political, economic, religious, refugees, asylum seekers, cultural).

Topic 2: Categories of migrants

Sub-topics:

- Political migrants
- Economic migrants
- Religious migrants
- Cultural/Ethnic migrants
- Refugees
- Asylum seekers

Skill: Analysis (examine).

Learning Objectives: By the end of this topic, students will be able to:

- Identify types of migrants.
- Explain different categories of migrants.
- Identify the common types of migrants in PNG.
- Identify the advantages and disadvantages of different types of migrants in PNG.

Content Background

There are different types of people migrating due to certain factors as listed below.

Types of migrants

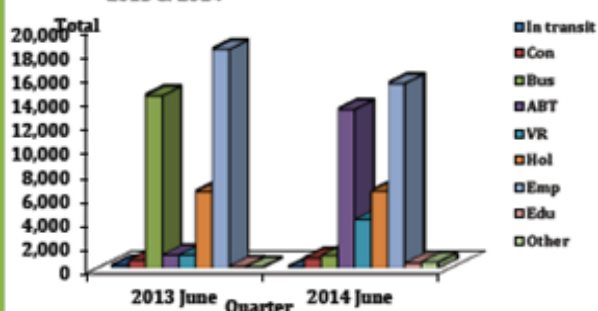
1. Political migrants are people who are forced to migrate because of a war, civil war or state policies which discriminate against particular groups of citizens or people who oppose those in power. These people are unable to return home because they have fears of being persecuted and are unlikely to receive any protection from their government.
2. Economic migrants are people who move from one country to another to benefit from greater economic opportunities. Such migration occurs primarily from economically less developed countries to the economically more developed countries, and/or from former colonies to the country that was the imperial power.
3. According to the UNHCR definition, a refugee is someone who has been forced to flee his or her country because of persecution, war or violence. A refugee has a well-founded fear of persecution for reasons of race, religion, nationality, political opinion or membership in a particular social group.
4. An asylum seeker is someone who says he or she is a refugee, but whose claim has not yet been evaluated and verified.

The United Nations Agency responsible for verifying international migrants and granting them refugee status is United Nations High Commission for Refugees (UNHCR).

The graphs and tables below show the reasons and purposes of migration in and out of PNG in 2014, recorded by the National Statistical Office.

Reasons and purposes of migration, in and out of PNG in 2014

Arrivals of visitors by Reasons for Visit, June Quarter 2013 & 2014



Arrivals of visitors by Reasons for Visit, June Quarter 2013 & 2014

Reason for visit	Quarter ended- June	
	2013	2014
In transit	261	100
Convention	707	879
Business	14,429	1,085
Accompanying Business Traveler	1,145	13,285
Visiting Relative	1,131	4,095
Holiday	6,419	6,496
Employment	18,298	15,455
Education	199	452
Other	134	549

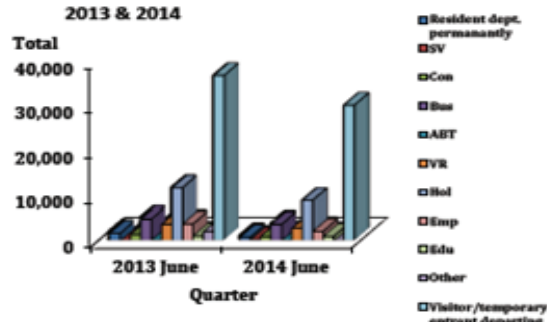
Arrivals by Purpose of Journey, June Quarter 2013 & 2014



Arrivals by Purpose of Journey, June Quarter 2013 & 2014

Period	Returning Residents	Visitor or Temporary entrant
Quarter ended -		
2013 March	22,891	43,321
June	19,258	42,723
September	21,558	42,268
December	13,655	39,900
2014 June	29,796	42,396

Departures by purpose of journey, June Quarter 2013 & 2014



Departures by purpose of journey, June Quarter 2013 & 2014

Reason for departing	Quarter ended- June	
	2013	2014
Resident dept. permanently	1,720	858
Student Vacation	6	279
Convention	1,497	1,058
Business	4,865	3,702
Accompanying business traveler	215	133
Visit relatives	3,735	2,835
Holiday	11,572	8,763
Employment	3,808	2,183
Education	1,153	1,076
Other	2,094	8
Visitor/temporary entrant departing	36,584	29,952

(Source: National Statistical Office, PNG - 2014)

Suggested Resources

1. National Statistical Office; PNG. (2014). *Migration*. Port Moresby. Retrieved from: <https://www.nso.gov.pg/index.php/population-and-social/migration>
2. Rob Berry, (2006). *Thinking Geography (1st edition)*. South Yarra (Victoria). Macmillan Education Australia
3. Use other sources (newspapers, magazines, articles, reports,)

Benchmark 9.1.3.3: Evaluate the reasons for people migrating to other places.

Topic 3: Reasons for migration

Sub-topics:

- Pull factors of migration
- Push factors of migration

Skills: Evaluation (evaluate)

Learning Objectives: By the end of this topic, students will be able to:

- Identify the pull factors of migration.
- Explain the pull factors of migration.
- Identify the push factors of migration.
- Explain the push factors of migration.

Content Background

There are many economic, social and physical reasons why people migrate and these are usually classified into push and pull factors.

Push factors are those associated with the area of origin and pull factors are those associated with the area of destination.

Reasons of migration			
Factors	Economic	Social	Physical
Pull Factors	More jobs Better jobs Higher wages The promise of a better life	Religious tolerance Ethnic and racial diversity Gender inclusion	Attractive environments, such as mountains, seashores, and warm climates
Push Factors	Over-population Few jobs Low wages Poverty Unemployment Poor living conditions	Intolerance and discrimination towards a certain cultural group or race Active religious persecution War	Natural disasters Famine

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. National Statistical Office; PNG. (2014). *Migration*. Port Moresby. Retrieved from: <https://www.nso.gov.pg/index.php/population-and-social/migration>
3. Rob Berry, (2006). *Thinking Geography (1st edition)*. South Yarra (Victoria). Macmillan Education Australia
4. Use other sources (newspapers, magazines, articles, reports,)

Benchmark 9.1.3.4: Investigate the social, economic, political and cultural impact of human migration on places, resources, services, environments and cultures.

Sub-topics:

- Social effects of migration
- Economic effects of migration
- Political effects of migration
- Cultural effects of migration

Topic 4: Impact of migration

Skills: Analysis (investigate).

Learning Objectives: By the end of this topic, students will be able to:

- Explain the social effects of migration.
- Examine the economic effects of migration.
- Highlight the political effects of migration.
- Discuss the cultural effects of migration.

Content Background

Peoples' movement, particularly from one country to another, has numerous effects on both, the sending country and the receiving country. The social, economic, political, and cultural impact of peoples' movement can be both positive and negative.

Factors such as the availability of resources, provision of goods and services, economic and political stability, state of the environment and level of economic development, influence the decisions individuals or families make in choosing their country of settlement.

The social, economic, political and cultural impact of human migration on places, resources, services, environments and cultures:

Impacts of migration			
Social	Economic	Political	Cultural
Over-crowdedness Increase in criminal activities Unhygienic – water, places, food, Prostitution Pollution; noise, air, Racism Sexism	Increase in illegal or informal sector trading Misusing basic services	Migrants involved in politics and making decisions that may have negative impacts on the original citizens	Culture clash Native culture fades

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Department of Education - FODE, (2017). *Population Change, Resources and Migration*. Port Moresby. NDoE.
3. Rob Berry, (2006). *Thinking Geography (1st edition)*. South Yarra (Victoria). Macmillan Education Australia

Benchmark 9.1.3.5: Use research skills to determine and report on the impact of global migration on the security of places and people, and the management of conflict and its consequences.

Topic 5: Impact of global migration

Sub-topics:

- Impact of global migration on security
- Impact of global migration on management of conflicts and consequences.

Skills: Evaluation (determine).

Learning Objectives: By the end of this topic, students will be able to:

- Explain global migration.
- Assess the impact of global migration on the security of people and places.
- Evaluate global migration and the management of conflict and its consequences.

Content Background

The effects of globalisation, economic labour mobility, as well as environmental degradation, mean that migration across borders will continue to increase in decades to come. Due to lack of employment opportunities, widespread inequality and extreme poverty in developing countries people moving to live in developed countries, particularly Europe, North America, Australia and New Zealand, is on the rise. This mass exodus of people across borders brings complex socio-economic, socio-cultural and socio-political consequences for the receiving countries. Some of these consequences are positive, yet others are negative.

Factors	Positive impacts	Negative impacts
Security of places & people	Migrants can boost a country's labour force, encourage investment and boost economic growth. Introduce new skills and ways of doing things better to the people of the receiving country	Spread of diseases Overcrowding Destroying traditional cultures of the receiving country (food, religion, sport, music, fashion) leading to loss of national identity & the traditional values. National security of the receiving country be at stake Introduction of terrorists activities in the receiving country Resources exploitation in the receiving country Ethnic clashes
Management of conflicts & its people		Difficult to manage & control social problems Require more financial resources to accept refugees. The need to adjust the fiscal policy of a country to accommodate the refugees. Fear and loathing(ethnic clashes) Ethnic cleansing (e.g. Jewish persecution by Nazi Germany)

An integrated Migration Policy should absorb the following to better manage conflicts in migration.

- The ability of labour markets to absorb migrants
- Allow migrants to have access to education and training
- Recognise foreign educational qualifications possessed by migrants
- Support migrant entrepreneurs by reducing barriers to start-ups and providing support with legal advice, counselling and training.
- Promoting a safe and secure working environment for migrants.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Rob Berry, (2006). *Thinking Geography (1st edition)*. South Yarra (Victoria). Macmillan Education Australia
3. Use other sources (newspapers, magazines, articles, reports,)

Unit 4: People and Environment

Content Standard 1.4: Students will be able to evaluate how geographic processes and human actions modify the environment and how the modified environment affects humans.

Benchmark 9.1.4.1: Identify and explain the different land uses

Topic 1: Land uses

Sub-topic:

- Types of land uses in the world and in PNG

Skills: Understanding (identify, explain).

Learning Objectives: By the end of the topic, students will be able to:

- Investigate the different types of land uses in the world.
- Examine the different types of land uses in PNG.

Content Background

The earth is composed of a set of interdependent systems. A system is defined as a functional whole, composed of organized, interacting, interdependent parts. The physical systems are also known as the natural systems.

The earth's physical systems

The earth comprises of four (4) major sub-systems:

- Atmosphere
- Lithosphere
- Hydrosphere
- Biosphere

Atmosphere

The atmosphere is the gaseous blanket of air that envelops, shields, and insulates the earth. The movements and processes of the atmosphere create the changing conditions that we know as weather and climate.

Biosphere

The biosphere is composed of all living things; people, other animals and plants.

The physical systems

Lithosphere

The lithosphere is comprised of the solid earth – rocks, soil landforms and the minerals

Hydrosphere

The hydrosphere is comprised of the waters of the earth – oceans, lakes, rivers & the glaciers

It is the nature of these four major subsystems and the interactions among them that create and nurture the conditions necessary for life on Earth. For example, the hydrosphere provides the water supply for life on Earth,

including humans, and provides a home environment for aquatic plants and animals. The hydrosphere directly affects the lithosphere as water moving in streams, waves, and currents shapes landforms. It also influences the atmosphere through evaporation, condensation, and the effects of ocean temperatures on climate. The impact and intensity of interactions among earth's subsystems are not identical everywhere on our planet, and it is these variations that lead to the geographic patterns of environmental diversity.

(Source: http://pacificschoolserver.org/content/_public/Environment/Geography/History%20and%20Social%20Science/PhysicalGeographyTextbook.pdf)

Physical systems and processes of the earth

Physical system	Processes in the physical system
Atmosphere	Atmospheric processes
Lithosphere	Geomorphic processes Tectonic Plate Movements
Hydrosphere	Hydrologic processes
Biosphere	Biotic processes

Suggested Resources

1. Brian Parker, (2008). *Geography for Global Citizens (3rd edition)*. South Yarra (Victoria). Macmillan Education Australia.
2. David Darmanin & John Paine. (1982). *Systems in Physical Geography*. South Melbourne, Macmillan.
3. R B Bunnet, (1965). *Physical Geography in Diagrams*. London, Longman
4. Rob Berry, (2006). *Thinking Geography (1st edition)*. South Yarra (Victoria). Macmillan Education Australia.

Benchmark 9.1.4.2: Examine the different landforms and the forces acting on these landforms.

Topic 2: Landforms

Sub-topics:

- Types of landforms
- Formation of different landforms
- External forces that reshape the landforms

Skills: Analysis (identify).

Learning Objectives: By the end of the topic, students will be able to:

- Identify the different types of landforms.
- Describe the different types of landforms.
- Identify the external processes that reshape the landforms.
- Explain how landforms are being reshaped by external processes.

Content Background

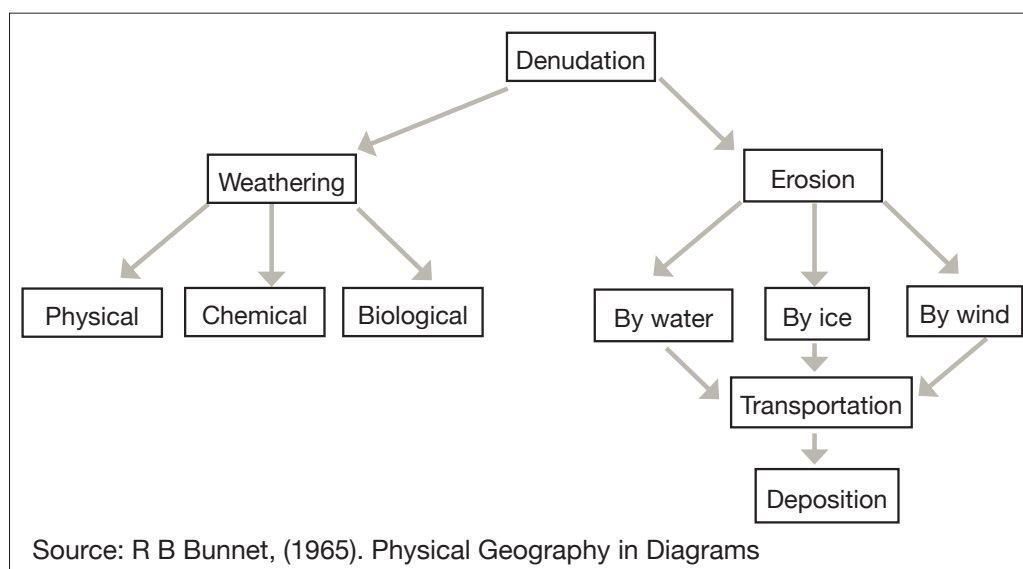
Landforms are the physical or natural features of the earth's surface such as;

- mountains
- valleys
- plateaus
- glaciers
- hills
- loess
- plains
- deserts

Landforms are created by both internal forces (volcanism & diastrophism) and external forces of weathering, erosion and deposition.

The landforms that are built through the internal forces are reshaped by the external forces.

The processes involved in reshaping the landforms



Suggested Resources

1. David Darmanin & John Paine. (1982). *Systems in Physical Geography*. South Melbourne, Macmillan.
2. R B Bunnet, (1965). *Physical Geography in Diagrams*. London, Longman
3. Use other sources (books, newspapers, magazines, articles)

Benchmark 9.1.4.3: Explore how extreme physical conditions such as floods, droughts and bush fires affect human settlements and animal populations in different regions.

Topic 3: Natural disasters

Sub-topics:

- Natural disasters
- Effects of natural disasters
- Natural disasters in different regions of the world
- Recent natural disasters in PNG

Skills: Analysis (explore).

Learning Objectives: By the end of the topic, students will be able to:

- Identify different types of natural disasters caused by extreme physical conditions.
- Explain how natural disasters affect human settlement.
- Explain how natural disasters affect animal populations.
- Compare natural disasters in different parts or regions of the world.
- Identify recent natural disasters in PNG.

Content Background

Extreme physical conditions such as floods, droughts and bush fires and cyclones are resultant effects of extreme weather conditions.

Extreme weather conditions	Natural disaster	Effects on human settlement and animal population
Prolonged rainy seasons	Flood	<ul style="list-style-type: none"> • destroy food gardens, homes, animals and infrastructures • cause deaths of people and animals • people are forced to migrate • relocation of settlements • extinction of animal and plant species • alter landform features
Prolonged dry season	Drought/ Bush fires	<ul style="list-style-type: none"> • destroy food gardens, homes, animals and infrastructures • cause deaths of people and animals • people are forced to migrate • relocation of settlements • extinction of animal and plant species

Suggested Resources

1. David Darmanin & John Paine. (1982). *Systems in Physical Geography*. South Melbourne, Macmillan.
2. Department of Education – FODE, (2017). *Environment and Resources*. Port Moresby, NDOE.
3. R B Bunnet, (1965). *Physical Geography in Diagrams*. London, Longman
4. Sue Lauer. (2004), *Natural Hazards & Disasters in PNG*. South Melbourne, Pearson /Longman
5. Use other sources (newspapers, magazines, articles)

Benchmark 9.1.4.4: Explain how human settlements and structures become part of the earth's surface and evaluate the positive and negative effects of such changes.

Topic 4: Human settlement and structures

Sub-topics:

- Changes in human settlement and structures
- Effects of human settlement and structures on the environment

Skills: Analysis (explain).

Learning Objectives: By the end of the topic, students will able to:

- Explain how human settlement and structures become part of the earth's surface.
- Explain how changes in human settlement and structures have an impact on the environment.
- Identify the impacts of changes in human settlement and structures.
- Assess the positive and negative effects of such changes.

Content Background

The natural environment over the years has been altered by natural geographical processes and human activities. Humans have altered the environment by developing settlements and structures for different purposes. The part of the environment that is altered including the settlement and the structures that have been built by humans makes up the man-made or human environment. It is also known as the built environment as opposed to the natural environment.

Effects of human activities on the environment	
Positive effects	Negative effects
Creates higher living standards Increase productivity of goods and services Increase life expectancy Alleviate poverty	Distorts natural cycles Air, water and land pollution Global warming Climate change Extinction of animal and plant species

Suggested Resources

1. Department of Education – FODE, (2017). *Environment and Resources*. Port Moresby, NDoE.
2. J.H. Holmes & R.P.Simson. (1983). *Man and the Environment: Regional Perspectives*. Melbourne. Longman.
3. Newspaper articles and other relevant materials that may be available

Strand 2: History

This strand has 7 units and they are;

1. Making Sense of History
2. Systems of Power, Authority and Governance
3. Culture and Society
4. Development and Sustainability of Societies
5. Economic Needs and Wants
6. Geographical Influences on Historical Events, People, Places and Environment
7. Historical Inquiry

Units	Topics
1. Making Sense of History	Topic 1: German and British colonisation of Papua and New Guinea Topic 2: Australia's colonisation of Papua (1906-1914) Topic 3: Australia's administration in Papua and New Guinea
2. Systems of Power, Authority and Governance	Topic 1: Roles of Europeans in Papua and New Guinea Topic 2: Colonial administration in Papua and New Guinea Topic 3: Policies of colonial governments in Papua and New Guinea Topic 4: Impact of World War II Topic 5: United Nation's role in Papua and New Guinea
3. Culture and Society	Topic 1: Culture transmission Topic 2: Culture of dominant and minority groups Topic 3: Cultural practices in PNG Topic 4: Cultural influence
4. Development and Sustainability of Societies	Topic 1: Governments and changes in PNG Topic 2: Impact of foreign government actions in PNG Topic 3: Governments reactions and contributions to changes and sustainability in PNG Topic 4: Agents of change in Papua New Guinea Topic 5: Religions and change in PNG Topic 6: Military force and change in PNG Topic 7: Plans and policies of change and sustainability in PNG Topic 8: Foreign government intervention and change in PNG
5. Economic Needs and Wants	Topic 1: Early explorers and economic activities Topic 2: Motives for colonisation of PNG and the Pacific Topic 3: Economic motives for migration into PNG and the Pacific Topic 4: Economic motives for migration into PNG - (Case studies) Topic 5: Reasons for business firms or multinational corporations in PNG - (Case studies)
6. Geographical Influences on Historical Events, People, Places and Environment	Topic 1: Prehistoric migration Topic 2: Geographical challenges in the early exploration of PNG Topic 3: Significance of War Tracks during World War II Topic 4: Tidal waves and tsunamis
7. Historical Inquiry	Topic 1: Historical issues and events in PNG Topic 2: Causes and effects of historical events in PNG Topic 3: Prominent Papua New Guinean Topic 4: Interpretation and documentation of significant historical events in PNG

Unit 1: Making Sense of History

Content Standard 2.1: Students will be able to discover that people construct knowledge of the past from multiple and various types of sources to make sense of historical patterns, periods of time and the relationship among these elements.

Benchmark 9.2.1.1: Interpret historical narratives – ‘fiction and non-fiction’ about the German, the British and Australia’s Colonisation of Papua and New Guinea.

Topic 1: German and British colonisation of Papua and New Guinea

Sub-topics:

- Colonisation process by Germans in New Guinea
- Colonisation process by British in Papua
- Historical evidences of British in Papua

Skills: Analysis (Interpret, compare and assess).

Learning Objectives: By the end of this topic, students will be able to:

- Explain the colonisation process by Germans in New Guinea.
- Explain the colonisation process by British in Papua.
- Describe historical evidences showing colonisation by the Germans and the British.

Content Background

The first Europeans to sight New Guinea were probably the Portuguese and Spanish navigators sailing in the South Pacific in the early part of the 16th century. In 1526, Don Jorge de Menezes a Portuguese explorer sailed ashore the mainland of New Guinea. The natives had frizzy hair thus he named the island and its inhabitants Papua, a Malay word meaning frizzy. In 1545, Spanish explorer namely Ynigo Oritz de Retes also came across the island of New Guinea and named it New Guinea because of the resemblance to people in New Guinea, African.

Although European navigators visited the islands and explored their coastlines thereafter, little was known of the inhabitants by Europeans until the 1870s, when Russian anthropologist Nikolai Miklukho-Maklai made a number of expeditions to New Guinea, living among native tribes, and described their way of life. The two European countries who showed great interest and made their presence felt were Germany and Great Britain later by Australia.

Germans New Guinea: 1884-1914

After the Franco-Prussian war, Germany emerged as a colonial power and made its presence felt in the Pacific. On 3rd November 1884, she took possession of the northeastern part of the island of New Guinea known at that time as Kaiser Wilhelmsland. In 1885 German extended its powers to the northeast islands of New Guinea which is the coast of New Britain, New Ireland and Northern Solomon Islands and claimed them as its protectorate. The

German government opted for chartered meaning German licensed companies to look after the German governments interest in areas annexed. The annexation eventuated through the support of one of Germans largest trading firm in the Pacific at that time German New Guinea Company.

In 1899, the German imperial government formally took direct control of the territory and made it become its protectorate renaming it German New Guinea. Until the First World War in 1914, September when Australian troops captured the colonial headquarters at Kokopo, near Rabaul.

British New Guinea: 1884–1914

In 1883, the Colony of Queensland tried to annex the southern half of eastern New Guinea but the British government did not approve of this. In 1884, a British protectorate was proclaimed over the southern coast of New Guinea and its adjacent islands. The protectorate, called British New Guinea, was annexed in 1888. In the same year, Sir William, MacGregor became the administrator of British New Guinea and set out to explore his possession, establishing a native police force to spread the benefits of British government. He instituted the policy of ‘government by patrol’ which continued right through the Australian period.

Historical Evidences both primary and secondary like artifacts, images, recordings, films both can be used to investigate the presences of the British and Germans in New Guinea during the period of their administration.

Suggested Resources

1. John Waiko, (1993), *A Short History of Papua New Guinea*. South Melbourne. Oxford University Press.
2. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
3. Peter Nagle. (1998). *Papua New Guinea Records 1883-1942: Microfilm Collections*. National Achieves of Australia.
Retrieved from: <http://guides.naa.gov.au/papua-new-guinea/>
4. Territory of Papua and New Guinea:
Retrieved from: <https://en.wikipedia.org/wiki/>
5. Use other relevant materials available (magazines, newspaper articles, reports, short films)

Benchmark 9.2.1.2: Use available information to interpret and document Australia's reasons and role in the colonisation of Papua and New Guinea

Topic 2: Australia's colonisation of Papua (1906 -1914)

Sub-topics:

- Reasons of Australia's colonisation of Papua
- Australia's role in Papua

Skills: Analysis (interpret and examine)/Creative/synthesis (documentation).

Learning Objectives: By the end of the topic, students will be able to:

- Find out the reasons for Australia's colonisation in Papua.
- Describe the role of Australia in Papua.

Content Background

In 1905, most Papuan societies were much the same as pre-colonial times. Fewer than 100 Europeans were based in Port Moresby and Samarai. It was the spread of steel axes, knives, fish hooks, nails and other trade items the white men brought that begin to bring change. Under the Papuan Act, adopted by the Commonwealth of Australia in 1905 and brought into effect in 1906, made Australia formally accept responsibility for the British colony and renamed it Papua. Sir William Macgregor departed in 1898 and Hubert Murray was appointed the first Australian administrator in Papua in 1907.

Reasons of Australia's colonisation of Papua

Australia was conscience of its security and saw other powers expansion in the Pacific as a threat. Australia asked Great Britain to annexed Papua to act as a Buffer zone for its security. The prospect of Gold and other mineral and resources was one factor that made Australia interested in administrating Papua. Labour recruitment for their sugarcane plantations in Australia was another reason they looked after Papua.

Australia's role in PNG

Hubert Murray was in favour of rapid development by recruiting labour from the locals. Hubert Murray administrated Papua for 3 decades supporting many good policies. For example, the Land Ordinances introduced the 99 years lease which is still effective today. The Labour Ordinances of 1907 introduced the Labour Indenture system. Murray also increased the spending on Health by building four hospital in 1908 where TB and leprosy patients were treated. Hubert ruled Papua until the First World War in 1914. After WW1, Australia's role was to administer both German New Guinea and British Papua as one territory. It was important to take over as administrators because of its strategic location to Australia. It gave them military and political advantage.

Suggested Resources

1. John Waiko, (1993), *A Short History of Papua New Guinea*. South Melbourne. Oxford University Press.
2. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.

3. Peter Nagle. (1998). *Papua New Guinea Records 1883-1942: Microfilm Collections*. National Archives of Australia.
Retrieved from: <http://guides.naa.gov.au/papua-new-guinea/>
4. Territory of Papua and New Guinea:
Retrieved from: <https://en.wikipedia.org/wiki/>
5. Use other relevant materials available (magazines, newspaper articles, reports, short films)

Benchmark 9.2.1.3: Identify and interpret major events that occurred during Australia's administration in Papua and New Guinea.

Topic 3: Australia's administration in Papua and New Guinea

Sub-topics:

- Australian colonisation of PNG between World Wars 1 & 2
- Major events of Australia's colonial rule in Papua and New Guinea

Skills: Analysis (identify/interpret).

Learning Outcomes: By the end of the topic, the students will be able to:

- Identify historical information about Australia's colonisation of Papua and New Guinea.
- Interpret major events of Australia's colonial rule after World War 1 to World War 2.
- Interpret historical events and explain how Papua and New Guinea was administrated by Australia.

Content Background

The mandated territory was administered by the Australian Government from 1919 until the outbreak of the Pacific War and Japanese invasion in December 1941.

Australian colonisation of PNG between World Wars 1 & 2

At the 1919 Paris Peace Conference following the war, Australian Prime Minister Billy Hughes sought to take hold of New Guinea from the defeated German Empire: telling the Conference: "Strategically the northern islands encompass Australia like fortresses. They are as necessary to Australia as water to a city."

When the war ended in 1919, New Guinea and Papua became the Mandated Territory of New Guinea but was administered separately by the Australians. In New Guinea, Europeans economic interest was encouraged at the expense of the locals. The Australian Military was still in control of the activities there. While in Papua, Australian administrator, Hubert Murray tried to protect the Papuans and their land and their labour rights. Most of the land in New Guinea was sold to the Europeans or taken over by the European, mostly Australians, after the war. The land was sold to Australian companies like Burns Philps. In 1922, Murray introduced land policies that where only the colonial authority could buy land from the local people.

The Labour policy stated that laborers had to be recruited through the colonial authority. Murray also established the first village councils in 1927. In 1929 the police and almost the whole local workforce in Rabaul, then capital of the mandated territory of New Guinea, went on strike for higher wages. It marked the first true Melanesian urban-based protest against the inequalities of the colonial system.

Murray also improved health services and in 1933 sent 38 Papuan students to undertake a six month medical course at the University of Sydney.

Major events of Australia's colonial rule in PNG

An improvement in the gold price urged further exploration for the commodity, and major finds were located at Edie Creek in 1926, followed by the discovery of large alluvial deposits in the Bulolo Valley. Then in 1933, Gold miners, Mick and Dan Leahy, Patrol Officer Jim Taylor did patrols in the Waghi Valley and were surprised to see the fertile and populated areas of the Highlands.

In 1941, after the volcanic eruption in Rabaul, the capital for former German New Guinea was moved to Lae. During this time World War 2 started in the Pacific and into PNG. The Australia's fought the war on our land impacting the natives greatly. In 1949, the two Territories New Guinea and Papua were combined into one administrative unit as the Territory of Papua and New Guinea under the Papua New Guinea Provisional Administration Act (1949).

This act united the territories as the Territory of Papua and New Guinea. However, for the purposes of Australian nationality a distinction was maintained between the two territories. The act provided for a Legislative Council, a judicial organization, a public service, and a system of local government. That administrative union was renamed as Papua New Guinea in 1971.

Under Australian Minister for External Territories Andrew Peacock, the territory adopted self-government in 1972 and on the 16th of September 1975, during the term of the Whitlam Government in Australia, the Territory became the Independent State of Papua New Guinea.

Suggested Resources

1. John Waiko, (1993), *A Short History of Papua New Guinea*. South Melbourne. Oxford University Press.
2. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
3. Peter Nagle. (1998). *Papua New Guinea Records 1883-1942: Microfilm Collections*. National Achieves of Australia.
Retrieved from: <http://guides.naa.gov.au/papua-new-guinea/>
4. Territory of Papua and New Guinea:
Retrieved from: <https://en.wikipedia.org/wiki/>
5. Use other relevant materials available (magazines, newspaper articles, reports, short films)

Unit 2: Systems of Power, Authority and Governance

Content Standard 2.2: Students will be able to critique the processes and probe the reason for people creating, maintaining or changing the systems of power, authority and governance.

Benchmark 9.2.2.1: Evaluate the roles that European settlers, religious groups and other groups played in the creation, maintenance or change of system of power, authority and governance in the colonial era.

Topic 1: Roles of Europeans in Papua and New Guinea

Sub-topics:

- Europeans in Papua and New Guinea
- Roles of miners in PNG
- Roles of settlers in PNG
- Roles of religious groups in PNG
- Roles of administrators in PNG

Skills: Analysis (comparison), evaluation (evaluate and assess).

Learning Objectives: By the end of the topic, students will be able to:

- Identify the different groups of Europeans in Papua and New Guinea.
- Compare and evaluate the roles different groups of Europeans in the creation and maintenance in the systems of power, authority and governance in Papua and New Guinea.

Content Background

The two main European powers of the colonial era whose influence are very evident in Papua New Guinea were the Germans and the Great Britain.

Europeans in PNG

The first Europeans that came to Papua New Guinea were Spanish and Portuguese explorers who were in our region in the 16th century. The Dutch who were here competed with them for spices. In the 18th Century, The British and France explorers sailed along our coast. The British traders made contact because they wanted sandal-wood, cedar, copra and beche-de-mer also known as sea cucumber. Scientists and missionaries came to our shores and settled with the people.

Roles of Administrators

German government chartered German firms the role of administering the territory of New Guinea for business and economic reasons thus German New Guinea Company was tasked to administer the territory. The Company established some major cocoa and copra plantations on the mainland of New Guinea in provinces such as Madang and East Sepik and on the islands of New Guinea which is East New Britain, New Ireland and North Solomon's. The Company failed to attract local work force on the plantations and the German government took over the administration in 1889. The German government then appointed Governor Albert Hahl an experienced colonial administrator

and manager to administer this territory.

The British had little interest in New Guinea because it had one of the biggest colonial empires throughout the world extending as far as Africa. British interest in Papua was to keep other powers out of the region. Britain did not use excessive force to take away land from the local people. In the British territory, the colonial authority decided which laws and rules should be made as well as ensuring that they were obeyed by the people.

Roles of Miners

The major industry that attracted white men into Papua was gold mining. Many Europeans came to the colony in search of gold which started at Sudest and Misima Islands. The miners paved way for exploration of mining sites and maps and along with that developed stations that later grew into large towns and cities for instance, Wau-Bulolo in the Morobe Province. Mining also lured the Explorers in the discovery of the Highlands provinces.

Roles of settlers

The British colonial administration was centered on the central Papuan region. However, some parts of the highlands region were explored by traders like Jim Taylor and the Leahy family whose influence can be felt in many parts of the highlands region. Queen Emma Forsyth was one settler and plantation owner in Rabaul. Some people gladly received and invited the settlers to settle permanently with them while some resisted the settlers because of the colour of their skin. For instance, the Binandere people of the Northern (Oro) province became hostile towards the Europeans.

Roles of Religious Groups

It is important to acknowledge the work of missionaries who changed the lives of the local people by preaching to them the gospel. First mission churches to be established were the following; London Missionary Society (now United Church), Roman Catholic, Lutheran and Wesleyan Church. The natives or the locals were helpers to the missionaries as catechists, interpreters and pastors. The missionaries apart from converting souls into practising the doctrines of their respective denominations and religious practices were able to establish mission stations along with schools and health centers.

Suggested Resources

1. John Waiko, (1993), *A Short History of Papua New Guinea*. South Melbourne. Oxford University Press.
2. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
3. Peter Nagle. (1998). *Papua New Guinea Records 1883-1942: Microfilm Collections*. National Archives of Australia.
Retrieved from: <http://guides.naa.gov.au/papua-new-guinea/>
4. Territory of Papua and New Guinea:
Retrieved from: <https://en.wikipedia.org/wiki/>
5. Use other relevant materials available (magazines, newspaper articles, reports, short films)

Benchmark 9.2.2.2: Examine the system of power, authority and governance of the German, British and Australian colonial administration in Papua and New Guinea.

Topic 2: Colonial administration in Papua and New Guinea

Sub-topics:

- Germans administration in New Guinea
- British administration of British New Guinea
- Australia's administration of Papua and New Guinea as one territory

Skills: Analysis (examine), evaluate (assess).

Learning Outcomes: By the end of the topic, students will be able to:

- Examine how German administered German New Guinea.
- Examine how Britain administered British New Guinea.
- Assess how Australia administered Papua and New Guinea as one territory.

Content Background

As studied earlier the Germans and the British colonized the eastern island of New Guinea (now Papua New Guinea) in the late 19th century for various reasons. They came as traders, miners, missionaries and settlers.

Germans administration through the New Guinea Company

The German New Guinea Company employed different people to work on its plantations. They began to understand the natives' local cultures and realized that the local people could exercise real power over them. The German settlers were expected by the locals to at least acknowledge the customs of their land.

Unlike the Company's officials on the mainland, most of these settlers on the island of German New Guinea believed that local people deserved respect. They respected their customs and daily ways of doing things. However, slowly the similar labour problems on the mainland began to develop on the islands. For instance, the Tolai's resented the loss of their land to planters who interfered with their sacred places. This resentment also erupted into violent conflicts and civil unrest in the plantations.

There were two other colonial stations based at Madang for the mainland or Momase region and Kokopo for islands or New Guinea Islands. The German governor at that time Albert Hahl further extended colonial administration of German to Kavieng, Namatanai, Kieta, Rabaul, Lorengau, Aitape, Angoram and Lae. Hahl built his headquarters at Kokopo until 1906, when it was moved to Kavieng.

In order to have direct control over the villages, Hahl appointed local headmen known as 'luluais' as direct agents of the colonial administration. Their roles were limited to solving village disputes, however; big cases such as death were referred to the German Courts. The luluais were involved in assisting the German officials recruit labourers. Later Hahl appointed 'tultuls' who assisted the luluais in maintaining control and order in the villages and plantations.

The British in Papua

The British on the other hand were purely concentrating on administration. Captain James Erskine a British Naval Officer raised the British flag in Port Moresby on 6th November 1884 on behalf of the government of Great Britain. The British claimed the southeast of the island mainly to keep other powers out of the area. The British were not interested in using the people's land and labour for commercial purposes. The British officials protected the people and their land. The officers appointed by the British government to look after the protectorates were called special commissioners. In December 1884 Sir Peter Scratchley became the first special commissioner who later died and was replaced by Hugh Hastings Romily until 1886.

Australia's administration of the mandated territory

Great Britain was given the task to take care of German New Guinea but due to distance and financial constraints after the war, Australia was tasked to administer German New Guinea and British Papua as separate territories.

The Australians took over in the view that it should continue the British policy of protecting Papuan rights over land and labor. Australians also wanted to encourage economic development from Europeans using cheap local land and labor. The land and labour ordinances were meant to attract European settlers to invest but most failed.

Suggested Resources

1. John Waiko, (1993), *A Short History of Papua New Guinea*. South Melbourne. Oxford University Press.
2. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
3. Peter Nagle. (1998). *Papua New Guinea Records 1883-1942: Microfilm Collections*. National Achieves of Australia.
Retrieved from: <http://guides.naa.gov.au/papua-new-guinea/>
4. Territory of Papua and New Guinea:
Retrieved from: <https://en.wikipedia.org/wiki/>
5. Use other relevant materials available (magazines, newspaper articles, reports, short films)

Benchmark 9.2.2.3: Analyse colonial governments' policies on the social, economic, political, cultural and religious development in the Territories of Papua and New Guinea.

Topic 3: Policies of colonial governments in Papua and New Guinea

Sub-topics:

- Germans colonial policies in former German New Guineas territory
- British colonial policies in former British territory
- Australia's colonial policies in former Australian territory

Skills: Analysis (analyse).

Learning Outcomes: By the end of the topic, students will be able to:

- Investigate by examining Germans colonial policies on social, economic, political, cultural and religious development in the former German New Guinea Territory.
- Analyse British colonial policies on social, economic, political, cultural and religious development in the former British Territory.
- Examine Australia's colonial policies on social, economic, political, cultural and religious development in in former Australian Territory.

Content Background

In administering Papua and New Guinea, the Germans and British including Australia who joined afterwards had to have policies in place to guide the natives to achieve their goals of colonization.

The German's Policies

Administrator Albert Hahl experienced problems in German New Guinea especially in labour recruitment drives. The labourers especially the natives contributed a lot in the general economic progress of the Imperial German administration. However, the natives did not like the harsh treatment and the labourous work on the plantations thus began showing resentment and responded that they had surplus of food in the gardens and were no longer interested in working for someone else.

So, the German administrators began by giving orders to the luluais who were the village elders to ensure the new laws made by the colonial administration were followed by the people. Luluais, tutuls and village constables and village councilors began enforcing the Germans policy. For instance, one of the policies was that every unmarried man had to work for at least three years on a plantation. Luluais were made as agents to monitor these policies. In 1903 Germans introduced a new labour law that ordered the people to work up to four weeks a year in building roads, bridges, and cleaning the houses of the settlers. The local villagers were encouraged to plant twenty new coconut palms for each young man in the village. Another way introduced to get man into the plantations was through the introduction of the head tax.

These people helped to bring the European type of government to many parts of Papua New Guinea. They also helped to break down many of the customs and traditions of the people. Law breakers were punished as a result of new laws which brought many changes to the lives of Papua New Guineans. In

order to pay the tax, villagers had the opportunity to sell copra or vegetables.

These are some of the policies the German administration introduced to capture people to work for them indirectly. Their main aim was to make as much profit as possible through the use of local resources and exploitation of human labour. For some, the cash and experience gained from the Europeans as labourers, police, tutuls and luluais were useful skills for later use in their villages.

The British and their policies

Macgregor believed that the native people should not sell their land to the Europeans. He ordered the sale of land to be approved by the colonial administration. He developed a policy to prevent Europeans from buying land cheaply. He lived with the people and understood the local culture of land ownership and tried to protect this ownership. Macgregor did not allow labourers to be taken away long distances to work for Europeans. In 1892, he introduced a policy to coordinate the labour exploitation after he realised the abuse carried out in Queensland sugar plantations.

Though Macgregor intended to prioritise health and education, the failure was caused by trained professionals. May be one other reason could be funding and resources to implement better health systems and education in the colony. Macgregor had created good working relationships with the Christian churches to carry out the colonial administration work in partnership. He wanted the missionaries to help his officers to establish friendly contacts with the local people to promote and spread European moral values. He allowed them to build schools, teach English language and make them able to write their own local language.

The Australians in Papua (1905-1914)

In 1905 the Australian Parliament passed the Papuan Act that enabled Australia to formally take over the British colony of New Guinea and renamed it Papua. The British wanted Australia to continue the British policy of protecting Papuan rights over land and labour. The British also wanted the Australians to encourage economic development by Europeans using cheap local land and labour if necessary at the cost of Papuan rights. These views of the British changed when Australia took over the colony of Papua. In 1906 a Royal Commission was established which recommended large scale plantations to be developed in the colony. The commissioners believed that Europeans should own the land and the people should be used as cheap labourers. In the same year Land Ordinance Act or Land Law were reviewed. It was an undertaking that land cannot be bought from the people but is only allowed to be leased for only 99 years.

Native Labour Policy and Social Changes in the Colony: 1907

This native labour policy was used to monitor the way laborers were recruited and employed in the plantations. Natives who work for the Europeans were required to sign a contract called an indenture. In Papua there were surplus laborers because people were eager to have excess to steel tools while some ran away from troubles created in the villages.

Suggested Resources

1. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
2. John Waiko, 1993, *A short History of Papua New Guinea*: Oxford University Press, Australia
3. Peter Nagle. (1998). *Papua New Guinea Records 1883-1942: Microfilm Collections*. National Achieves of Australia.
Retrieved from: <http://guides.naa.gov.au/papua-new-guinea/>
4. Australian New Guinea Administrative Unit.
Retrieved from: <https://en.wikipedia.org/wiki/>
5. Papua New Guinea - The Colonial Period.
Retrieved from: <https://www.britannica.com/>
6. The History of Papua New Guinea.
Retrieved from: https://en.wikipedia.org/wiki
7. Use other relevant materials available (magazines, newspaper articles, reports, short films)

Benchmark 9.2.2.4: Use research skills to investigate the impact of World War II on change of the system of power in the Territories of Papua and New Guinea.

Topic 4: Impact of World War II

Sub-topics:

- Systems of power, authority and governance during World War II
- Change in the systems of power, authority and governance during WW II
- Impact of the change of systems of power, authority and governance on Papua and New Guinea

Skills: Analysis (research, investigate, analyzing).

Learning Outcomes: By the end of the topic, students will be able to:

- Use historical data to investigate the systems of power, authority and governance during WW II.
- Examine the change in the systems of power, authority and governance during WW II.
- Analyse the impact of change of systems of power, authority and governance on PNG.

Content Background

Papua New Guinea was very much affected by World War II especially areas along the coast of the mainland New Guinea and the New Guinea islands. The hinterland of the Island of New Guinea that is the Highlands Regions felt very little effects of the war.

New Guinea Administrative Unit (ANGAU)

In April 1942 the Australian military authorities established the Australian New Guinea Administrative Unit (ANGAU). ANGAU administered those parts of Papua New Guinea which were not occupied by the Japanese. Many ANGAU officers had worked for the pre-war colonial authority. With the support of the police, which was placed under its control, ANGAU recruited Papua New Guineans as soldiers, stretcher bearers and carriers for the Allied troops. It also recruited labourers to build roads, wharves and airstrips and to work on the plantations, especially copra and rubber.

ANGAU patrols collected much information about the movements of the Japanese. This was useful in military planning. ANGAU units, which included Papua New Guineans with local knowledge, often accompanied the front line troops. Because they were familiar with the territory and could act as interpreters and they were very useful to the Allied troops.

ANGAU was also expected to keep law and order. As the Japanese were driven back, ANGAU was supposed to help restore villages and gardens and provide education and medical services. But little was done. Sometimes ANGAU was not popular because some of its officers were harsh towards the people. People tend to link ANGAU with hard times and the many problems of the war.

Japanese Invasion

Japan invaded Papua and New Guinea in 1942 and set up its operational base of WW2 in Rabaul. The Battle of Rabaul, also known by the Japanese as Operation R, was fought on the island of New Britain in January and February 1942. It was a strategically significant defeat of Allied forces by Japan in the Pacific Campaign of World War Two. Following the capture of the port of Rabaul, Japanese forces turned Rabaul into a major base and proceeded to land on mainland New Guinea.

Rabaul was important because of its proximity to the Japanese territory of the Caroline Islands, site of a major Imperial Japanese Navy base on Truk. Rabaul was Japanese main headquarters in the south west Pacific. Their attacks and all battles against the Allies were planned and carried out on PNG soil against the Allies. The Japanese paid a very heavy price for their invasion of Papua New Guinea. Their front-line troops were often far from their source of supply and they suffered from a shortage of food. Even when completely cut off from their supply routes, they refused to surrender.

The Americans

The Australians and Americans fought several battles against the Japanese in Papua and New Guinea. American troops made a strong impact on our people. They were much better supplied than the Australian or Japanese troops. Our people were astonished by the variety and quantity of the goods which arrived from the United States. The people also saw black men serving as soldiers and apparently enjoying all the privileges and wealth of white soldiers. The natives envied the Black Americans.

Change in power and authority from the German and British Administration to Military rule during WW2, changed the lives of Europeans as well as natives.

The Japanese came in and bombed German held towns of Rabaul, Bulolo, Wau, Lae and Salamaua. That was the end of German New Guinea as they evacuated women and children to safer locations. It was confusing time as the natives did not know what was going on. The number of foreigners increased as the war continued. PNG became a battle ground taken over by military/ troops from Japan, Australia and America. General Douglas MacArthur of US army became the leader of the region including PNG for the Allies. While General Hirohito was the commander for the Japanese military forces.

During the war, Europeans and natives lost a lot to the destructions caused by the war. Houses, water holes and food gardens destroyed by the bombs. All the European families were evacuated to Australia. Many native's people were killed and some displaced. Men of fighting age were taken into the war to help both sides, Allies and the Japanese, to fight a war they knew very little off.

Suggested Resources

1. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
2. John Waiko, 1993, *A short History of Papua New Guinea*: Oxford University Press, Australia
3. Peter Nagle. (1998). *Papua New Guinea Records 1883-1942: Microfilm*

Collections. National Achieves of Australia.

Retrieved from: <http://guides.naa.gov.au/papua-new-guinea/>

4. Australian New Guinea Administrative Unit.

Retrieved from: <https://en.wikipedia.org/wiki/>

5. *Papua New Guinea - The Colonial Period.*

Retrieved from: <https://www.britannica.com/>

6. *The History of Papua New Guinea.*

Retrieved from: https://en.wikipedia.org/wiki

7. Use other relevant materials available (magazines, newspaper articles, reports, short films)

Benchmark 9.2.2.5: Discuss the roles of the United Nations in the creation, maintenance or change in the system of power, authority and governance in the territories of Papua and New Guinea.

Topic 5: United Nations role in Papua and New Guinea

Sub-topics:

- Role of United Nations as an international organization
- Role of UN in the creation, maintenance or change in the systems of power, authority and governance in the Mandated Territory of Papua

Skills: Analysis (discuss by debating).

Learning Objectives: By the end of the topic, students will be able to:

- Discuss and debate the role of United Nations as an international organization.
- Analyse the role of UN in the creation, maintenance or change in the systems of power, authority and governance in the Mandated Territory of Papua.

Content Background

The United Nations formally came into existence in 1945 replacing the League of Nations. The main role of the United Nations as an international organization is to promote world peace. It is involved in events and activities that promote world peace like poverty reduction, gender equity, eradication of disease, decolonisation, Human right issues, Conflict resolution etc.

Role of UN in the creation, maintenance or change in the systems of power, authority and governance in the Mandated Territory of Papua and New Guinea

Following the surrender of Japan in 1945, civil administration of Papua and New Guinea was restored, and under the Papua & New Guinea Provisional Administration Act (1945–46) created by the Australian Administration, Papua and New Guinea were combined in an administrative union. The Papua and New Guinea Act 1949 united them as the Territory of Papua and New Guinea. The Act formally approved the placing of New Guinea under the international trusteeship system and confirmed the administrative union of New Guinea and Papua. It also provided for a Legislative Council (which was established in 1951), a judicial organisation, a public service, and a system of local government. The Australian Labour Government promised a 'New Deal' for Papua New Guinea. Under the New Deal the Australian government provided money to improve the living standards and education, health and welfare services for our people. The government also abolished the indenture system. They sent the labourers back to their villages. Some villagers were compensated for their time and services and damages caused during the war. The New Deal was meant to thank Papua New Guineans for supporting Australia during the war.

United Nations Missions

By 1962 Australia was under international pressure to prepare Papua New Guinea for independence. In 1962 a United Nations mission, chaired by Sir Hugh Foot, recommended rapid economic progress. The World Bank was asked to draw up a development plan based on a survey of the economy. The Foot Report, UN report supported the colonial authority's view that expatriates should provide the money and technical skills and be responsible for marketing agricultural and livestock products.

The Foot Report, UN report also stressed that:

“Australia should substantially concentrate its efforts on the advancement of the native people. This advancement will come through the native taking a much greater part in expanding production and by accelerating his training and education. The agricultural and livestock program provides for the native farmers to take a major part in increasing production.” (Waiko, n.d)

The expatriate community, in particular white planters, did not believe that the local people should be given the ‘advancement’ recommended by the Foot Report from United Nations. But the colonial authority accepted the report. Within the next decade it put into practice most of the recommendations.

In 1973 the United Nations Development Programme sent a team from the University of East Anglia to prepare a Report on Development Strategies for Papua New Guinea. This report became the basis of the second Five Year Plan which was to cover the period 1973-78.

Michael Somare was Chief Minister in the House of Assembly and the most influential Papua New Guinea politician. He used the second Five Year Plan as the basis for an economic and social programme which came to be known as the Eight Point Plan. Somare's plan reflected the policies of the PANGU Pati of which he was leader. These points were all accepted by the House of Assembly in February 1973.

Suggested Resources

1. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
2. John Waiko, 1993, *A short History of Papua New Guinea*: Oxford University Press, Australia
3. Peter Nagle. (1998). *Papua New Guinea Records 1883-1942: Microfilm Collections*. National Achieves of Australia.
Retrieved from: <http://guides.naa.gov.au/papua-new-guinea/>
4. Australian New Guinea Administrative Unit.
Retrieved from: <https://en.wikipedia.org/wiki/>
5. *Papua New Guinea - The Colonial Period*.
Retrieved from: <https://www.britannica.com/>
6. *The History of Papua New Guinea*.
Retrieved from: <https://en.wikipedia.org/wiki/>
7. Use other relevant materials available (magazines, newspaper articles, reports, short films)

Unit 3: Culture and Society

Content Standard 2.3: Students will be able to investigate the different ways of transmitting culture and critically think about the reasons culture and cultural diffusion affects the development and maintenance of societies.

Benchmark 9.2.3.1: Examine the methods by which societies of PNG transmit culture across time, such as storytelling, songs, religious services, food, clothing, rituals, holidays, etc.

Topic 1: Culture transmission

Sub-topics:

- Methods used to transmit culture in PNG
- Transmission of culture through oral traditions in PNG
- Transmission of culture through art, music and customs in PNG
- Transmission of culture PNG food, clothing and religious rituals in PNG

Skills: Analysis (examine, discuss through debate), evaluate (critique, argue).

Learning Objectives: By the end of the topic, students will be able to:

- Examine the different methods used to transmit cultures in PNG.
- Discuss how PNG's cultures are transmitted through oral tradition.
- Examine how PNG cultures are transmitted through language, art, music and customs.
- Observe and critique how PNG cultures are transmitted through food, clothing and religious rituals.
- *Use video recording gadgets to record a video on a method of transmitting culture (Authentic Assessment).*

Content Background

Culture is a way of life of a group of people and how they carry out activities, behave and interact with each other. It includes beliefs, art and social organisations. Papua New Guinea is culturally diverse and unique in that it has about 800 plus languages signifying these diversity. Cultural practices have their own prominence in the societies in which they are practiced. For instance, the way 'Tolais' of East New Britain Province practice their marriage ceremonies and rituals in their culture is quite different to the people of Mekeo in the Central province.

Methods used to transmit culture

There are a number of ways cultures of our people have been transmitted over time and passed down from one generation to the next. They have been transmitted orally or by word of mouth and actions. Oral transmission would be storytelling and songs. For instance, many stories have been told about how the highest mountain in their area came into existence. They also have stories describing the origin of plants and animals, migration, kinship and warfare. Enactment would be through dance, drama, the practised ceremonies or rituals, food preparation and consumption, and days to observe. For instance, many rituals focus on health and fertility, such as male and female initiation

rituals. It is aimed at bringing about the maturation and future success of the initiates. Initiation and other ceremonies focus on seeking the help of ancestors which is accompanied by the exchange of valuables and food. In some areas planting and harvesting of crops were accompanied with singing and dancing as part celebrations. In the highlands songs were sung during singing gatherings to irritate their enemies.

Transmission of culture through oral traditions

Language is very important to our culture as it identifies our origin whether; one is from the Central Province or from Enga Province. The language that we speak and communicate with others within our society is part of our culture. Story telling of myths and legends passed on from one generation to the next is an important way of transmitting our culture. The stories by the fire or bedtime stories have maintained our cultures over time.

Transmission of culture through art, music and customs

Traditional festivals are equally as important as the language in our culture. Most festivals comprise of singing and dancing. Most of the songs and music from our provinces tell a story of the past. The paintings and carvings from different parts of PNG have their own story to tell thus transmitting knowledge from the past to the future. They are normally performed in village squares. For instance, in the Highlands region festivals were used as a courtship avenue for young adults to establish deep relationships.

Transmission of culture through food, clothing and religious rituals in PNG Cultural items such as headdresses, traditional costumes and face designs and colored face paintings are used to signify something of importance and sacred known only to them that has been passed down from one generation to the next. Also other culturally used items like the kundu drums and garamuts were specially designed in different sizes and forms for reasons only known to the society that uses them. Our traditional costumes and dresses are also part of our identify as it is part of our culture. For example, type of dressing up in the highlands is different from those dressing from the coastal areas.

So, societies throughout Papua New Guinea must show appreciation of their culture and value them so that it is maintained overtime.

Suggested Resources

1. John Waiko, 1993, *A short History of Papua New Guinea*: Oxford University Press, Australia
2. Culture of Papua New Guinea,
Retrieved from: <https://en.wikipedia.org/wiki/>
3. Margherita Ragg, (2018). *Papua New Guinea culture – An Introduction to Ancient Traditions*. Zegrahm Expeditions.
Retrieved from: <https://www.zegrahm.com/blog/>
4. Countries and their cultures forum. *Culture of Papua New Guinea*.
Retrieved from: <https://www.everyculture.com/>
5. Use other relevant materials available (magazines, newspaper articles, reports, short films)

Benchmark 9.2.3.2: Evaluate and compare the culture of the politically and economically dominant groups with the culture of minority groups in PNG.

Topic 2: Culture of dominant and minority groups

Sub-topics:

- Dominant groups and minority groups
- Impacts of dominant groups on the minority groups

Skills: Analysis (analysing, compare), evaluating (evaluate).

Learning Objectives: By the end of the topic, students will be able to:

- Evaluate and compare the cultures of the politically and economically dominant groups with the cultures of the minority groups in PNG.
- Assess the impacts of the dominant group over the minority group in PNG.

Content Background

Inequality in life exists everywhere, and Papua New Guinea is no exception. Dominant groups or individuals who were in power like the chiefs and elders made decisions which took into account the disadvantaged groups such as those with disabilities, orphans and those without land for cultivating food gardens. For instance, the political culture of Papua New Guinea known as 'Big Man' and 'Chieftaincy' is mainly practiced in patrilineal societies, where men dominate and inherit the wealth of their fathers. Likewise in chieftain societies are practiced both by patrilineal and matrilineal societies. Matrilineal societies are those where power is vested on women and are practised mainly in the New Guinea islands region of Papua New Guinea. Out of these systems our people developed one of the most complicated customs and practices unique to themselves.

However, this has drastically changed overtime as a result of colonisation. The ideas of the foreigners encouraged for self-sustenance that is one person for him or herself. Thus our good values that were upheld by our ancestors for care, love and prosperity in its real meaning have decayed to the core where nobody cares anymore for the minorities in their society.

Today, those regarded as minorities would preferably be People with Disabilities, orphans, beggars and even those residents of illegal settlements and those in the remotest parts of Papua New Guinea. As they lack the power in their society. For instance, people of the Star Mountains will not accept modern clothing because the place is isolated. Who will assist bring modern goods to them on weekly or monthly basis? Forty years past independence yet the geographical locality makes it difficult for a good airstrip or road of any sorts to be developed by their representatives to the parliament. However, people are beginning to recognise the values of human rights and assistance is gradually been given to these people from disadvantaged areas.

Suggested Resources

1. John Waiko, 1993, *A short History of Papua New Guinea*: Oxford University Press, Australia
2. *Culture of Papua New Guinea*,
Retrieved from: <https://en.wikipedia.org/wiki/>
3. Margherita Ragg, (2018). *Papua New Guinea culture – An Introduction to Ancient Traditions*. Zegrahm Expeditions.
Retrieved from: <https://www.zegrahm.com/blog/>
4. *Papua New Guinea; Daily Life and Social Custom*.
Retrieved from: <https://www.britannica.com/>
5. Use other relevant materials available (magazines, newspaper articles, reports, short films)

Benchmark 9.2.3.3: Discuss and reflect cultural practices and their association with holidays celebrated by different cultures and religions in PNG.

Topic 3: Cultural practices in PNG

Sub-topics:

- Importance of cultural practices
- Holidays celebrated by different cultures in PNG
- Holidays celebrated by different religions in PNG

Skills: Analysis (discuss and assess), evaluating (appraise), synthesis (reflect, participate).

Learning Objectives: By the end of the topic, students will be able to:

- Discuss importance of different cultural practices in PNG.
- Appraise holidays celebrated by different cultures in PNG.
- Assess holidays celebrated by different religions in PNG.

Content Background

Importance of cultural practices

Culture is acquired through social interaction, not through biological inheritance. No person is born with a culture. Children take on the culture in which they are raised through observing, imitation and experiences. For instance, the use of medical plants when children have scores or when they are sick. Children may also absorb certain aspects of culture unconsciously. For instance, in gatherings separation between males and females appear naturally where men folk tend to sit in groups on the one hand whilst women do the same but some distance away from the men. Children do not realise this until such age that they begin to question this way of sitting. Gatherings such as; village meetings, certain ceremonies and rituals and even during church services. Another cultural activity is the sharing and chewing of betel nut and other gift exchange during gatherings. It strengthens and motivates participants.

Holidays celebrated by different cultures in PNG

A very wide variety of multinational festivals and holidays are celebrated around the world, whether within particular religions, cultures, or otherwise. There are many events that Papua New Guineans take part which represents their cultures and those that have been introduced by foreigners. The cultural days observed are the Goroka Show in September, Independence Day (16th September), Maborasa Show in Madang celebrated every October and the Yam Festival in Milne Bay Province and the Tolai Warwargira Festival held in East New Britain Province. For instance, the exchange traditional trades like the Moka, Tei, Hiri, Kula and Vitiaz are practiced today but modified and influenced by the western culture. A Moke ceremony in the Highlands is now complete with cartoons of can drinks as icing on the cake.

Holidays celebrated by different religions in PNG

There are many beliefs about spirit beings especially ancestral spirits. Other important spirits are also respected. Christianity has been introduced widely, but traditional rituals are still frequently celebrated. They are related to religion or practices of their own cultures. For instance, religious holidays like Good Friday, Easter and Christmas Day.

Suggested Resources

1. John Waiko, 1993, *A short History of Papua New Guinea*: Oxford University Press, Australia
2. *Culture of Papua New Guinea*,
Retrieved from: <https://en.wikipedia.org/wiki/>
3. Margherita Ragg, (2018). *Papua New Guinea culture – An Introduction to Ancient Traditions*. Zegrahm Expeditions.
Retrieved from: <https://www.zegrahm.com/blog/>
4. *Papua New Guinea; Daily Life and Social Custom*.
Retrieved from: <https://www.britannica.com/>
5. Use other relevant materials available (magazines, newspaper articles, reports, short films)

Benchmark 9.2.3.4: Survey the ways in which a society dealt with the introduction or influence of another society's culture or religion.

Topic 4: Cultural influence

Sub-topics:

- Influences from other cultures and religions
- Ways in which other cultures are introduced into PNG culture
- Ways in which other religions are introduced or influence our religions in PNG

Skills: Analysis (examine, survey).

Learning Outcomes: By the end of the topic, students will be able to:

- Examine ways in which other cultures and religions are introduced into and influence PNGs culture.
- Conduct a survey to find out about the influences of other cultures and religions in PNG.

Content Background

Every culture changes but all parts of a culture do not change at the same time. For example, science and technology may sometimes change so rapidly that they lessen the importance of customs, ideas, and other non-material parts of a culture. At other times, changes in ideas and social systems may occur before changes in technology. A number of factors may cause a culture to change. The two main ones are contact with other cultures and invention.

Contact with other cultures

No society is so isolated that it does not come in contact with other societies. When contact occurs, societies borrow cultural traits from one another. As a result, cultural traits and patterns tend to spread from the society in which they originate. This spreading process is called diffusion.

Influences from other cultures and religions

Western cultures and religion have had a great impact on PNG culture. PNG ways of doing things are changing and are influenced by western ideas and ways of doing things. The traditional cultures of Papua New Guinea are changing more rapidly in some areas than in others. Old skills and ideas are sometimes lost as new ones are learnt.

Ways in which other cultures are introduced into PNG culture

Education has become a tool that has influence our culture and religion. Globalisation and developments in Technology like computers, phones internet, and other apps have virtually changed and transform our world that people are losing connection with their traditional and Melanesian ways.

Christianity's Influence on our Religion

People have accepted many different elements of Christianity into our society and many traditional ceremonies that had been performed for hundreds of years began to lose their importance. Christianity has had a great impact on

our nation that most of our tradition religious beliefs and practises are fading away. We rarely call upon our ancestors for help, guidance or protection but to the Christian God nowadays.

Suggested Resources

1. John Waiko, 1993, *A short History of Papua New Guinea*: Oxford University Press, Australia
2. *Culture of Papua New Guinea*,
Retrieved from: <https://en.wikipedia.org/wiki/>
3. Margherita Ragg, (2018). *Papua New Guinea culture – An Introduction to Ancient Traditions*. Zegrahm Expeditions.
Retrieved from: <https://www.zegrahm.com/blog/>
4. *Papua New Guinea; Daily Life and Social Custom*.
Retrieved from: <https://www.britannica.com/>
5. Use other relevant materials available (magazines, newspaper articles, reports, short films)

Unit 4: Development and Sustainability of Societies

Content Standard 2.4: Students will be able to explain and analyse the roles of individuals and groups within a society as promoters of change or guardians of status quo.

Benchmark 9.2.4.1: Examine how foreign governments have contributed to change or sustainability in PNG.

Topic 1: Governments and change in PNG

Sub-topics:

- Foreign governments contributions to change in PNG
- Reasons for change
- Changes influenced by foreign governments
- Maintaining the status quo

Skills: Analysis (Discuss and debate, explain and examine, analyzing).

Learning Objectives: By the end of this topic, students will be able to:

- Discuss the contributions of foreign governments to changes in PNG.
- Describe the role played by foreign governments in contributing to change in PNG.
- Explain the reasons for changes influenced by foreign governments.
- Analyse the four main areas in which foreign governments influenced change.
- Explain how foreign governments contributed to maintaining the status quo in PNG.

Content Background

European colonialism of the world had resulted in great changes in many parts of the globe. European powers were not seeking to obtain colonies merely for political, economic or military reasons but to also transform territories and peoples whom they considered primitive or backward in comparison with their own societies. This bias rationale was one of the basic driving forces behind European colonial quest of the world. Like many societies of the world, PNG, experienced great a degree of change from a traditional subsistence rural community to a more modern society incorporating much of the influences of its former colonial rulers. Our former colonial rulers influenced social, economic, political and cultural changes which are still evident in PNG today. For instance, English is the official language of government, business, education and communication in PNG today. Similarly, other countries had also adopted the language of their former colonial rulers as their official language of communication.

Suggested Resources

1. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne. Oxford University Press.
2. John Waiko, 1993, *A short History of Papua New Guinea*: Oxford University Press, Australia
3. Susan Baing, (2015). *PNG Upper Secondary; Grade 12 History*. Melbourne. Oxford University Press.

Benchmark 9.2.4.2: Analyse how the actions of foreign governments impacted PNG.

Topic 2: Impact of foreign government actions in PNG

Sub-topics:

- Foreign government actions
- Nature of foreign government actions
- Impact of foreign government actions on PNG and its people

Skills: Analysis (identify, describe and analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Identify foreign government actions.
- Describe the nature of foreign government actions in PNG.
- Analyse the impacts of foreign government actions on PNG and its people.

Content Background

Many parts of the world that came under European colonialism experienced many changes largely as a result of the actions that were effected on the territories and people by the colonial rulers. These actions varied greatly in terms of its impact between territories and people as well as contributed greatly in shaping many societies today. The actions of foreign governments centred on activities, policies and legislations which were geared largely to influence changes to the wishes of the western imperialists. For instance, the introduction of western education system has led to the destruction and gradual extinction of certain traditional practices and knowledge. However, not all foreign government actions were negative as other acts brought positive impacts such as the legislation for dead corpses to be buried rather than having been preserved over fire places near at home or along cliff faces near village for health reasons.

Suggested Resources

1. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
2. John Waiko, (1993), *A short History of Papua New Guinea*: Oxford University Press, Australia.
3. Ronald.J.May, (2001). *State and Society in Papua New Guinea; The First Twenty-Five Years*. Australian National University Press.
4. Susan Baing, (2015). *PNG Upper Secondary; Grade 12 History*. Melbourne. Oxford University Press.

Benchmark 9.2.4.3: Examine how governments of different countries react to and contribute to social, economic, political, cultural or religious change and sustainability in PNG.

Topic 3: Governments reactions and contributions to changes and sustainability in PNG

Sub-topics:

- Government reaction and contribution to changes
- Purpose of governments response to changes
- Example of government intervention policies in PNG

Skills: Analysis (compare and examine), evaluation (describe and assess).

Learning Objectives: By the end of this topic, students will be able to:

- Compare government reactions and contributions to social, economic, political and cultural changes in PNG.
- Describe the type of changes contributed to PNG by certain countries.
- Assess the impact of these changes on the people and the sustainability of this changes in PNG.

Content Background

Change is a common characteristic of every society but the rate in which it occurs varies from place to place. Change can be planned or unplanned and often intentional, and creates issues that cause authorities to react or respond. Often governments respond to social, economic, political, cultural, religious changes and sustainability through policy interventions or legislations. For instance, the invention of social media platforms such as Facebook, Twitter and instagram had revolutionized the way we communicate and share information today. However, these innovations have created various issues such as the spread of fake news, lies, and defamatory remarks and identify theft. Most recently, certain aggrieved politicians were calling for a ban on Facebook in PNG because unknown individuals had posted defamatory articles of them. In light of the challenges posed by social media both international and local, government of PNG enacted the National Cybercrime Code Act in 2016 as a control mechanism to address issues related to these abuses.

Suggested Resources

1. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
2. John Waiko, (1993), *A short History of Papua New Guinea*: Oxford University Press, Australia.

Benchmark 9.2.4.4: Identify individuals and groups in PNG who have made important contributions towards promoting change or sustainability and evaluate the nature of their contribution.

Topic 4: Agents of change in PNG

Sub-topics:

- Case Study: Individuals and groups who have contributed to change in PNG
- Nature of contributions for change by individuals and groups

Skills: Evaluation (identify and evaluate).

Learning Objectives: By the end of this topic, students will be able to:

- Identify individuals and groups who have made important contributions to PNG.
- Evaluate the nature of these contributions.
- Research on important figures in PNG's history and create monuments in honor of their valuable contributions to developing our country. (STEAM integration).

Content Background

There are many individuals and groups both foreign and national who played very significant roles in bringing about change during the colonial and post-colonial era in Papua New Guinea. Many of these individuals and groups 'contributions have been lost through time and rarely heard of in the present era. Some of these people have long passed on but their legacies remain for many years to come. It is only fitting as students studying history to revisit their stories and learn the contributions they made in shaping our country to be what it is today.

Papua New Guinea has produced some great leaders both at the national and local level, in politics, business and the community at large. A few are well remembered in our historical archives whilst a great many are unheard of and have remained obscured for many years. Regardless, the patriotism and determination, as well as the contributions of particular individuals and groups have greatly shaped PNG's history immensely. Individuals like Sir Michael Somare, Sir Julius Chan, Sir Albert Maori Kiki, Sir Tei Abal, John Momis, the Sepik World War II hero Yauwiga, Kondom Agaundo, Hal Holman, Thomas Shacklady, Gough Whitlam, the "Bully Beef Club," Pangu Party and others played significant roles in promoting change and sustainability in PNG.

Suggested Resources

1. Eric Johns, (2006). *PNG History Through Stories*, Melbourne. Pearson Education Australia
2. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
3. John Waiko, (1993), *A short History of Papua New Guinea*: Oxford University Press, Australia.

Benchmark 9.2.4.5: Examine the roles and responsibilities of religions in bringing about change or maintaining the status quo in PNG.

Topic 5: Religions and change in PNG

Sub-topics:

- History of Christian Missions to PNG
- Roles and responsibilities played by Christian Missions in bringing change
- Impact of Christian Missions in PNG

Skills: Analysis (identify and examine, analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Identify the different groups of missionaries that settled in PNG.
- Use a map to plot the arrival and settlement of Christian Missions throughout PNG.
- Examine the role and responsibilities Christian Missions played in bringing change or maintaining the status quo of PNG.
- Analyse the impact of changes introduced by Christian Missions in PNG.

Content Background

Christian missions started arriving in the mid 19th century and settled in different parts of the country. Each mission had varying reasons for coming to PNG, however their influences gradually resulted in the breakdown of various cultural practices and beliefs in many parts of the country. Many regions of the country today are dominated and influenced by the particular mission that first arrived and settled there.

These Christian Missions have had a very profound influence and impact on PNG societies since they first arrived and settled in various parts of the country. Their presence and influence is experienced throughout the country today and the frequent reference of PNG as a Christian country is a testament of the impact Christian Missions has had on the nation and its people. Further evidence of the influence and impact of Christian Missions in the country is the presence of churches, schools and health facilities provided by various Christian denominations. In fact, the Christian Missionary presence is experienced right down to the remotest locations of the country. Furthermore, the Christian Missionary influence is also seen in the practice of marriage customs and ceremonies, childrearing, dress, artistic displays, attitudes, beliefs, government, education and even in agricultural practices. As a matter of fact, some commentators have stated that Christian Missions have had a far greater influence on the people than the government.

Suggested Resources

1. Eric Johns, (2006). *PNG History Through Stories*, Melbourne. Pearson Education Australia
2. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
3. John Waiko, (1993), *A short History of Papua New Guinea*: Oxford University Press, Australia
4. Countries and their cultures forum. *Culture of Papua New Guinea*. Retrieved from: <https://www.everyculture.com/>

Benchmark 9.2.4.6: Analyse cases where military force was used or were being used to bring about change or maintaining the status quo in PNG.

Topic 6: Military force and change in PNG

Sub-topic: Case Study: The Bougainville Conflict

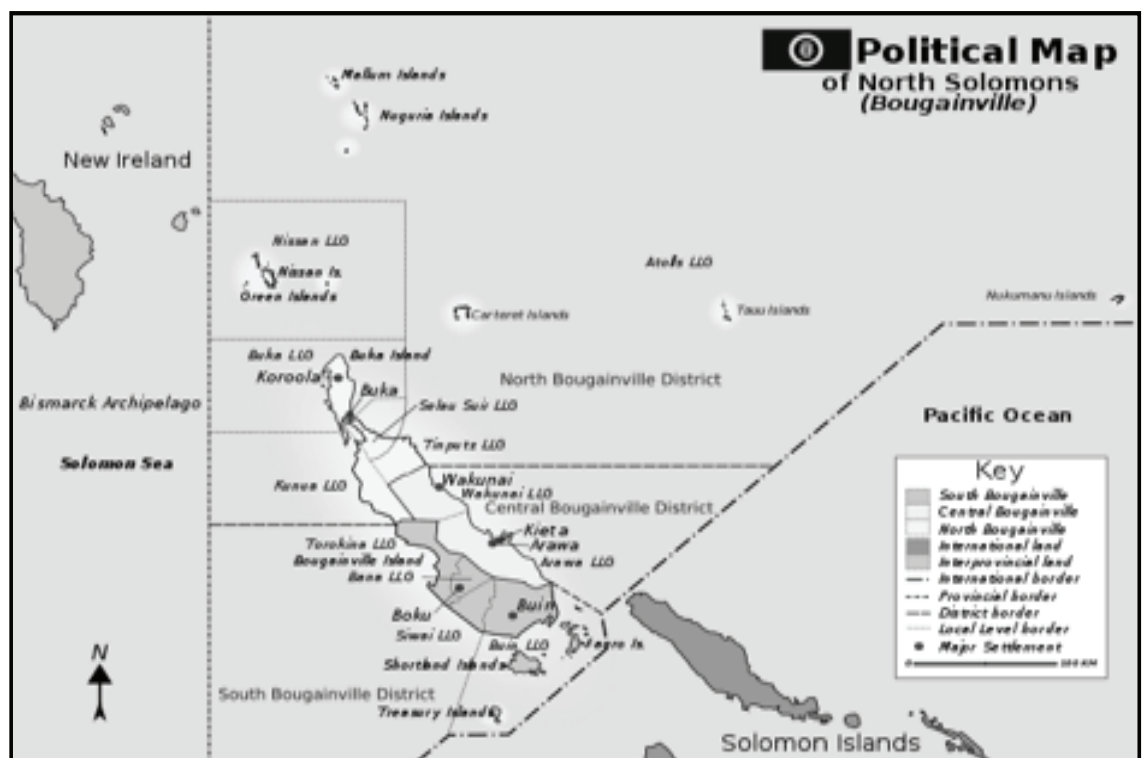
Skills: Analysing (identify and examine, analyse)

Learning Objectives: By the end of this topic, students will be able to:

- Identify the causes of the Bougainville conflict.
- Examine the social, economic and political impact of the conflict on the people and the country.
- Analyse PNG government's decision to use military force to maintain the status quo.

Content Background

The *Bougainville Conflict* also known as the *Bougainville Civil War* was by far the single biggest conflict in the Oceania region. The ten year war fought between the PNG Government and the Bougainville Revolutionary Army (BRA) claimed an estimated 15, 000 to 20, 000 lives when it ended in 1999. This conflict had far reaching impact particularly on Bougainvilleans and reconciliation has been a slow but gradual process that has been carried out on the island over the years.



(Source: <https://bougainvilleneews.com>)

Suggested Resources

1. Adams Rebecca (2001). *Peace on Bougainville*: Truce Monitoring Group. Centre for Strategic Studies, New Zealand. Victoria University Press.
Retrieved from: <https://books.google.com.au/books?>
2. Mary.L. O'Callaghan, (2002). *Weaving Consensus - The Papua New Guinea – Bougainville Peace Process Accord Issue 12*. London. Conciliation Resources.
Retrieved from: <https://www.c-r.org/>
3. May. R. James & Selochan Viberto (2004). *The situation on Bougainville: Implications for Papua New Guinea, Australia and the Region*. Current Issues Brief 9 1996-97. Canberra. Parliamentary Research Service.
Retrieved from: <https://www.aph.gov.au/>
4. Roberts. John (2002). *Reporting Military Conflict and Human Rights Abuse*. The Australian Press and Bougainville, 1996. RMIT University, Melbourne.
Retrieved from: <https://researchbank.rmit.edu.au/>

Benchmark 9.2.4.7: Evaluate the sustainability and change policies and plans of the government of PNG.

Topic 7: Plans and policies of change and sustainability in PNG

Sub-topics:

- PNG's plans and policies on addressing change and sustainability
- Implementation of plans and policies on change and sustainability

Skills: Evaluation (identify and justify).

Learning Objectives: By the end of this topic, students will be able to:

- Identify and discuss PNG's plans and policies on addressing change and sustainability.
- Evaluate the effectiveness of the implementation of these plans and policies.

Content Background

Suggested Resources

Benchmark 9.2.4.8: Justify the intervention of outside forces or governments in promoting change or maintaining stability in PNG.

Topic 8: Foreign government intervention and change in PNG

Sub-topics:

- Foreign governments intervention in promoting change or sustainability in PNG
- Motives of foreign government intervention in promoting change and sustainability in PNG
- Historical examples of foreign government interventions in PNG
- Impact of foreign government interventions

Skills: Evaluation (identify and justify).

Learning Objectives: By the end of this topic, students will be able to:

- Identify the ways in which foreign governments intervene in promoting change or sustainability.
- Evaluate the motives of foreign government interventions in PNG.
- justify through the use of historical examples to foreign government interventions in promoting change or sustainability.
- Describe the impact of foreign government interventions in PNG.

Content Background

Foreign governments or outside forces interventions in PNG is not a new experience. Since the first sightings and arrival in our country over a century ago, outside forces or governments have and continue to influence change in our country and people today. The interventions by foreign governments or outside forces come in various forms including foreign aid, humanitarian assistance, military intervention and foreign affairs. PNG is no different to other nations as our country has also experienced foreign interventions in different ways including the current Australian Police Partnership Program, Australian Asylum Program on Manus Island, the World Health Organization Immunization Program, foreign aid from Australia, New Zealand, the European Union and the various United Nations organizations including UNESCO, UNDP, UNFP and UNHCR.

Suggested Resources

1. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
2. John Waiko, (1993), *A short History of Papua New Guinea*: Oxford University Press, Australia
3. Development Assistance in Papua New Guinea. Australian Government; Department of Foreign Affairs and Trade.
Retrieved from: <https://dfat.gov.au/>
4. Closer Ties between China and PNG. (2018). The National. Port Moresby
5. China and Papua New Relations Forging Ahead with Great Opportunity. (2018).
Retrieved from: <http://www.bjreview.com/World/>

Unit 5: Economic Needs and Wants

Content Standard 2.5: Students will be able to investigate and discuss how economic needs and wants affect individual and group decisions.

Benchmark 9.2.5.1: Map the routes of early explorers and explain their economic activities in various parts of PNG and the Pacific Region.

Topic 1: Early explorers and economic activities

Sub-topics:

- Routes of early explorers
- Economic activities of early explorers
- Case Study - Akmana Expedition: 1929 – 1930
- Case Study – Jim Taylor, Dan and Mick Leahy: 1930

Skills: Synthesis (map)/Analysis (explain)

Learning Objectives: By the end of this topic, students will be able to:

- Identify early explorers in PNG and the Pacific region.
- Map and analyse the routes of early explorers in PNG and the Pacific Region.
- Outline the economic activities of the early explorers in PNG and the Pacific Region.
- Plot their establishments and settlement on the map of PNG.

Content Background

Early European expansion into the Pacific region was sparked by two economic factors: quick access to the “Spice Islands” or Maluku in present Indonesia and a belief in the existence of an undiscovered southern continent rich in gold, spices and other valuable trade goods. Interest in the exploration of Papua New Guinea’s highlands lagged behind Asia and Africa as Europeans were cautious of venturing further inland due to fear, and insecurity. Much of the early mapping of Papua New Guinea was done by observing from the coast or from mountain peaks. The earliest European explorations were carried out by travelling up and along major rivers.

Suggested Resources

1. Hank Nelson, (1982). *Taim Bilong Masta: The Australian Involvement with Papua New Guinea*. Australian Broadcasting Commission. Sydney.
2. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
3. Chris Ballard, (2016). *Explorers and Co-interior New Guinea; 1872-1928*. Canberra. ANU Press.
Retrieved from: <http://press-files.anu.edu.au/>
4. The History of Papua New Guinea.
Retrieved from: <https://en.wikipedia.org/wiki>

Benchmark 9.2.5.2: Assess and analyse the economic reasons for the colonization of PNG and the Pacific Region.

Topic 2: Motives for colonization of PNG and the Pacific

Sub-topics:

- Economic reasons of colonization in the Pacific region
- Economic reasons of colonization in PNG

Skills: Evaluation (assess)/Analysis (analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Analyse the economic reasons for the colonization of PNG and the Pacific.
- Evaluate the economic reasons for the colonization of PNG and the Pacific.

Content Background

“In the early days of colonization, Australia was a spearhead for the British Empire. But in the 1850s, gold rushes caused economic boom. The accumulated wealth began seeking outlets in the surrounding region, giving rise to an expansion drive. The colonists themselves became imperialists...” (Tom O’Lincoln – Australian colonialism in Papua New Guinea).

Australian and European colonialism differed very little in motive as much of the colonial expansion in PNG, and the Pacific region were driven by economic, political and strategic military factors as in Asia and Africa. European colonialism sought to obtain colonies for their narrow national interests with less consideration of the interests of the colonies and its people.

Suggested Resources

1. John Waiko, (1993), *A short History of Papua New Guinea*: Oxford University Press, Australia
2. Hank Nelson, (1982). *Taim Bilong Masta: The Australian Involvement with Papua New Guinea*. Australian Broadcasting Commission. Sydney.

Benchmark 9.2.5.3: Explain the ways in which economic factors have influenced people from other countries to migrate to PNG and the Pacific Region.

Topic 3: Economic motives for migration into PNG and the Pacific

Sub-topics:

- Historical background of immigration in PNG and the Pacific region
- Motives and causes of immigration
- Economic contributions of immigrants in PNG and the Pacific region
- Impact of immigration in PNG and the Pacific region – A Case Study: The Manus Island and Nauru asylum seekers detention centres.

Skills: Analysis (Explain and analyze), evaluation (discuss and evaluate).

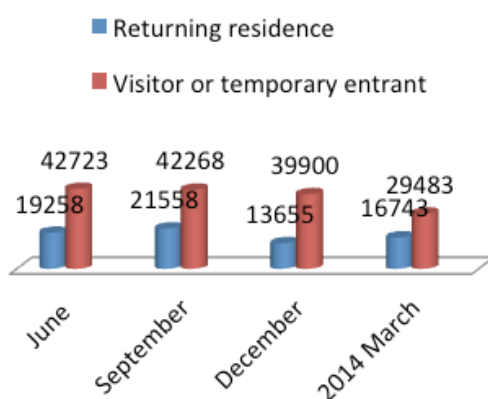
Learning Objectives: By the end of this topic, students will be able to:

- Explain the historical background of immigration in PNG and the Pacific region.
- Analyse the causes and motives of immigration to PNG and the Pacific region.
- Discuss the contributions of immigrants in PNG and Pacific region.
- Evaluate the impacts immigration has had on PNG and the Pacific region.

Content Background

Migration has been a part of human habit for centuries. The factors influencing migration and the rate in which it occurs varies widely across the world. They include natural factors such as disasters or human factors like armed conflict. Migration may be internal or it may be external over international borders, and between countries. In recent times, migration has been occurring at exponential levels across the world and it has created social, economic and political problems for host countries. PNG is not immune to this as we also have local migration challenges of our own including rural-urban drift, the West Papua refugees in Port Moresby and Sandaun Province plus the asylum seekers in Manus Province as some case in point.

Arrivals by Purpose of Journey, March Quarter 2013 & 2014

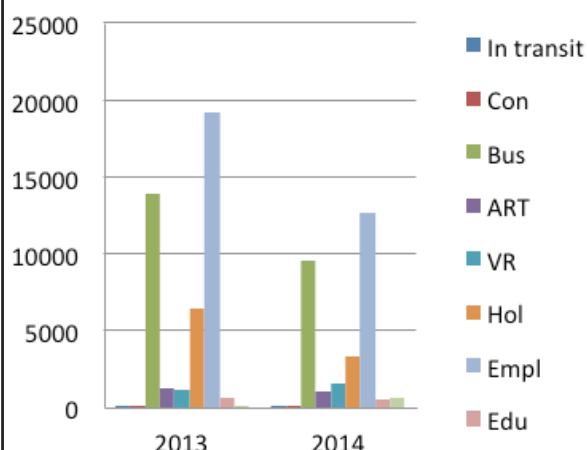


Arrivals by Purpose of Journey, March Quarter 2013 & 2014

Period	Returning Residents	Visitors or Temporary entrant
Quarter ended		
2013 March	22,891	43,321
June	19,258	42,723
September	21,558	42,268
December	13,655	39,900
2014 March	16,743	29,483

Migration – March Quarter 2014

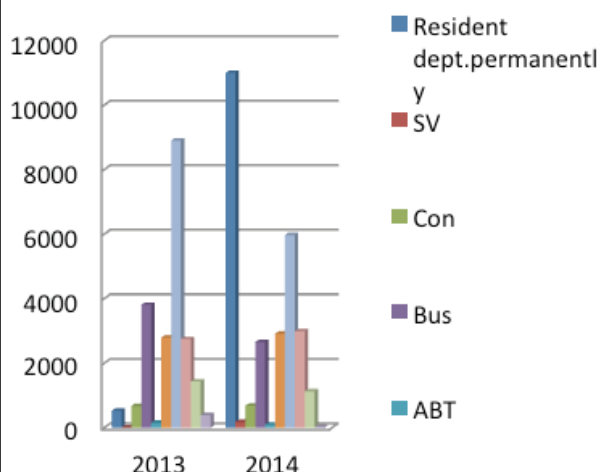
Arrivals of Visitors by Reasons for Visit, March Quarter 2013 & 2014



Arrival of visitors by Reasons for visit, March Quarter 2013 & 2014

Reasons for Visit	Quarter-ended 2013	March 2014
In transit	207	144
Convention	601	308
Business	13,870	9,848
Accompanying Business Traveller	1,216	1,003
Visiting Relatives	1,077	1,550
Holiday	6,445	3,318
Employment	19,234	12,608
Education	559	480
Others	112	588

Departure by Purpose of Journey, March Quarter 2013 & 2014

Departure by Purpose of Journey
March Quarter 2013 & 2014

Reasons for departing	Quarter-ended 2013	March 2014
In transit	528	1,001
Convention	2	179
Business	669	683
Accompanying Business Traveller	3,809	2,652
Visiting Relatives	153	95
Holiday	2,792	1,914
Employment	8,898	5,971
Education	1,431	1,127
Others	388	24
Visitors/ temporary entrant departing	28,802	23,259

(Source: PNG National Statistical Office)

Suggested Resources

1. Wonderful Hope Khonje, (2015). *Migration and Development: Perspectives from Small States*. London. The Commonwealth Secretariat. Retrieved from: <https://www.google.com/search>
2. Stephen Castles, Hein de Haas & Mark. J. Miller, (2014). *The Age of Migration – International Population Movement in the Modern World (5th edition)*. New York, Palgrave Macmillan. Retrieved from: <https://www.google.com/search>
3. National Statistical Office; PNG. (2014). *Migration*. Port Moresby. Retrieved from: <https://www.nso.gov.pg/>

Benchmark 9.2.5.4: Use research skills to investigate and ascertain the economic reasons of an individual or group for migrating to PNG.

Topic 4: Economic motives for migration into PNG (Case studies of individuals & groups)

Sub-topics:

- Chin Hoi Min (CHM)
- Filipinos in PNG
- Sir Brian Bell
- The Chinese in PNG

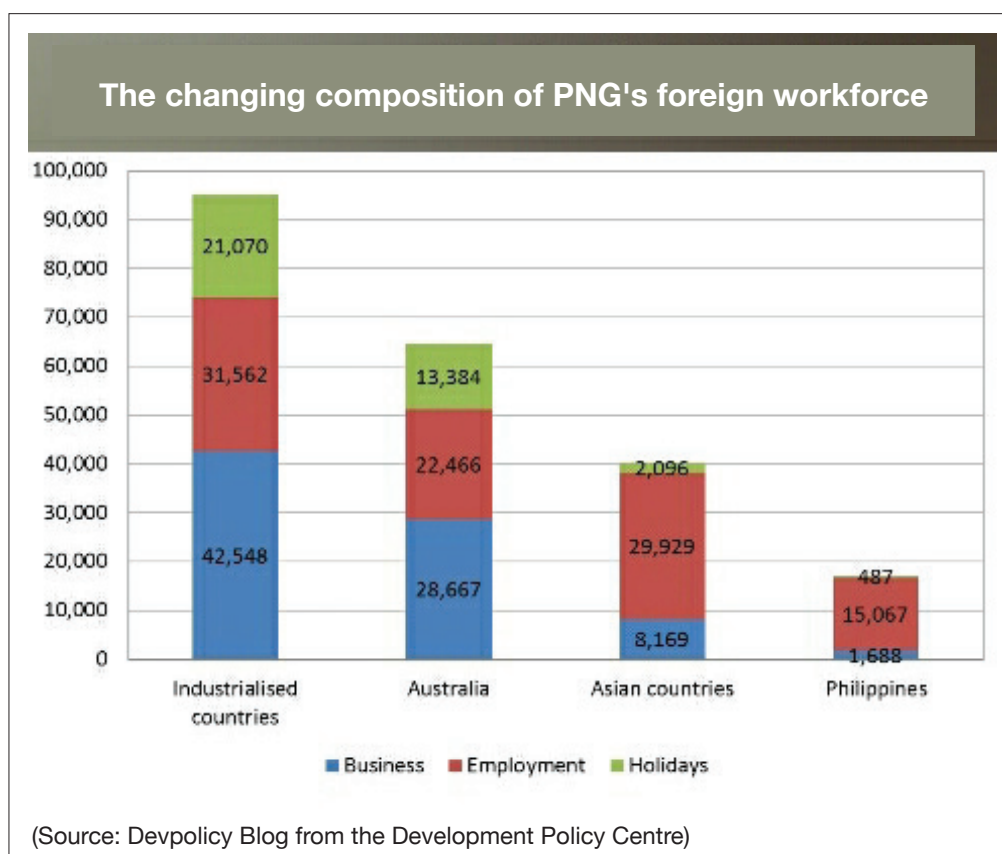
Skills: Analysis (research/investigate and ascertain).

Learning Objective: By the end of this topic, students will be able to:

- Investigate the reasons of individuals or groups for migrating to PNG.
- Ascertain the success of migrant individuals or groups in PNG.
- Discuss the economic impact of migrants in PNG.

Content Background

Migration is a characteristic of every human society. The impact of immigrant populations across the world has produced varying degree of results both positive and negative. The positive aspects of immigration are that, it adds to a host nation's workforce with people who may be skilled, knowledgeable and talented. However, immigration incurs negative results whereby it adds extra people to a nation's population and this may lead to overpopulation, overcrowding, unemployment, and exert pressure on limited services of a host nation. The sending country of the immigrants may also suffer the loss of productive workforce and skilled personnel creating a 'brain drain.'



This topic needs a lot of reading to find facts of individuals and groups migrating into PNG for economic (business) purposes. Allow students do a research-based project. Give the students clear and specific guidelines to follow (provide a rubric).

Suggested Resources

1. Carmen Voigt - Graf, (2015). The changing composition of PNG's foreign workforce. Development Policy Blog.
Retrieved from: <https://devpolicy.org/>
2. Use other relevant materials (newspapers, research papers, reports/data from national agencies like NSO, CIA,).

Benchmark 9.2.5.5: Use research skills to investigate the reasons for a business firm or a multinational corporation company doing business in PNG.

Topic 5: Reasons for business firms or multinational corporations in PNG - Case studies

Sub-topics:

- What are Multinational Corporations (MNC)?
- Benefits of MNCs on host countries (PNG)
- Case Study of a business or MNC in PNG: Rimbunan Hijau (PNG)

Skills: Analysis (research/investigate and analyse, examine).

Learning Objective: By the end of this topic, students will be able to:

- Investigate the operations of Multinational Corporations.
- Analyse the reasons for businesses or MNC operations in PNG.
- Evaluate the benefits of MNCs in the host country (PNG).

Content Background

What does Multinational Corporation mean? A multinational corporation (MNC) has facilities and other assets in at least one country other than its home country. Such companies have offices and/or factories in different countries and usually have a centralized head office where they coordinate global management. Very large multinationals have budgets that exceed those of many small countries. Multinational corporations are sometimes referred to as transnational, international or stateless corporations. (Source: *Multinational Corporation* by James Chen – www.investopedia.com)

This topic needs a lot of reading to collect information about business firms and MNCs operating in PNG.

Allow students do a research-based project. Give the students clear and specific guidelines to follow (provide a rubric).

Suggested Resources

1. Multinational Corporation (MNC).
Retrieved from: <http://www.investopedia.com>
2. Use other relevant materials (newspapers, magazines, research papers, reports/data from national agencies responsible for businesses)

Unit 6: Geographical influences on Historical Events, People, Places and Environment

Content Standard 2.6: Students will be able to analyse and critically reflect on the effects of geographical factors on historical events, people, places and the environment in the past.

Benchmark 9.2.6.1: Investigate the challenges posed by the sea, and its associated elements in the migration of people in prehistoric times.

Topic 1: Pre-historic migration

Sub-topics:

- Origin of prehistoric migration
- Motives of prehistoric migration
- Routes of prehistoric migration
- Challenges posed by the sea in prehistoric migration

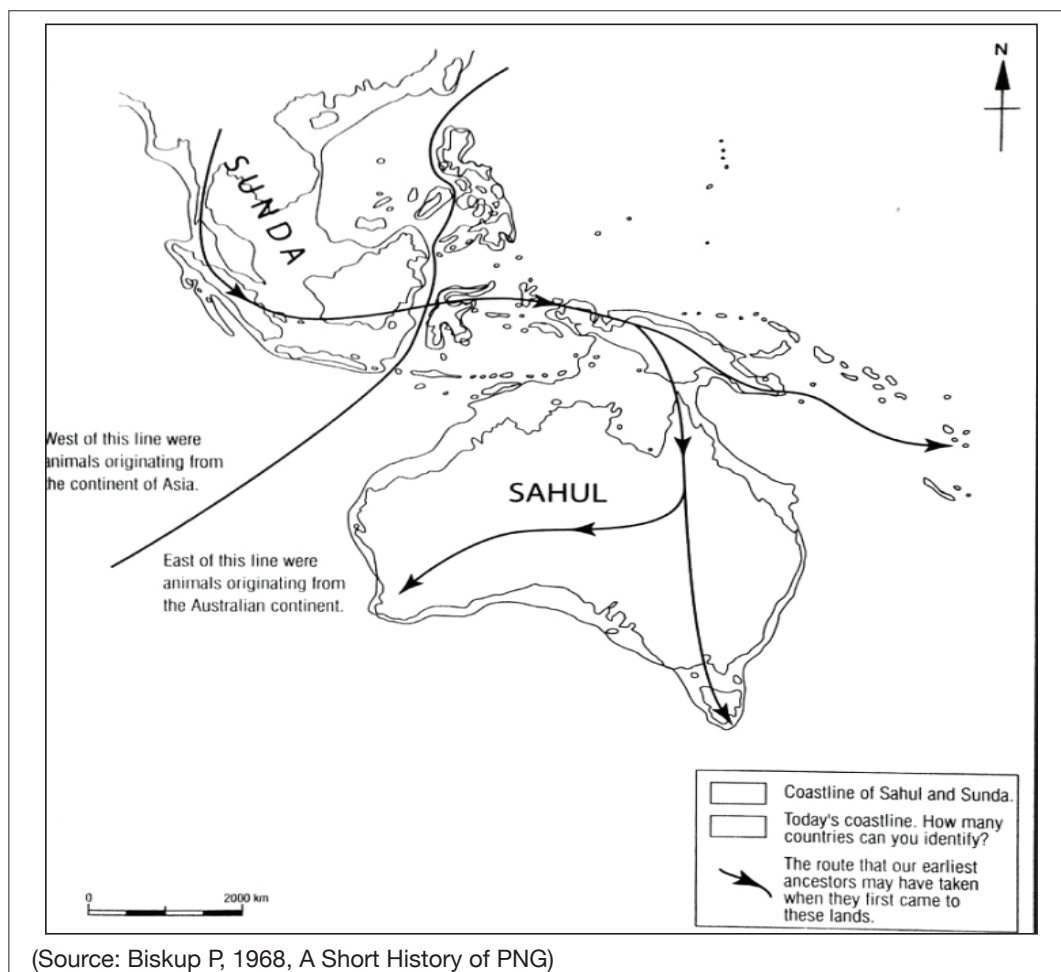
Skills: Analysis (investigate).

Learning Objective: By the end of this topic, students will be able to:

- Discover the origin of prehistoric migration.
- Explain the motives of prehistoric migration.
- Investigate by locating the possible migration routes of the early migrants to PNG.
- Examine the geographical challenges faced by the first migrants to PNG.
- Analyse how they were able to overcome these challenges and settled.

Content Background

People often ask questions like: Where did our ancestors originate? How did they get here? What difficulties did they face? Why did they settle here and not elsewhere? These are difficult but important questions that need to be considered especially, in PNG where our origins are vital in terms of tracing one's identity and roots in relation to establishing ownership rights to traditional or customary land. However, in historical studies understanding the challenges, particularly geographical barriers that early migrants encountered and the means or ways in which they overcame those difficulties are vital. These experiences help us make informed decisions and plans for change in the future, and how to overcome impediments to progress.



Suggested Resources

1. Brian Egloff, (1979). *Recent prehistory in Southeast Papua*. Australian National University.
2. Brian Jinks, et al, (1973). *Readings in New Guinea History*. Angus and Robertson.
3. Gash, Noel and June Whittaker, (1975). *A Pictorial History of New Guinea*. Queensland, Jacaranda.
4. Geoffrey Irwin, (1992). *The prehistoric exploration and colonization of the Pacific*. Auckland, Cambridge University Press,
5. Ian Huges, (1977). *New Guinea Stone Age Trade: the Geography and Ecology of Traffic in the Interior*. Australian National University.
6. Pamela Swading, (1981). *Papua New Guinea's Prehistory: An Introduction*. National Museum and Art Gallery
7. Peter Biskup, et al, (1968), *A Short History of New Guinea*. Angus and Robertson.

Benchmark 9.2.6.2: Examine the challenges posed by the sea, mountains, rivers, swamps, rain and other elements in the exploration of Papua New Guinea by early explorers.

Topic 2: Geographical challenges in the early exploration of PNG

Sub-topics:

- Origin of first explorers and exploration
- Routes of early explorers
- Challenges of early exploration

Skills: Analysis (examine).

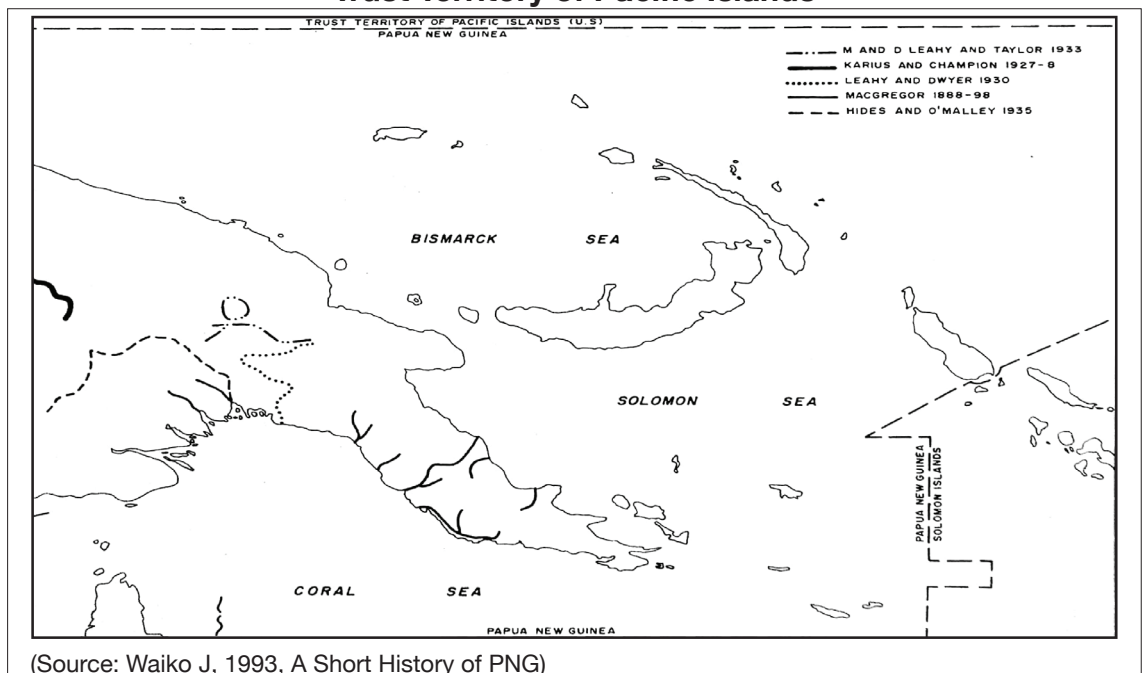
Learning Objectives: By the end of this topic, students will be able to:

- Discover the origin of early explorers.
- Examine the routes of early exploration.
- Highlight the geographical challenges faced by the early explorers.

Content Background

“MacGregor explored nearly all the navigable rivers in Papua, crossed the island, and climbed the highest mountain, Mount Victoria. Physically strong, he was driven by the desire to make the colonial influence known to the local people and by his ambition to be the first European to penetrate the interior of the island.” (Source: *A Short History of Papua New Guinea* – John Dademo Waiko)

Trust Territory of Pacific Islands



(Source: Waiko J, 1993, *A Short History of PNG*)

Suggested Resources

1. Clive R. Moore, et al, (1984). *Colonial Intrusion: Papua New Guinea 1884*. Port Moresby, PNG Centennial Committee.
2. James P Sinclair, (1985). *Papua New Guinea, the First 100 Years*. NSW, Australia. Roberts Brown and Associates.
3. John Waiko, (1993), *A short History of Papua New Guinea*. Australia, Oxford University Press.

Benchmark 9.2.6.3: Explain the importance of Kokoda Track and other Tracks in PNG during the Battles of World War II.

Topic 3: Significance of War Tracks during WW II

Sub-topics:

- Kokoda Track
- Black Cat (Skin Diwai) Track
- Bulldog Track

Skills: Analysis (explain).

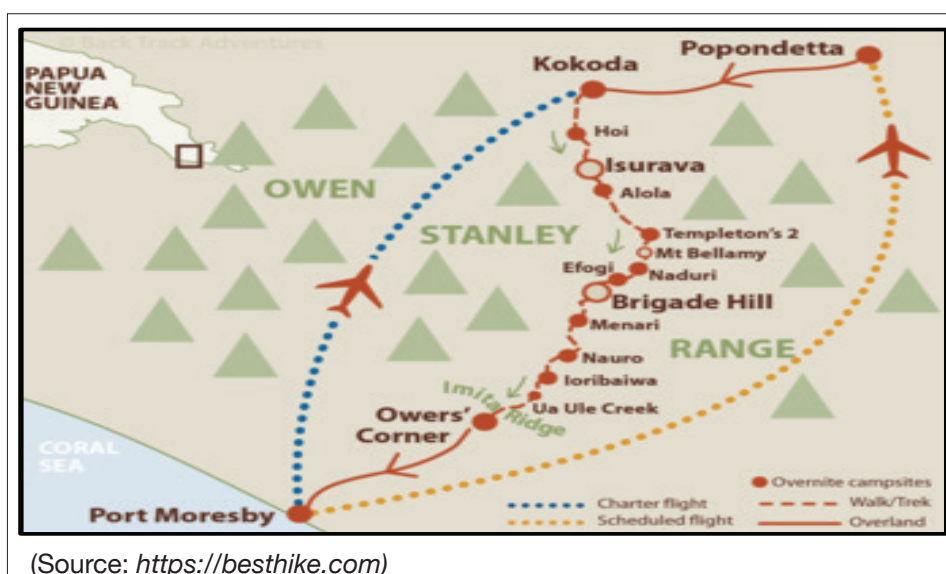
Learning Objectives: By the end of this topic, students will be able to:

- Identify the three main war tracks in PNG.
- Explain the importance of these war tracks in PNG during the Battles of World War II.
- Examine the challenges these tracks provided for soldiers and carriers during World War II.
- Plot these significant War Tracks on the map of PNG.

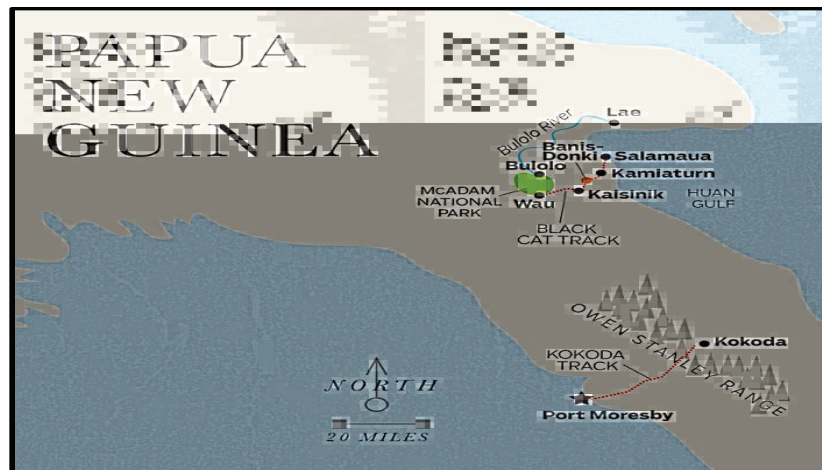
Content Background

The war tracks including the famous Kokoda Track plus the Black Cat and Bulldog Tracks played significant roles in the allied forces efforts during the Battles of the Second World War. These tracks existed in some of the most difficult terrains of PNG with almost right angled mountain slopes, fast flowing rivers, thick forest undergrowth and lots of mosquitoes. However, these tracks were the lifeline in getting supplies and ammunitions to battle weary soldiers at the battle front and local PNG carriers carted these vital necessities along these tracks. Today the infamous Kokoda Track attracts large numbers of trekkers every year, mostly Australians but the Black Cat and Bulldog Tracks have virtually fallen into disuse, though very few locals use it at present. These maps show the tracks used during WW II in PNG

Kokoda Track



Black Cat Track



Black Cat Track is located in Morobe Province
(Source: <https://trekkokoda.com.au>)

Bulldog Track



During World War II, the Bulldog Track was pushed from Malalaua to Edie Creek near Wau in Morobe Province to carry provisions.
(Source: <https://stepheninasia.com>)

Suggested Resources

1. James Karl (editor), (2017). *Kokoda – Beyond the Legend*. Cambridge University Press.
2. Max Carmichael, et al, (2016), *Attack on the Black Cat*. Melbourne, Melbourne Books.
3. Philip Bradley, (2008). *The Battle of Wau*. New York, Cambridge University Press.
4. Peter Phelps, (2018). *The Bulldog Track*. Hachette Australia.
5. Peter Williams, (2012). *The Kokoda Campaign 1942: Myth and Reality*. New York, Cambridge University Press.

6. Peter Williams, (2012). *Kokoda for Dummies – Australian Edition*. Queensland, Wiley Publishing Australia Pty Ltd.
7. Stephen, (2015). Stephen in Asia. *Bulldog Track in PNG 2010*. Retrieved from: <https://stepheninasia.com/bulldog-track-post/>

Benchmark 9.2.6.4: Explain the causes and effects of tidal waves and tsunami on the coastal regions of Papua New Guinea.

Topic 4: Tidal waves and tsunamis

Sub-topics:

- Causes of tidal waves
- Causes of tsunamis
- Impacts of tidal waves and tsunamis
- The Aitape Tsunami of 1998 – A Case Study

Skills: Analysis (explain).

Learning Objectives: By the end of this topic, students will be able to:

- Explain the causes and effects of Tidal wave and tsunami.
- Discuss the impact of tidal waves and tsunami on coastal regions of PNG.
- Evaluate the lessons to be learnt from the Aitape experience and propose solutions to reduce the impact of future disasters.

Content Background

Are tidal waves and tsunami the same? Absolutely not! Although both are sea waves, a tidal wave and a tsunami are two different things and unrelated phenomena. A tidal wave is a shallow water wave caused by the gravitational interactions between the sun, moon, and earth (tidal wave was used in earlier times to describe what we now call a tsunami.) A tsunami is an ocean wave triggered by large earthquakes that occur near or under the ocean, volcanic eruptions, and submarine landslides or by onshore landslides in which large volumes of debris fall into the water. Scientists do not use the term “tidal waves” because these waves are not caused by tides. Tsunami waves are unlike typical ocean waves.



Photograph showing destruction by Tsunami – Aitape, Sandaun Province-(1998)
(Source: <https://.....com>)

Suggested Resources

1. Brij Lal & Kate Fortune, (2000). *The Pacific Islands: An Encyclopedia*. Honolulu. University of Hawai Press.
2. H. L. Davies, (2008). *Aitape Story: 2nd Draft of a Report on the Aitape Tsunami of 1998*. H.L.Davies.
3. Kelly Doudna, *Tidal Wave or Tsunami*. Abdo publishing.
4. Rajendra K Bhandari, (2014). *Disaster Education and Management – A joyride for students, teachers and disaster managers*. New Delhi, Springer.

Unit 7: Historical Inquiry

Content Standard 2.7: Students will be able to use historical inquiry skills and relevant methods to analyse and interpret historical events and issues.

Benchmark 9.2.7.1: Collect and analyse information on an historical issue that occurred in PNG in the past.

Topic 1: Historical issues and events in PNG

Sub-topic: World War II in PNG

Skills: Analysis (interpret and analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Investigate by collecting information on World War II in PNG.
- Interpret and analyse information on World War II in PNG.

Content Background

A short summary of the start and end of World War II in PNG

Year	Main Events during WW II
1939	Second World War begins in Europe
1941	Japan enters the War by bombing Pearl Harbour, in Hawaii
1942	Japan captures Rabaul Japanese planes bomb Port Moresby
1943 to 1944	Japanese occupy Lae and Salamaua Second World War rages on in PNG
1945	Japan surrenders and the War ends

(Source: Waiko J, 1993, A Short History of PNG)

Suggested Resources

1. David Dexter, (1961). *The New Guinea offensives*. Canberra, Australia, Australian War Memorial.
2. Dudley McCarthy, (1959). *South-West Pacific Area – First Year: Kokoda to Wau (Volume V)*. Canberra, Australia, Australian War Memorial.
3. Eric Feldt, (1991). *The Coast Watchers*. Australia, Penguin Books.
4. Ian Stuart, (1970). *Port Moresby: Yesterday and Today*. Sydney, Australia, Pacific Publications.
5. John Waiko, (1993), *A short History of Papua New Guinea*: Australia, Oxford University Press,
6. Timothy Hall, (1981). *New Guinea 1942-1944*. Methuen Australia

Benchmark 9.2.7.2: Analyse the causes and the effects of historical events that occurred in PNG and the likely influence on future events.

Topic 2: Causes and effects of historical events in PNG

Sub-topics:

- PNG's Independence
- Sandline Mercenary
- Twin volcanic eruptions of Rabaul in 1994
- Asylum seekers in Manus

Skills: Analysis (identify and analyse), evaluation (evaluate).

Learning Objectives: By the end of this topic, students will be able to:

- Identify various historical events that occurred in PNG.
- Analyse the causes and effects of these events.
- Evaluate the likely influence these (events) will have on future events.

Content Background

Papua New Guinea's Independence

Year	Major events before independence
1884	Britain established protectorate over Papua and Germany annexes New Guinea
1906	Britain transferred control of Papua to Australia and renamed it Territory of Papua
1914	Australian forces occupied German New Guinea during the First World War
1921	After World War I the League of Nations granted Australia a mandate to run German New Guinea. New Mandated Territory of New Guinea was governed separately from the Territory of Papua
1942	Japanese forces occupied parts of both territories
1949	Australia established a joint administration over both territories called the Territory of Papua and New Guinea
1951	A 28 – member Legislative Council established by Australia
1961	First Elections involving indigenous population
1964	A 64 – member House of Assembly replaces Legislative Council and for the first time indigenous representatives were elected to the majority seat
1971	Renamed Papua New Guinea
1973	Granted self-government. Michael Somare, chief minister in an interim coalition government, was sworn in as head of the governing Executive Council
1975	In April new currency, the kina, replaced the Australian dollar. September attained full independence from Australia. Sir Michael Somare became PM

(Source: Waiko J, 1993, A Short History of PNG)

This topic requires Inquiry-Based Learning. Students should be given the opportunity to do their own research and significant historical events in PNG. Teacher is to provide a specific rubric to guide the students.

Suggested Resources

1. David Dexter, (1961). *The New Guinea offensives*. Canberra, Australia, Australian War Memorial.
2. Dudley McCarthy, (1959). *South–West Pacific Area – First Year: Kokoda to Wau (Volume V)*. Canberra, Australia, Australian War Memorial.
3. Eric Feldt, (1991). *The Coast Watchers*. Australia, Penguin Books.
4. Ian Stuart, (1970). *Port Moresby: Yesterday and Today*. Sydney, Australia, Pacific Publications.
5. John Waiko, (1993), *A short History of Papua New Guinea*: Australia, Oxford University Press.
6. Timothy Hall, (1981). *New Guinea 1942-1944*. Methuen Australia.

Benchmark 9.2.7.3: Identify and examine the roles of individuals and groups who were involved in an event or an issue that had an important impact and influence on PNG's development and progress.

Topic 3: Prominent Papua New Guineans

Sub-topics:

- Sir Michael Somare
- PANGU Party
- Sir John Guise
- Susan Karike
- Kondom Agaundo
- Constitutional Development Committee (CDC)

Skills: Analyse (identify and examine).

Learning Objectives: By the end of this topic, students will be able to:

- Identify prominent Papua New Guineans who had an important impact on PNG's development and progress.
- Examine the roles these individuals and groups played and the influence they had on PNG's development and progress.

Content Background

Flag Designer: Susan Karike

Susan Karike was from the Gulf Province and she was 15 years old in 1971. She attended a Catholic Mission School at Yule Island, Central Province.

Prior to the independence of Papua New Guinea, a new flag was proposed by the Australian government. It had three colors, blue, green, and yellow. The flag also featured the Southern Cross and the bird-of-paradise initially designed by Hal Holman. However, the flag was not accepted by the people of the country. Instead, a nationwide competition was held in 1971 to design the flag. Fifteen years old, Susan Karike was selected as the winner.

On 1st July 1971 the flag became official as the national flag for Papua and New Guinea. The new flag gained more of its status as the national flag when it was raised on Independence Hill on 16th September 1975, on the day the country was officially declared as the Independent State of Papua New Guinea.

Today this flag flies not only in Papua New Guinea but also in other countries where Papua New Guinea has foreign missions. The flag symbolizes the national pride and identity of the people of Papua New Guinea.

What do the colours and symbols of the Flag of Papua New Guinea Mean?



Red, black and white are traditionally important colors in PNG found in most art and clothing. These colors have been used by many of the country's tribes for centuries. The Southern Cross visible in the night sky is a reminder of the country's position in the Southern Hemisphere and connection with

Australia and other countries in the South Pacific while, the bird-of-paradise represents freedom, the natural wealth and the emergence of PNG as an independent nation.

Inaugural Pangu Pati Coalition 1975–1980



Oaths taken at Independence Day, 16

September 1975

- from left: Michael Somare (first Prime Minister) Sir John Guise (first Governor- General), and John Haugie

From 1975 there was even less party political activity than there had been before independence. This was partly because most of the issues on which the parties had disagreed had been resolved. The timing of independence was obviously no longer an issue. The Pangu Pati dropped the radical economic and social policies advanced in the Eight Point Plan. The policy of rapidly appointing local people to positions in the public and private sector was accepted by all except a handful of whites in the United Party and the National Party.

(Waiko, D.J – A Short History of Papua New Guinea; pp.166)

Suggested Resources

1. Gash, Noel and June Whittaker, (1975). *A Pictorial History of New Guinea*. Queensland, Jacaranda.
2. Hank Nelson, (1982). *Taim Bilong Masta: The Australian Involvement with Papua New Guinea*. Australian Broadcasting Commission. Sydney.
3. James P Sinclair, (1985). *Papua New Guinea, the First 100 Years*. NSW, Australia. Roberts Brown and Associates.
4. John Waiko, (1993), *A short History of Papua New Guinea*: Australia, Oxford University Press.
5. Peter Biskup, et al, (1968), *A Short History of New Guinea*. Angus and Robertson.

Benchmark 9.2.7.4: Use symbols, photographs, narratives, recordings of events, films/videos and other relevant information to reconstruct and interpret an important event that occurred in the history of PNG.

Topic 4: Interpretation and documentation of significant historical events in PNG

Sub-topics:

- Early exploration of Papua New Guinea
- World War II
- Papua New Guinea's Independence

Skills: Synthesis (interpret & document).

Learning Objectives: By the end of this topic, students will be able to:

- Research and gather information about significant historical events in PNG.
- Analyse the information collected from different sources.
- Use the collected information and document (video, essay, booklet, pictorial, presentation) significant historical events in PNG.

Inquiry-Based Learning

Teachers are advised to provide clear guidelines and rubrics to students to do mini research and document important events that occurred in the history of Papua New Guinea.

Suggested Resources

1. Gash, Noel and June Whittaker, (1975). *A Pictorial History of New Guinea*. Queensland, Jacaranda.
2. Hank Nelson, (1982). *Taim Bilong Masta: The Australian Involvement with Papua New Guinea*. Australian Broadcasting Commission. Sydney.
3. James P Sinclair, (1985). *Papua New Guinea, the First 100 Years*. NSW, Australia. Roberts Brown and Associates.
4. John Waiko, (1993), *A short History of Papua New Guinea*: Australia, Oxford University Press.
5. Peter Biskup, et al, (1968), *A Short History of New Guinea*. Angus and Robertson.

Strand 3: Political Science

This strand has 4 units and they are:

1. Government Systems
2. Political Ideologies and Systems
3. International Relations
4. Civic and Citizenship

Units	Topics
1. Government Systems	Topic 1: Principles of democracy Topic 2: History of democracy in PNG Topic 3: Purpose of democratic governments Topic 4: Structure of democratic governments Topic 5: Roles and responsibilities of democratic governments Topic 6: Process of changing democratic governments Topic 7: Processes of decision and law making in democratic governments Topic 8: Citizens' demand and democratic government processes Topic 9: Commonwealth and republic democratic countries
2. Political Ideologies and Systems	Topic 1: National symbols of democratic nations Topic 2: Patriotism in democratic nations Topic 3: Democratic alliances and groupings Topic 4: Leaders of democratic countries
3. International Relations	Topic 1: PNG's bilateral and multilateral relations Topic 2: Purpose, impact and outcomes of international relations Topic 3: PNG's international trade relations Topic 4: Conflicts in international relations Topic 5: PNG's international trade agreements Topic 6: Factors affecting PNG's bilateral and multilateral relations Topic 7: Role of the media in international relations
4. Civic and Citizenship	Topic 1: Citizenship Topic 2: Features of citizenship Topic 3: Application of good citizenship Topic 4: Key ideals of democratic governments Topic 5: Constitution as the basis for citizenship

Unit 1: Government Systems

Content Standard 3.1: Students will be able to evaluate and explain the purposes, ideologies, concepts, structures, functions, and processes of different government systems.

Benchmark 9.3.1.1: Identify and examine the main principles of democracy.

Topic 1: Principles of democracy

Sub-topics:

- What is democracy?
- Democracy as an ideology
- Important principles of democracy

Skills: Analysis (identify and examine).

Learning Objectives: By the end of this topic, students will be able to:

- Explain democracy as an ideology.
- Describe the main principles of democracy.

Content Background

What is democracy?

Democracy is a system of government where the citizens exercise power by voting. In a direct democracy, the citizens as a whole form a governing body and vote directly on each issue. In a representative democracy the citizens elect representatives from among themselves.

Democracy as an ideology

Four major features of democracy are:

1. The final decision making power rests with those elected by the people.
2. It must be based on a free and fair election.
3. Each adult citizen must have one vote and each vote must have one value.
4. It should rule within limits set by constitutional law and citizens' rights.

Important principles of democracy

Democracy is a system of rule by laws, not individuals. In a democracy, the rule of law protects the rights of citizens, maintains order, and limits the power of government. All citizens are equal under the law. No one may be discriminated against on the basis of their race, religion, ethnic group, or gender.

Suggested Resources

Benchmark 9.3.1.2: Use research skills to investigate the history of democracy in Papua New Guinea.

Topic 2: History of democracy in Papua New Guinea

Sub-topics:

- Democracy in traditional PNG society (The Melanesian Way)
- Colonial influence and democracy
- Independent Papua New Guinea and democracy

Skills: Analysis (investigate).

Learning Objectives: By the end of this topic, students will be able to:

- Describe democratic concepts in traditional PNG society.
- State how colonial acquisition influenced democracy.
- Explain how Papua New Guinea's road to independence was democratic in nature.

Content Background

Democracy in traditional PNG society (The Melanesian Way)

"A long time ago, our people discovered the secret of life; live well, love well, have something good for every person and die a happy death". (the late Bernard Narokobi in his book *'Melanesian Way'*). Papua New Guineans have for thousands of years lived in relatively independent societies. They managed their resources efficiently to cater for their needs. They lived in harmony with their environment if not always with their neighbours. The environment was the source of their physical, spiritual and intellectual nourishment. They fed on the food it provided, the lessons it taught and the mythical spirits it harboured. The environment defined them and confined them to a locality such that there is an enormous diversity of linguistic, cultural and phenotypical features of tribes, even within the same region.

Everyone was deeply rooted to the land of their forefathers and fought to defend the integrity of the tribe. While individuals had certain property rights, such as the ownership of personal artefacts of value, the land was owned communally.

Hence the fruits of the land were regarded as communally owned and, as such, everyone in the society expected a fair share – not necessarily an equal portion. This balancing act between the interests of the individual against those of the tribe is what is referred to as the Melanesian Equilibrium.

Many beliefs, laws, values, practices and systems of social, economic and political organisation were aimed at achieving that balance. Hunting, gardening, fishing, marriage, birth and death all had cultural norms aimed at satisfying everyone and maintaining social order.

This is indeed still the case in many traditional Melanesian communities despite contact with the outside world. Melanesians in remote, isolated communities

depend on their traditions as a means of survival.

Traditional Melanesian governance worked because the people and their leadership were always accountable to one and other. More importantly, the people had direct contact with the leadership and could shape decisions in the interest of the majority. That is not the case with the political arrangements of the modern state.

It is about warriors defending the national interest and sovereignty. It is about a population educated to be of use to society. Above all it is about the fear of God and respect for the rule of Law.

Colonial influence and democracy

In 1884, British established a protectorate over the present day Central, Gulf, Oro, Southern Highlands and Western with the headquarter in Port Moresby. It was declared a colony in 1888 as British Papua whilst German colonized the north east quarter of the island. (German New Guinea)

When Australia gained independence in 1901, British announced its plan to transfer British to Australia. Under the Papuan Act 1905, Australia accepted British New Guinea as a territory and changed its name to Papua. Germany transferred its administration from the mainland to Rabaul in 1910.

When WW I broke out in 1914, Australian troops occupied New Guinea. And in 1920 a separate administration for New Guinea was established as the Mandated Territory of New Guinea.

World War two reached New Guinea in 1942. The Australians and the Americans fought against the Japanese invaders. In 1945, the Japanese surrendered and the civil administration was established uniting both Papua and New Guinea. It was in 1972 that the name of the territory was later changed to Papua New Guinea.

Independent Papua New Guinea and democracy

Papua New Guinea gained independence after the self-government in 1975. The country adopted the British style of government-the Westminster System, which is the Constitutional Parliamentary Democracy. PNG's system of government is a Constitutional Parliamentary Democracy or Constitutional Monarchy, with Queen Elizabeth II as the head of state. This means that the country is governed by the people through their elected representatives and the Queen as the monarch, (head of state.) The representative of the Queen in the country is the Governor General. The Governor General acts on behalf of the Queen in attending to the affairs of the nation.

Papua New Guinea has 22 provinces, with 20 provincial governments except for National Capital District and the Autonomous Region of Bougainville. There are 89 districts in the country in which members elected serve those open electorates. The provinces have their governors at the provincial level.

Suggested Resources

Benchmark 9.3.1.3: Explain the purpose(s) of a democratic government.

Topic 3: Purpose of democratic governments

Sub-topics:

- What is democratic government?
- Purpose of democratic government
- Examples of democratic governments

Skills: Analysis (explain).

Learning Objectives: By the end of this topic, students will be able to:

- Describe what a democratic government is.
- Explore the purpose of democratic government.
- Identify countries that have democratic government.

Content Background

What is democratic government?

Free and equal representation of people: the free and equal right of every person to participate in a system of government, often practiced by electing representatives of the people by the majority of the people. This system of government is for the people where freedom is granted for all citizens of the country regardless of age, gender and status. You may have heard about countries in the world with a democratic form of government, treat their citizens to exercise their rights. In short form, the term democracy is about all citizens having equal political rights. It deals with a government of a country where representatives are elected by the people. With such system comes the idea of freedom, rights, ownership and the different arms of the government that function on their own.

Purpose of democratic government

The governments of various countries play a very significant role in managing and controlling the affairs of their nations. These government systems influence political, social and economic actions of the people. In a democracy it focuses in the political system in which the people of a country rule through any form of government they choose to establish.

Examples of democratic governments

Below are countries that have democratic system of governments.

- Canada
- Australia
- Papua New Guinea
- England
- Canada
- New Zealand

Suggested Resources

Benchmark 9.3.1.4: Illustrate and explain the structure of a democratic government.

Topic 4: Structure of democratic governments

Sub-topics:

- Basis for the structure of democratic governments
- Structure of democratic governments – A comparison

Skills: Analysis (illustrate/explain).

Learning Objectives: By the end of this topic, students will be able to:

- Explain the basis for democratic governments.
- Draw a diagram illustrating the structure of democratic governments.

Content Background

Basis for the structure of democratic governments

A constitution may provide the framework within which the political life of a state is conducted. The structure of government is defined by the means of a number of functions – managing the state, regulating public affairs, decision-making, and policy implementation’ exerting leadership – which are considered as essential to the role of government as a life sustaining system.

Structure of democratic governments

The constitution establishes three (3) branches or arms of government. They are:

1. The Legislative

The legislative branch of the government makes laws and plans for the country. Members of the legislative branch are the elected Members of Parliament who are voted in after every five years. We have 113 members of Parliament, comprising of 22 provincial governors and 91 open members.

2. The Executive

The executive branch is made up of the Prime Minister with the government ministers. This is known as the National Executive Council (NEC). They make sure plans made by the government are carried out.

3. The Judiciary

The Judicial branch is made up of the courts. The judges and the magistrates work in the courts. Their main role is to make sure that the laws made by the legislative are followed and use these laws to punish those who break them. In PNG we have several court systems in practice.

- The Supreme Court is the highest court in the country. It reviews constitutional matters and is the final court of appeal against decisions by the lower courts. At least three judges hear the case brought before the courts.
- National Court is heard by the same judges who sit in the Supreme Court but only one judge hears the case. The court hears cases on

- appeals, criminal and civil matters.
- iii. District Court hears smaller civil law claims, less serious criminal charges, and appeals from local courts. They are run by magistrates who can make final decision or refer the case to the National Court.
 - iv. Village Court deals with the problems in five or six nearby villages or settlements. The village magistrate is a local resident appointed after consultation with the people. The aim of the Village Court Act is to encourage people to settle local disputes in their own peaceful way.

Suggested Resources

Benchmark 9.3.1.5: Identify and examine the roles and responsibilities of democratic governments.

Topic 5: Roles and responsibilities of democratic governments

Sub-topics:

- What are roles and responsibilities?
- Basis for roles and responsibilities of democratic governments

Skills: Analysis (identify/examine).

Learning Objectives: By the end of this topic, students will be able to:

- Identify the roles and responsibilities of democratic governments.
- Discuss the roles and responsibilities of democratic governments.
- Describe the basis for the roles and responsibilities of democratic governments.

Content Background

What roles and responsibilities?

Role is the way in which someone or something is involved in an activity or situation, and how much influence they have on it.

Responsibilities are the specific tasks or duties members are expected to complete as a function of their roles. These are the specific activities or obligations for which they are held accountable when they assume or are assigned to do.

Basis for roles and responsibilities of democratic governments

Like it or not, the government decides the biggest part of our lives, in almost every country and every regime. It is there to guide and to lead, to protect the interests of individuals as well as the interests of the weak, the old or the young. It is also there to create and maintain state infrastructures such as roads, hospitals, schools, as well as collect taxes to keep up this infrastructure's just to name a few.

Suggested Resources

Benchmark 9.3.1.6: Analyse the processes of creating, maintaining, or changing a democratic government (for example, using the election process and votes of no confidence).

Topic 6: Process of changing democratic governments

Sub-topics:

- Formation and maintaining of democratic governments
- Basis for changes in democratic governments
- The election process
- Vote of no confidence

Skills: Analysis (analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Describe the process involved in the formation and maintaining of democratic governments.
- Explain the basis for changes in democratic governments.
- Describe the election process of democratic governments (PNG).
- Compare the election process of democratic governments of different countries.
- Participate in a simple election in a democratic government (Electing the class captain).
- Explain the basis of a vote of no confidence.

Content Background

Formation and maintaining of democratic governments

Democratic governments are formed through election processes stated in the constitution of the country. In parliamentary democracies governments are based on bargains among politicians and parties. These bargains, both implicit and explicit, have profound implications not only for who gets into government, but how they govern, how long they endure, and how voters respond.

Basis for changes in democratic governments

The basis for the formation, maintenances and changes of government in a democracy is founded in the country's constitution. It spells out the legal processes that should be followed if there is a need to change the government. In some popular democracies a change in the government can be done through a vote of no confidence or through the election process.

The election process

Individual rights of the people are protected by the government and free elections are conducted every five years. Citizens who are over 18 years are eligible to vote. Despite the election related violence that you may have heard or seen, the country is still following a limited preferential voting system that peoples' voice are heard fairly through the ballot papers. Elections are held every 5 years for all levels of government (National & Local Level Government). The Electoral Commission is responsible for the elections especially in the issuing of writs and the returning of the writs in the election process.

Vote of no confidence

A vote of no confidence is a process an executive government can be changed if it becomes unpopular in a democracy. It is a statement or vote about whether a person in a position of responsibility is no longer deemed fit to hold that position, perhaps because they are inadequate in some respect.

Suggested Resources

Benchmark 9.3.1.7: Explain the processes and the principles of decision and law making in a democracy.

Topic 7: Processes of decision and law-making in democratic governments

Sub-topics:

- Basis to decision and law-making in democratic governments
- Decision making process in democratic governments
- Law-making process in democratic governments

Skills: Analysis (explain).

Learning Objectives: By the end of this topic, students will be able to:

- Explain the basis to decision-making in democratic governments.
- Describe the decision-making process in democratic governments (PNG).
- Explain the basis to law-making in democratic governments.
- Describe the law-making process in democratic governments (PNG).

Content Background

Basis to decision and law-making in democratic governments

The basis to the decision and law making processes is founded in the constitution of Papua New Guinea. In a representative democracy citizens elect representatives to make laws and decisions on their behalf. Direct democracy makes decision by majority rule. Representative democracy was made with the idea that representative would be responsible for the majority's interests while protecting minority rights.

Decision-making in democratic governments (PNG)

Democratic decision making process gives up ownership and control of a decision and allows the group to vote. Majority vote will decide the action. In a democratic government the elected representatives of the people make decisions that concern national issues on behalf of the people who voted them into those positions. In order for a question to be resolved, it must be voted on and agreed by majority in the chamber. This can be done in different ways.

Types of voting

1. Vote on the voices

When a decision needs to be made, it is first put to a vote on the voices, which means the Speaker asks Members of Parliament (MPs) to cast their vote by saying 'aye or no'. The Speaker announces the result after listening to the response. If no-one challenges the result, the matter is decided. However, if the result is challenged by more than one MP, a division is called. This is the next stage of voting.

2. Vote by division

This is a formal vote conducted by the Speaker where MPs voting in the affirmative (yes/agree/support) to move to the right side of the chamber and those voting against (no/disagree) to move to the left side of the chamber. This

allows the vote to be counted accurately and the names of those voting to be recorded.

3. Tied votes

In the chamber the Speaker does not vote, unless the result is a tie, meaning that the required majority was not achieved. In this case the Speaker has to cast his/her vote to decide the matter.

4. Party voting

This voting involves a block of votes being put forward on behalf of members of a party when a division is called.

5. Conscience debates

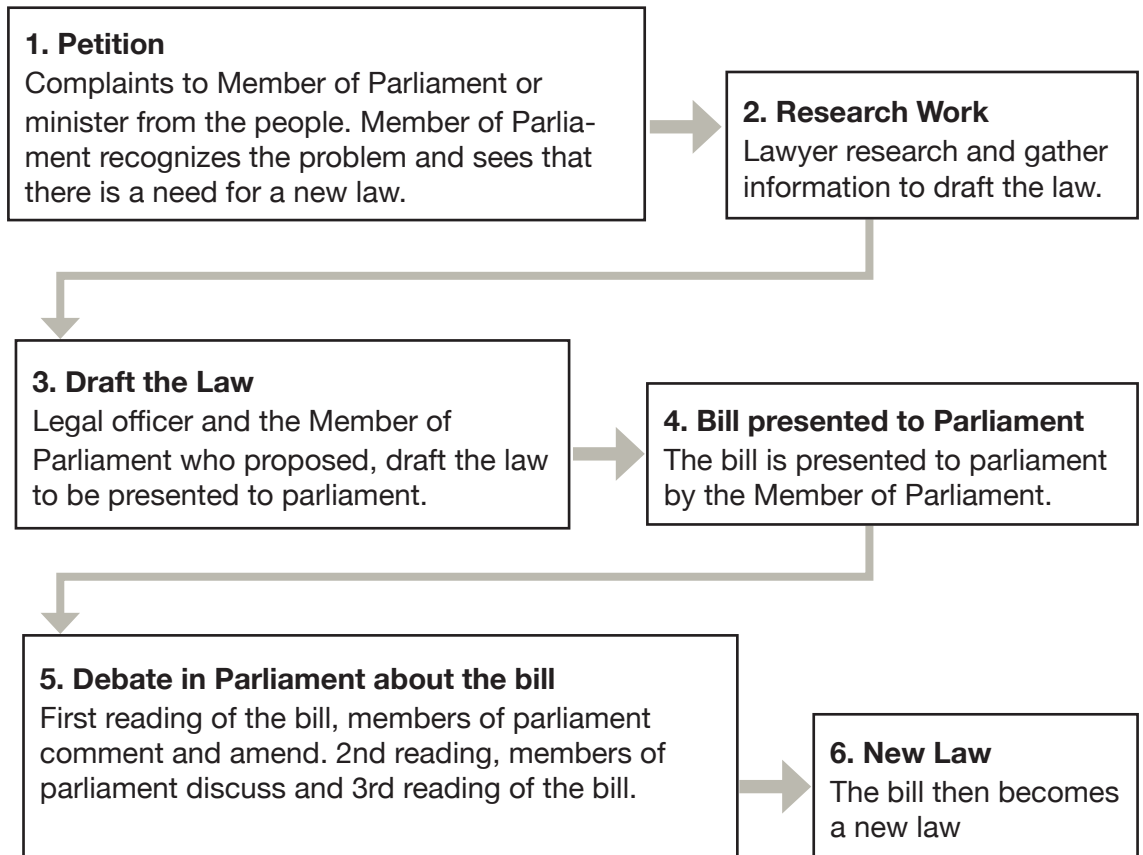
Members of a party are able to vote according to their own beliefs rather than being bound by their party conventions to vote in support of their party's position.

6. Crossing the floor

This occurs when a member of parliament walks across the chamber to vote against their party.

These are the types of voting used in the parliament. Similarly, certain steps are required to make a new law. The diagram below outlines the stages in making laws.

The law-making process in PNG



(Source: <https://masalaiwordpress.com>)

Suggested Resources

1. John.B.Varey, (2016). *Know your Parliament with Theo Zurenuoc*. Port Moresby. Office of the Speaker, PNG National Parliament,
2. National Department of Education - FODE, (2017). *Grade 7, Strand 2: Organisation*. Port Moresby, NDoE.
3. How laws are made in PNG.
Retrieved from: <https://masalai.wordpress.com/2012/11/27/>
4. Parliament.
Retrieved from: <http://www.paclii.org/pg/Parliament/pgph-2009.html>

Benchmark 9.3.1.8: Evaluate how citizens' demands are addressed and met through the democratic government processes.

Topic 8: Citizens demands and democratic government processes

Sub-topics:

- Citizen's rights
- Types of citizen's demands
- Responsibilities of democratic governments towards its citizens

Skills: Evaluation (evaluate).

Learning Objectives: By the end of this topic, students will be able to:

- Identify citizen's demands.
- Explain the responsibilities of democratic governments towards its citizens.
- Assess how citizen's demands are addressed by democratic governments.
- Compare how citizens' demands are met by democratic government in different countries.

Content Background

You may have heard people talking about their rights. What would it be like if there are no rights? And what would happen when your rights are denied? Whenever people live together in communities, they have duties towards the other members of the community. These duties are called obligations or responsibilities. With the responsibilities comes their right as the members of the community. Right refers to what a person is entitled to and others are duty bound to respect it.

Every citizen has a right to do things as required by the law. With the rights comes freedom where a person is free to engage in activities that he or she wishes, as long as he or she does not interfere with the other people's rights. The citizens' rights are derived from the UN Declaration of Human Rights

Rights

Papua New Guinea being a democratic country has its citizens exercises their rights. Our rights are considered as obligations that we find freedom within. Basic rights and social obligations of Papua New Guinea citizens are spelled out in the beginning of the constitution which is the basis of people's legal protection against abuse.

The rights are:

- right to freedom of life
- right to freedom of liberty (freedom)
- right to freedom of inhuman treatment and forced labour
- right to freedom from arbitrary rule of power
- right to freedom of expression
- right to freedom of movement
- right to freedom of employment
- right to privacy
- right to freedom of choice

- right to freedom of speech
- right to protection of law
- right to equality
- right to freedom of arbitrary search and entry
- right to freedom of conscience, thought and religion
- right to freedom of unjust deprivation of property

Responsibilities of democratic governments towards its citizens

The government of a democracy is accountable to the people. It must fulfil its end of the social contract. In a practical sense, government must be accountable because of the severe consequences that may result from its failure. The central purpose of government in a democracy is to be the role model for and protector equality and freedom and people have associated human rights.

Suggested Resources

Benchmark 9.3.1.9: Differentiate between a Commonwealth and a Republic democratic country.

Topic 9: Commonwealth and republic democratic countries

Sub-topics:

- Commonwealth democratic countries
- Republic democratic countries

Skills: Analysis (differentiate).

Learning Objectives: By the end of this topic, students will be able to:

- Distinguish between a commonwealth and republican government.
- Identify commonwealth democratic countries.
- Describe the practices of commonwealth democratic countries.
- Identify republic democratic countries.
- Describe the practices of republic democratic countries.
- Outline the differences and similarities between commonwealth and republic democratic governments.

Content Background

Commonwealth Democratic Countries

Many countries that are members of the Commonwealth of Nations practice democratic principles in their government. The Commonwealth of Nations consists of the United Kingdom of Great Britain and Northern Ireland and most of her former colonies, protectorates, trusteeships, dominions or other settlements. The member countries of the Commonwealth of Nations range from very small island states with few people to some large countries with large populations, found in every continent. Most of these countries have the Queen of England as their Head of State.

Some famous examples of countries that are members of the Commonwealth of Nations are:

- England
- Canada
- Australia
- New Zealand
- Papua New Guinea

Republic Democratic Countries

A republic is a form of government in which a state is ruled by representatives of the citizen body. Modern republics are founded on the idea that sovereignty rests with the people in a republic. The Head of State is not a hereditary monarch like a king or queen.

Some examples include; USA, China, Germany and Russia.

Suggested Resources

Unit 2: Political Ideologies and Systems

Content Standard 3.2: Students will be able to identify and interpret the belief systems, representations, behaviours, traditions, structures, practices and other characteristics that signify political systems and represent their ideologies.

Benchmark 9.3.2.1: Recognize and interpret national symbols and other representations of different democratic nations (for example, national flag, national crest, national anthem, national monuments, independence day, infrastructure such as buildings).

Topic 1: National symbols of democratic nations

Sub-topics:

- Importance of national symbols
- National symbols of Papua New Guinea
- National symbols of democratic nations

Skills: Analysis (recognise/interpret).

Learning Objectives: By the end of this topic, students will be able to:

- Discuss the importance of national symbols.
- Identify the national symbols of Papua New Guinea.
- Explain the meaning of the national symbols of Papua New Guinea.
- Identify the national symbols of democratic nations.
- Explain the meaning of the national symbols of democratic countries.

Content Background

What is a national symbol?

National symbols are patriotic symbols representing nations and countries. Sometimes symbols are used for cultural and ethnic groups that do not have their own country yet. National symbols try to unite people or send a message representing the national people, values, goals or history. People often honour their nation, country, or group by celebrating their national symbol.

National symbols of Papua New Guinea

National symbols intend to unite people of Papua New Guinea by creating visual, verbal, or iconic representations of the national people, values, goals, or history. These symbols are often rallied around as part of celebrations of patriotism or aspiring nationalism (such as independence, autonomy or separation movements) and are designed to be inclusive and representative of all the people of the national community. Some national symbols of Papua New Guinea include the National Anthem, the Flag, Coat of Arms,

National symbols of democratic nations

- The flag or banner of a nation-state
- The coat of arms of the land or ruling dynasty
- The seal or stamp of the land or ruling dynasty

- The head of state, especially in a monarchy
- The associated device and motto can also be used separately
- The national colors, often derived from the above
- National anthems, royal and imperial hymns; alongside such official hymns custom may also recognize the national symbol value of very popular songs.

Suggested Resources

Benchmark 9.3.2.2: Recognise and interpret patriotic activities and other representations (for example, the National Pledge (Pledge of Allegiance), salute to the national flag, and the national anthem) of different democratic nations.

Topic 2: Patriotism in democratic nations

Sub-topics:

- What is patriotism?
- Symbols of patriotism in democratic nations
- Activities that promote patriotism

Skills: Analysis (recognise/interpret).

Learning Objectives: By the end of this topic, students will be able to:

- Define the concept of patriotism.
- Identify the patriotic activities of Papua New Guinea.
- Identify the symbols of patriotism in democratic nations.
- Explain the symbols of patriotism in democratic nations.

Content Background

What is patriotism?

Patriotism or national pride is the feeling of love, devotion and sense of attachment to a homeland and alliance with other citizens who share the same sentiment. This attachment can be a combination of many different feelings relating to one's own homeland, including ethnic, cultural, political or historical aspects. It encompasses a set of concepts closely related to nationalism.

Symbols of patriotism in democratic nations

People who are patriotic value their nation by referring to symbols that continue to remind them the importance of their country. And democratic nations of the world have symbols like their history, identity, and the principles that are foundation to democracy like the idea of government by the people, of the people and by the people.

Activities that promote patriotism

How can you show your patriotism? These are some meaningful ways to show that people patriotism.

- Support veterans and active-duty military. Taking care of the people who serve our country is an important way to show patriotism.
- Vote in elections
- Fly the flag – the right way
- Visit and support a conservation national park.
- Participate in Independence celebrations
- Sing the National Anthem and say the National Pledge.

Suggested Resources

Benchmark 9.3.2.3: Identify and examine the purposes, roles, structures, principles, and practices of different democratic alliances and groupings (such as the Commonwealth of Nations, NATO, ANZAC, and South Pacific Forum).

Topic 3: Democratic alliances and groupings

Sub-topics:

- Aspects of some international democratic organisations
- Democratic Alliances and Grouping (United Nations Organisation, Commonwealth of Nations, North Atlantic Treaty Organisation, South Pacific Forum)

Skills: Analysis (identify/examine).

Learning Objectives: By the end of this topic, students will be able to:

- Discuss the aspects of international democratic organisations.
- Explain the purposes and principles of different democratic groups.
- Describe the structure and functions of different democratic groups.
- Justify the practices of democratic alliances and groupings.

Content Background

Aspects of international democratic organisations

International democratic organisations play an important role in the world. Their main aim is to maintain peace and stability globally. Many of these organisations have been set up based on the fact that the countries that have set them up share common interests.

Democratic alliances and groupings

1. United Nations Organisation,
2. Commonwealth of Nations,
3. North Atlantic Treaty Organisation,
4. South Pacific Forum

Suggested Resources

Benchmark 9.3.2.4: Differentiate between a Prime Minister, Governor-General, and a President of a democratic country.

Topic 4: Leaders of democratic countries

Sub-topics:

- Leaders in democratic nations
- Prime Minister
- Governor-General
- President

Skills: Analysis (Differentiate).

Learning Objectives: By the end of this topic, students will be able to:

- Identify the different leaders found in democratic nations.
- Explain the role of a Prime minister. Governor-General, and President in democratic nations.
- Draw a flow chart showing the leadership hierarchy in democratic countries (PNG).

Content Background

Leaders in democratic nations

Leaders in democratic nations are also known as participative leadership or shared leadership, is a type of leadership style in which members of the group take a more participative role in the decision-making process. This type of leadership can apply to any organisation, from private business, to school to government. Everyone is given the opportunity to participate, where ideas are exchange freely, and discussion is encouraged. While the democratic processes tend to focus group equality and free flow of ideas, the leader of the group is still there to offer guidance and control.

Prime Minister

A Prime Minister is the head of a cabinet and the leader of the ministers in the executive branch of government, often in a parliamentary or semi-parliamentary system. A prime minister is not a head of state or chief executive officer of their respective nation, they are head of government, serving typically under a monarch or democratically elected government.

Governor-General

The Governor-General is the representative of the head of state. The governor-general is authorised to perform the functions, duties, and responsibilities of the head of state. All actions undertaken by or in the name of the head of state must be made in accordance with the advice of the National Executive Council.

President

A president is a common title for the head of state in most republics. In politics, president is a title given to leaders of republican states. The functions exercised by a president varies according to the form of government.

Unit 3: International Relations

Content Standard 3.3: Students will be to analyse and discuss government to government and people to people relationships as a basis for satisfying social, economic, political, and cultural demands and achieving development goals and aspirations.

Benchmark 9.3.3.1: Identify and evaluate Papua New Guinea's multilateral and bilateral relationships with other democratic countries.

Topic 1: PNG's bilateral and multilateral relations

Sub-topics:

- What is international relations?
- PNG's bilateral and multilateral relations with other democratic nations
- Importance of bilateral and multilateral relations for PNG

Skills: Analysis (identify)/Evaluation (evaluate).

Learning Objectives: By the end of this topic, students will be able to:

- Explain the meaning of international relations.
- Identify PNG's bilateral and multilateral relations with other democratic countries.
- Highlight the importance of bilateral and multilateral relations for Papua New Guinea.
- Assess Papua New Guinea's performances in maintaining bilateral and multilateral relations.

Content Background

International relations

Relations between the people of different countries or nations are called international relations. Another name for international relations is foreign affairs. How and why people from different countries meet and mix with each other is what international relations is about. Relations with other countries are very important to an independent country. No country exists entirely on its own but depends on other countries. This is called interdependence. There have always been interactions between groups of people. International relations can both be very complicated and very simple. Sometimes, however, a country decides to close itself to other countries and tries to survive alone.

Papua New Guinea's bilateral and multilateral relations

Most of Papua New Guinea's international relations are with individual countries. Our common border with Indonesia causes us to have special relations with that country. Our colonial past has left us with close relationship with Australia. Trade and defence relations are particularly strong between Papua New Guinea and Australia. Relations of this type are called bilateral or two-sided relations. Papua New Guinea also has bilateral relations with the Japan, South Korea, China, USA and several other countries. Countries often join together to satisfy their common needs. These multilateral or many-sided relations are entered into by groups of countries having similar historical or cultural backgrounds or because of common political needs.

Benchmark 9.3.3.2: Identify and analyse the purpose, impact, and the outcomes of these relationships in terms of addressing national development aspirations and meeting the demands of citizens.

Topic 2: Purpose, impact and outcomes of international relations

Sub-topics:

- Reasons for having international relations
- Impacts and effects of international relations
- International relations and development

Skills: Analysis (identify/analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Identify the reasons for having international relations.
- Explain the impacts and effects of international relations.
- State how international relations contribute to development.

Content Background

Reasons for having international relations

Most countries have some kind of relationships with each other. The type of relationship depends on what the countries consider will best serve their separate national interests. Countries have relationships with other countries that range from very close and cooperative to relationships of strong dislike and conflict. International relations are not fixed forever, yesterday's friends can be today's enemies and they could be friends tomorrow. The complicated and constantly changing sets of international relations in the world today cannot easily be shown on a single map.

Impacts and effects of international relations

International relations do not affect our daily lives directly, but it will eventually have some impacts on our living needs. International relations affect our everyday lives by influencing us through the products we buy, the ideas we value, and the well-being of our family abroad and at home. All nations depend on the trade and exchanges with others can be beneficial in many ways. Naturally, foreign relations are based on this international communication. No or poor communication between countries has proven to lead to terrible consequences in the past.

International relations and development

International relations promote successful trade policies between nations. International relations encourage travel related to business, tourism, and immigration, providing people with opportunities to enhance their lives. Articles relating to citizenship, monetary policy, and the common foreign and security policy; general principles for the member states' and the union's development co-operation were laid down to encourage international relations. These were summed up in the so-called 'three Cs'; complementarity, co-ordination, and coherence.

Benchmark 9.3.3.3: Provide examples of goods and services derived from these relationships and evaluate their importance, relevance, and consequences on the development of Papua New Guinea.

Topic 3: Papua New Guinea's international trade relations

Sub-topics:

- What is international trade?
- International relations and trade – PNG's exports and imports
- PNG's trading partners
- Importance of international trade and development in PNG

Skills: Synthesis (provide)/Evaluation (evaluate).

Learning Objectives: By the end of this topic, students will be able to:

- Explain international trade.
- Explain the role that international relations play in trade.
- Identify major exports and imports.
- Name Papua New Guinea's main trading partners.
- Explain the role that international trade play in the development of PNG.
- Assess PNG's trade relations with other countries.

Content Background

What is international trade?

Trade is the system of buying and selling which exists between two or more partners. Trade between countries is called international trade. International trade depends on what goods each country has to supply, the demand for these goods in other countries and the system of transportation that exist between them. Countries sell the produce they don't need themselves to other countries who need these things. Similarly, they buy the things they need, but don't produce from other countries.

All countries are interdependent in trade. The very smallest country in the middle of the Pacific Ocean and the biggest countries in the world like the United States of America, Russia and China, all depend on others to maintain their ways of life by developing trade relations. No country can survive entirely by itself. Some countries need raw materials for their industries and others import manufactured goods which they cannot produce themselves.

International relations and trade

Much trade between countries is carried out between companies. Governments, however, through their international relations, still play an important role. Effective political relations are most important for trade between countries.

A country's control of its international trade relations depends on the state of its economy. A rich country with surplus natural resources, manufactured goods, technical skills and capital has much more choice and control of its international trading than a poor country. Countries that have only one major export commodity such as Cuba (sugar), Brazil (coffee) and Venezuela (oil) have few choices in the area of international trade.

PNG's trading partners

Like all other countries, Papua New Guinea is dependent on international trade. It is, however, a country which is rich in natural resources.

The main resources of Papua New Guinea which are traded internationally are coffee, cocoa, copra, rubber, tea, copper, gold, nickel, timber, oil and gas. Most of these natural resources are exported to other countries in a totally 'raw' state.

Papua New Guinea is a major importer of processed products. We import food, industrial goods, luxury items and other goods. Papua New Guinea now has a small manufacturing sector which we hope will grow and help us produce many of the goods we now have to import.

Papua New Guinea's major trade partners are Australia, China, Japan, Germany, Philippines, Singapore, South Korea, and the United Kingdom. The most important way in which countries cooperate in trade is to form international trading groups.

Importance of international trade and development in PNG

International trade is important to Papua New Guinea because it is an important factor in raising living standards, providing employment and enabling consumers to enjoy a greater variety of goods. A measure of total gains from trade is the sum of consumer surplus and producer profits or, more roughly, the increased output from specialization in production with resulting trade. Gains from trade may also refer to net benefits to Papua New Guinea from lowering barriers to trade such as tariffs on imports. Papua New Guinea gains from net exports. Thus, international trade helps to increase the Gross Domestic Product (GDP) of a country and also reduces the cost of products for the citizens of the countries receiving it. Further, there are many countries which are not self-reliant and depend on imports.

International trade drives economic growth, enhanced efficiency, increased innovation, and the greater fairness that accompanies a rules-based system. These benefits increase as overall trade exports and imports increases. Free trade increases access to higher-quality, lower-priced goods.

Gains from trade may also refer to net benefits to a country from lowering barriers to trade such as tariffs on imports. These benefits increase as overall trade exports and imports increases. Free trade increases access to higher-quality, lower-priced goods. Freeing trade reduces imported-input costs, thus reducing businesses' production costs and promoting economic growth. Free trade improves efficiency and innovation.

Suggested Resources

Benchmark 9.3.3.4: Use research skills to investigate conflicts arising out of Papua New Guinea's bilateral and multilateral relationships with other countries (for example the trade conflict between Papua New Guinea and Fiji over the export of bully beef meat, rice monopoly by Trukai Rice).

Topic 4: Conflicts in international relations

Sub-topics:

- Conflicts related to bilateral and multilateral relations with other countries
- Trade protection
- Sanctions

Skills: Analysis (investigate).

Learning Objectives: By the end of this topic, students will be able to:

- Identify conflicts that PNG faces with other countries in relation to bilateral and multilateral relations.
- Explain how these conflicts were resolved.
- Identify trade protection policies.
- Identify trade sanction policies.

Content Background

Conflicts related to bilateral and multilateral relations

The existence of political relations between countries provides opportunities for better relations or cooperation. However, there can also be difficult relationships between countries which may lead to conflict, the breaking of diplomatic relations, or even war. Whether cooperation continues or whether conflict will take place, depends on how well - established the relations are. Some international relations are better than the others, some are long-lasting and some break up.

In the real world, most countries conduct their international relations according to what they judge to be in their best national interest. Countries cooperate with their 'friends' and try to prevent conflict with their 'enemies' and help their development.

Trade Protection

In Papua New Guinea, people can buy only one brand of sugar, produced by Ramu Sugar Corporation at Gusap in the Markham Valley. No foreign sugar can be imported into Papua New Guinea unless there is a shortage of sugar from the Ramu factory. This is an example of trade protection. Ramu sugar industry creates jobs for Papua New Guineans and is economically independent.

Sanctions

It is an official order of approval or punishment. In this regard, a sanction is an official order to stop trade for certain countries to make them obey international law of trade. In recent times, Papua New Guinea threatened not to import any items from Fiji because Fiji had imposed a ban on Papua New Guinea corned beef. A trade war had erupted but Fiji retracted its decision so the problem was averted from escalating further.

Benchmark 9.3.3.5: Analyse Papua New Guinea's trade agreements with other democratic nations.

Topic 5: PNG's international trade agreements

Sub-topics:

- International trading groups
- PNG's trade agreements with other countries
- Advantages and disadvantages of trade agreements

Skills: Analysis (analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Identify international trade groups.
- Highlight Papua New Guinea's trade agreements with other countries.
- Identify the advantages and disadvantages of trade agreements.

Content Background

Trading groups

The most important ways in which countries cooperate in trade is to form international trading groups. Papua New Guinea is a member of several of these, including producer groups for coffee, copper, sugar and cocoa. Papua New Guinea is also a member of geographical and of political groups such as the SPF, ASEAN, APEC, and the ACP-EU groupings which promote trade as well.

PNG's trade agreements with other countries

Much trade between countries is carried out between companies. Governments, however, through their international relations, still play an important role. Effective political relations are most important for trade between countries.

Advantages and disadvantages of trade agreements

All countries are interdependent in trade. The very smallest country in the middle of the Pacific Ocean and the biggest countries in the world like the United States of America, Russia and China, all depend on others to maintain their ways of life by developing trade relations. No country can survive entirely by itself. Some countries need raw materials for their industries and others import manufactured goods which they cannot produce themselves.

Self-interest is the motive of all international relations. In trading, both partners would like to make the best deal for themselves. Unfortunately only those countries that have valuable resources to sell or money to buy can control their foreign trade. These resources could be primary products such as minerals and crops, secondary products such as manufactured goods or tertiary services such as information and education.

Suggested Resources

Benchmark 9.3.3.6: Identify and analyse the factors that hinder or promote bilateral and multilateral relationships between different democratic countries.

Topic 6: Factors affecting PNG's bilateral and multilateral relations

Sub-topics:

- Factors that promote bilateral and multilateral relations
- Factors that hinder bilateral and multilateral relations

Skills: Analysis (identify and analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Identify factors that promote international relations.
- Explain how these factors encourage international relations.
- Identify factors that hinder international relations.
- Explain how these factors delay international relations.

Content Background

Factors affecting international relations

i. Trade

Trade plays an important role in bilateral and multilateral relations. Through trade different countries are able to deal with one another in one way or more. Through trade, countries are able to venture into other areas of concern for the countries concerned. Trade can provide the catalyst for countries to explore other areas that are of common concern for each other.

ii. Stability and security in government

Countries involved in trade with others require certain conditions before they commit themselves to each other. One such condition is, stability in government. This means that they would like to engage with a government that does not change frequently with the likely chance of dishonouring its commitment. With stability comes the issue of security. Countries would like to deal with others that ensure their engagement is in an environment that is free of trouble and allows for fulfilment of commitments made to one another.

iii. Resource abundance

One of the major issues affecting international relations for Papua New Guinea is the control of the use of our resources. These resources are presently being developed with the help of foreigners. Their first aim is to make profits. It is in our best interest to see development as something which is sustainable. This means, it is long-lasting and will grow and benefit our country. As government and people of Papua New Guinea try to gain better control of the use of our country's resources, we are likely to face situations of both conflict and co-operation in our international relations. That is, why it is important to have good understanding with overseas developers in order to have a win-win situation for all.

Suggested Resources

Benchmark 9.3.3.7: Evaluate the role of the media in promoting and protecting bilateral and multilateral relationships.

Topic 7: Role of the media in international relations

Sub-topics:

- Role of the media in international relations
- Promoting and protecting relations through the media

Skills: Evaluation (evaluate).

Learning Objectives: By the end of this topic, students will be able to:

- Explain the role of the media in international relations.
- Assess the role of the media in promoting and protecting international relations.

Content Background

Role of the media in international relations

Information about and experience of people from different cultures can increase respect and co-operation, However, it can also increase misunderstanding and therefore create more conflict. In this respect the media plays an important role. Newspapers, radio, television, and the internet are all part of the media and spread information to many billions of people around the world. International sporting and cultural events are also important methods of helping people meet and appreciate each other. Tourism or the travel of individual people also plays a role in this respect.

Promoting and protecting relations through the media

Each year the saying, ‘it’s a small world and it’s getting smaller’ becomes more and more true. Even the most isolated country can now find out about other countries through radio, films, recorded music, videotapes, television, the internet, newspapers and magazines of all types.

But are the media always accurate? Do they always tell the truth? Do the media ignore some important stories while giving away too much publicity to others? Do the stories they tell increase rather than decrease people’s prejudices? Providing answers to these questions will help us understand the issue of promoting and protecting relations through the media. It is interesting to see how the media in different countries report the same event.

Suggested Resources

Unit 4: Civics and Citizenship

Content Standard 3.4: Students will be able to evaluate and explain the purposes, ideologies, concepts, structures, functions, and processes of different government systems.

Benchmark 9.3.4.1: Describe what is meant by citizenship.

Topic 1: Citizenship

Sub-topics:

- Types of citizenship
- Processes of becoming a citizen
- Roles and responsibilities of citizens

Skills: Synthesis (describe).

Learning Objectives: By the end of this topic, students will be able to:

- Find out the different types of citizens.
- Explain the process of becoming a citizen.
- Describe the roles and responsibilities of citizens.

Content Background

Citizenship is the status of being a citizen. If you have citizenship in a country, you have the right to live there, work, vote, and pay taxes. Citizenship comes from the Latin word for city, because in the early days of human governments, people identified themselves as belonging to cities more than countries. There are two classes of citizens in Papua New Guinea. The first class is automatic citizens, and the second one is naturalised citizens. Automatic citizens are citizens who were born in Papua New Guinea whilst naturalised citizens are people born in other countries, have lived in the country for a long time and have applied to become citizens of Papua New Guinea, and have been given the right to become citizens of the country.

As citizens of a country one has certain roles and responsibilities, foremost of all are that the citizen must be law abiding. All citizens have to contribute to the development of the country and must have respect for one another.

Suggested Resources

1. Stephen. Ranch, (2011). *Outcomes Edition for PNG Social Science Grade 10*. Australia, Oxford University Press.
2. Susan Baing & Trevor Tindall, *PNG Social Science Outcomes Grade 9 Student Book (1st edition)*, Australia, Pearson Education.

Benchmark 9.3.4.2: Identify examples of honesty, courage, fairness, loyalty, patriotism and other characters traits seen in PNG history or elsewhere..

Topic 2: Features of citizenship

Sub-topics:

- Responsible personal decision making
- Community participation
- Civics duties of citizens

Skills: Analysis (identify).

Learning Objectives: By the end of this topic, students will be able to:

- Give examples of responsible personal decisions.
- Plan a community participation-oriented activity to illustrate the civic duties of citizens.

Content Background

As a citizen of Papua New Guinea you have rights. You also have responsibilities. As someone who has made it to grade 9 when many children of your age have not, you have an extra responsibility to make the most of the educational opportunities made available to you.

One way to show that one is a responsible citizen is to participate in activities that contribute to the well-being of the community. One could be helping the needy as a volunteer or leading a campaign that addresses climate change or be involved in helping illiterate mothers.

Responsible personal decision making

Making a responsible personal decision is important for citizens. Responsible decision-making can shape one's life. This aspect of democracy is about making good decisions in the face of uncertainty and multiple objectives. The logic by which the decision is made, the decision maker, whose elements are considered in making the decision. Making responsible decisions lead to actions that promote health, protect safety, follow laws, show respect for self and others, follow guidelines set by responsible adults, and demonstrate good character.

Citizen participation

Citizen participation refers to citizen involvement in public decision making. In different interpretations, 'citizens' may be either individuals or organized communities, and participation may involve either observation or power. Citizen participation is a process which provides private individuals an opportunity to influence public decisions and has long been a component of the democratic decision-making process. The roots of citizen participation can be traced to ancient Greece and colonial New England.

Before the 1960s, governmental processes and procedures were designed to facilitate "external" participation. Public involvement means to ensure that citizens have a direct voice in public decisions. The terms "citizen" and

“public,” and “involvement” and “participation” are often used interchangeably. While both are generally used to indicate a process through which citizens have a voice in public policy decisions, both have distinctively different meanings and convey little insight into the process they seek to describe. Mize reveals that the term “citizen participation” and its relationship to public decision-making has evolved without a general consensus regarding either its meaning nor its consequences.

Many agencies or individuals choose to exclude or minimize public participation in planning efforts claiming citizen participation is too expensive and time consuming. Yet, many citizen participation programs are initiated in response to public reaction to a proposed project or action. However, there are tangible benefits that can be derived from an effective citizen involvement program. Some scholars have identified five benefits of citizen participation to the planning process:

- Information and ideas on public issues;
- Public Support for planning decisions;
- Avoidance of protracted conflicts and costly delays;
- Reservoir of good will which can carry over to future decisions; and
- Spirit of cooperation and trust between the agency and the public

Civic participation includes both political involvement and non-political involvement. Non-political involvement is participation in activities that help others in our community. Examples include cleaning up a neighborhood park, volunteering in your child's school, or organizing a community gardens.

Suggested Resources

1. Stephen. Ranch, (2011). *Outcomes Edition for PNG Social Science Grade 10*. Australia, Oxford University Press.
2. Susan Baing & Trevor Tindall, *PNG Social Science Outcomes Grade 9 Student Book (1st edition)*, Australia, Pearson Education.

Benchmark 9.3.4.3: Explain and apply good citizenship traits within the school and community using the elements of fair play, good sportsmanship, the idea of treating others the way you want to be treated, and being trustworthy.

Topic 3: Application of good citizenship

Sub-topics:

1. Participation in school activities
2. Community Participation

Skills: Analysis (explain/apply).

Learning Objectives: By the end of this topic, students will be able to:

- Participate in school organised activities displaying good citizenship.
- Take part in activities organised in the local community promoting good citizenship.

Content Background

Characteristics of an ethical citizen

There are numerous characteristics of a good citizen. Honesty is the most important characteristic of good citizenship. Compassion is the emotion that you feel when you genuinely care for other people and living things. Respect for self and others is an important citizenship trait. Responsibilities is the skill of becoming accountable and responding wisely.

Good and ethical leadership is foundational to citizens in a democratic society. It is important for citizens to be aware of what type of leadership is acceptable to their respective societies. This can be done through a leadership health-check. A leadership health-check provides an individual with a self-assessment on his or her leadership standing within the society.

Citizens who show outstanding commitment to society in whatever they do are recognized by their respective society, In Papua New Guinea some are recognized by bodies like the Commonwealth when they are awarded in the Queen's award. Another example is being included in Man or Woman of Honour awards.

Suggested Resources

Benchmark 9.3.4.4: Evaluate the continuing influence of key ideals of the democratic forms of government such as individual human dignity, liberty, justice, equality and the rule of law at local, provincial, national, and global events.

Topic 4: Key ideals of democratic governments

Sub-topic:

- Influences of the key ideals of democratic governments

Skills: Evaluation (evaluate).

Learning Objectives: By the end of this topic, students will be able to:

- Describe the influence of democracy on local events.
- Discuss the influence of democracy on provincial events.
- Justify the influence of democracy on national events.
- Explain the influence of democracy on global events.

Content Background

Origin of democracy

Democracy rests upon the principles of majority rule, coupled with individual, and minority rights. Citizen involvement and open compromise are essential. Individual rights for all human beings are equal in a fundamental sense.

In many countries throughout history, most people have had no say in their government. In a democracy, all people help shape the government. The United States is a democracy that gives its citizens many rights. The Bill of Rights in the Constitution lists some rights, such as the right to speak freely, the right to practice any religion, and the right to a fair trial in court. One of the most important rights is the right to vote. When citizens vote, they help choose their government leaders. At age 18, citizens can register to vote. Our government protects these rights. The government also protects the rights of all people to be treated fairly in housing and jobs, so that no one can discriminate against them because of religion or race. People who come to the Papua New Guinea from other countries can become citizens through the process of naturalization.

Citizens' Responsibilities

Our government gives citizens freedom and many rights. But citizens have responsibilities to Papua New Guinea, too. Citizens must obey the law. This helps to keep our communities safe. Citizens must pay taxes. Taxes help the government pay for police, roads, and many other important services. Citizens are responsible for voting. Young people have responsibilities, too. They must go to school. Education helps young people make good choices and decisions. This helps them become good citizens. Our government works hard to make Papua New Guinea a good place to live. But people need to help our democracy stay strong. Some ways to help are by learning about what is happening in the community, voting, and volunteering. Volunteers help communities in many ways. A strong democracy like Papua New Guinea depends on its citizens to participate.

Benchmark 9.3.4.5: Examine the role Papua New Guinea Constitution plays in governance of Papua New Guinea and stay informed about how it impacts day to day life.

Topic 5: Constitution as the basis for citizenship

Sub-topics:

- Role of Papua New Guinea's Constitution in governance
- Role of Papua New Guinea's Constitution and citizenship

Skills: Analysis (examine).

Learning Objectives: By the end of this topic, students will be able to:

- Explain the role of Papua New Guinea's constitution in governance.
- Explain how the Constitution provides the basis for citizenship.
- Compare the difference between citizenship in theory and citizenship in practice.

Content Background

The Constitution of Papua New Guinea established Papua New Guinea's national government and fundamental laws, and guaranteed certain basic rights for its citizens. It was adopted on Independence Day on 16th September 1975.

Role of Papua New Guinea's Constitution in governance

The Constitution of PNG outlines how the country should be governed. The Constitution gives powers and strength to the state and government. It is the foundation for government in almost every society. The power and authority of the government of PNG are vested in the three (3) principal arms of the government; The National Parliament or the Legislative Power, The National Executive Power and the National Judicial Power. The functions of the government are distribution among these arms of the government. This is known as the separation of powers. The importance of the separation of powers is to act as 'checks and balances' for each other.

Moreover, the Constitution is the blue print governance. It is the duty of the government to follow this blue print. The Constitution shows direction to the government to reach its national goals.

Role of Papua New Guinea's Constitution and citizenship

The Constitution gives valuable rights to citizens. The government cannot withdraw these rights. So long as the citizens enjoy these rights, the government cannot be authoritarian or dictatorial. On the other hand, while enjoying the rights, citizens are also required to discharge some duties, should remain loyal to their sovereign state and respect the rights of other citizens in PNG. The Constitution injects a sense of discipline in the citizen.

Suggested Resources

1. John.B.Varey, (2016). *Know your Parliament with Theo Zurenuoc*. Port Moresby. Office of the Speaker, PNG National Parliament,
2. The Constitutional Planning Committee, (1974). *Constitution of the independent State of Papua New Guinea*. Port Moresby, Office of the Legislative Council.

Strand 4: Economics

This strand has 5 units. They are;

1. Factors of Production and Consumption
2. Methods of Production and Distribution
3. Regulation of Production, Distribution and Consumption
4. Satisfying Needs and Wants
5. Economic Ideologies

Units	Topics
1. Factors of Consumption and Production	Topic 1: Types of tax Topic 2: Tax systems and regulations in PNG Topic 3: Tax revenue
2. Methods of Production and Distribution	Topic 1: Financial markets and institutions Topic 2: Impacts of incentives Topic 3: Circular flow of income Topic 4: Economic systems
3. Regulation of Production, Distribution and Consumption	Topic 1: Regulating money supply in the economy Topic 2: Bank of Papua New Guinea Topic 3: Fiscal Policy (Budgetary Policy) Topic 4: Impact of wages and salaries on government budget Topic 5: Wage control in the economy Topic 6: Printing money
4. Satisfying Needs and Wants	Topic 1: Importance of trade Topic 2: Types of trading systems Topic 3: Patterns of trade Topic 4: Impact of trade Topic 5: Impacts of changes in transportation and communication on trade and economic activities Topic 6: Globalization and economic interdependence
5. Economic Ideologies	Topic 1: PNG's National Goals and Directive Principals Topic 2: Inclusive development Topic 3: Socio-economic policies of PNG Topic 4: Inclusive production, distribution and consumption Topic 5: Inequality and non-inclusive development Topic 6: Manifestation of PNG's National Goals and Directive principles Topic 7: PNG's development policies Topic 8: Impact of global socio-economic trends on PNG's development plans

Unit 1: Factors of Production and Consumption

Content Standard 4.1: Students will be able to identify and analyze the different factors that influence and contribute to the production, distribution and consumption of goods and services.

Benchmark 9.4.1.1: Examine the different types of taxes and their purposes.

Topic 1: Types of tax

Sub-topics:

- Tax and its importance
- Types and examples of government tax
- Purpose of paying government tax

Skills: Analysis (examine).

Learning Objectives: By the end of the topic, students will be able to:

- Explore the concept of government tax and its importance.
- Categorise the main forms of tax and their examples.
- Identify and discuss purpose of government tax.

Content Background

Tax is the amount of money collected by the government which is paid by individuals, businesses and importers to the government. Taxation is a means where revenue is raised to finance government expenditure. Taxation may be used to achieve other economic and social objectives of the government.

Types of tax

The basic nature and purpose of taxation revolves around direct and indirect taxes. Direct tax refers to the tax paid directly by the tax payer to the government through its agencies: - Internal Revenue Commission (IRC) and Customs. The examples of direct tax include personal income tax and company tax. Increasing and decreasing of tax will affect individual income earners and companies accordingly.

Indirect Tax is a form of tax passed on from one party to the other party wherein the final user of goods and services passes the burden of tax onto the government. The examples of indirect tax include Sales Tax, Goods and Services Tax (GST), import duty, exercise duty, tariffs, etc.. The three (3) approaches of taxation include progressive tax, regressive tax and proportional tax. The direct taxes are considered progressive and proportional whereas indirect taxes are regressive in nature.

Type of tax	Purpose of tax
Direct taxes Tax paid or collected straight from the tax payer to the government (IRC). E.g. Personal income tax and company profit tax. Direct taxes are progressive	Used as a tool to reduce higher income earners disposable income
Indirect taxes Tax passed on from one party to the other where the final user of the good or service feels the pinch of tax. E.g. Sales tax, GST, VAT Government collects tax from producers or retailers who pass the tax burden onto the purchasers of their products. Indirect taxes are regressive	Used to discourage the import and consumption of alcohol & cigarette and protect local industries

Purpose of tax

Basically, tax is good for the government whereas for the tax payers, it is a cost. In fact, the government uses tax as a tool to raise its revenue while at the same time Government uses tax deliberately as a tool to discourage production, consumption, import and export of certain goods and services in the country. For instance, imposing tax on alcohol and cigarettes by government is purposely to discourage its consumption by its citizens. Similarly, if the government increases tax on companies, it will discourage companies from operating. However, the opposite is true. The following table summarizes direct and indirect tax.

Suggested Resources

1. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
2. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby: UPNG Press & Bookshop.
3. O'Neill, E. (2014). *A Guide to Papua New Guinea Taxation*. Port Moresby, Papua New Guinea. UPNG Press & Bookshop.

Benchmark 9.4.1.2: Analyse the Papua New Guinean tax system and regulations.

Topic 2: Tax systems and regulations in Papua New Guinea

Sub-topics:

- Tax systems in PNG
- Tax laws and regulations in PNG
- Tax collection methods and its related problems in PNG
- Tax rates in PNG

Skills: Analysis (analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Identify and examine the different types of tax systems in PNG.
- Investigate and point out the the tax laws, regulations and guidelines in PNG.
- Identify and describe the methods of collecting tax in PNG.
- Identify and highlight the problems of tax collection in PNG.

Content Background

Papua New Guinea's tax system

Tax is a major source of revenue for the government in PNG. About 75% of Government budget is funded from tax revenue. PNG practices both direct and indirect tax types. Tax system affects households and businesses in a significant way. While it is an important means of raising revenue by the government, its effects can either have positive and negative consequences on households and businesses.

Tax rates

Three common approaches of tax are; progressive, proportional and regressive tax. The Progressive rate of tax is a direct tax, such as the personal income tax. That is, as income increases, the % of income taken away by tax also increases. Regressive rate of tax is when income increases, the % of income taken away by tax decreases and proportional rate of tax is the rate paid as tax is the same or a flat rate for all income earners regardless of their income.

The tax laws and regulations relate to the payment of tax, collection of tax and the imposition of penalties for breach of tax laws by the government through the Internal Revenue Commission.

In particular, the tax laws of Papua New Guinea are;

- i. Income Tax Act 1959
- ii. Income Tax and Dividend (Withholding) Tax Act 1984
- iii. Income Tax (Salary or Wages) (Rates) Act 1979.

Tax is a compulsory payment made to the government by the private sector in compliance with tax laws. Papua New Guinea adopts a progressive tax system where tax rates increase with increase in personal income. Income tax was first levied or collected in Papua New Guinea in 1959. The power to levy income tax

is one given solely to the National Government by the Constitution. The Internal Revenue Commission (IRC) is the body which is responsible for the collection of Papua New Guinea's taxation revenue.

Income tax is imposed on all residents of Papua New Guinea especially on the income of individuals and companies and whether the source of income is within or outside of the country. Income tax is also imposed on the Papua New Guinea sourced income of non-residents. Income earned by individuals is taxed at marginal rates. The tax rates applied to resident individuals differ from those which apply to non-resident individuals. Furthermore, tax rates differ from different sources of income by households, businesses and others on the size of the amount they earn in a given period.

Suggested Resources

1. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
2. E.D.Shade, R. M. (1995). *Fundamentals of Economics*. (4 ed. Vol. 1). Longman House, Kings Garden, 95 Coventry Street, Melbourne 3205, Australia: Longman Australia Pty Ltd.
3. IRC. Internal Revenue Commission.
Retrieved from: <http://irc.gov.pg/>
4. Mankiw, G. (1998). *Principles of Macroeconomics*. 6277 Sea Harbour Drive Orlando, FL 32887-6777: The Dryden Press.
5. O'Neill, E. (2014). *A Guide to Papua New Guinea Taxation*. Port Moresby, Papua New Guinea: UPNG Press & Bookshop.

Benchmark 9.4.1.3: Investigate how money collected from taxes is used to meet the demands of citizens.

Topic 3: Tax revenue

Sub-topics:

- Sources of tax revenue
- Uses of tax revenue

Skills: Analysis (investigate).

Learning Objectives: By the end of this topic, students will be able to:

- Identify the sources of tax revenue.
- Explain how the government budgets tax revenue.
- Describe how the three types of budgets are used to meet the demands of the citizens.

Content Background

There are many ways in which the government collects taxes which ultimately becomes revenue for the government. The companies, individuals' residents and non-residents all pay tax in one way or the other from the type of income they earn (sources of income elaborated in Topic 1 namely company income tax, personal income tax, sales tax, tariff, import duty, goods and service tax, excise duty etc..

The revenue collected is redistributed to every citizen in the provision of public goods and services. In other words, tax revenues are used to pay the public servants, maintain and build infrastructures such as schools, hospitals or public amenities such as stadium for hosting sporting activities etc...Other uses of tax revenue include; other uses of tax revenue include;

- i. Public servants wages and working conditions
- ii. Maintaining of government departments and institutions and programs
- iii. Government funded projects
- iv. Emergency and disaster relief services
- v. Maintenance of government diplomatic missions abroad
- vi. Debt servicing and other external payment

Tax revenue is used in the government budget which is the government plan of expenditure over a given period. The government budget can be a surplus budget, a deficit budget or a balanced budget. Allocation for spending by the government for the following years' budget is normally passed through the floor of parliament every November.

When there is a short fall in tax revenue, the government borrows to support its budget in order for the government to spend in the economy. Borrowing can be done either domestically or internationally.

Suggested Resources

1. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
2. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies* (20 ed.). New York, USA: McGraw Hill Books.
3. IRC. Internal Revenue Commission.
Retrieved from <http://irc.gov.pg/>
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5. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby: UPNG Press.
6. Mickleburgh, A. (1992). *Economics for Developing Nation (Vol. Book 1)*. Level 95 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
7. O'Neill, E. (2014). *A Guide to Papua New Guinea Taxation*. Port Moresby, Papua New Guinea.: UPNG Press & Bookshop.

Unit 2: Methods of Production and Distribution

Content Standard 4.2: Students will be able to explain and analyze the methods and processes of production and the distribution of goods and services.

Benchmark 9.4.2.1: Explain and analyse the operations of common financial markets and institutions.

Topic 1: Financial markets and institutions

Sub-topics:

- Stock (shares) Market
- Bond Market
- Banking Institutions
- Non-Banking Financial Institutions

Skills: Analysis (explain).

Learning Objectives: By the end of this topic, students will be able to:

- Identify different types of financial institutions in PNG.
- Describe the operations of these financial institutions.
- Explain the operations of stock markets in PNG.
- Explain the operations of bond markets in PNG.

Content Background

Financial markets and institutions play a significant role in the financial sector of the economy of Papua New Guinea. It helps to mobilise capital or money to different sectors of the economy through the intermediation process where money or funds are mobilised from those who have it (investors) to those who need it (borrowers). The financial system cover authorised and regulated financial institutions. The Bank of Papua New Guinea is empowered to regulate the whole financial system through the Central Banking Act 2000. This is achieved through:

- setting licensing requirements
- promoting proper standards of conduct
- setting specific standards and guidelines for sound business practices
- ensuring authorised institutions comply with the rule of law through effective supervisory activities.

The financial markets are classified into stock market and bond market. Stock market is a venue where shares can be bought and sold provided that the company is listed on the stock exchange. The operations of PNG National Exchange (formerly Port Moresby Stock Exchange) are a local stock market which is regulated by Securities Commission Authority Act 2015 (formerly Securities Act 1997).

On the other hand, the bond market or debt market is another form of financial market where bond issuers issue bonds to borrow from the investors who are the bondholders. In fact the bond market is a market for borrowing. In PNG, the debt market is regulated by Capital Market Act 2015. It is the market that is

housed within the Bank of Papua New Guinea.

Financial institutions refer to institutions that deal with financial affairs of the financial system. Types of financial institutions include insurance companies, commercial banks, microfinance banks, and development banks like National Development Bank, superannuation funds, savings and loans societies. Of these institutions, different sets of laws regulate their operations and these are highlighted below.

The laws to regulate banking and non-banking financial institutions are Banks and Financial Institutions Act 2000, Superannuation General Provision Act 2000, Life Insurance Act 2000. Savings and Loan Societies Act 1962 regulates the saving and loans societies and the Office of Insurance Commissioner regulates general insurance industry through the General Insurance Act 1995. The National Development Bank Act 1997 is the act that regulates the operations of this institution whose purpose is to regulate the operations and development of indigenous businesses in Papua New Guinea.

The financial markets and institutions are categorised according to the nature of their operations and functions which they perform. The following table shows the categories of the financial institutions, laws governing them and their functions respectively.

Banking Institutions		
Examples of banking institutions	Laws governing these institutions	Purpose/functions
Central/Reserve Bank – Bank of Papua New Guinea	Central Banking Act 2000	Currency issuer Act as the banker and financial agent to the Government and Commercial Banks. Formulates and implements monetary policy to achieve. Maintain price stability in the economy. Controls the operations of all the financial institutions Manages Foreign Exchange Manages Foreign Reserves

<p>Commercial Banks Australia & New Zealand Banking Group Ltd (ANZ), Bank of South Pacific Ltd (BSP), May Bank Ltd, Westpac Bank Ltd, Kina Bank</p> <p>Licensed Microfinance Institutions MiBank, People's Microbank, PNG Microfinance Ltd</p> <p>Authorised Licensed Financial Institutions (LFI) Credit Corporation Finance Ltd, Finance Corporation Ltd, Heduru Moni (Moni Plus) Ltd, Kina Finance Ltd, 11 recognised LFI in PNG</p>	<p>Banks and Financial Institutions Act 2000.</p>	<p>Accept deposits from ordinary people and businesses to large firms and organizations.</p> <p>Allows people to save and withdraw on demands.</p> <p>Provide loans and other financial incentives to everyone who seeks their assistance. The LFI do not accept deposits as in case of commercial banks. However, they provide a variety of financial products and services (loans) to assist new enterprises, small and big firms to expand their economic activities as well to individuals to improve their standard of living.</p>
<p>Savings & Loan Societies Teachers Savings & Loan Society, Air Nuigini Savings & Loan Society, 21 recognised SLAs in PNG</p>	<p>Savings and Loans Societies Act 1962 (amended 2015)</p>	<p>Allows for savings usually through pay deductions and loans through membership application and qualification. One has to be a financial member to be qualified for benefits from these institutions.</p>
<p>Non-Banking Financial Institutions</p>		
<p>Superannuation Funds Nambawan Super, Defence Force Retirement Benefit Fund, National Superannuation Fund (Nasfund)</p>	<p>Superannuation General Provision Act 2000</p>	<p>Money put aside by your employer over the course of your working life that you live on once you retire.</p> <p>Superannuation is important, as you need a solid amount of money to live off when you're no longer working.</p>
<p>Insurance Companies Capital Life Insurance Company, Kwila Insurance Company, Pacific MMI Insurance Ltd</p>	<p>Life Insurance Act 2000 and General Insurance Act 1995.</p>	<p>Accept payment from clients in the form of insurance cover from risks to life or loss of life or injuries, etc. as a worker. Clients get claims if in the case injury or death, etc. Or on maturity or duration of the membership... etc.</p>
<p>National Development Bank (NDB)</p>	<p>National Development Bank Act 1997</p>	<p>To assist local indigenous SME's to have access to loans in order to engage in income operating activities and grow the economy.</p>

Financial Markets		
Stock Markets PNG National Exchange (formerly Port Moresby Stock Exchange)	Securities Commission Authority Act 2015 (formerly Securities Act 1997)	Purposely to allow investors to buy and sell shares to another party. It also serves as a market where companies can raise capital to finance their investments. Buying and selling of shares and even capital raising can occur if the company is listed on a stock exchange such as the renamed PNG National Exchange.
Bonds Market Bond Market (Bank of Papua New Guinea)	Capital Market Act 2015	Bonds are issued by governments and corporations when they want to raise money. By buying a bond, you're giving the issuer a loan, and they agree to pay you back with interest on a specific date. Bonds are interest bearing securities. Market for buying and selling of debt securities in PNG is normally through the Bank of Papua New Guinea. With the new Act, this market is designed to allow people with existing bonds, Inscribed Stock and T-Bills to sell to the other investors prior to maturity.

(Source: Bandara P, 2013, Economics for Grade 12.

Suggested Resources

1. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
2. Bank of Papua New Guinea. (2007). *Money and Banking (Vol. 2)*. Victoria: Melbourne University Publishing Ltd.
3. Manohar, P. (2008). *Fundamentals of Business and Management for Papua New Guinea*. Port Moresby, Papua New Guinea: Universal Business Academy.
4. O'Neil, E. (1996.). *Principles of Economics*. Victoria. Australia.: Dellasta Pacific.

Benchmark 9.4.2.2: Explain and critically reflect on the role of incentives on the economic behaviour of consumers, producers, workers, savers, investors, and citizens.

Topic 2: Impacts of Incentives

Sub-topics:

- Purpose of incentives
- Types of incentives
- Role of economic incentives
- Impacts of economic incentives
- Role of financial sector players in the economy

Skills: Analysis (explain)/Evaluation (reflect).

Learning Objectives: By the end of this topic, students will be able to:

- Discuss the purpose of incentives.
- Identify and explain the types of incentives to households and corporations.
- Examine the role of incentives on production and consumption.
- Highlight the impacts of economic incentives.
- Assess the role of financial sector players in the economy.

Content Background

Incentives are rewards given to someone for an outstanding effort or initiative. It is the outcome of productivity which firms and household provide to other individuals and firms/businesses in the production process.

Incentives are vital in any economy, businesses and organisations because it makes people feel appreciated for what they contribute to the economy, business or a large organization. Feeling appreciated is a key driver in the workplace. It motivates and attracts the consumers, producers, employees, savers, investors and citizens to use their full potential to increase productivity.

There are three types of incentive namely;

1. social incentive,
2. private incentive and
3. economic incentive.

Social incentive is provided to individuals and organizations that assist communities to achieve a social objective.

Private incentives are provided to individuals by their managers in appreciation of their individual effort. Examples of such include job promotion, money bonuses, better housing, paid holiday, housing allowances, medical and educational care, reduced prices etc.

Economic incentives are rewards provided to household and businesses who embark on profit motive by another business or the government. For example, tax holidays and subsidies are given to investors both foreign and local by the government to invest in the country to undertake economic activities. Without

incentives such as tax holidays and subsidies, productivity and quality of output will fall which would possibly result in the fall of consumption by other households/consumers and business entities.

Impacts of incentives

- i. Consumers: Motivated and increased consumption
- ii. Producer: Motivated and increased productivity or output and quality
- iii. Workers: Motivated and efficient, creative and industrious in their work
- iv. Savers. High yield or benefit from savings will make them to increase savings
- v. Investors. Better incentives to investors [e.g. Tax reduction] increases scope investors to increase and expand and generate economic activities.
- vi. Citizens. A motivated and supported citizen can reduce a alt of social problems and will lead also lead to healthier and productive society.

The financial sector players play an important role for businesses and to the government. Commercial banks provide loan to businesses. Businesses save and conduct financial transactions within and outside of the country. Microfinance banks assist with credit or loan for small and informal businesses. Insurance companies provide cover to potential losses for individuals and businesses. The superannuation funds are primarily established for retirement purposes of those employees. Contributed funds are withdrawn when the contributors retire.

Suggested Resources

1. Bank of Papua New Guinea. (2007). *Money and Banking (Vol. 2)*. Victoria: Melbourne University Publishing Ltd.
2. Manohar, P. (2008). *Fundamentals of Business and Management for Papua New Guinea*. Port Moresby, Papua New Guinea: Universal Business Academy.
3. Mickleburgh, A. (1992). *Economics for Developing Nation (Vol. 1)*. Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.

Benchmark 9.4.2.3: Examine how decisions about spending and production made by households, businesses and governments determine the nation's level of income, employment, and prices.

Topic 3: Circular flow of income

Sub-topics:

- Circular Flow Income Model and factor income and factor payments
- Injections and Leakages in the Circular Flow of Income
- Two - sector model
- Three - sector model
- Four - sector model
- Five - sector model
- Impact of injections and leakages on levels of income, employment, and prices.

Skills: Analysis (examine).

Learning Objectives: By the end of this topic, students will be able to:

- Explore and analyse the circular flow income model and differentiate factor income and factor payment.
- Distinguish the impact of injections and leakages on income, employment and prices.
- Explain the flow of resources between households and firms.
- Describe the flow of resources in the three sector circular flow of income model.
- Explain the flow of resources in the four sector circular flow of income model.
- Explain the flow of resources in the five sector circular flow of income model.
- Analyse the impact of injections and leakages on the circular flow of income model.

Content Background

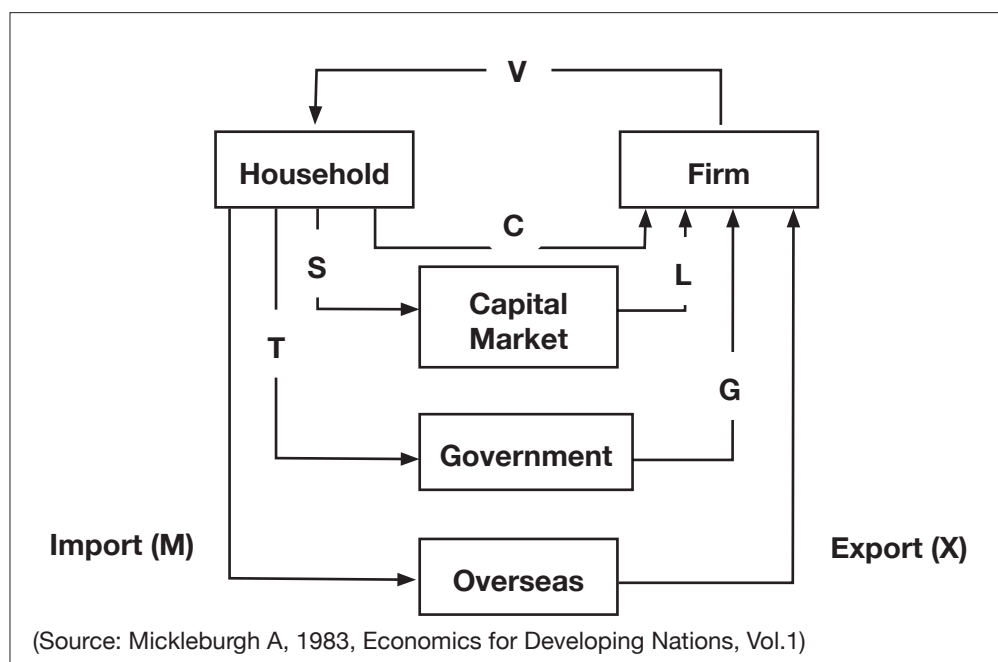
The circular flow of income model

The circular flow of income shows how money income circulates in the economy. Basically, it is a simplified model of the real economic activities in the economy. The modern economy is very complex consisting of many different parts reacting with each other.

To understand this, it has been divided into five (5) broad sectors as:

- i. Household
- ii. Firm
- iii. Capital
- iv. Government
- v. Overseas

The diagram below shows the five sector circular flow of income model.



The **National Income** is formally defined as the net value of the economic goods and services currently produced by the private and public enterprises of the nation over a period of time, usually a calendar year. The national income earned by the government during the year is spent as government expenditure via (through) annual budgets by the national government.

Injection is anything that adds money to the circular flow of income and consequently raises the level of economic activities. Injections increase the flow of income and these include;

- i. investment,
- ii. government spending (expenditure) and;
- iii. payment received from exports.

The injections into the circular flow of income on the economy boost the circular flow of income leading to a multiplied expansion of output.

On the other hand, leakages refer to anything that takes money out of the circular flow of income and reduces the level of economic activities. The sources of leakages are;

- i. savings
- ii. payment made for import
- iii. taxation

Leakage takes the money away from the circular flow of income model. To understand the circular flow of income model, there are five broad sectors of the economy namely;

- i. Household Sector
- ii. Firm Sector
- iii. Financial Sector
- iv. Government Sector
- v. Overseas Sector.

In all, injections stimulate the economic activities which would possibly lead to higher incomes, more employment and increased prices of goods and services. The leakages however, deflate economic activities.

Suggested Resources

1. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
2. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies* (20 ed.). New York, USA: McGraw Hill Books.
3. E.D.Shade, C. G. L. a. P. M. S. (1989). *Fundamentals of Economics*. (3rd ed. Vol. 1). Australia: McGraw Hill Book Company.
4. Greenlaw, S. A., Dodge, E., Gamez, C., Jauregui, A., Keenan, D., MacDonald, D., Openstax. (2014). *Principles of Economics* (1 ed.): Openstax.
5. John Sloman, K. N. D. G. (2014). *Principles of economics* (4 ed.). Unit 4, Level 3 14 Aquatic Drive, French Forest NSW 2086: Pearson Australia.
6. Mankiw, G. (1998). *Principles of Macroeconomics*. 6277 Sea Harbour Drive Orlando, FL 32887-6777: The Dryden Press.
7. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby: UPNG Press.

Benchmark 9.4.2.4: Use basic concepts (such as supply and demand, production, distribution and consumption; labour, wages, and capital; inflation and deflation; market economy and command economy) to compare and contrast local, regional, national economies across time and at the present time.

Topic 4: Economic systems

Sub-topics:

- Market economy
- Command economy

Skills: Analysis (compare/contrast).

Learning Objectives: By the end of this topic, students will be able to:

- Explore and compare the basic economic questions.
- Identify and describe the characteristics of a market economy.
- Identify and explain the characteristics of command economy.
- Compare the operations of a market economy with a command economy.

Content Background

Economic systems are the means by which countries and governments distribute economic resources and trade goods and services. They are used to control the five factors of production in labor, capital, entrepreneurs, physical resources and information resources. Two types of economic system are;

- i. command economic system;
- ii. market economic system.

Each of these types of economic systems differ on how they answer the basic economic questions (what to produce, how to produce, and for whom to produce).

There are countries in the world that practice either the market or command economic systems. For example, America is the main advocate of capitalism while Russia and China promotes command economy with socialist values. Global trade is also affected due to differences in economic ideologies and practices in resource allocation and distribution in providing economic resources and trading of goods and services.

The changes in these economic ideologies from the past to the current are due to emerging economic problems. In all, an economy is determined by;

- i. The nature of resource ownership.
- ii. The system of exchange
- iii. Motivation (incentive)
- iv. Government involvement in decision-making.

An economy is determined by;

- i. the way in which economic resources are owned
- ii. a system of exchange
- iii. motivation
- iv. government involvement in economic decision-making

Characteristics	Market (Capitalist) Economy	Command (Planned) Economy
Ownership of economic resources	Private ownership of economic resources	Resources owned by the government
System of exchange	Buyers and sellers determine the prices of goods & services	Government decides and set prices for goods and services as well as wages and salaries
Motivation	The government allows private businesses and individuals to own more resources and become more creative in producing goods and services to trade with other countries to make profits.	The main focus is on the equal distribution of goods and services by the government to all citizens
Government intervention in making economic decisions	Minimal government control. Economic decisions are based on Free Enterprise (competition between firms)	Government controls and makes all economic decisions

(Source: Bandara, P. (2013). Economics for Grade 12.)

Suggested Resources

1. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
2. Mickleburgh, A. (1998). *Economics for Developing Nations (Vol. Book 1)*.
3. R.J.Brown. (1989). *The Australian Economy in perspective: (Vol. 2)*. Queensland, Australia.: Brooks Waterloo. .
4. Walstad, W. (2008). *Study Guide for Use with Economics* (C. M. S. Brue Ed. 7 ed.). New York: McGraw-Hill Irwin

Unit 3: Regulation of Production, Distribution and Consumption

Content Standard 4.3: Students will be able to analyze and elaborate on how market forces and other mechanisms are used to regulate the production, representation, distribution and consumption of goods and services.

Benchmark 9.4.3.1: Evaluate the different ways government institutions regulate money in the economy.

Topic 1: Regulating money supply in the economy

Sub-topics:

- Money
- Bank of Papua New Guinea (Central Bank)
- Internal Revenue Commission (IRC)
- Department of Finance and Treasury
- Investment Promotion Authority (IPA)

Skills: Evaluation (evaluate).

Learning Objectives: By the end of this topic, students will be able to:

- Examine the concept of money.
- Identify government institutions that control the supply of money in the economy.
- Explain how government institutions control the supply of money in the economy.
- Assess the effectiveness of government institutions in controlling the money supply.

Content Background

Money is anything that is generally accepted for making payment in exchange for goods and services in an economy. It is the medium of exchange which is generally accepted for payment of goods and services. The function of money is worth assessing because money has intrinsic value and is therefore a legal tender in an economy.

The money supply in an economy can have a positive or negative influence. For instance, too much money supply can create excess demand for goods and services and inflation. However, it can influence economic growth and raise standard of living. The factors that influence money supply are;

- i. Balance of payment
- ii. Government budget
- iii. Buying and selling of government securities by the Central Bank
- iv. Lending by Commercial Banks.

Components of money include money and further relates to the different classifications of money such as narrow money, quasi money and broad money or total money.

In Papua New Guinea context, there are other institutions or agencies of government that assist in collecting, controlling and facilitating the flow of

money for and on behalf of the government and for the economy in general. These important institutions are the Bank of Papua New Guinea, Internal Revenue Commission, Department of Finance and Treasury and Investment Promotion Authority. The following table shows the roles and functions of the government institutions.

Money supply in the economy is controlled in order to maintain price stability or control inflation.

Government Institutions	Mechanisms used to control the money supply
Central Bank (BPNG)	Use of the instruments or tools of monetary policy to regulate money supply.
Internal Revenue Commission (IRC)	Use of regulations on taxation and other government income means to control money supply
Department of Finance & Treasury	Regulations and/or decisions on releasing of government funds to regulate money supply in the economy
Investment Promotion Authority	Regulations on Promotion and operations of business entities and effect on growth of money supply in the economy.
Independent Consumer and Competition Commission	Regulates prices of certain goods and ensure monopoly is discouraged in certain industries such as airline, power etc...

(Source: Bandara, P. (2013). Economics for Grade 12.)

Suggested Resources

1. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
2. Bank of Papua New Guinea. (2007). *Money and Banking (Vol. 2)*. Victoria: Melbourne University Publishing Ltd.
3. IRC. Internal Revenue Commission.
Retrieved from: <http://irc.gov.pg/>
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5. Mickleburgh, A. (1992). *Economics for Developing Nation (Vol. Book 1)*. Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.

Benchmark 9.4.3.2: Explain the role of the Bank of Papua New Guinea in managing money and implementing and monitoring the monetary policy.

Topic 2: Bank of Papua New Guinea

Sub-topics:

- Roles of the Bank of Papua New Guinea
- Monetary Policy

Skills: Analysis (explain).

Learning Objectives: By the end of this topic, students will be able to:

- Identify the roles of the Bank of Papua New Guinea.
- Identify the instruments/tools of monetary policy.
- Explain how each instrument is used to control the money supply in the economy.
- Describe problems encountered in implementing monetary policies in developing countries.
- Distinguish types of monetary policies and their effect on the economy.
- Evaluate the uses of expansionary monetary policy and their effects on the economy.
- Assess the uses of contractionary monetary policy and their effects on the economy.

Content Background

With limited banking in Papua New Guinea under Australia's colonial administration of Papua New Guinea, there was a criticism by Australian National University which led to New Guinea Committee in 1953. In 1965, a division was established in Port Moresby by Reserve Bank of Australia. In 1971, the Select Committee on Constitutional Development allowed the Committee on Banking to present a Committee on Banking Report. It paved the way for the eventual blueprint on Independent Banking System which the Reserve Bank of Australia finally relinquished the powers to act as the Central Monetary Authority which is now called Bank of Papua New Guinea.

The Central Banking Act 1973 gave the Bank of Papua New Guinea necessary powers to fulfil the principal obligations as per the Act. In 2000, the Central Banking Act 1973 was revised with separations of powers and responsibilities and to broaden the scope of regulation of the financial system in general whilst strengthening the governance mechanisms.

The Bank of Papua New Guinea now has several roles and functions to undertake as highlighted in the table below.

Functions of Central Bank

- Formulate and Implement Monetary Policy
- Banker and Financial Agent for Government.
- Banker and Regulator of Commercial Banks.
- Prudential Supervision of Financial System

Management of Money and Banking System:

- Currency management (Notes and Coins)
- Lender of Last Resort
- Banker to Banks
- Manage Gold and Foreign Exchange Reserves
- Managing the Debt Market.

Direct Monetary Policy Instruments

- i. Minimum Liquid Asset Ratio
- ii. Cash Reserve Ratio
- iii. Standing Facility
- iv. Directives
- v. Stabilisation Funds.

Indirect Monetary Policy Instruments

- i. Open Market operations
- ii. Discount Facility Rate
- iii. Kina Auction Facility
- iv. Kina Facility Rate
- v. Lender of Last Resort
- vi. Exchange Settlement Account.

(Bank of Papua New Guinea. (2007). Money and Banking, Vol. 2)

Suggested Resources

1. BPNG Quarterly Economic Bulletin [QEB]. <http://www.bankpng.gov.pg>
2. Bank of Papua New Guinea. (2007). *Money and Banking (Vol. 2)*. Victoria: Melbourne University Publishing Ltd.
3. Mickleburgh, A. (1992). *Economics for Developing Nation (Vol. Book 1)*. Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.

Benchmark 9.4.3.3: Appraise the monetary and fiscal policy of the government in terms of their regulation of money and its expenditure, and overall impact on production, distribution, and consumption of goods and services.

Topic 3: Fiscal Policy (Budgetary Policy)

Sub-topics:

- Aims of Fiscal Policy
- Instruments of Fiscal Policy
- Types of Fiscal Policy and their effects on the economy

Skills: Evaluation (appraise).

Learning Objectives: By the end of this topic, students will be able to:

- Identify the aims of fiscal policy.
- Identify the instruments/tools of fiscal policy.
- Explain how each instrument is used in the economy.
- Examine and evaluate the types of fiscal policies.

Content Background

A fiscal policy is also called budget policy, which is the money plan of the government on how to spend tax and borrow funds in order to allocate those funds to different sectors of the economy. Fiscal policy is implemented through the government budget where revenue raised from taxes and from few other sources such as donor aids are spent.

The main instruments of fiscal policy are determined through the budget from tax and borrowings.

The core instruments of fiscal policy are;

- i. Government Expenditure (Budget)
- ii. Taxation

The flow of funds in an economy can influence the volume of output, income and employment. The government is a large employer, producer and consumer in most countries including PNG. Changes in government expenditure (G), taxation (T) or borrowing will affect aggregate (total) demand and total income (Y), output (O), consumption (C), employment, savings (S) and Investment (I). An expansionary fiscal policy relates to an increase in government expenditure (G) which leads to an increase in aggregate (total) demand and stimulates the economy, while a contractionary fiscal policy relates to a decrease in government expenditure (G) which leads to a decrease in aggregate demand and deflate the economy.

Suggested Resources

1. BPNG Quarterly Economic Bulletin [QEB]. <http://www.bankpng.gov.pg>
2. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
3. *Bank of Papua New Guinea. (2007). Money and Banking (Vol. 2)*. Victoria: Melbourne University Publishing Ltd.
4. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby: UPNG Press.
5. Mickleburgh, A. (1998). *Economics for Developing Nations (Vol. Book 1)*.

Benchmark 9.4.3.4: Analyse the impact of salary and wages on the ability of governments to provide goods and services.

Topic 4: Impact of wages and salaries on government budget

Sub-topics:

- Wages and salaries
- Annual government budget of wages and salaries
- Impact of wages and salaries on government's budget

Skills: Analysis (analyze).

Learning Objectives: By the end of this topic, students will be able to:

- Examine and differentiate between wages and salaries.
- Discuss the effects of wages and salaries on annual government budget.
- Evaluate the impacts of wages and salary bills on the economy.

Content Background

Wages is the price paid for labour services rendered which is paid on a fortnightly basis. Wages can be paid to someone in a week or for two weeks work. Wages are not fixed amounts and vary in accordance with changes such as adjustments, bonuses etc....Wages are applied to government officers engaged in state own enterprises and the private sector workers.

On the other hand, salary refers to annual payment paid to some for work normally in a year. Salaries are a fixed amount calculated annually and is applied to all public servants. In the early 1970's, the Issac Report and the Cochrane Report raised issues of Wages in Papua New Guinea. The former report argued that wages in rural areas should be increased in order to allow more people to stay in the rural areas. The Cochrane Report proposed that Wages, Prices and Income Board be established to set the minimum wage in PNG.

Government all over the world make annual budgets in order to spend on its public servants and meet other expenses in a year. Most of the annual income tax is spent on wages and salaries among other development and recurrent budgets.

Since independence most of the budget by PNG government has been spent on wages and salaries.

Public servants in Papua New Guinea have placed a big strain on salaries and wages on the national budget given the recent cash flow problem. For instance, the Government pays more than K200m every fortnight to pay public servants.

Impact of wages and salaries on government's budget

This hinders other infrastructure development and the provision of basic services to reach all Papua New Guineans. Moreover, higher wages and salaries contribute to the increase in the cost of producing goods and services.. High cost of production may lead to low productivity as well as cost-push inflation.

Suggested Resources

1. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby: UPNG Press.
2. Mickleburgh, A. (1998). *Economics for Developing Nations (Vol. Book 1)*.
3. O'Neil, E. (1996.). *Principles of Economics*. Victoria. Australia.: Dellasta Pacific.

Benchmark 9.4.3.5: Identify and analyse different ways salaries and wages are regulated and controlled to minimize the inflationary effects on the costs of production, distribution, and consumption of goods and services.

Topic 5: Wage control in the economy

Sub-topics:

- Wage indexation
- Reasons for regulating wages and salaries
- Wage and salaries control measures
- Relationship between wages and salaries and prices

Skills: Analysis (identify/analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Explain the motives of regulating wages and salaries.
- Examine ways of controlling wages and salaries.
- Describe the relation between wages and salaries and prices.

Content Background

Wage regulation refers to attempts by governments to regulate wages paid to citizens. Indexation policies are policies of the government to impose limits on the rises of prices or incomes. The Cochrane Report made a resolution to establish minimum wage, price and income board. The 1972 Minimum Wage Determination Board of Papua New Guinea was the consequent result whereby the minimum wage laws were established in order to prevent indigenous labour exploitation in the economy.

For wage indexation, the Consumer Price Index (CPI) increase in line with the rise in the prices of goods and services which is essential to accommodate inflationary pressures. Using regimen or a basket of commodities prices can be indexed and a CPI is calculated. From the CPI the rate of inflation could be calculated.

Measures to regulate wages and salaries:

- Increase personal income tax to reduce disposable income
- Public sector annual pay increase is tightly controlled or even frozen
- Establish overtime policies to reduce overtime payments
- Decrease minimum wages rate

The government sometimes initiate wage freeze, a policy of the government to stop the increase of wages. The main reason for wage freeze would be to control wage-push inflation rate in the economy by the government. However for the company, wage freeze is initiated to sustain the company in difficult financial situations. Inflation affects the purchasing power of money in the economy. During times of inflation, the wage packet could be worth less than before.

Lower wage growth helps to reduce cost-push inflation and helps to moderate demand-pull inflation. Nominal wage refers to pay packet that is not adjusted to price changes. A real wage is a wage that is adjusted to price change.

Inflation affects people on fix incomes such as wage and salary earners. Debtors gain while creditors loose and it affects both national and international trade.

Suggested Resources

1. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
2. Bank of Papua New Guinea. (2007). *Money and Banking (Vol. 2)*. Victoria: Melbourne University Publishing Ltd.
3. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies (20 ed.)*. New York, USA: McGraw Hill Books
4. E.D.Shade, C. G. L. a. P. M. S. (1989). *Fundamentals of Economics. (3rd ed. Vol. 1)*. Australia: McGraw Hill Book Company.
5. John Sloman, K. N. D. G. (2014). *Principles of economics (4 ed.)*. Unit4, Level 3 14 Aquatic Drive, French Forest NSW 2086: Pearson Australia.
6. Mankiw, G. (1998). *Principles of Macroeconomics*. 6277 Sea Harbour Drive Orlando, FL 32887-6777: The Dryden Press.
7. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby: UPNG Press.
8. Mickleburgh, A. (1998). *Economics for Developing Nations (Vol. Book 1)*.
9. O'Neil, E. (1996.). *Principles of Economics*. Victoria. Australia.: Dellasta Pacific.

Benchmark 9.4.3.6: Analyse the impact of printing more or less money on the economy.

Topic 6: Printing money

Sub-topics:

- Mint and print money
- Impact of printing more money
- Impact of printing less money

Skills: Analysis (analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Investigate mint and printing of money.
- Identify and discuss why our notes and coins are printed.
- Highlight the effects of printing more money than what is required.
- Outline the effects of printing less money than what is required.

Content Background

The word “*mint*” is ascribed to the manufacture of silver coin in Rome in 269 BC at the temple of goddess Juno Moneta. Today, a *mint* is a factory where money is made. Coins are minted in a mint so that they can be homogeneous or identical. Papua New Guinea produced its coins and notes from the Australian Mint in Canberra.

Money is printed in order to meet the demands of money supply in the economy. Money has three main functions namely;

- i. medium of exchange
- ii. store of value
- iii. measure of value

BPNG is the only authorized institution responsible for printing and issuance of currency. However, just printing of money to address the cash flow issues is not allowed. Normally, printing is done through various denominators of currencies where the modern mints have made the printing of money easier. Print of money is done according to the demand and supply of the currency concerned.

Impact of printing more money

When a country prints more money, there will be surplus leading to depreciation in the value of the currency, prices of goods and services go up instead (inflation) and people find they need more and more money to buy the same amount of goods. This means, printing more money reduces the value of the country’s currency leading to demand-pull-inflation.

Impact of printing less money

If a country prints less money to fund its economic activities, then there will be a decrease in the economic activities. There are chances of cost-push inflation. The printing of less money will obviously lead to shortage of currency notes and coins which further lead to the appreciation of the value of currency such as kina.

However, to stabilise the economic activities, printing of more or less money is not the answer or a good mechanism to use. Other mechanisms such as; the application of the monetary policy instruments or the fiscal policy instruments may be used.

Suggested Resources

1. Bank of Papua New Guinea. (2007). *Money and Banking (Vol. 2)*. Victoria: Melbourne University Publishing Ltd.
2. John Sloman, K. N. D. G. (2014). *Principles of economics (4 ed.)*. Unit4, Level 3 14 Aquatic Drive, French Forest NSW 2086: Pearson Australia.
3. Mankiw, G. (1998). *Principles of Macroeconomics*. 6277 Sea Harbour Drive Orlando, FL 32887-6777: The Dryden Press.
4. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby: UPNG Press.
5. Mickleburgh, A. (1998). *Economics for Developing Nations (Vol. Book 1)*.
6. O'Neil, E. (1996.). *Principles of Economics*. Victoria. Australia. Dellasta Pacific.

Unit 4: Satisfying Needs and Wants

Content Standard 4.4: Students will be able to investigate and review the different mechanisms used by individuals, groups, families, institutions, communities, organizations and businesses to satisfy their wants and needs.

Benchmark 9.4.4.1: Justify the importance of trade in the exchange of goods and services.

Topic 1: Importance of trade

Sub-topics:

- The importance of trade
- Reasons for trade
- Benefits from trade

Skills: Evaluation (justify).

Learning Objectives: By the end of this topic, students will be able to:

- Identify and discuss the importance of trade.
- Examine the reasons for trade.
- Evaluate the benefits from trade.

Content Background

Trade is swapping or exchanging of goods and services between two individuals or groups. Barter is the form of trade which existed in traditional economies. Barter is the swapping of goods for goods without the use of money.

Importance of trade

Trade is important in all societies because without trade people will not have everything they need and desire. To have a better living, people need to have everything but they may not be able to produce them, therefore, through trade, we can get what cannot be produced.

Reasons for trade

Trade has grown rapidly since the 1800s despite the great economic depression and tariffs. Trade contributed to;

- i. Increases variety of goods and services
- ii. Increases quantity of goods available
- iii. Development of specialization
- iv. Establishment of relationships

Benefits from trade

- Earn revenue through the sales of goods and services
- Improve standards of living
- Encourages economic activities

The benefits of trade are numerous because people will have access to varieties of goods and services. Trade has given an advantage for countries to produce goods in which they have comparative and absolute advantages.

Suggested Resources

1. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
2. Mickleburgh, A. (1994). *Economics for Developing Nation (Vol. Book 2)*. 95 Coventry Street South Melbourne 3205, Australia.: Eddison Wesley Longman Pty Ltd.
3. National Department of Education - FODE, (2017), *Grade 12 Unit 3 – The Global Economy*. Port Moresby, NDoE.

Benchmark 9.4.4.2: Identify and evaluate the different ways people trade goods and services.

Topic 2: Types of trading systems

Sub-topics:

- Traditional barter system
- Modern trading system

Skills: Analysis (identify)/Evaluation (evaluate).

Learning Objectives: By the end of this topic, students will be able to:

- Explore the practices of the traditional barter system of trade.
- Analyse the practices of the modern ways of trading.

Content Background

There are different types of trading system such as the barter trade and the modern trading system.

Traditional Barter System

Trade existed long before civilisation. Our ancestors traded in order to meet their basic needs and wants. However, there was absence of money in those transactions. Traditional trade involved the trading of goods or services between two individuals or groups for other goods or services in return. This was known as the barter system of trade. The barter system has been used for centuries before money was invented. The Case Study #28 in Mickleburgh (p. 137) shows that traditional systems of trade in PNG existed between coastal provinces and the highlands region. This trading system extended further into the pacific region to countries such as Samoa and New Caledonia. However, as transactions increased, problems and difficulties of barter exchange also increased. For instance, the goods or services one person or group wants to sell or buy is what the other party wants to buy or sell. Thus, a seller has to find a person who wants to buy the seller's good and at the same time who must have what the seller wants. In many cases, that was not so. Moreover, there was no common measure of value (unit). Traders were faced with the problem of 'what proportion' the two goods are to be exchanged. Thus, new ideas were developed to improve trade and so the development of money as a medium of exchange was introduced. Today, money is used as the medium of exchange for goods and services.

Modern Trading System

In the modern cash economy everything that is traded has a price tag. People trade for goods and services using money as the medium of exchange simplifies transactions. Mickleburgh (1994) asserted that the rapid growth in the modern era was attributed to;

- i. industrial revolution
- ii. European colonization of Africa and other parts of the World
- iii. improvement in communication and transport

Trade is the exchange of goods and services between countries. Goods bought into a country are called imports, and those sold to another country are called exports. Developed countries have a greater share of global trade than developing countries.

Usually developed countries export valuable manufactured goods such as electronics items and cars and import cheaper primary products such as tea and coffee. Trading blocs such as the European Union, dominate world exports.

Suggested Resources

1. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
2. Mickleburgh, A. (1994). *Economics for Developing Nation (Vol. Book 2)*. 95 Coventry Street South Melbourne 3205, Australia.: Eddison Wesley Longman Pty Ltd.
3. Traditional trade vs modern trade.
Retrieved from: <https://diffzi.com/>
4. What is the barter system?
Retrieved from: <https://www.quora.com/>
5. Barter exchange meaning and problems of barter exchange.
Retrieved from: <http://www.economicdiscussion.net/>

Benchmark 9.4.4.3: Investigate and interpret patterns of trade from traditional societies, during the colonial era, and at present.

Topic 3: Patterns of trade

Sub-topics:

- Traditional trade
- Trade in the colonial era
- Modern trade

Skills: Analysis (investigate/interpret).

Learning Objectives: By the end of this topic, students will be able to:

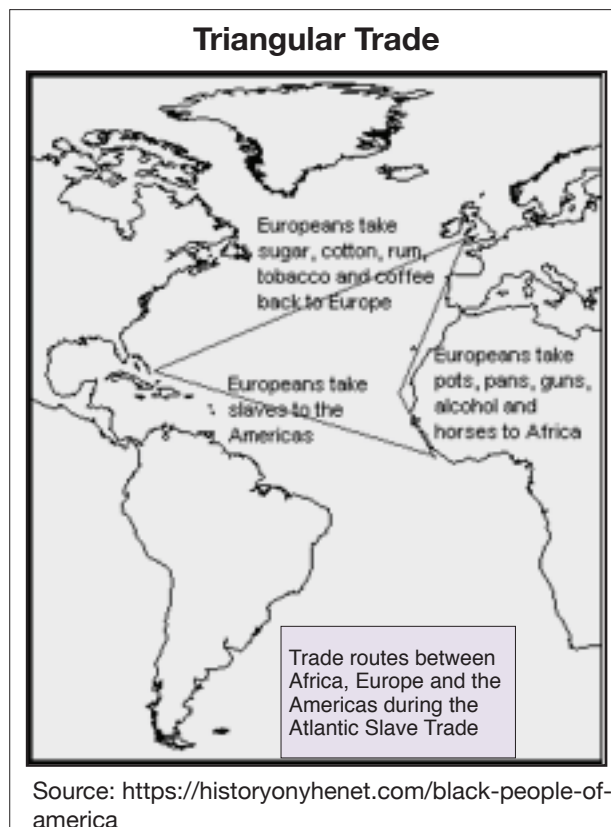
- Examine the pattern of traditional trade in traditional societies.
- Examine trade patterns in the colonial era.
- Outline current trading patterns.
- Examine the history of trade in PNG.

Content Background

Traditional trade patterns

The barter system is an old method of trade. It dates back to 6000 BC and was introduced in ancient Mesopotamia. The ancient people used the bartering system to get food, weapons and spices needed. For instance, the Babylonians exchanged goods for food, tea, weapons as well as spices. Salt became a valuable item of trade at that time. Roman soldiers exchanged their services.

Even before the first empires were created, cities in Mesopotamia were trading with each other as well as the Indus Valley Civilisation. They traded



grains, wool and textiles for gold, stone for building, spices and wood. Early Mesopotamian trade, according to some scholars, might have played a role in the gradual shift from a barter economy to one that used commodities such as silver or grain in payment.

This system spread and many ancient societies adopted and bartered goods to other locations in various cities across the oceans. During the middle ages, Europeans travelled the globe to barter crafts and furs in exchange for silk and perfumes while the Americans trade deer skins and wheat.

Trade in the colonial era

Industrial revolution in Europe has led to colonisation. Industrialization

is the process by which an economy is changed from primarily agricultural to one based on the manufacturing of goods. Making goods by people using the manual tools was replaced by complicated machines for mass production. When this happened, more and more raw materials were needed in the factories to produce more. This gave birth to colonisation.

Europeans explored the world looking for raw materials to supply to their industries, markets to sell their products and places to set up businesses. European nations explored, conquered, settled, and exploited large areas of the world.

By the early 18th century, a network of colonial trade was established over the North Atlantic Ocean.

Sailing ships were controlled by the dominant wind patterns which resulted in a trade system following the wind patterns. This system of trade was known as the Triangular Trade. Triangular trade involved three parties; Europe, Africa and America.

Traditional trade in PNG

In the traditional societies, trade was minimal and mainly took the barter form. However, trade gradually improved over time and space with neighboring villages as relations were forged and further expanded. In essence, traditional trading took place before colonization before with the arrival of colonial masters on the shores of Papua New Guinea.

One unique example of traditional trading system is the Hiri-Motu Trade. Clay pots from Central Province was exchanged for food especially sago from the people of Gulf Province. Highlanders were also trading with the coastal people for stone axes and kina shells. The colonial trading was based on search for raw materials. Originally spices and salt were traded. Eventually other items were also traded. The colonial traders were merchants who traded manufactured products such as iron products for raw materials such as spices, coffee, coconut, copra, gold etc.

Modern Trade

Presently the modern economy operating alongside the traditional economy, it is better referred to as the dual economy. The traditional sector is where goods and services are traded for other goods and services and the modern sector is where goods and services are exchanged for money. It is projected that the modern sector will grow significantly while the traditional sector will decrease and would eventually die out altogether.

Suggested Resources

1. Mickleburgh, A. (1994). *Economics for Developing Nation (Vol. Book 2)*. 95 Coventry Street South Melbourne 3205, Australia.: Eddison Wesley Longman Pty Ltd.
2. Traditional trade vs modern trade. Retrieved from: <https://diffzi.com/>
3. Global Economics - The patterns of trade.
Retrieved from: <https://www.economicsonline.co.uk/>
4. Ancient history- Ancient-near-east-trade-patterns. Retrieved from: <https://worldhistory.us/>

Benchmark 9.4.4.4: Analyse the ways in which trade has contributed to change in selected societies or civilisations.

Topic 4: Impact of trade

Sub-topics:

- Trade and economic changes
- Trade and social changes
- Trade and cultural changes
- Trade and political changes

Skills: Analysis (analyse).

Learning Objectives: By the end of this topic, students will be able to:

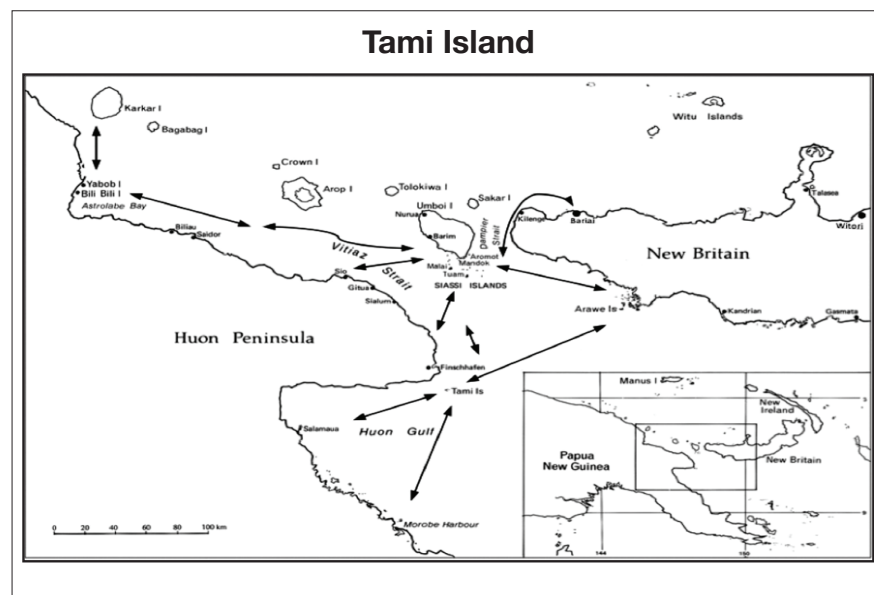
- Identify the changes that occurred as a result of trade.
- Classify the changes as economic, social, cultural and political.
- Research on PNG's trading patterns and the changes that have occurred.
- Present the main points on PNG's trading patterns and the changes that have occurred.

Content Background

Teachers to select a society of choice (can be a local society or people from other parts of the world). The main focus is to see how trade has influenced and brought change to the society. Specific case studies are relevant to this topic of study.

Case study: Tami Islanders of Morobe Province

For instance, the Tami Islanders are a group of people who live on the islands off the Huon Peninsula in Morobe Province, Papua New Guinea. Before European contact, the native people of the Tami islands were known throughout the Solomon and South Sea islands for their distinct wooden bowls. They were specialized in making wooden bowls and ceremonial masks. These products became popular and were traded with neighbouring islands like Siassi islanders for boar's husks.



As the island was too small to fully support itself, it became the heart of a regional sea trading network, supplying bowls and other carved objects in exchange for necessary goods or the similarly specialized production of neighboring islands.

Trade has greatly changed their lifestyle because their wooden bowls were on high demand everywhere. They could trade the bowls with other necessities to improve their standards of living. Even today, their bird form bowls are on the market.

Suggested Resources

1. Mickleburgh, A. (1994). *Economics for Developing Nation (Vol. Book 2)*. 95 Coventry Street South Melbourne 3205, Australia.: Eddison Wesley Longman Pty Ltd.
2. National Department of Education - FODE, (2017), *Grade 9 Unit 3 – Investigating Papua New Guinea History*. Port Moresby, NDoE.

Benchmark 9.4.4.5: Examine reciprocal influences of change in transportation and communication and change in trade and economic activities.

Topic 5: Impact of changes in transportation and communication on trade and economic activities

Sub-topics:

- Effect of change in transportation on trade
- Effect of change in communication on trade

Skills: Analysis (examine).

Learning Objectives: By the end of this topic, students will be able to:

- Discuss the effects of improved transportation on trade.
- Discuss the effects of improved transportation on economic activities.
- Explain the effects of improved communication on trade.
- Explain the effects of improved communication on economic activities.

Content Background

To effectively enhance trading communication and transportation are very important ingredients. Communication is used to inform people of available goods and services. Importantly, the means of transportation are used to bring the goods and services to the final consumers. The improvements in domestic and international communication and transport systems (particularly shipping and internet services) has lowered costs, time lags, reduced damages and theft of goods and services. This allowed goods produced further away from their markets to be distributed in less time and safely.

Effects of improved transportation and communication

1. enhance ease of trading amongst trading countries
2. increased quantity and variety of goods and services amongst trading partners
3. transfer of skills and technical know-how is also transmitted efficiently
4. increased economic interdependence of national economies across the world through a rapid increase in cross-border movements of goods, services, technology, capital flows and labour.

Suggested Resources

1. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
2. Mickleburgh, A. (1994). *Economics for Developing Nation (Vol. Book 2)*. 95 Coventry Street South Melbourne 3205, Australia.: Eddison Wesley Longman Pty Ltd.
3. O'Neil, E. (1996.). *Principles of Economics*. Victoria. Australia.: Dellasta Pacific.
4. R.J.Brown. (1989). *The Australian Economy in perspective: (Vol. 2)*. Queensland, Australia.: Brooks Waterloo.
5. S.V.Harcourt.1980. *Commerce and Development in Papua New Guinea*. (2nd edition. Page.49-151) Pearson Education, Melbourne. Australia

Benchmark 9.4.4.6: Assess global economic interdependence and competition, using examples to illustrate their influence on national and international policies.

Topic 6: Globalisation and economic interdependence

Sub-topics:

- Globalisation, international trade and economic inter-dependence
- Influences of global trading patterns on national economic policies

Skills: Evaluation (assess).

Learning Objectives: By the end of this topic, students will be able to:

- Describe international trade and national economic interdependence.
- Discuss and identify effects of the influence of aid and global trading patterns on national economic policies.

Content Background

What is globalisation?

Globalisation refers to the way countries and people of different nations interact and integrate with each other. They are inter-connected through global networks such as trade. The different types of globalization include cultural, financial, technological, political, ecological, sociological and economic globalisation. Hence, the characteristics of economic globalisation include;

- Growing economic interdependence. There is no longer isolated economies
- Improved transportation, communication and technology making the world one global village
- Integration of economies between developing and developed economies
- Rapid growth of direct foreign investments
- Greater labour mobility between countries than before
- International agreements to promote free trade and resolve related issues
- Increased opportunities for trade and competition.

Economic globalisation

Economic globalisation is the increasing interdependence between national economies globally through trade, investment and aid. This means, there is greater movement of goods and services, technology, capital flows and labour between different nations. For instance, Papua New Guinea has trading partners all over the world and is a member of major global organisations such as Asia Pacific Economic Cooperation (APEC).

The APEC meeting hosted by PNG in 2018 is an example of having being part of the global interdependence of economies and with paramount influence on national and international policy shifts to accommodate member countries interests and promote economic and political cooperation amongst member countries.

Impacts of economic interdependence and competition

Economic interdependence has benefited many economies by exchanging goods and services as well as the much needed skills and knowledge.

International trade has resulted in economic growth in many countries.

Below are some impacts of economic globalisation in PNG outlined by different people

Global factors

The slowdown in the economy, which commenced in 2015, is attributable mainly to external factors. Lower prices for many of the mineral and agricultural commodities that PNG exports to the world—in particular liquefied natural gas (exports of which only commenced in 2014), gold, copper, palm oil and coffee—were key, as was the resultant depression in the global resources sector, which slowed investment in PNG’s mining and petroleum industry. (Source; Business Advantage PNG)

The impact of globalisation on small island developing economies – A PNG perspective

Hualupmomi, Francis (author)

Abstract: *This article provides a critical examination into the impact of economic globalization in Papua New Guinea’s political economy as one of the small developing economies in the Pacific region. The study employed an international political economic analysis applying a neo-liberalism approach of the neo-classical liberalism of classical economic liberalism school of thought. Study was premised on the question: to what extent does globalization affect small island economies in the Pacific region? From the analysis it can be concluded that economic globalization has both positive and negative impacts on the economy. Therefore in order to maximize opportunities and minimize consequences brought about by globalization, state’s intervention is absolutely necessary. (source: Contemporary PNG Studies, Volume 12)*

Papua New Guinea has mixed experiences of globalisation, Benedict Y Imbun writes

Since Papua New Guinea achieved political independence 41 years ago, the country has been absorbed into the global economy. But that has had mixed results for the nation, which is still struggling to formulate policies that work to its advantage.

Just as Papua New Guineans were either superficially aware or oblivious to the significance of the colonial economy prior to 1975, their post-independence adaptation to globalisation has had limited benefits. Put simply, they have failed to properly grasp what it means for them, and how to use it to their advantage.

At best, the country has been able to articulate legislation and policies aimed at encouraging foreign (direct) capital investment, particularly in extractive industries such as mining. At its worst, PNG has been unable to deal effectively with the by-products of globalisation; it has not been shrewd or economical in its management of the opportunities or pitfalls globalisation presents.

In PNG, globalisation-fuelled international investment ushered in the huge Bougainville copper mine in the 1960s and thereafter a series of large – such as Ok Tedi, Porgera and Lihir copper and gold mines – and medium-scale mining developments, such as Misima, Tolukuma and Hidden Valley. This has

been supplemented by investments in oil and gas, agriculture, forestry, and fishing in the last three decades.

It has not been a smooth ride, however. Most Papua New Guineans want development in their country, but they don't effectively grasp what it means, nor how to formulate policy to attract and manage it effectively, and the government has failed to articulate the benefits and challenges it offers.

PNG development goals as the Medium Term Development Policy (MTDP) 2004-10 and such key investment policies as the Look North Policy have been only words on paper, without any meaningful effort made by politicians to inform and familiarise the population about them, let alone bureaucrats. Nor have they touched on the country's development issues – the omission of real issues such as unemployment, gender equality and culture and heritage.

The lack of evaluation of these policies is also cause for concern. Politicians commonly misunderstand development goals, squandering scarce development funds on less important areas. Allan Bird, adviser to the government's Vision 2050 (the more recent collection of visionary development ideals), confirmed the politicians' deficiencies as he lamented the country's miserable failing to achieve the global Millennium Development Goals (MDGs).

It's a confused landscape, compounded by an absence of populist development goals, illiteracy, poverty and ineffective political leadership, and it informs Papua New Guineans' reactions to development and investors. The lack of unified commitment and aspirations for development is a result of successive PNG governments' failure to effectively communicate and advocate their policies to the population.

Respective governments' own economic development choices, such as prioritising capital intensive hard rock and hydrocarbon extraction of resources over popular agricultural development, have compounded the issue of unclear development priorities, and led to a diversity of approaches to investment.

In the process, many people struggle to meaningfully contribute to development and sound economic growth. The result is a population that is lost in making sense of its country's aspirations, and a nation-state that lures foreign investors to make up for the failure of local initiatives. Add to this leaders and technocrats who offer no development visions of any significance to the bulk of the country's population located in the rural areas.

This is compounded by a near-absence of a local, aspirational lower-middle class, and the timely or untimely arrival of Asian entrepreneurs via the Look North policy to fill the gap.

Some people might argue that a class of local entrepreneurs is still emerging, but there is nothing to compete with or challenge the ever-entrenching Asian business concentration.

Given the lack of leadership in issues such as growth and development, and the growing anti-Asian sentiments that have resulted in social upheavals in recent years, it is imperative for the government to come up with a bold and new

populist approach to arrest the situation.

For any appropriate national development policy aimed at appealing to the broad sections of the country, several essential factors should be present.

First and foremost, the government ought to acknowledge the failures of past development plans such the as PNG Government Development Strategic Plan 2010 and various Medium Term Development Plans, and identify and acknowledge successes before shaping new policies.

Policies ought to reflect prevailing issues and challenges, backed by reliable information and data, and be simple and easy for the entire population to understand.

Communication is also the key, and initiatives should be effectively communicated not only via the bureaucracy but also through mass media and educational, civil, NGO, church, and other appropriate avenues to maximise the message across the country, including more remote areas.

To add legitimacy to projects, politicians and bureaucrats should allocate resources to the priorities earmarked, and advocate for them convincingly.

It should be a constant process, with systematic reviews of the policies at all spheres of local, provincial, and national government.

Unless the country analyses its development policies and tailors these to reflect PNG's unsophisticated nature in its messages, the people will always struggle to be part of a development path, and become a missing partner in the development trinity of state, business, and community — regardless of the origin of the investors. (Source: Asia & the Pacific Forum Society)

Suggested Resources

1. Causes and effects of Globalization. (2012).
Retrieved from: <https://laboureconomics.wordpress.com>
2. Hualupmomi, F. (2010). The Impact of Globalization on Small Island Developing Economies: A PNG Perspective.
Retrieved from: <https://search.informit.com.au/documentSummary;dn=588877405258173;res=IELIND>
3. Manohar, P. (2008). *Fundamentals of Business and Management for Papua New Guinea*. Port Moresby, Papua New Guinea: Universal Business Academy.
4. Mickleburgh, A. (1994). *Economics for Developing Nation (Vol. Book 2)*. 95 Coventry Street South Melbourne 3205, Australia.: Eddison Wesley Longman Pty Ltd.
5. Papua New Guinea's mixed experiences of globalisation.
Retrieved from: <https://www.policyforum.net/>

Unit 5: Economic Ideologies

Content Standard 4.5: Students will be able to interrogate and rationalize the influence of economic ideologies on economic systems, production, distribution, and consumption of goods and services, and on the trade relationships amongst different nations and people.

Benchmark 9.4.5.1: Interpret Papua New Guinea's Five National Goals and Directive Principles and investigate their influence on thinking, economic policies and practices, on economic relationships, and on the production and distribution of resources.

Topic 1: Papua New Guinea's National Goals and Directive Principles

Sub-topics:

- Integral Human Development
- Equality and Participation
- National Sovereignty and Self-reliance
- National Resources and Environment
- Papua New Guinean Ways

Skills: Evaluation (interpret) Analysis (investigate).

Learning Objectives: By the end of this topic, students will be able to:

- Identify and explain PNG's National Goals and Directive Principles.
- Examine the influence of Integral Human Development and its Directive Principles on the economic activities in PNG.
- Explain the influence of Equality and Participation and its Directive Principles on the economics activities in PNG.
- Describe the influence of National Sovereignty and Self-reliance and its Directive Principles on the economic activities in PNG.
- Discuss the influence of National Resources and Environment and its Directive Principles on the economic activities in PNG.
- Highlight the influence of Papua New Guinean Ways and its Directive Principles on the economic activities in PNG.

Content Background

Given below is an article about how the National Constitution of Papua New Guinea was framed outlining the National Goals and Directive Principles. It is important for students to know the purpose of the National Constitution and interpret each of the National Goals of Papua New Guinea and reflect on the practices and achievement of these goals. Teachers are advised to allow students to discuss and evaluate the practices and achievement of these goals.

The story of PNG's National Goals and Directive Principles

Retrieved from: <http://www.eagletimespng.com/2016/04/04/the-story-of-pngs-national-goals-and-directive-principles/>

This year PNG celebrates 40 years of Independence. It is perhaps timely therefore to reflect on what the framers of the constitution thought when they

pondered independence 40 years ago. The vision these patriotic Papua New Guineans had for their new nation remains timeless and is captured in the Constitutional Planning Committee (CPC) Report of 1974.

The Constitutional Planning Committee (CPC) was established in June 1972 by the House Assembly. Its objective was to frame “a constitution for full internal self-government in a united Papua New Guinea with a view to eventual independence.”

In 1973, the Committee toured every district and subdistrict throughout PNG and held consultation meetings that were attended by an estimated 60, 000 people. In addition to public consultations, the committee also received over 2000 submissions from discussion groups throughout PNG.

In his book SANA, Grand Chief Sir Michael Somare, who was Chief Minister then, describes the establishment of the CPC.

“The success of nation building and taking the country through self-government and independence depended very much, I thought, on devising a basic constitution appropriate for Papua New Guinea.

Father John Momis (now President Momis of Bougainville), was appointed by Somare as the deputy Chairman of the CPC.

Relations between the CPC and Somare were sometimes frosty. According to Somare, confrontation between the CPC and his government meant that the date for independence had to be pushed further into the future. Some of these differences were over issues such as citizenship, Head of State, and decentralisation (creation of provincial governments).

However following a meeting with Father Momis and Tei Abal, Somare ironed out some of the obstacles. He (Somare) then set his eyes upon breaking away from the Australian model of development and defining a Papua New Guinean model of development.

“... I wanted to make a break from the Australian development policies of the past,” he writes in SANA.

“I wanted to develop principles underlining the fact that the only good reason for government is promotion of the welfare of the people.”

With the assistance of a development report compiled by academics from the University of East Anglia, Somare set out to frame eight national aims. These aims reflected the report’s core argument that development policies should not just produce the fastest rate of economic growth but should focus of distributing welfare services and income in order to improve the general well-being of the people.

The aims are summarised as follows:

- 1) A rapid increase in the proportion of the economy under Papua New Guinean*

- 2) Equal distribution of economic benefits including incomes and government services
- 3) Decentralization of economic activity, planning and government spending.
- 4) Emphasis on small scale artisan service and business activity
- 5) Reduce dependence on imports through local production
- 6) Increase government dependence on local revenue
- 7) Rapid increase in active participation of women in economic and social activities
- 8) Government control of economy where necessary

According to Somare, strategies of development had to change to bring majority of the benefits to the people.

The CPC adapted this view when formulating the constitution.

“It is development of the people rather than development of the country that we have sought to emphasise,” the Committee wrote.

“Thus, for example the people gain little if the benefits derived from development of our natural resources go principally to foreigners.

“In the recent expression of policy there has been some movement towards balanced development with an emphasis on rural areas where most of our people live, and a less permissive attitude towards foreign investment than in the past.

“Such matters are given prominence in our recommendations on National Goals and Directive Principles, together with personal liberation and self-fulfilment, participation and equality, national sovereignty and self-reliance.”

The Founding Fathers of Papua New Guinea were very concerned that economic development translates into improvements in the lives of all Papua New Guineans. As such, they were willing to forego economic growth if such growth didn't improve the well-being of citizens and only profited foreigners.

They therefore articulated a Papua New Guinean model of development and enshrined it in the Constitution as the National Goals and Directive Principles (NGDPs). There are five national goals and directive principles;

1. Integral Human Development

Goal number one reflects the development challenge for “every person to be dynamically involved in the process of freeing himself or herself from every form of domination or oppression so that each man or woman will have the opportunity to develop as a whole person in relationship with others.”

2. Equality and participation

This reflects the Papua New Guinean belief in equality and calls for “all citizens to have an equal opportunity to participate in, and benefit from, the development of our country.”

3. National sovereignty and self-reliance

True independence for Papua New Guineans means that our country is “to be politically and economically independent, and our economy basically self-reliant.”

4. Natural resources and environment

Culturally, Papua New Guineans have had a strong relationship with their land because of the memory their ancestors and the inheritance of future generations. As such goal number four calls on the government and the people to ensure that “Papua New Guinea’s natural resources and environment to be conserved and used for the collective benefit of us all, and be replenished for the benefit of future generations.”

5. Papua New Guinean ways. Finally, Papua New Guineans are urged to “achieve development primarily through the use of Papua New Guinean forms of social, political and economic organization”

Whilst these noble goals are expressed in the Preamble of the Constitution, they are not enforceable by law. Section 26 of the Constitution restricts how the national goals are applied. What this means is that whilst all arms of government are expected to act within the spirit of the NGDPs (section 26 subsection 2), they cannot be taken to court for being in breach of the goals (section 26 subsection 1). The only exception to this relates to the powers of the Ombudsman Commission (section 26 subsection 3).

Nevertheless, the CPC felt that that these goals summed up the national mood at independence about the type of Papua New Guinea, the people wanted.

“We did not determine these national goals in a matter of days or weeks,” wrote the CPC.

“We have distilled them after a great deal of thought and discussion over the twenty-two months during which our Committee has been at work.

“During that time, as we have mentioned in our Introduction, we held well over one hundred public meetings in all parts of the country, and we received thousands of submissions, verbally and in writing, many of which were concerned either directly or indirectly, with the type of society we should seek to build for ourselves.

“We believe that these goals, and the principles which should guide the government and our people in order to achieve them, express the needs and aspirations of our people in meaningful terms, and that they are stated in such a manner that people will readily understand and remember them.

“The particular form in which they have been cast – spelling out the goals first, and then stating the goals and the principles – is intended to assist our people to fully understand and appreciate them.

“We consider that they should be given the widest possible publicity at all levels of government; in towns and villages; in schools and tertiary institutions; in churches and other organizations so that our people will become fully aware of them, discuss them and obtain a clear sense of the direction in which our

country is heading.

“It should give each man and woman a clear appreciation of the need for him or her to participate fully in the building of our new nation – a nation which is firmly based on equality and social justice.”

One of the big misconceptions about the National Goals and Directive Principles is that they are seen as being anti-development and anti-foreign investment. The CPC responded to this concern.

“We do not suggest that all foreign companies operate in this way, or that foreign investment in itself is necessarily bad.

“But we are concerned to ensure that foreign investment is firmly controlled in the interests of the majority of our people.

“When our economy is largely in the hands of foreign investors, as it is now, what real political power do we have, whether we are independent or not?”

And so in articulating a Papua New Guinean model of development as expressed through the National Goals and Directive Principles, the founders of this nation wanted development in which Papua New Guineans were in charge and not foreigners. They then sounded a prophetic warning that should the nation slip away from this road map to progress, there would be negative consequences.

“We see the darkness of neon lights,” they warned.

“We see the despair and loneliness in urban cities.

“We see the alienation of man from man that is the result of the present machine orientated economy.

“We see true social security and man’s happiness being diminished in the name of economic progress.

“We caution therefore that large-scale industries should be pursued only after very careful and thorough consideration of the likely consequences upon the social and spiritual fabric of our people.

“Great emphasis, we believe, should be given to small-scale, artisan services and business activity.

“That man should live decently in conditions fitting to his dignity is an objective we cherish. We believe that that humanity can be achieved in simplicity.

“There is overwhelming evidence to suggest that a significant number of people who live by the fruits of multi-million dollar multi-national corporations live in misery, loneliness and spiritual poverty.

“We believe that since we are a rural people, our strength should be essentially the land and the use of our innate artistic talents.

“We should not be misunderstood.

“We are not here urging our people to become a nation of woodcarvers and banana-taro producers.

“What we say is that secondary and tertiary industries should be pursued only to supplement and to support our primary industries.

“Many of our people must, in time, become commercial entrepreneurs, capable of dealing with giant industries.

“But we should proceed in that direction with caution, and ensure that, in respect of each new large-scale enterprise it is conclusively established that the net benefit of the enterprise to Papua New Guineans as a whole will far exceed the net detriment in terms of our national goals and directive principles and to our human persons.”

We, the people of Papua New Guinea, set before ourselves these national goals and directive principles that underlie our constitution.

Suggested Resources

1. Constitutional Planning Committee. (1974). Constitution of Independent State of Papua New Guinea. Pacific Island Legal Information Institute
Retrieved from: http://www.pacilii.org/pg/legis/consol_act/cotisopng534/.
2. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
3. Mickleburgh, A. (1992). *Economics for Developing Nation (Vol. Book 1)*. Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia

Benchmark 9.4.5.2: Define the concept of ‘inclusive development’ and defend its social and economic principles.

Topic 2: Inclusive development

Sub-topics:

- Social inclusion in development
- Socio-economic principles of inclusive development

Skills: Analysis (define)/Evaluation (defend).

Learning Objectives: By the end of this topic, students will be able to:

- Discuss and analyse inclusive socio-economic development.
- Support and justify the principles of inclusive economic development.

Content Background

What is inclusive development?

Inclusive development refers to development that equally values and includes contributions from all stakeholders of a nation. It allows for marginalised groups to speak their piece of mind in development issues. There is collaboration (partnership & corporation) between civil societies, government and the private sector to address development issues. The government does not work in isolation. Issues on inclusive development on gender, HIV/Aids, education, law and order and people with disabilities have to be captured in the development planning process.

Why does it matter?

Development fails when governments neglect the needs of the very people it is designed to help. In order to reduce poverty, all stakeholders must be actively involved in planning, execution and monitoring of development programs.

Social inclusion – Leaving no one behind

Social inclusion involves excluded groups and the processes of exclusion - geographic, social, political, and economic are recognised, understood and addressed so that all can participate and progress equally and fairly in society.

Social Inclusion Principles

- Improved access to services for the most disadvantaged
- Improved access to resources and benefits of development for the most disadvantaged
- Meaningful participation in decision making for the most disadvantaged
- Removal of institutional and social barriers to the above

Linking social inclusion to development

- Reflect on your country, workplace and community context - who do you think is marginalised/left behind in development and how?
- Is inclusion or equal opportunities incorporated in your government national development goals? Reflect on your workplace and sector - are there individuals/groups who are excluded from the work process or from the benefits of the work you are doing?
- What can you do to promote inclusion in the above scenarios?

Principles of inclusive economic growth

1. Creating a shared, binding mission

Showing commitment and have a vision for change and how it can be achieved.

2. Measuring the human experience of growth, not just its rate

Providing opportunities for the workforce of the country to learn and have quality jobs and progress in life. People should believe in themselves and make full use of their abilities to succeed. In doing so, there will be shift in the quality of economic growth.

3. See growth as a social system, not just a machine

Getting underneath the skin of the problem, 'inclusive growth' is designed to solve, including what is having an impact, where and why, and where services or spending are having perverse effects on inclusive growth outcomes.

4. Be an agile investor at scale

Making sure there is strategic, integrated finance for social and physical infrastructure, to maximise the value of public, private and third sector investment. This might require smaller-scale funding to pump prime public innovation and social enterprise.

5. Entrepreneurial

Use local resources to build on existing assets and opportunities, as well as developing new innovative and investable propositions for change.

The National Goals and Directive Principles, the United Nation's Millennium Development Goals (now Sustainable Development Goals), and PNG's Medium Term Development Strategies 2005-2010 identify critical focus areas to be proactively addressed at all levels of government, administration, business, and communities, including civil society organizations. There is a huge imbalance and inequity in all facets of PNG societies.

Suggested Resources

1. ADB. (2012). *Papua New Guinea: Critical Development Constraints*. 6 ADB Avenue, Mandaluyong City, Philippines: Asian Development Bank.
2. Bandara, P. (2013). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
3. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby, Papua New Guinea: UPNG Press & Bookshop.
4. Mickelburgh, A. (1994). *Economics for Developing Nation (Vol. Book 2)*. 95 Coventry Street South Melbourne 3205, Australia.: Eddison Wesley Longman Pty Ltd.
5. SME Policy 2016 - 2030. (2016). Port Moresby
Retrieved from https://www.dci.gov.pg/images/article/png-sme-policy_2016.pdf.

Benchmark 9.4.5.3: Appraise social and economic policies and practices in terms of the intentions and actual practice with regards to inclusive development.

Topic 3: Socio-economic policies of Papua New Guinea

Sub-topics:

- Social policies of PNG
- Economic policies of PNG

Skills: Evaluation (appraise).

Learning Objectives: By the end of this topic, students will be able to:

- Identify social policies of PNG.
- Assess the implementation of social policies in PNG in terms of their intention and practice.
- Identify economic policies in PNG.
- Assess the implementation of economic policies in PNG in terms of their intention and practice.

Content Background

Social Policies of PNG

Social Policies of PNG are guided by series of policy framework namely;

- i. National Social Protection Policy – Department of Community Development and Religion
- ii. Free Education Policy – Department of Education
- iii. Child Protection Policies
- iv. WaSH Policy – UNICEF
- v. National Strategy to Prevent and Respond to Gender Based Violence
- vi. Gender Equity Policy
- vii. Environmental Policy
- viii. Others

Economic Policies of PNG

Economic policies of Papua New Guinea include;

- National Trade Policy
- SME Policy
- Agriculture Policy
- Taxation Policy

In all, the Vision 2050 is the main anchor that drives the social and economic policies of the government. The plans and policies all intend to reach the main objective which is to make PNG a richer, happier, healthier and wiser nation by 2050.

Suggested Resources

1. ADB. (2012). *Papua New Guinea: Critical Development Constraints*. 6 ADB Avenue, Mandaluyong City, Philippines: Asian Development Bank.
2. Bandara, P. (2013a). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
3. *National Policy on Social Protection*. (2015). Port Moresby: Blakes Printing
Retrieved from: http://www.dfcd.gov.pg/images/pdf_files/Social-Protection-Policy.pdf.
4. SME Policy 2016 - 2030. (2016). Port Moresby
Retrieved from: https://www.dci.gov.pg/images/article/png-sme-policy_2016.pdf.

Benchmark 9.4.5.4: Propose ways in which production, distribution, and consumption of resources could be more inclusive.

Topic 4: Inclusive production, distribution and consumption

Sub-topic:

- Ways of inclusive production, distribution and consumption

Skills: Creative/synthesis (propose).

Learning Objectives: By the end of this topic, students will be able to:

- Identify ways of inclusive production, distribution and consumption.
- Explain the strategies of inclusive production, distribution and consumption in the economy.

Content Background

Ways of inclusive production, distribution and consumption

i. Supporting public private partnerships and reform of state owned enterprises

A lack of infrastructure and poor service delivery are considered to be two of the biggest constraints to Private Sector Development (PSD) in PNG, thus supporting improvements in these two areas is a very valid way to promote PSD and growth.

Supporting the PNG Government's SME Sector Policy

The Government has begun work on a range of incentives aimed at encouraging and supporting SME growth, including tax breaks, state buying commitments, the provision of subsidized finance and proposals to reserve business lists.

Developing the SME sector, and promoting supplier linkages with large extractives companies are important ways to;

- prevent the development of a dual economy,
- and promote broader-based private sector,
- improved access to finance,
- supporting business advisory centres,
- providing entrepreneurial and business skills training,
- financial literacy courses and mentoring opportunities,
- promoting relevant regulatory and policy reform to tackle barriers to entrepreneurship, business formalisation and expansion.
- ensure quality of basic education is an important determinant of success.

ii. Engaging with individual businesses to enhance their development impact

Engagement with agribusiness companies might be around helping to develop the domestic supply chain in order to reduce their costs and promote development opportunities at the same time, perhaps through provision of extension services, training of farmers, creation of aggregation centres, coordination of transportation arrangements, or construction of necessary infrastructure.

iii. Promoting agricultural sector market development

While agriculture accounts for about 36% of Papua New Guinea's GDP, about 85% of PNG's labour force is engaged in the sector, many at a subsistence level. Thus a focus on the agriculture sector could have a very large impact on development and poverty reduction – potentially far greater than any other sector in terms of numbers of people reached.

iv. Engaging with the private sector on technical and vocational training

Skills shortages are cited as one of biggest constraints to doing business in PNG, and mean that foreign labour is sometimes imported as skills do not exist domestically, thus reducing the development impact of domestic business activity and foreign investment.

v. Developing a Green Growth/Green Energy strategy

Green Growth is an approach to identify opportunities for growth through environmentally sustainable policies, initiatives and associated funding. Engagement with companies to develop the domestic supply chain in order to reduce their costs and promote development opportunities. The provision of extension services, training of farmers, creation of aggregation centres, coordination of transportation arrangements, or construction of necessary infrastructure are essential. Skills shortages are the biggest constraint to doing business in PNG where foreign labour is imported. Such affect the development impact of domestic business activities.

Suggested Resources

1. ADB. (2012). *Papua New Guinea: Critical Development Constraints*. 6 ADB Avenue, Mandaluyong City, Philippines: Asian Development Bank.
2. *SME Master Plan 2016 - 2030*. (2016).
Retrieved from: <https://www.dci.gov.pg/images/article/sme-master-plan-2016-2030.pdf>.

Benchmark 9.4.5.5: Identify and critically reflect on the social and economic conditions of individuals and groups who are victims of inequality and non-inclusive development.

Topic 5: Inequality and non-inclusive development

Sub-topics:

- Social impacts of equality and non-inclusive development
- Economic impacts of equality and non-inclusive development

Skills: Evaluation (reflect)/Analysis (identify).

Learning Objectives: By the end of this topic, students will be able to:

- Identify and explain the indicators of inequality and non-inclusive development.
- Identify victims of inequality and non-inclusive development.
- Identify and reflect the economic indicators of inequality and non-inclusive development.
- Identify and reflect the social indicators of inequality and non-inclusive development.

Content Background

Inequality refers to the difference or gap between individuals, groups, regions, towns, cities, etc. in terms of income standard, wealth accumulation, living standards, education levels, level of development, level of technology, etc. Inequality occurs when income distribution is not done fairly. There are people who are not captured or are omitted due to unequal distribution of resources.

In PNG context, inequality means, there is great difference amongst people in terms of income, living standards including water and sanitation, education, wealth possession, accessibility to much needed services such as transport and communication.

There are couple of factors that contribute to inequality and non-inclusive development. Firstly, weak governance and institutions undermine all economic activities. The other factors include, low levels of government effectiveness, poor law and order situation, and weak control of corruption are among the main factors. In addition, the land administration and difficult access to formal land titles also constrain private investment and infrastructure development.

Victims of inequality and non-inclusive development

Development does not reach everyone in PNG. More than half of the population live in remote parts of PNG who do not see any services at all. There is unequal distribution of wealth obtained from Papua New Guinea's natural resources. There are certain individuals or groups who are victims of inequality and non-inclusive development;

- People with disabilities
- People in the remotest parts of PNG
- Indigenous people
- Migrants

Impacts of inequality and non-inclusive development

Social impacts	Economic impacts
Poverty	Unemployment
Increase in rural-urban migration	High tax rates
Law and order problems	Income inequality
Illiterate population	

Poor and unequal access to healthcare is a critical constraint to reducing poverty and inequality whereby poor health can prevent people from accessing economic opportunities and can adversely affect productivity and earnings.

The shortage of skilled human capital is seen as another key constraint faced by both the public and the private sectors. It severely constrains the government in delivery of public services and the private sector in expanding economic activities. The shortage of skilled human capital is further exacerbated by the poor access of the population to affordable and quality education, especially in the remote and rural areas.

Suggested Resources

1. ADB. (2012). *Papua New Guinea: Critical Development Constraints*. 6 ADB Avenue, Mandaluyong City, Philippines: Asian Development Bank.
2. National Strategic Plan Taskforce. (2007). *Papua New Guinea Vision 2050*. Port Moresby, Papua New Guinea.

Benchmark 9.4.5.6: Identify and interpret symbols, infrastructure, social, economic, political, and cultural perspectives and practices, attitudes and behaviours, and policies and plans that manifest Papua New Guinea's approach and commitment to its Five National Goals and Directive Principles.

Topic 6: Manifestation of PNG's National Goals and Directive Principles

Sub-topics:

- Practices of PNG's National Goals and Directive Principles
- Significance of economic, political, social and cultural symbols

Skills: Analysis (identify)/Evaluation (interpret).

Learning Objectives: By the end of this topic, students will be able to:

- Identify and critically reflect the success and failures of National Goals and Directive Principles.
- Identify and interpret the significance of symbols economically, socially, politically and culturally.

Content Background

Being politically independent for four decades, Papua New Guinea had to reflect on its journey as a very young nation. There are successes and failures in relation to National Goals and Directive Principles. There are light improvements to education, health and other socio-economic indicators. Due to resource constraint, most of the development goals were not achieved. The socio economic indicators indicate those not achieved as envisioned or not fully achieved.

These Medium Term Development Strategies (MTDS) are aligned to PNG Development Sustainable Plan (PNGDSP) 2010-2030. Its aim is to improve and develop the governance and institutional capacity together with essential infrastructure and the necessary policy mix required to prepare PNG to advance into higher productivity and improve the quality of life. The PNGDSP clearly sets out the 20-year strategies and targets to achieve Vision 2050. Thus, the first MTDP will be a crucial foundation where monitoring is vitally essential.

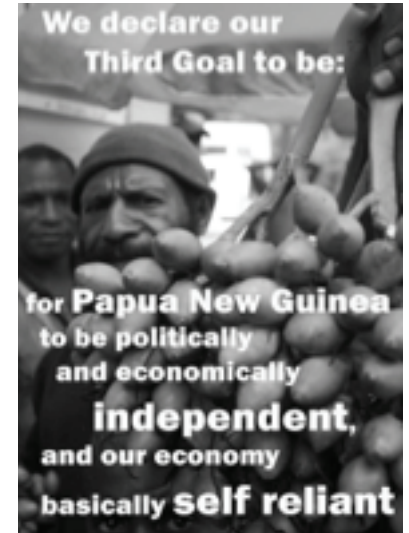
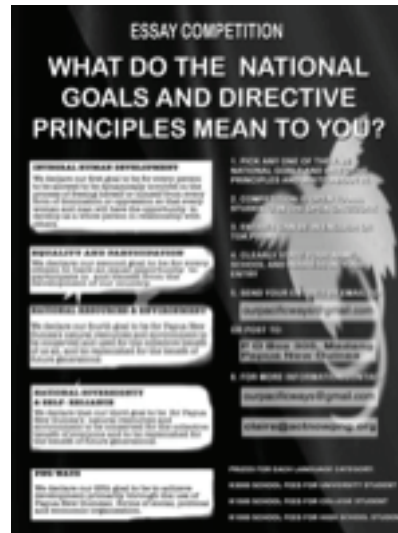
The National Goals and Directive Principles are evident in development policies. For instance, the Vision 2050 captures some of the National Goals and Directive Principles outlined in the National Constitution.

Vision 2050 is underpinned by 7 strategic focus areas which are referred to as pillars;

1. Human Capital Development, Gender, Youth and People Empowerment
2. Wealth Creation
3. Institutional Development & Service Delivery
4. Security & International Relations
5. Environmental Sustainability & Climate Change
6. Spiritual, Cultural & Community Development
7. Strategic Planning, Integration & Control

There is a link between the Vision 2050 and other development policies and plans such as; The Papua New Guinea Development Strategic Plan (PNGDSP), PNG Medium Term Development Plan (MTDP) and other relating policies all working towards the achievement of the National Goals and Directive Principles.

Moreover, the pictures, symbols and sayings show evidence of the National Goals and Directive Principles. The government as well as non-government organisations, groups and individuals ensure that the National Goals and Directive Principles are promoted, practiced, captured in national development plans and policies to benefit every Papua New Guinean.



- Our vision is integral human development achieved through an affordable education system that appreciates Christian and traditional values, and that prepares literate, skilled and healthy citizens by concentrating on the growth and development of each individual's personal viability and character formation, while ensuring all can contribute to the peace and prosperity of the nation.

1.4 Introduction–TVET Mission Statement

TO PROVIDE, FACILITATE AND PROMOTE INTEGRAL HUMAN DEVELOPMENT THROUGH THE DELIVERY OF RELEVANT AND NATIONALLY RECOGNISED TECHNICAL VOCATIONAL EDUCATION AND TRAINING PROGRAMS NECESSARY TO FOSTER, ENHANCE AND SUSTAIN THE SOCIO-ECONOMIC DEVELOPMENT OF PAPUA NEW GUINEA.



WOMEN'S ECONOMIC PARTICIPATION IN PAPUA NEW GUINEA Achieving APEC Priorities for Gender Equality



(Source: <https://ourpacificways.file.wordpress.com>)

Suggested Resources

1. ADB. (2012). Papua New Guinea: *Critical Development Constraints*. 6 ADB Avenue, Mandaluyong City, Philippines: Asian Development Bank.
2. Equality and Participation in PNG.
Retrieved from: <https://www.google.com/search?>
3. National Strategic Plan Taskforce. (2007). *Papua New Guinea Vision 2050*. Port Moresby, Papua New Guinea.
4. *Papua New Guinea Development Strategic Plan 2010-2030*, Department of National Planning and Monitoring, (2010). Port Moresby.

Benchmark 9.4.5.7: Interpret the purposes, intentions, processes, and outcomes of Papua New Guinea's development policies (for example Vision 2050, Medium Term Development Strategy, National Sustainable Strategy, Monetary and Fiscal Policies, etc.) and compare these with economic values and principles.

Topic 7: PNG's Development Policies

Sub-topics:

- Vision 2050
- Medium Term Development Plan

Skills: Evaluation (interpret/compare).

Learning Objectives: By the end of this topic, students will be able to:

- Describe the intentions and processes of each development policy.
- Assess the implementation and outcomes of each development policy.
- Compare the achievements and failures of the development policies.

Content Background

At the end of 2007, the government made a decision to develop a framework for a long-term strategy called “The Papua New Guinea Vision 2050.” The intent was to map out the future direction for Papua New Guinea and reflect on the aspirations of the people of Papua New Guinea. Vision 2050 is underpinned by seven Strategic Focus Areas called pillars namely;

- i. Human Capital Development, Gender, Youth and People Empowerment;
- ii. Wealth Creation;
- iii. Institutional Development and Service Delivery;
- iv. Security and International Relations;
- v. Environmental Sustainability and Climate Change;
- vi. Spiritual, Cultural and Community Development; and
- vii. Strategic Planning, Integration and Control.

The Papua New Guinea Vision 2050 incorporates the National Government's Strategic Directional Statements that will drive development initiatives over the next 40 years. By comparison, the MTDS and PNG Vision 2050 is aligned to PNG development objectives. The Medium Term Development Plan is the touchstone for all sectorial, provincial, district and LLG plans. The MTDP 2011-2015 is the first of four (4) rolling Medium Term Development Plans to implement the Papua New Guinea Development Strategic Plan 2010-2030.

The PNGDSP clearly sets out the 20-year strategies and targets to achieve Vision 2050. This first MTDP will be a crucial foundation and its implementation will be monitored closely. Successful implementation of the key enabling sector strategies in the first MTDP will largely depend on maintaining a stable price and lower interest rate environment going forward. In fact doing that will not only ensure macroeconomic stability but also economic development as more businesses will be encouraged to embark on more investment.

Suggested Resources

1. ADB. (2012). *Papua New Guinea: Critical Development Constraints*. 6 ADB Avenue, Mandaluyong City, Philippines: Asian Development Bank.
2. National Strategic Plan Taskforce. (2007). *Papua New Guinea Vision 2050*. Port Moresby, Papua New Guinea.

Benchmark 9.4.5.8: Examine the effect of global social, economic, political, and cultural development principles and agenda on the implementation and the realization of Papua New Guinea's economic principles and development aspirations.

Topic 8: Impact of global socio-economic trends on PNG's development plans

Sub-topics:

- Global trends on socio-economic principles in PNG
- Global trends on the political and cultural aspects in PNG
- Global trends on National Investment aspirations of PNG

Skills: Analysis (examine).

Learning Objectives: By the end of this topic, students will be able to:

- Discuss and identify the influences of Global trends on the socio-economic principles.
- Identify and explain the influences of Global trends on the political and cultural aspects in PNG.
- Evaluate and analyze the influences of Global trends on the Development aspirations of PNG.

Content Background

Papua New Guinea has its development plans, policies and principles in place as all other countries. However, as mentioned in the preceding lessons, globalization has great influence on how to carry out these development plans and policies. No economy will survive on its own; they are all interconnected and interdependent. Therefore, the development plans, policies and principles of PNG must be in line with the global plans, policies and principles such as the Millennium Development Goals.

Globalization has benefits and challenges. It can provide tremendous opportunity for economic growth to improve the quality of life for many people. It can also lead to challenges with the welfare of workers, economies, and the environment as businesses globalize and shift their operations between countries to take advantage of lower costs of doing business in other world regions.

Papua New Guinea has progressed to improve the climate for business in order to attract business and economic investment. Increase global investment in PNG will reduce poverty and inequality. Governments and NGOs are working together to provide a good starting point help us to define what we mean by poverty and provide a set of internationally agreed targets for the steps we have agreed on to address it.

Increasing globalization and cultural invasions have obviously impacted Papua New Guinean culture. Our unique culture is disappearing and will become extinct in the near future. Papua New Guineans are quick in accepting and embracing western lifestyle and there is no consideration and attention to preserve the culture. It is very sad to see our culture fading because cultural

extinction means; loss of our diverse languages, traditions, habits and even customs.

The United Nations Millennium Development Goals (now Sustainable Development Goals) and Medium Term Development Strategies are adopted and incorporated through the PNG Vision 2050 and the Medium Term Development Plan.

Many investors prepare to invest in countries that have political stability because of investment security reasons. The global trends certainly influence many aspects including development aspirations of PNG. PNG is dependent on other foreign countries for most of its needs for goods and services. In order to enhance improvement in terms of trade the country's economic policies on international trade has to benefit the country.

Suggested Resources

1. ADB. (2012). *Papua New Guinea: Critical Development Constraints*. 6 ADB Avenue, Mandaluyong City, Philippines: Asian Development Bank.
2. National Strategic Plan Taskforce. (2007). *Papua New Guinea Vision 2050*. Port Moresby, Papua New Guinea.

Strand 5: Environment

This strand consists of 4 units. They are;

1. Environment and Resources
2. The Earth and Its Systems
3. Biological Dynamics of the Earth
4. Environmental Change and Sustainability

Units	Topics
1. Resources and Environments	Topic 1: Rocks as a resource Topic 2: Soil as a resource Topic 3: Common fuels Topic 4: Fossil fuels Topic 5: Alternative fuels
2. The Earth and Its Systems	Topic 1: Heat transfer and meteorological processes Topic 2: Characteristics of oceans Topic 3: Life in the oceans
3. Biological Dynamics of the Earth	Topic 1: Impact of interrupting natural cycles Topic 2: The Interdependence of ecological and socio-economic systems Topic 3: Sustainability Topic 4: Specific adaptations in different environments
4. Environmental Change and Sustainability	Topic 1: Air pollution Topic 2: Soil degradation Topic 3: Biodiversity and habitat loss Topic 4: Sustainable Development Goals 2030:

Unit 1: Resources and Environments

Content Standard 5.1: Students will be able to examine and make sense of different resources and different environments.

Benchmark 9.5.1.1: Examine the different types of rocks as resources.

Topic 1: Rocks as a resource

Sub-topics:

- Types of rocks
- Uses of rocks as resources

Skills: Analysis (examine)

Learning Objectives: By the end of this topic, students will be able to:

- Identify the types of rocks.
- Explain the uses of rocks as resources and as metallic and non-metallic mineral resources.

Content Background

Rocks are classified into three main types;

- i. Igneous
- ii. Sedimentary
- iii. Metamorphic.

Uses of rocks as resources

They help us to develop new technologies and are used in our everyday lives. Rocks are made up of minerals. Some minerals are metallic and others are non-metallic. An example of a metallic mineral is copper and an example of a non-metallic mineral is phosphate.

Our use of rocks and minerals includes building materials, cosmetics, cars, airplanes, roads, and appliances. Rocks and minerals are important for learning about earth materials, structure, and systems. Rocks are commonly used for architecture and design by the building and construction industries.

Suggested Resources

1. Department of Education, (1987). *Changing World*. Port Moresby, NDoE.
2. R B Bunnet, (1965). *Physical Geography in Diagrams*. London, Longman
3. Retrieved from:
 - i. <https://geology.com>
 - ii. <https://www.learner.org>

Benchmark 9.5.1.2: Investigate fertile soil as a resource and the processes of soil formation.

Topic 2: Soil as a resource

Sub-topics:

- Soil type
- Processes of soil formation
- Uses of soil as a resource

Skills: Analysis (investigate).

Learning Objectives: By the end of this topic, students will be able to:

- Identify soil types.
- Explain soil types.
- Explain soil forming processes.
- Identify the uses of soil.

Content Background

Soil is the upper layer of the earth from which plants grow. It is one of the three major natural resources alongside air and water. Soil is made up of largely rock minerals, organic matter, gases and water. Organic matter includes both living matter (soil decomposers) and dead matter.

Soil types

Soils that are made up of coarse grains are called sandy soils. Soils that are made of smaller particles are known as silts, and fine grained soils are clay. A mixture of sand, silt and clay is known as a loam soil. The size difference of the particles is known as soil texture.

Soil forming processes

It takes a long time for soil to form. Soil forms as rocks are broken down by weathering and mixes with other materials like organic matter, gases and water on the surface. Soil is constantly being formed. Overtime soil develops layers to give its profile.

Uses of soil as a resource

Traditional uses of soil	Modern uses of soil
Face and body paint Ink or paint Making of clay pots and pans and other household ornaments Making of fire places in tilted houses	Farming and Agriculture Parks and Gardens Sculptures and monuments Building and construction Mining and quarrying

Suggested Resources

1. Stan Squire, (1988). *Interactions in Physical Geography Today*. Australia. Oxford University Press
 - i. <https://www.gardenguides.com>
 - ii. <https://www.hunker.com>

Benchmark 9.5.1.3: Describe the commonly used fuels such as fossil and nuclear fuels.

Topic 3: Common fuels

Sub-topics:

- Fossil fuel
- Nuclear fuel

Skills: Analytical (describe).

Learning Objectives: By the end of this topic, students will be able to:

- Differentiate between fossil fuels and nuclear fuels.
- Describe the formation of fossil fuels.
- Identify global reserves and stocks of fossil and nuclear fuels.
- Explain the advantages and disadvantages of using fossil fuels.
- Explain pollution problems associated with the extraction and consumption of fossil fuels.

Content Background

Fossil fuel is a general term for buried combustible geologic deposits of organic materials, formed from decayed plants and animals that have been converted to crude oil, coal, natural gas, or heavy oils by exposure to heat and pressure in the earth's crust over hundreds of millions of years. Fossil fuels are non-renewable. Fossil fuels are mined and extracted whether it's near the surface or buried deeply underground.

Nuclear fuel is used in power stations to produce heat to power turbines. Nuclear fuel is the fuel that is used in a nuclear reactor to sustain a nuclear chain reaction. The most common nuclear fuels are radioactive metals uranium 235 and plutonium 239. Nuclear fuels can also be recycled and used as a fuel in thermal reactors.

When fossil fuels are burned, they release carbon dioxide, methane, nitrogen and particulates into the atmosphere. This upsets the natural balance of nitrogen and carbon dioxide in the atmosphere, which leads to smog, acid rain, and enhanced greenhouse effect. Burning of fossil fuel causes air pollution and contribute to harmful global warming and climate change. Air pollution does not refer only to the addition of dangerous gases in the atmosphere but more to the alteration of the current composition of the atmosphere such as increased carbon dioxide.

Advantages of using fossil fuel

- Cheap and widely available source of energy
- Easy to set up a fossil fuel power plant
- Very efficient source of power
- A fossil fuel power plant occupies a small area to produce huge amounts of energy
- Fossil fuels generate thousands of jobs worldwide

Globally, we currently consume the equivalent of over 11 billion tonnes of oil from fossil fuels every year. Crude oil reserves are vanishing at a rate of more than 4 billion tonnes a year – so if we carry on as we are; our known oil deposits could run out in just over 53 years. Moreover, the effects of using this source of fuel may pose serious threats to humans and natural systems.

Suggested Resources

1. Brian Parker, (2008). *Geography for Global Citizens. (3rd edition)*. South Yarra (Victoria). Macmillan Education Australia.
2. Rob. Berry, (2006). *Thinking Geography*. South Yarra (Victoria). Macmillan Education Australia.
3. Stan Squire, (1988). *Interactions in Physical Geography Today*. Australia. Oxford University Press.
4. Retrieved from:
 - i. <https://www.alternative-energies.net>
 - ii. <https://www.alternativeenergysecret.com>

Benchmark 9.5.1.4: Explain the origin of fossil fuels and analyse the problems associated with humans' dependence on this energy.

Topic 4: Fossil fuel

Sub-topics:

- Origin of fossil fuel
- Impacts of using fossil fuel

Skills: Analysis (explain).

Learning Objectives: By the end of this topic, students will be able to:

- Explain the origin of fossil fuels.
- Explain the problems associated with using fossil fuels.
- Explain the impact of man's dependence on this energy.

Content Background

Fossil fuels, as you have learnt previously, are coal, oil, and natural gas. All three were formed many hundreds of millions of years ago from the fossilised remains of prehistoric plants and animals. Fossil fuels are a non-renewable energy source since they take millions of years to form. They were particularly formed before the time of the dinosaurs, during the carboniferous period. Fossil fuels ultimately get their energy from the sun.

The burning of fossil fuels produces around 21.3 billion tonnes of carbon dioxide per year. It is estimated that natural processes can only absorb about half of that amount, so there is a net increase of 10.65 billion tonnes of atmospheric carbon dioxide per year. The United States alone gets 81% of its total energy from oil, coal, and natural gas, all of which are fossil fuels. We depend on those fuels to heat our homes, run our vehicles, power industries and manufacturing, and provide us with electricity.

Fossil fuels are the major energy sources that are being used in the world today. However, their over-consumption can lead to serious environmental degradation such as air pollution, global warming and climate change.

There are numerous health problems associated with the consumption of fossil fuels. For example, particulates and other compounds released during coal burning can contribute to the development of asthma, pneumonia, bronchitis, upper respiratory diseases and eye irritation, heart attack, heart disease, neurological deficits and cancer.

Some positive steps and actions that can be taken by individuals and communities to reduce our dependence on fossil fuels:

- Conserve energy – people can do simple things to reduce energy consumption
- Re-use products – many consumer goods can be reused instead of being discarded
- Recycle materials
- Live green or off-grid – do without electricity and water supply

Suggested Resources

1. Rob. Berry, (2006). Thinking Geography. South Yarra (Victoria). Macmillan Education Australia.
2. Retrieved from:
 - iii. <https://www.conserve-energy-future.com>
 - iv. <https://www.theworldcounts.com>

Benchmark 9.5.1.5: Investigate alternative fuels such as wind, hydro, solar, ethanol and geothermal.

Topic 5: Alternative fuels

Sub-topics:

- Solar
- Wind
- Ethanol
- Geothermal
- Hydro

Skills: Analysis (investigate).

Learning Objectives: By the end of this topic, students will be able to:

- Identify alternative fuels.
- Explain the use of alternative fuels.
- Explain the advantages and disadvantages of alternative fuels.

Content Background

Alternative energy is any energy sources that are an alternative to fossil fuel. Alternative energy is naturally occurring and renewable in nature and the environment around us. These alternatives are intended to address the high carbon dioxide emission rates of fossil fuels which is an important factor in global warming. Carbon dioxide is one of the 5 naturally occurring greenhouse gases that keep the earth warm by trapping reflected out-going heat energy.

Alternative energy is good for the environment because renewable energy sources like wind, solar, and biomass produce very low or zero emissions.

The commonly known alternative energy sources are:

- Hydroelectric energy
- Solar energy
- Wind energy
- Biomass energy
- Geothermal energy from geothermal vents
- Tidal energy

Suggested Resources

1. National Department of Education. FODE (2017), *Grade 10 Social Science - Unit 1 Resource Development and Management*, Port Moresby, NDoE.
2. National Department of Education. FODE (2017), *Grade 8 Social Science- Unit 1 Environment and Resources*, Port Moresby, NDoE.
3. Retrieved from:
 - i. <https://www.renewableresourcescoalition.org>
 - ii. <https://www.alternative-energies.net>
 - iii. <https://www.futureofworking.com>

Unit 2: The Earth and Its Systems

Content Standard 5.2: Students will be able to investigate and explain the physical dynamics of Earth that result in the flow of energy and cycling of matter within an ecosystem to demonstrate that earth is one interconnected system.

Benchmark 9.5.2.1: Explain heat transfer in the atmosphere and its relationship to meteorological processes such as pressure, winds, evaporation and precipitation.

Topic 1: Heat transfer and meteorological processes

Sub-topics:

- Methods of heat transfer
- Relationship between heat transfer and meteorological processes

Skills: Analysis (explain).

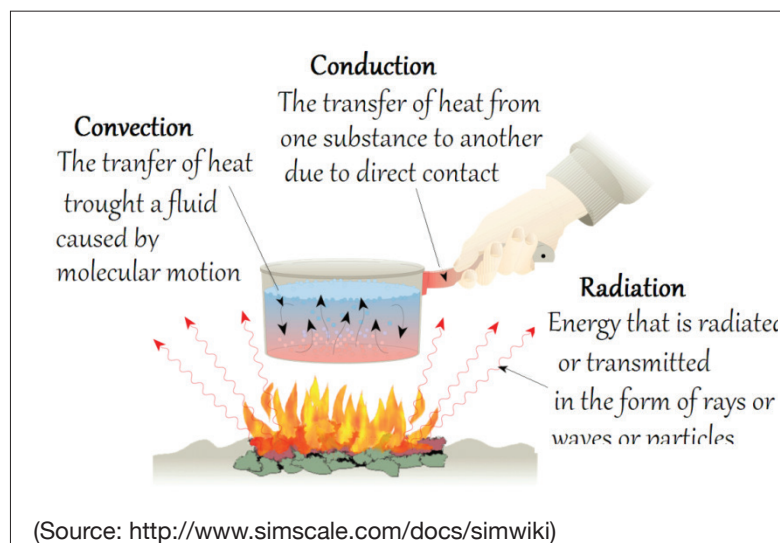
Learning Objectives: By the end of the topic, students will be able to:

- Explain the methods by which heat moves through the atmosphere.
- Identify the meteorological processes in the atmosphere.
- Explain each meteorological process.
- Describe the relationship between heat transfer and the various meteorological processes.

Content Background

Heat is transferred from one place to another by three methods:

- conduction in solids;
- convection of fluids (liquids or gases) and
- radiation through anything that will allow radiation to pass.



Relationship between heat transfer and meteorological processes

Meteorological processes are processes that take place in the earth's atmosphere that focuses on weather processes and forecasting. Therefore, the transfer of heat and the meteorological processes occur in the earth's atmosphere. Thus all these processes occur in the earth's atmosphere.

Suggested Resources

1. Types of heat transfer in the atmosphere.
Retrieved from: <https://www.google.com/search?>

Benchmark 9.5.2.2: Investigate the characteristics of the ocean: composition and lateral and vertical motion of water and their effects on temperature salinity and nutrient distribution.

Topic 2: Characteristics of oceans

Sub-topics:

- Composition of the ocean
- Lateral and vertical motion of water in the ocean
- Effects of the motion of water

Skills: Analysis (investigate).

Learning Objectives: By the end of the topic, students will be able to:

- Explain the lateral and vertical motion of water.
- Describe the effects of lateral and vertical motion of water on temperature distribution.
- Describe the effects of lateral and vertical motion of water on nutrient distribution.

Content Background

Ocean refers to the large body of water that covers much of the earth's surface. Sea is a division of the ocean that is partially or totally surrounded by land. It is also part of an ocean but is smaller than an ocean.

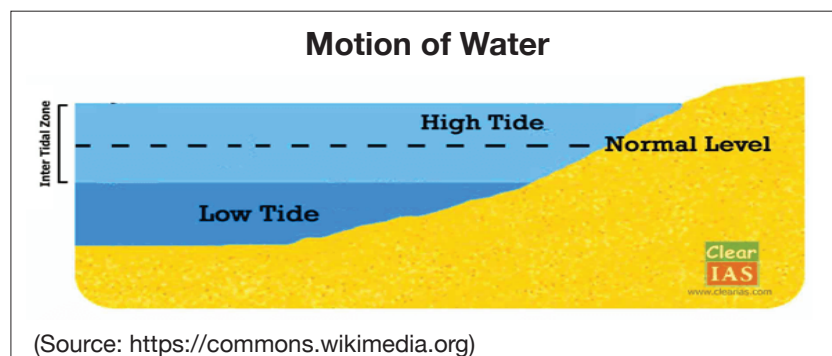
Composition of ocean water

The water in the ocean is made up of many substances. It comprises of 2.5% salt and 96.5% water plus other inorganic and organic materials. (<https://www.britannica.com>)

Motion of water

The ocean is never still. There are two types of movement of water in the ocean.

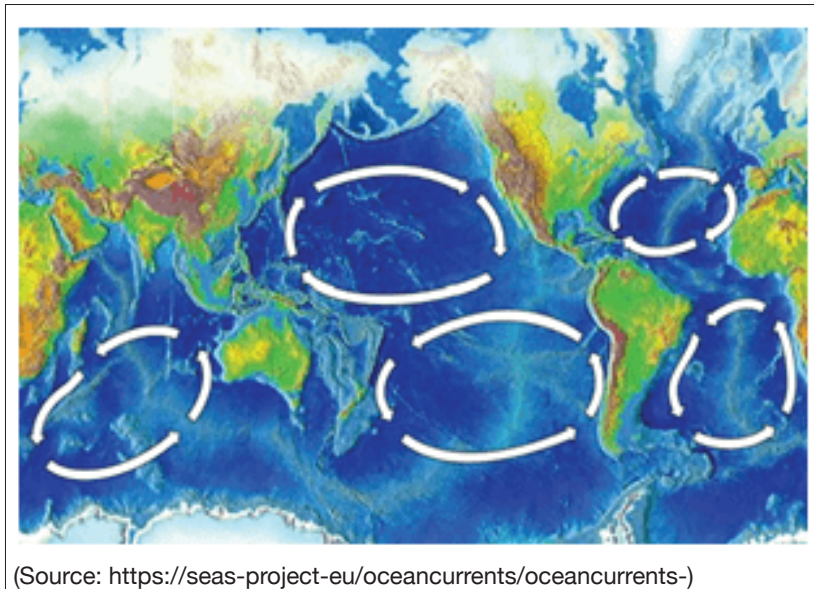
- Vertical motion
- Lateral motion (horizontal)



The vertical motion refers to the tides. This refers to the rise and fall of the sea level (low and high tides) once or twice a day. It also refers to the upwelling process whereby the nutrient-rich cold water from the bottom of the ocean is drawn up to the ocean surface thus changing the ocean surface temperature, salinity and nutrients.

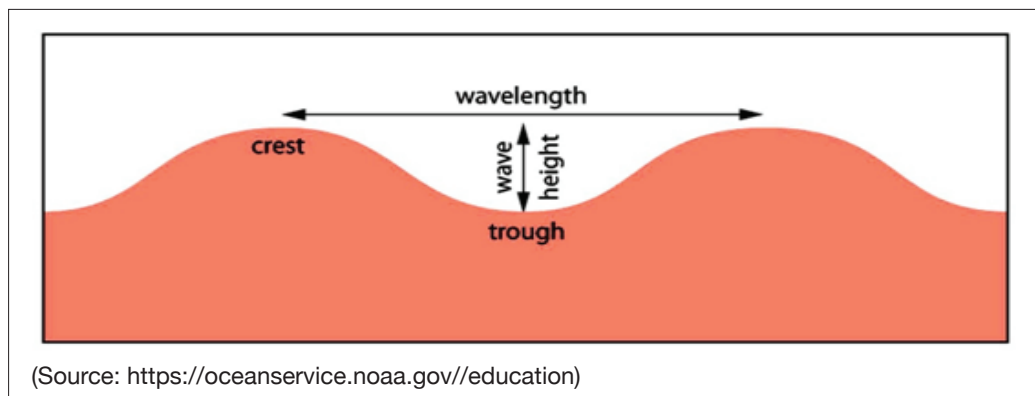
The lateral motion refers to waves and ocean currents. Ocean current is the flow of a mass of water in a direction over long distances. It is just like a river flowing in the ocean. They are basically formed by strong winds.

Ocean Currents



(Source: <https://seas-project-eu/oceancurrents/oceancurrents->)

Waves are movement of ocean water which moves across the ocean surface. The winds provide the energy for the waves as they lash the ocean surface water.



(Source: <https://oceanservice.noaa.gov//education>)

Effects of movements of ocean water

- Winds and currents assist in the upwelling process which results in much fisheries.
- Tides assist in the feeding and reproduction process of marine species.
- Heat is re-distributed around the globe through cold and warm ocean currents.

Suggested Resources

1. Movements of ocean waves and tides currents.
Retrieved from: <https://www.clearias.com/>

Benchmark 9.5.2.3: Examine the ocean's biological zonation (distribution of organism in biogeographic zones).

Topic 3: Life in the oceans

Sub-topic:

- Distribution of organisms in biogeographic zone in oceans

Skills: Analysis (examine).

Learning Objectives: By the end of the topic, students will be able to:

- Describe the ocean's biological zonation.
- Identify the biogeographic zones.
- Describe the distribution of organisms in the biogeographic zones.
- Define and contrast 'upwelling' and 'down welling' of nutrients.
- Explain the origin and distribution of nutrients.

Content Background

The distribution or arrangement of plants or animals into specific zones (areas/ regions) according to the altitude, latitude and temperature.

The ocean's biological zonation

Why the earth is called the blue planet? It's because the world's five oceans (Pacific, Atlantic, Indian, Southern and Arctic) cover two thirds of its surface. The oceans support a wide variety of life but not everything can live everywhere. From top to bottom, there are different zones in the ocean as shown on the diagram. Each zone is defined by such things as sunlight, temperature and water pressure.

Ocean zonation

The ocean can be divided into many zones. The ocean bottom is the benthic zone and the water itself (or the water column) is the pelagic zone. The neritic zone is that part of the pelagic zone that extends from the high tide line to an ocean bottom less than 600 feet deep.

Suggested Resources

1. Zonation.
Retrieved from: <https://www.biologyonline.com/dictionary/zonation>
2. Oceans Biological Zonation.
Retrieved from: <https://www.google.com/search?q=Oceans+Biological+Zonation&source>

Unit 3: Biological Dynamics of the Earth

Content Standard 5.3: Students will be able to investigate and interpret the biological dynamics of the Earth.

Benchmark 9.5.3.1: Analyse the consequences of interrupting natural cycles.

Topic 1: Impact of interrupting natural cycles

Sub-topic:

- Consequences of interrupting the natural cycles

Skills: Analysis (analyze).

Learning Objective: By the end of this topic, students will be able to:

- Examine the consequences of interrupting natural cycles.

Content Background

The natural environment include: air (gases), flora and fauna/plants and animals, soil, solar energy (heat and light) and water. The natural and human environments do not exist in isolation but are constantly interacting with each. They are interdependent. If one part is changed, it affects all the others. When changes occur, there can be both positive and negative effects and impacts.

Peoples' actions play a major role in altering the environment. The environment is suffering now faster than any time in history. No one wants to see their quality of life go down and we cannot simply go backwards.

The main concerns for the environment are how:

- the atmosphere, the rivers, lakes and the oceans are being polluted
- people might be causing global warming
- people are destroying the world's forests and other wilderness areas
- people are endangering the survival of other species
- people are being careless with toxic (life-threatening wastes)

As a result of these human activities, we are faced with global warming causing sea level to rise and drowning smaller islands, extinction of wild life (flora & fauna), inappropriate disposal of chemical waste causing diseases and many other complications we have experienced already and more to come. So important decisions have to be made, on how to make life better for everyone in the world and at the same time take better care of the environment. This idea is known as sustainable development. It is about preservation and conservation of our environment for us today as well as the future generations to enjoy.

Suggested Resources

1. Brian Parker, (2008). *Geography for Global Citizens. (3rd edition)*. South Yarra (Victoria). Macmillan Education Australia.

Benchmark 9.5.3.2: Examine the interconnections and interdependency of ecological, social and economic systems.

Topic 2: The interdependence of ecological and socio economic systems

Sub-topic:

- Interdependence of ecological and socio economic systems

Skills: Analysis (examine).

Learning Objectives: By the end of this topic, students will be able to:

- Examine ecological and socio-economic systems.
- Describe the relationship between ecology and socio economic systems.

Content Background

What is ecology?

Ecology is the study of how organisms interact with one another and with their physical environment. The distribution and abundance of organisms on Earth is shaped by biotic (living-organism-related) and abiotic (nonliving or physical) factors.

Why is ecology important?

Ecology helps us understand how the world works. It provides useful evidence on the interdependence between people and the natural world and also the consequences of human activity on the environment.

An ecosystem is all the living things in an area interacting with each other and all of the abiotic parts of the environment.

In ecology, ecosystems are composed of organisms, the communities they comprise, and the non-living aspects of their environment.

Socioeconomics is the social science that studies how economic activity affects and is shaped by social processes. In general it analyzes how societies progress, stagnate (cease to advance) or regress (passing back) because of their local or regional economy, or the global economy. Societies are divided into 3 groups: social, cultural and economic.

What is the relationship between the environment and the economy?

In reality, the environment contains human society, which in turn contains the economy. A vibrant economy depends on the rule of law and depends on people earning enough money to create a robust market for goods and services.

The natural and environmental resource input function is central to understanding the relationship between economic growth and the environment. Water, soil, air, biological, forest and fisheries resources are productive assets, whose quality helps determine the productivity of the economy.

In very broad terms, environmental economics looks at how economic activity and policy affect the environment in which we live. Some production generates pollution – for example, power station emissions can cause acid rain and also contribute to global warming.

Humans impact the environment in several ways. Common effects include decreased water quality, increased pollution and greenhouse gas emissions, depletion of natural resources and contribution to global climate change.

The role of ecology in our lives

The many specialties within ecology, such as marine, aquatic, terrestrial, vegetation, and statistical ecology, provide us with information to better understand the world around us. This information also can help us improve our environment, manage our natural resources, and protect human health.

Suggested Resources

1. Department of Education, (1999). *Papua New Guinea Secondary School Atlas*. Australia & New Zealand Oxford University Press.
2. R B Bunnet, (2003). *General Geography in Diagrams (2nd edition)*. First Lok Yang Road: Longman.

Benchmark 9.5.3.3: Assess how the health of these systems determines the sustainability of natural and human communities at local, provincial, national and global levels.

Topic 3: Sustainability

Sub-topics:

- Sustaining natural communities (plant and animal species)
- Sustaining human communities

Skills: Evaluation (assess).

Learning Objectives: By the end of this topic, students will be able to:

- Investigate and determine the sustainability of natural and human communities.
- Do an awareness of environmentally friendly activities.

Content Background

Why do we manage our environment?

The whole world is interdependent. All parts (systems) are necessary for the whole to work well. Careful management of the world's resources is needed if resources are to continue to meet people's needs today and in many years to come. Uncontrolled population increase and unmanaged resource use will lead to increasing environmental destruction. The world's population is in danger of destroying its own home –planet Earth. Healthy ecosystems clean our water, purify our air, maintain our soil, regulate the climate, recycle nutrients and provide us with food. They provide raw materials and resources for medicines and other purposes. They are at the foundation of all civilizations and sustain our economies.

- People must learn to think globally and act locally to save our planet.
- Government at all levels: local, provincial and national must manage our environment by passing laws to protect our environment. It must initiate and support programs that promote sustainable economic practices.

8 Simple Ways to Protect the Environment on Earth Day

- i. Volunteer at an earth day event
- ii. Host a recycling drive
- iii. Stop or reduce your use of disposable plastics
- iv. Host your own event to clean and beautify your community
- v. Opt out
- vi. Plant your own vegetable garden
- vii. Support your local farmers' market
- viii. Conserve energy

5 ways our governments can confront climate change

- i. Protect and restore key ecosystems. Respect for nature is fundamental
- ii. Support small agricultural producers
- iii. Promote green energy
- iv. Combat short-lived climate pollutants
- v. Bet on adaptation, not just mitigation

8 Simple Ways to Help the Environment

- i. Use reusable bags. Plastic grocery-type bags that get thrown out end up in landfills or in other parts of the environment
- ii. Print as little as necessary
- iii. Recycle
- iv. Use reusable beverage containers
- v. Don't throw your notes away
- vi. Save electricity
- vii. Save Water
- viii. Avoid taking cars or carpool when possible

Suggested Resources

1. Department of Education (FODE), (2017). *Environment and Resources; Grade 8, Strand 1*. Port Moresby, NDoE.
2. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
3. Retrieved from:
 - i. 10 simple ways to protect the environment on earth day: www.treetopcommons.com/
 - ii. Environmental management system: <https://en.m.wikipedia.org/wiki/>
 - iii. Managing our environment: <https://www.orc.govt.nz/>

Benchmark 9.5.3.4: Investigate how specific adaptations can help organisms survive in their environment.

Topic 4: Specific adaptations in different environments

Sub-topics:

- Animal adaptations
- Plant adaptations

Skills: Analysis (investigate).

Learning Objectives: By the end of this topic, students will be able to:

- Explain how plants adapt to the environment.
- Explain how animals adapt to the environment.
- Investigate how specific adaptations can help organisms survive in their environment.
- Examine certain ecosystems and outline some ways in which they adapt to their environment.

Content Background

How do plants adapt to their environment?

Each species of plants only grow in a range of conditions to which it has adapted. The most important influence of the environment comes through the climate: the pattern of temperature and rainfall. Another influence is the length of the seasons. Plants often adapt to cope with certain kinds of soil or with waterlogged or drought-prone parts of the landscape. Plants need nourishment in the form of nutrients dissolved in water. They get these from the soil or from decaying plants on the ground surface. Plants also need sufficient sunlight, warmth and moisture so that their leaves can produce the chemicals needed for further growth.

Likewise plants also develop certain adaptations. The main influences are food supply, availability of water, temperature range, destructions of habitats by human and natural disasters etc....

Example of desert animals adaptations;

Burrowing animals (rats) have the ability to dig down deep into the soil where it is cooler.

Some animals cope with the harsh conditions through the ability to control body temperature and moisture loss. Snakes and lizards are cold blooded and can tolerate big temperature changes. Some animals, like the road runner, can raise or lower their blood temperature according to the time of day. Moisture loss must be kept to a minimum because animals cannot survive if the percentage of water in their bodies drops too low. They do this by not sweating much and by producing very little urine.

Some animals search for food at night and rest in the heat of the day. Animals that do this are nocturnal animals.

Some animals have the ability to last a long time without much food or water. Some snakes, for example, can survive for months without food. Some insects can survive on very little moisture and some animals are able to absorb moisture through their skins.

Hibernation (the ability to sleep for long periods of time) is another form of adaptation. The toad has been known to hibernate for eight or nine months of the year, but a sudden downpour will wake it up from its long sleep.

Other animals (camels) have the ability to store food in their bodies. The camel's hump is actually a storehouse of food (not water) that allows the animal to travel long distances without food or water.

Some animals in a range of different environments have the ability to change colour or camouflage themselves to blend in with their surroundings. Many varieties of desert lizards camouflage themselves against predator.

With their 'fight or flight' mechanism some animals may also protect themselves against attack by means of either fighting or fleeing quickly. The mountain devil has sharp spikes all over its body, while the kangaroo rat is very fast over a short distance.

Suggested Resources

1. Brian Parker, (2008). *Geography for Global Citizens. (3rd edition)*. South Yarra (Victoria). Macmillan Education Australia.

Unit 4: Environmental Change and Sustainability

Content Standard 5.4: Students will be able to critique and make sense of the impact of human activities on the environment.

Benchmark 9.5.4.1: Evaluate the common problems related to air quality, regarding the automobile industry and natural emissions.

Topic 1: Air pollution

Sub-topics:

- Types of air pollution
- Causes and effects of air pollution
- Automobile industry and other sources of air pollution
- Natural sources of air pollution
- Emission rates and problems related to air quality

Skills: Evaluation (evaluate).

Learning Objectives: By the end of this topic, students will be able to:

- Examine air pollution.
- Identify types of air pollution.
- Explain causes of air pollution.
- Explain the automobile industry and other sources of air pollution including natural sources like volcanoes.
- Assess emission rates and problems related to air quality.

Content Background

Air pollution is the contamination of the atmosphere with harmful substances. Air pollution occurs when harmful or excessive quantities of substances including gases, particles, and biological molecules are introduced into the earth's atmosphere. The causes and effects of air pollution is outlined in the table below.

Air Pollution	
Causes	Effects
Natural sources like fire and volcanoes	Respiratory infections
Man-made sources from spray cans, cars, airplanes, chemicals and burning fossil fuels	Global warming
	Acid rain

The two forms of air pollution considered to be the most detrimental to humans are ozone, or smog, and particle pollution or soot. The majority of ozone is caused by a chemical reaction between the vapors emitted from the burning of fossil fuel and sunlight. Naturally occurring ozone is found in the second layer of the atmosphere (stratosphere) and performs a vital function. The man-made ozone (smog) found on the earth's surface (1st layer) is the dangerous ozone.

Ozone exposure can cause both short and long term issues to an individual's health. Short term problems include irritation to the respiratory system, and skin irritation. Long term exposure can cause more serious issues such as an increase rate of pulmonary disease, inflammation of the lining of the lungs, and impaired lung function.

Particle pollution is very widespread throughout the environment. It consists of liquid and solid particles comprising of chemicals, diesel exhaust, soot, ash, and metals. Particle pollution is produced by the use of diesel fuel in heavy equipment, passenger vehicles, and cargo vehicles, as well as from the burning of coal in power plants, and other industries. Wood burning is another source of this type of pollution, along with agricultural practices that employ slash - and - burn techniques. Particle pollution is particularly dangerous to humans (even in low concentrations), and has been linked to premature births, and lung cancer. It also causes illnesses like heart attack, stroke, irregular heart rate, shortened life span, and coughing, wheezing and asthma.

Everyone can be affected by air pollution especially when exposed over prolonged periods of time. Emission estimates are based on many factors, including levels of industrial activity, technological developments, fuel consumption, vehicle miles travelled, hectares of forest burned, and other activities that cause pollution.

Suggested Resources

1. Department of Education, (1987). Changing World. Port Moresby, NDoE.
2. Retrieved from:
 - i. <https://www.plushbeds.com>
 - ii. <https://www.sciencetopia.net>
 - iii. <https://www.conserve-energy-future.com>

Benchmark 9.5.4.2: Analyze the common problems related to the loss of fertile soil.

Topic 2: Soil degradation

Sub-topics:

- Causes of soil degradation
- Effects of soil degradation
- Sustainable use and management of soil

Skills: Analysis (analyse).

Learning Objectives: By the end of this topic, students will be able to:

- Explain soil degradation and loss of fertile soil.
- Explain causes of soil degradation.
- Highlight the effects of soil degradation.
- Outline sustainable use and management of soil.

Content Background

Soil degradation is the decline in soil condition caused by its improper use or poor management, usually for agricultural, industrial or urban purposes. It is a serious environmental problem.

There are several physical factors contributing to soil degradation distinguished by the manners in which they change the natural composition and structure of the soil. Rainfall, surface runoff, floods, wind erosion, tillage, and mass movements result in the loss of fertile topsoil thereby declining soil quality.

The effects of soil erosion go beyond the loss of fertile land. It has led to increased pollution and sedimentation in streams and rivers, clogging these waterways and causing declines in fish and other species. Degraded lands are also often less able to hold onto water, which can worsen flooding.

Soil management is important, both directly and indirectly to crop productivity, environmental sustainability, and human health. To achieve future food security, the management of soils in a sustainable manner will be the challenge, through proper nutrient management and appropriate soil conservation practices.

Some soil management practices to improve soil are:

- Reduce the rate of excessive tillage
- Increase the use of organic matter for soil fertility
- Use cover crops
- Reduce particle use and provide for beneficial organisms
- Rotate crops
- Manage nutrients

Suggested Resources

1. Retrieved from:
 - i. <https://www.hindawi.com>
 - ii. <https://www.environment.nsw.gov.au>
 - iii. <https://www.worldwildlife.org>
 - iv. <https://www.conserve-energy-future.com>

Benchmark 9.5.4.3: Investigate the common problems related to the loss of biodiversity.

Topic 3: Biodiversity and habitat loss

Sub-topics:

- Causes of biodiversity and habitat loss
- Impact of loss of biodiversity on the environment

Skills: Analysis (investigate).

Learning Objectives: By the end of this topic, students will be able to:

- Discuss biodiversity and habitat loss.
- Find out the causes of biodiversity and habitat loss.
- Explain the causes of biodiversity and habitat loss.
- Explain the impact of loss of biodiversity on the environment.

Content Background

Biodiversity refers to the variety of plant and animal life in a particular habitat. A habitat is the type of natural environment in which a particular species or organism lives. Organisms are adapted to survive under the food, water temperature, shelter, and space conditions of their natural habitats.

Loss of biodiversity has become a serious issue in many places around the world. Many factors such as habitat loss and degradation, excessive nutrient load, air and water pollution, increased temperature, over-exploitation and unsustainable use of natural resources, and invasive species, contribute to the loss of biodiversity.

Loss of biodiversity has many long term effects. Biodiversity provides various goods such as plants and animals that individuals need in order to earn an income or secure sustainable livelihoods. If ecosystems deteriorate to an unstable level, the resulting problems can be very expensive, economically, to reverse.

All organisms thrive within an optimum range of temperature. Increased temperature from global warming is challenging the optimum range of organisms. For example, coral bleaching (death of corals) is often associated with the increasing global average temperature. The destruction of corals as habitats for marine organisms in turn affect marine biodiversity.

Suggested Resources

1. Brian Parker, (2008). *Geography for Global Citizens. (3rd edition)*. South Yarra (Victoria). Macmillan Education Australia.
2. Retrieved from:
 - i. <https://www.thelossthatcounts.weebly.com>
 - ii. <https://news.umich.edu>
 - iii. <https://mashable.com>

Benchmark 9.5.4.4: Deconstruct the Sustainable Development Goals 2030 and ascertain their purposes and intensions, underlying assumptions, contradictions, relationships between different countries and the relationships between people and environments.

Topic 4: Sustainable Development Goals 2030

Sub-topics:

- Purposes and intensions of the goals in SDG 2030
- Underlying assumptions of the goals in SDG 2030
- Contradictions of the goals in SDG 2030
- Impact of the SDG 2030 on relationship between countries
- Impact of SDG 2030 on the relationship between the people and the environments

Skills: Creative/Synthesis (deconstruct)/Analysis (ascertain).

Learning Objectives: By the end of this topic, students will be able to:

- Review the purposes and intensions of the goals outlined in the SDG 2030.
- Identify and explain the assumptions of the SDG 2030.
- Describe the inconsistencies in the goals outlined in the SDG 2030.
- Explain how the SDG 2030 promote relationships between different countries.
- Describe the impact of the SDG 2030 on the relationship between people and the environments.

Content Background

The Sustainable Development Goals are a collection of 17 global goals set by the United Nations General Assembly in 2015 for the year 2030. The SDGs cover social, economic and environmental development issues including poverty, hunger, health, education, gender equality, clean water, sanitation, affordable energy, decent work, inequality, urbanization, global warming, environment, social justice and peace.

The 2030 Agenda for Sustainable Development was launched by a UN Summit in New York on 25-27 September 2015 and is aimed at ending poverty in all its forms. The UN 2030 Agenda envisages “a world of universal respect for human rights and human dignity, the rule of law, justice, equality and non-discrimination.”

The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate, environmental degradation, prosperity, and peace and justice.

The international community, through the United Nations, has set in motion a historic plan – 17 Sustainable Development Goals – that aims to build a more prosperous, more equal, and more secure world by the year 2030.

Suggested Resources

1. Retrieved from:
 - i. <https://sustainabledevelopment.un.org>
 - ii. <https://www.un.org/sustainable-development>
 - iii. <https://www.coe.int>

Standards-Based Lesson Planning

What are Standards-Based Lessons?

In a Standards-Based Lesson, the most important or key distinction is that, a student is expected to meet a defined standard for proficiency. When planning a lesson, the teacher ensures that the content and the methods of teaching the content enable students to learn both the skills and the concepts defined in the standard for that grade level and to demonstrate evidence of their learning.

Planning lessons that are built on standards and creating aligned assessments that measure student progress towards standards is the first step the teacher must take to help their students reach success. A lesson plan is a step-by-step guide that provides a structure for an essential learning.

When planning a standards-based lesson, teacher instructions are very crucial for your lessons. How teachers instruct the students is what really points out an innovative teacher to an ordinary teacher. Teacher must engage and prepare motivating instructional activities that will provide the students with opportunities to demonstrate the benchmarks. For instance, teacher should at least identify 3-5 teaching strategies in a lesson; teacher lectures, asks questions, puts students into groups for discussion and role play what was discussed.

Why is Standards-Based Lesson Planning Important?

There are many important benefits of having a clear and organized set of lesson plans. Good planning allows for more effective teaching and learning. The lesson plan is a guide and map for organizing the materials and the teacher for the purpose of helping the students achieve the standards. Lesson plans also provide a record that allows good, reflective teachers to go back, analyze their own teaching (what went well, what didn't), and then improve on it in the future.

Standards-based lesson planning is vital because the content standards and benchmarks must be comparable, rigorous, and measurable and of course evidence based and be applicable in real life that we expect students to achieve. Therefore, teachers must plan effective lessons to teach students to meet these standards. As schools implement new standards, there will be much more evidence that teachers will use to support student learning to help them reach the highest levels of cognitive complexity. That is, students will be developing high-level cognitive skills.

Components of a Standards-Based Lesson Plan

An effective lesson plan has three basic components;

- aims and objectives of the course;
- teaching and learning activities;
- assessments to check student understanding of the topic.

Effective teaching demonstrates deep subject knowledge, including key concepts, current and relevant research, methodologies, tools and techniques, and meaningful applications.

Planning for Under-achievers

Who are underachieving students?

Under achievers are students who fail or do not perform as expected. Underachievement may be caused by emotions (low self-esteem) and the environment (cultural influences, unsupportive family)

How can we deal with underachievement?

Underachievement varies between students. Not all students are in the same category of underachievement.

Given below a suggested strategies that teachers may adopt to assist underachievers in the classroom.

- Examine the Problem Individually
- It is important that underachieving students are addressed individually by focusing on the student's strengths.
- Create a Teacher-Parent Collaboration
- Teachers and parents need to work together and pool their information and experience regarding the child. Teachers and parents begin by asking questions such as;
- In what areas has the child shown exceptional ability?
- What are the child's preferred learning styles?
- What insights do parents and teachers have about the child's strengths and problem areas?
- Help student to plan every activity in the classroom
- Help students set realistic expectations
- Encourage and promote the student's interests and passions
- Help children set short and long-term academic goals
- Talk with them about possible goals
- Ensure that all students are challenged (but not frustrated) by classroom activities
- Always reinforce students to learn

Samples of Standards-Based Lesson Plans

To help teachers plan effective Standards-Based lesson plans, there are five (5) sample lessons provided here. Teachers are encouraged to study the layout of the different components of these lessons and follow this design in their preparation and teaching of each lesson. Planning a good lesson helps the teacher to focus on the essential knowledge, skills, values and attitudes that students are expected to learn and master at the end of the lesson.

Sample 1

Strand 1: Geography

Unit 1: Geography Skills

Content Standard 1.1: Student will be able to use geographical tools to locate and interpret information about people, places and environment.

Benchmark 9.1.1.1: Identify and explain the use of weather instruments and unit of measurements used in measuring weather.

Topic 1: Weather Instruments

Lesson Topic: What are weather instruments?

Grade: 9

Length of Lesson: 40 minutes

Essential Knowledge, skills, values and attitude

Knowledge:

- Weather instruments
- Elements of weather

Skills: Critical thinking skills of identifying weather instruments from other instruments.

Values: Caring for weather instruments

Attitudes: Being responsible when handling weather instruments

Performance Indicator: Identify weather instruments and the elements of weather measured.

Materials: pictures of weathers instruments plus other instruments, cardboards with names of weather instruments written on each of them, list of names of weather instruments on A4 size paper, pictures of elements of weather, charts, butcher papers etc.

Instructional (lesson) Objective(s): By the end of the lesson, students will be able to:

- List the weather instruments.
- Relate each weather instrument to the elements of weather measured.
- Distinguish weather instruments from other instruments.

Essential Questions:

- What is weather?
- What are the elements of weather?
- How do scientists measure weather?

Lesson Procedure

Teacher Activities			Student Activities										
Introduction (time in minutes)													
Ask questions in relation to the lesson topic. <ul style="list-style-type: none">• Do you like the weather today?• Why do you like or dislike the weather today? Build on the answers given by students to ask more relating questions about whether instruments.			Listen carefully and answer questions (possible answers) <ul style="list-style-type: none">- Yes I do because it is a sunny day today,- Yes I do because it is warm- No I do not because it rained last night and the place is wet- No I do not because it is windy.										
Explain the importance of learning about weather and weather instruments used for measuring weather.													
Body (time in minutes)													
Modeling													
Name an element of weather and identify the instrument used to measure it.			Listen and respond when questions are asked										
Guided Practice													
Give students a copy of the handout showing pictures/illustrations of different types of instruments.			Look at the pictures/illustrations and name a weather instrument										
Ask students to name one weather instrument			Give one weather instrument and the weather element it measures										
Ask students to stop and give one weather instrument and the element of weather it measures (this is to see if students understood the instructions and what is expected of them)													
Independent Practice													
Ask students to use the handout to identify and write the names of the weather instruments and the elements of weather.			Look at the handout and identify the weather instruments										
Ask students to fill in this table (in groups of 5)			Match the pictures with the names										
<table><tr><th>Name of weather instrument</th><th>Picture of weather instrument</th><th>Element of weather measured</th></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>			Name of weather instrument	Picture of weather instrument	Element of weather measured							Identify the element of weather measured	
Name of weather instrument	Picture of weather instrument	Element of weather measured											
Conclusion (time in minutes)													
Ask students to say in one sentence what they have learnt in the lesson?			Listen carefully										
			In one sentence, say what they have learned in the lesson.										

Sample 2

Strand 2: History

Unit 3: Culture and Society

Content Standard 2.3: Students will be able to investigate the different ways of transmitting culture and critically think about the reasons culture and cultural diffusion affects the development and maintenance of societies.

Benchmark 9.2.3.1: Examine the methods by which societies of PNG transmit culture across time, such as storytelling, songs, religious services, food, clothing, rituals, holidays, etc.

Topic 1: Culture transmission

Lesson Topic: Methods used to transmit cultures in PNG

Grade: 9

Length of Lesson: 40 minutes

Essential Knowledge, skills, values and attitude

Knowledge:

- Meaning of cultural transmission
- Importance of transmitting cultures
- Oral transmission of cultures – story telling, songs, lecturing,
- Practices - actions of dance, rituals, ceremonies
- Experience - participation

Skill(s): Critical thinking skills of analysing the ways in which cultures are transmitted.

Values: Respect for cultures, being responsible to maintain culture.

Attitudes: Being appreciative of cultures, willing to participate in cultural activities.

Performance indicator: Explain the different methods used to transmit cultures in PNG.

Materials:

Instructional (lesson) Objective(s): By the end of the lesson, students will be able to:

- Define culture transmission.
- State the importance of culture transmission.
- Explain how culture is passed to future generations.

Essential Questions:

- What is culture?
- Is your culture important? why?
- How did you learn about your culture?
- How can you pass on your culture to future generations?

Lesson Procedure

Teacher Activities	Student Activities
Introduction (time in minutes)	
<p>Engage the students by asking them to perform a traditional dance from their local culture.</p> <p>Take the lead by telling the students that, <i>'since the school's cultural show is coming up, I am going to show you a traditional dance from my village which I too will be performing at our school cultural show'.</i></p> <p>Perform the traditional dance and the students observe.</p> <p>Ask students, who come from the same province to get together, choose a common traditional dance from their province then go up to the front and perform the dance. (A short dance no more than two minutes)</p> <p>Ask students who just performed some questions.</p> <ul style="list-style-type: none"> • <i>How did you learn the song for this dance?</i> • <i>Who taught you the steps of this dance?</i> • <i>What will you do to pass the knowledge of this song and dance to others?</i> 	<p>Listen carefully and observe the teacher as he or she performs the dance</p> <p>Do accordingly as asked by the teacher, should take less than 2 minutes to get themselves organized. Then they do the presentation</p> <p>Listen carefully to the questions and answer them correctly</p>
Body (time in minutes)	
Modelling	
<p>Show pictures of cultural practices commonly practiced in PNG. (Pictures showing dances, ceremonies, rituals etc from provinces around PNG)</p> <p>Ask them the kind of cultural activities taking place as shown in the picture and from which particular province it is from.</p>	Listen and respond to teacher accordingly
Guided Practice	
<p>From the pictures shown ask them which ones they have observed and or participated in.</p> <ul style="list-style-type: none"> - <i>How did you feel about the activity you observed or took part in?</i> 	Listen and answer questions
Independent Practice	
<p>Ask students to do this exercise in their exercise books.</p> <p>Draw a table with two columns. Fill the first column as ways culture is transmitted and column 2 as examples of these ways</p> <p>(i) List common ways culture is transmitted (ii) Give examples of each</p> <p>Ask students to complete the table.</p> <p>Walk around and check to see if students have understood what they are supposed to do.</p> <p>Ask the students to stop and present to class their answers</p> <p>Explain the concept of cultural transmission</p>	<p>Get into their provincial groups</p> <p>Discuss and complete the table</p> <p>The team leader state one element to the class and explain how it is transmitted to the next generation</p> <p>Listen carefully and answer the questions asked</p>
Conclusion (time in minutes)	
<ul style="list-style-type: none"> - Ask students what they have learnt in the lesson. - <i>What did you learn from this lesson?</i> - <i>How are you helping to transmit your culture?</i> 	- Listen and answer accordingly

Sample 3

Strand 3: Political Science

Unit 4: Civic and citizenship

Content Standard 3.4: Students will be able to evaluate and explain the purposes, ideologies, concepts, structures, functions, and processes of different government systems.

Benchmark 9.3.4.1: Describe what is meant by citizenship.

Topic 1: Citizenship

Lesson Topic: Types of citizenship

Grade: 9

Length of Lesson: 40 minutes

Essential Knowledge, skills, values and attitude

Knowledge:

- Meaning of citizenship
- Types of citizenships

Skill(s): Creative thinking skills of describing the concept 'citizenship'.

Values: Respect for the rule of law and fellow citizens, being responsible in performing civic activities.

Attitudes: Appreciate being a Papua New Guinean, willing to participate in civic activities.

Performance indicator: Explain the different methods used to transmit cultures in PNG.

Materials:

Instructional (lesson) Objective(s): By the end of the lesson, students will be able to:

- List and describe the types of citizenship.
- Explain the process of becoming a naturalised citizen.
- State the roles and responsibilities of citizens.

Essential Questions:

- Are you a citizen of PNG?
- Why do you say you are a citizen of PNG?
- What are your roles and responsibilities as a Papua New Guinean?

Lesson Procedure

Teacher Activities	Student Activities
Introduction (time in minutes)	
Engage students in this lesson; <ul style="list-style-type: none"> Show students cartoons displaying various concepts of citizenship. Ask questions based on the cartoons Relate students' answers to examples in PNG Ask students to define citizenship. 	Study the cartoons carefully and answer questions Class discussion about the cartoons and relate to real situations in PNG Define the word citizenship
Body (time in minutes)	
Modeling	
Draw a table with two columns titled; automatic citizen & naturalized citizen on the boards Ask students to write their names under one of the columns Ask questions such as; <ul style="list-style-type: none"> Why do you have your name under 'automatic citizen'? Why do you have your name written under 'naturalized citizen'? Elaborate on the students responses and distinguish the types of citizens	Observe and follow instructions Write name under one of the columns Give reasons for writing their names under the appropriate column.
Guided Practice	
Divide the class into two groups according to the type of citizenship <ul style="list-style-type: none"> Automatic citizens Naturalized citizens (if there is none in the class then just choose some students to act) Assign tasks for each group <i>Automatic citizens – write the roles and responsibilities they have to perform as a citizen of PNG</i> <i>Naturalized citizens – describe how they have become citizens of PNG</i> Walk around the room to see if students have understood and answered the questions. Ask students to stop and give the responsibility to perform as a citizen and also the first step in acquiring a naturalized citizenship.	Listen to instructions and work accordingly
Independent Practice	
Provide students with readings, articles, pictures, stories of becoming naturalized citizens as well as the roles and responsibilities of a citizen. Ask students to use them to complete the group work. Ask students to present to the class; Group 1 (automatic citizens) Group 2 (naturalized citizens) Emphasize on the presentations by the two groups	Use the information provided to tackle the group activity Have the answers written neatly on charts to be presented to the teacher by the team leader Presentation of group activity Group 1 (automatic citizens) <i>Roles and responsibilities of</i> Group 2 (naturalized citizens) <i>The process of becoming a naturalized citizen</i>
Conclusion (time in minutes)	
Ask the students to write a summary of what has been learnt in the lesson without consulting their exercise books or the group work. The summary should have four important points according to the objectives of the lesson.	Write the summary about the lesson consisting of the four important points outlined in the lesson objectives.

Sample 4

Strand 4: Economics

Unit 5: Economic ideologies

Content Standard 4.1: Students will be able to interrogate and rationalize the influence of economic ideologies on economic systems, production, distribution, and consumption of goods and services, and on the trade relationships amongst different nations and people.

Benchmark 9.4.5.1: Interpret Papua New Guinea's Five National Goals and Directive Principles and investigate their influence on thinking, economic policies and practices, on economic relationships, and on the production and distribution of resources.

Topic 1: Papua New Guinea's National Goals and Directive Principals

Lesson Topic: What are National Goals and Directive Principles?

Grade: 9

Length of Lesson: 40 minutes

Essential Knowledge, skills, values and attitude

Knowledge:

- Meaning of National Goals and Directive Principles
- The Five National Goals and Directive Principles

Skill(s): Evaluation (interpret)

Values: Respect, being responsible

Attitudes: Appreciate

Performance indicator: Explain the different methods used to transmit cultures in PNG.

Materials:

Instructional Objective(s): By the end of the lesson, students will be able to:

- Define National Goals and Directive Principles.
- Identify Papua New Guinea's National Goals and Directive Principles.
- Interpret the National Goals and Directive Principles.

Essential Questions:

- Why do we have National Goals and Directive Principles?
- Who has written the National Goals and Directive Principles?
- Where do we find the National Goals and Directive Principles?

Lesson Procedure

Teacher Activities	Student Activities
Introduction (time in minutes)	
Relate this lesson to what is learnt in history. <ul style="list-style-type: none"> Show pictures of our great leaders (Grand Chief, Sir Michael Somare and others) Ask questions about the roles of these leaders and some significant things they have done. (writing of the constitution, independence) Discuss and elaborate on students' answers 	Listen and answer questions
Body (time in minutes)	
<i>Modeling</i>	
Bring students' attention back to the lesson about to be taught by relating to what has already been discussed. <ol style="list-style-type: none"> Why do governments have goals to be achieved? What is one of the goals of the PNG government? 	Discuss in pairs and answer questions accordingly
<i>Guided Practice</i>	
Give a copy of; <ul style="list-style-type: none"> the article; <i>The story of PNG's National Goals and Directive Principles</i> PNG Constitution (only the pages that have the National Goals and Directive Principles) Ask students to read and list one of PNG's National Goals and Directive Principles. Ask what is one of the National Goals and what does it mean?	Read and list one of PNG's National Goals and Directive Principles Students respond by giving one of the National Goals and provide a brief explanation.
<i>Independent Practice</i>	
Ask students to list all the other National Goals and Directive Principles and provide a brief explanation of what each of these mean. Ask students to exchange what they have written with other students to read aloud in class and compare their answers. Compile all the answers provided by the students.	List all the National Goals and Directive Principles and explain what they mean in their own words as to how they understand. Listen carefully and follow instructions. Listen and improve their answers.
Conclusion (time in minutes)	
Get students into five groups. Give each group an envelope containing a card with a National Goal. Ask students to explain in one sentence what that goal means. Ask team leaders to read what each group has written.	Form five groups. Open the envelop and read what is on the card. Discuss and construct one sentence that will explain what that Goal mean. Team leader read to the whole class

Sample 5

Strand 5: Environment

Unit 2: The earth and its systems

Content Standard 5.2: Students will be able to investigate and explain the physical dynamics of Earth that result in the flow of energy and cycling of matter within an ecosystem to demonstrate that earth is one interconnected system.

Benchmark 9.5.2.1: Explain heat transfer in the atmosphere and its relationship to meteorological processes such as pressure, winds, evaporation and precipitation.

Topic 1: Heat transfer and meteorological processes

Lesson Topic: Methods of heat transfer

Grade: 9

Length of Lesson: 40 minutes

Essential Knowledge, skills, values and attitude

Knowledge: Methods of heat transfer in the atmosphere

Skill(s): Analysis (explain)

Values: Caring

Attitudes: Being responsible

Performance indicator: Explain the methods by which heat moves through the atmosphere.

Materials:

Instructional Objective(s): By the end of the lesson, students will be able to:

- Explain the methods by which heat moves through the atmosphere.
- Identify the meteorological processes in the atmosphere.
- Explain each meteorological process.
- Describe the relationship between heat transfer and the various meteorological processes.

Essential Questions:

- How is heat transferred in the atmosphere?

Lesson Procedure

Teacher Activities	Student Activities
Introduction (time in minutes)	
<p>Engage students at the start of the lesson by demonstrating the methods of heat transfer.</p> <ul style="list-style-type: none"> • Inform students about the lesson topic and the demonstration of the lesson. • Get students together for the demonstration (heating water) and set up the demonstration • Ask questions before heating the water (what do you think is going to happen to the water?) • Ask more questions when the water begins to heat up (<i>Why do you think the water is heating up?/what do you feel when you bring your hands closer to the hot pot and why?/what do you feel when you put a metal spoon on the hot pot and hold the handle, what do you feel and why? etc</i>) • Distribute handout on 'heat transfer' to students 	<p>Listen carefully</p> <p>Observe</p> <p>Answer questions before and during the demonstration</p> <p>Participate in the demonstration by actually doing what is asked by the teacher and answer questions</p>
Body (time in minutes)	
Modeling	
<p>Put students into 3 groups.</p> <p>Ask them to read and discuss the contents of the handout</p> <p>Walk around the room to each group and ask questions (<i>what is one new word you can see in this handout? And what does it mean?</i>)</p>	<p>Get into the assigned groups</p> <p>Read and discuss the content in the handout</p> <p>Identify a new word and find the meaning of the word.</p>
Guided Practice	
<p>Ask student to list all the new words that relate to the topic as well as the demonstration and find their meanings</p> <p>Appoint students in each group to list a word and provide its meaning</p> <p>Write the important words on the board (conduction/radiation/convection) from the list of words provided by the students and explain each one of them</p> <p>Clarify misconceptions and writes explanations and examples on the board.</p>	<p>List all the new words that relate to the topic as well as the demonstration and find their meanings</p> <p>Provide the word and its meaning</p> <p>Listen carefully and discuss the 3 vocabulary words with examples.</p>
Independent Practice	
<p>Ask students to remain in the same groups and pass out cut-out pictures of the different methods of heat transfer, charts and markers for a group activity.</p> <p>Give instructions;</p> <ul style="list-style-type: none"> • Draw 3 columns on the chart labeled; conduction, convection and radiation • Paste the pictures under each column heading 	<p>In groups, listen, observe and do the activity.</p>
Conclusion (time in minutes)	
<p>Ask students to write 2 very new things they have learnt in this lesson</p> <p>Ask students to give what they have written to another student to read it aloud to the class</p>	<p>Write two new things learnt in the lesson</p> <p>Read what their friends have written.</p>

Assessment, Monitoring and Reporting

What is Standards-Based Assessment (SBA)?

Standards-Based Assessment is an on-going and a systematic process of **assessing, evaluating, reporting** and **monitoring** students' performance and progression towards meeting grade and national level expectations. It is the measurement of students' proficiency on a learning objective or a specific component of a content standard and progression towards the attainment of a benchmark and content standard.

Purpose of Standards-Based Assessment

Standards-Based Assessment (SBA) serves different purposes. These include instruction and learning purposes. The primary purpose of SBA is to improve student learning so that all students can attain the expected level of proficiency or quality of learning.

Enabling purposes of SBA is to:

- measure students' proficiency on well-defined content standards, benchmarks and learning objectives
- ascertain students' attainment or progress towards the attainment of specific component of a content standard
- ascertain what each student knows and can do and what each student needs to learn to reach the expected level of proficiency
- enable teachers to make informed decisions and plans about how and what they would do to assist weak students to make adequate progress towards meeting the expected level of proficiency
- enable students to know what they can do and help them to develop and implement strategies to improve their learning and proficiency level
- communicate to parents, guardians, and relevant stakeholders the performance and progress towards the attainment of content standards or its components
- compare students' performances and the performances of other students

Principles of Standards-Based Assessment

The principle of SBA is for assessment to be;

- emphasising on tasks that should encourage deeper learning
- be an integral component of a course, unit or topic and not something to add on afterwards
- a good assessment requires clarity of purpose, goals, standards and criteria
- of practices that should use a range of measures allowing students to demonstrate what they know and can do
- based on an understanding of how students learn
- of practices that promote deeper understanding of learning processes by developing students' capacity for self-assessment
- improving performance that involves feedback and reflection
- on-going rather than episodic

- given the required attention to outcomes and processes
- be closely aligned and linked to learning objectives, benchmarks and content standards.

Standards-Based Assessment Types

In standards-Based Assessment, there are three broad assessments types.

1. Formative Assessment

Formative assessment includes ‘assessment *for* and *as*’ and is conducted during the teaching and learning of activities of a topic.

Purposes of Assessment For Learning

- On-going assessment that allows teachers to monitor students on a day-to-day basis.
- Provide continuous feedback and evidence to the teachers that should enable them to identify gaps and issues with their teaching, and improve their classroom teaching practice.
- Helps students to continuously evaluate, reflect on, and improve their learning.
- Help teachers to make inferences about student learning to inform their teaching.
- Provide continuous feedback to both students and teachers which enables them to monitor progress, identify and address gaps and errors in learning.

Purposes of Assessment As Learning

- Occurs when students reflect on and monitor their progress to inform their future learning goals.
- Helps students to continuously evaluate, reflect, and improve their own learning.
- Helps students to understand the purpose of their learning and clarify learning goals.

2. Summative Assessment

Summative assessment focuses on ‘assessment of learning’ and is conducted after or at the conclusion of teaching and learning of activities or a topic.

Purposes of Assessment Of Learning

- Help teachers to determine what each student has achieved and how much progress he/she has made towards meeting national and grade-level expectations.
- Help teachers to determine what each student has achieved at the end of a learning sequence or a unit.
- Enable teachers to ascertain each student’s development against the unit or topic objectives and to set future directions for learning.
- Help students to evaluate, reflect on, and prepare for next stage of learning.

3. Authentic Assessment

- Is performed in a real life context that approximates as much as possible, the use of a skill or concept in the real world.
- Is based on the development of a meaningful product, performance or process.
- Students develop and demonstrate the application of their knowledge, skills, values and attitudes in real life situations which promote and support the development of deeper levels of understanding.

Authentic Assessment Criteria

Authentic assessment refers to assessment that:

- Looks at students actively engaged in completing a task that represents the achievement of a learning objective or standard.
- Takes place in real life situations.
- Asks students to apply their knowledge, skills, values and attitudes in real life situations.
- Students are given the criteria against which they are being assessed.

Performance Assessment

Performance assessment is a form of testing that requires students to perform a task rather than select an answer from a ready-made list. For example, a student may be asked to explain historical events, generate scientific hypotheses, solve math problems, converse in a foreign language, or conduct research on an assigned topic. Teachers, then judge the quality of the student's work based on an agreed-upon set of criteria. It is an assessment which requires students to demonstrate that they have mastered specific skills and competencies by performing or producing something.

Types of performance assessment;

i. Products

This refers to concrete tangible items that students create through either the visual, written or auditory media such as;

- Creating a health/physical activity poster
- Video a class game or performance and write a broadcast commentary
- Write a speech to be given at a school council meeting advocating for increased time for health and physical education in the curriculum
- Write the skill cues for a series of skill photo's
- Create a brochure to be handed out to parents during education week
- Develop an interview for a favorite sportsperson
- Write a review of a dance performance
- Essays
- Projects

ii. Process Focused Tasks

It shows the thinking processes and learning strategies students use as they work such as;

- Survival scenarios
- Problem-solving initiative/adventure/activities
- Decision making such as scenario's related to health issues
- Event tasks such as creating a game, choreographing a dance/ gymnastics routine, creating an obstacle course
- Game play analysis

- Peer assessment of skills or performances
- Self-assessment activities
- Goal setting, deciding a strategy and monitoring progress towards achievement

iii. Portfolio

This refers to a collection of student work and additional information gathered over a period of time that demonstrates learning progress.

iv. Performances

It deals with observable affective or psycho-motor behaviours put into action such as;

- Skills check during game play
- Role plays
- Officiating a game
- Debates
- Performing dance/gymnastics routines
- Teaching a skill/game/dance to peers

Performance Standards

Performance Standards are concrete statements of how well students must learn what is set out in the content standards, often called the “be able to do” of “what students should know and be able to do.” Performance standards are the indicators of quality that specify how competent a students’ demonstration or performance must be. They include explanations of how well students must demonstrate the content, explaining how good is good enough.

Performance standards:

- measure students’ performance and proficiency (using performance indicators) in the use of a specific knowledge, skill, value, or attitude in real life or related situations
- provide the basis (performance indicators) for evaluating, reporting and
- monitoring students’ level of proficiency in use of a specific knowledge, skills, value, or attitude
- are used to plan for individual instruction to help students not yet meeting expectations (desired level of mastery and proficiency) to make adequate progress towards the full attainment of benchmarks and content standards
- are used as the basis for measuring students’ progress towards meeting grade-level benchmarks and content standards.

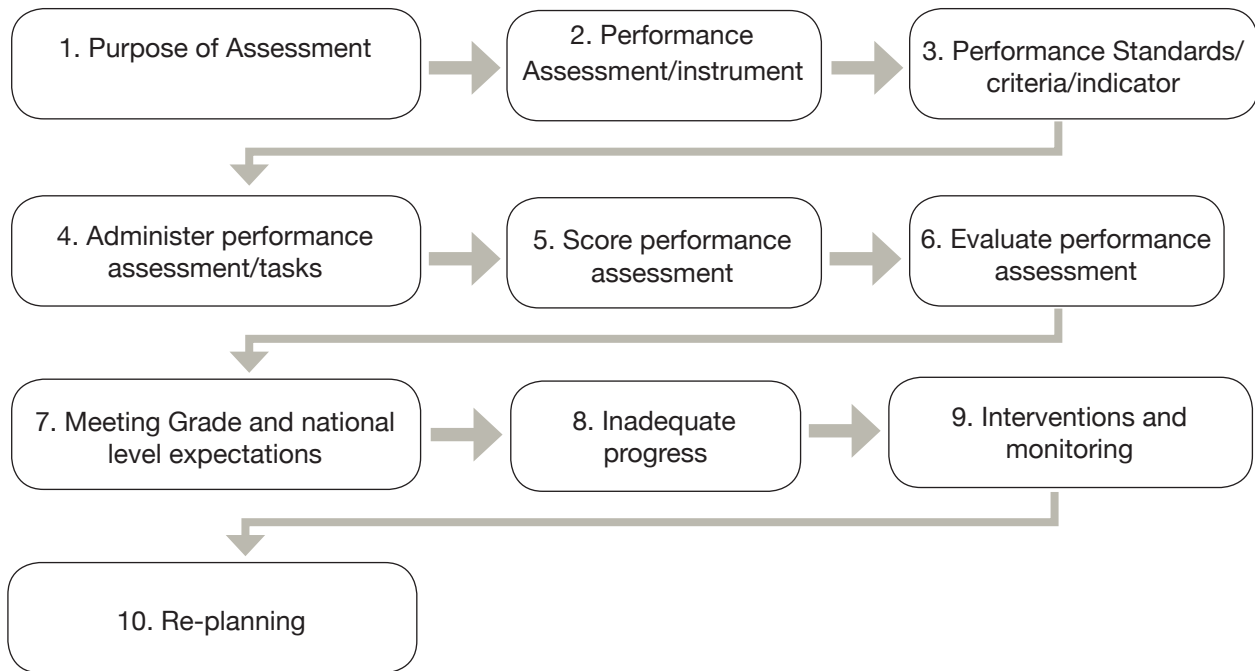
Assessment Strategies

It is important for teachers to know that, assessment is administered in different ways. Assessment does not mean a test only. There are many different ways to find out about student’s strengths and weaknesses. Relying on only one method of assessing will not reflect student’s achievement. Provided in the appendices is a list of suggested strategies you can use to assess student’s performances. These strategies are applicable in all the standards-based assessment types.

Please refer to Appendix 5 to see the suggested strategies.

There are different performance assessment methods and assessment strategies for assessing students’ learning and performance on significant components of content standards.

Standards-Based Assessment Process



Scoring Students' Assessment

Assessment scoring methods describe how students' assessment tasks will be scored.

The most commonly used methods of scoring students' assessment are:

- i. Checklists
- ii. Rating Scales
- iii. Rubrics

Students' performance is assessed and scored using:

- i. a set of well-defined criteria
- ii. performance standards or indicators,

Checklists, rating scales and rubrics are tools that state specific criteria and allow teachers and students to gather information and to make judgements about what students know and can do in relation to the standards. They offer systematic ways of collecting data about specific behaviours, knowledge and skills.

The quality of information acquired through the use of checklists, rating scales and rubrics is highly dependent on the quality of the descriptors chosen for assessment.

Checklists usually offer a yes/no format in relation to student demonstration of specific criteria. This is similar to a light switch; the light is either on or off. They may be used to record observations of an individual, a group or a whole class.

Rating Scales allow teachers to indicate the degree or frequency of the behaviours, skills and strategies displayed by the learner. Rating scales state the criteria and provide three or four response selections to describe the quality or frequency of student work.

Teachers can use rating scales to record observations and students can use them as self-assessment tools. Teaching students to use descriptive words, such as *always*, *usually*, *sometimes* and *never* helps them pinpoint specific strengths and needs. Rating scales also give students information for setting goals and improving performance. In a rating scale, the descriptive word is more important than the related number. The more precise and descriptive the words for each scale point, the more reliable the tool.

Effective rating scales use descriptors with clearly understood measures, such as frequency. Scales that rely on subjective descriptors of quality, such as *fair*, *good* or *excellent*, are less effective because the single adjective does not contain enough information on what criteria are indicated at each of these points on the scale.

Rubrics use a set of criteria to evaluate a student's performance. They consist of a fixed measurement scale and detailed description of the characteristics for each level of performance. These descriptions focus on the *quality* of the product or performance and not the quantity; e.g., not number of paragraphs, examples to support an idea, spelling errors. Rubrics are commonly used to evaluate student performance with the intention of including the result in a grade for reporting purposes. Rubrics can increase the consistency and reliability of scoring.

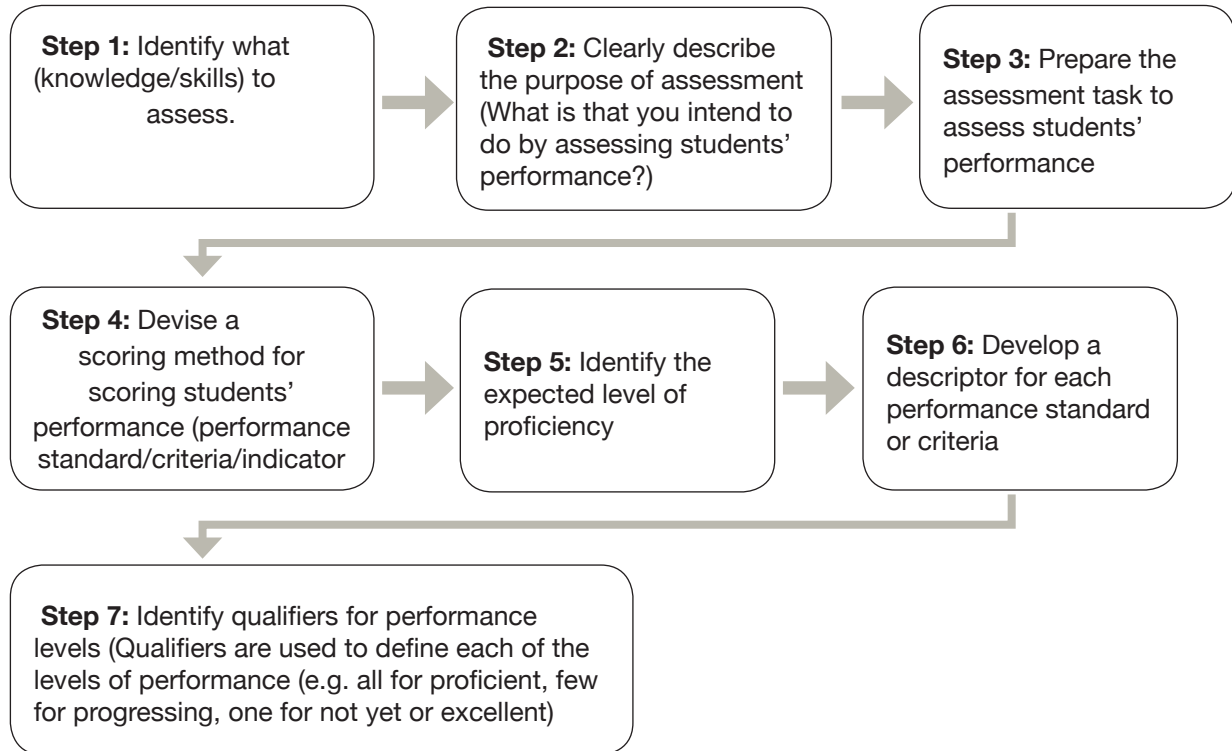
Rubrics use a set of specific criteria to evaluate student performance. They may be used to assess individuals or groups and, as with rating scales, may be compared over time.

Rubrics are recognized as a way to effectively assess student learning and communicate expectations directly, clearly and concisely to students. The inclusion of rubrics in a teaching resource provides opportunities to consider what demonstrations of learning look like, and to describe stages in the development and growth of knowledge, understandings and skills. To be most effective, rubrics should allow students to see the progression of mastery in the development of understandings and skills.

However, regardless of which method is used, students' performance, proficiency, and quality of learning should be meaningfully and effectively measured. This will help ascertain if students are meeting grade-level expectations and progressing towards meeting the content standard.

Assessment Samples

Teachers are required to use the steps outlined below when planning assessment. These steps will guide you to develop effective assessments to improve student's learning as well as evaluating their progress towards meeting national and grade-level expectations.



There are three (3) assessment samples provided here to guide teachers when preparing assessment for students. There is a/an;

- i. formative assessment sample
- ii. summative assessment sample
- iii. authentic assessment sample

Teachers are encouraged to give a variety of assessments using different strategies on one topic to test the understanding and achievement of a content standard and a benchmark by individual students.

Formative Assessment

This assessment is given during the lesson.

Benchmark 9.1.1.1: Identify and explain the use of weather instruments and unit of measurements used in measuring weather.

Topic 1: Weather instruments

Lesson Topic: What are weather instruments?

What are you assessing?

Identification of weather instruments and relate to the elements of weather.

Assessment Task

Identify weather instruments and the elements measured. Students will complete this table.

Name of weather instrument	Picture of weather instrument	Element of weather measured

What is the purpose of this assessment?

To monitor students understanding of the weather instruments and the elements measured

Assessment Scoring

Checklist		
Date: 7th August, 2020		
Performance criteria/standard	Yes	No
Identifies weather instruments and the elements measured.		

Summative Assessment

This assessment is conducted at the end of the topic, which means that it assesses the benchmark.

Strand 1: Geography

Unit 1: Geography Skills

Content Standard 1.1: Student will be able to use geographical tools to locate and interpret information about people, places and environment.

Benchmark 9.1.1.1: Identify and explain the use of weather instruments and unit of measurements used in measuring weather.

Topic 1: Weather instruments

Learning Objectives: By the end of the topic, students will able to;

- Identify weather instruments.
- Explain the uses of weather instruments.
- Identify the units of measurements used in weather instruments.

Purpose of this assessment

The purpose of this assessment is to measure student's achievement of the benchmark, i.e. if students have used analytical skills to identify different weather instruments and their units of measurements and explain what each weather instrument is used for and how it is used. Also to find out if the students can work independently and have confidence in their abilities and evaluate the effectiveness of their research.

Expected level of proficiency

1. Explain the uses of weather instruments
2. Identify the units of measurements used in weather instruments

Performance Task

Create a booklet on weather instruments. This will include; carrying out a research on the uses and units of measurements of weather instruments, explanations on the uses of weather instruments, illustrations of the different weather instruments, general layout of the booklet (cover, content, references,)

Assessment Strategy

Project to assess the quality of end product.

Scoring Rubrics

Rubric					
DATE: 20th August, 2019					
Performance standard/criteria	Proficiency Levels				Score
	Excellent (4)	Good (3)	Fair (2)	Needs to improve (1)	
Research (Work independently)	Research is complete including descriptions and facts from different sources	Research is mostly there with descriptions and facts from only two sources	Research is missing some descriptions and facts and used only one source	Research is lacking some crucial parts making it incomplete	
Identify units of measurements used in each weather instrument	Identify units of measurements used in all the weather instruments	Identify units of measurements used in most of the weather instruments	Identify units of measurements used in some of the weather instruments	Identify units of measurements used in few weather instruments	
Explain the use of each weather instruments	Clear explanations on the uses of all weather instruments	Explain the uses of most of the weather instruments	Explain the uses of some weather instruments only	Explain the use of only a few weather instruments	
Design, layout and organization of the booklet	Content is well organized with headings and sub-headings. Text and illustrations are neatly organized and making it easy to read	Content is organized with headings and sub-headings. Text and illustrations are placed to make it easy to read	Most of the sections are organized, however, the placement of the text and graphics sometimes make it difficult to read	There was no clear structure. Text and illustrations are randomly placed making it hard to read.	

Strand 2: History

Unit 3: Culture and Society

Content Standard 2.3: Students will be able to investigate the different ways of transmitting culture and critically think about the reasons culture and cultural diffusion affects the development and maintenance of societies.

Benchmark 9.2.3.1: Examine the methods by which societies of PNG transmit culture across time, such as storytelling, songs, religious services, food, clothing, rituals, holidays, etc.

Topic 1: Culture transmission

Learning Objectives: By the end of the topic, students will be able to:

- Examine the different methods used to transmit cultures in PNG.
- Discuss how PNG's cultures are transmitted through oral tradition.
- Examine how PNG cultures are transmitted through language, art, music and customs.
- Observe and critique how PNG cultures are transmitted through food, clothing and religious rituals.
- Use video recording gadgets to record a video on a method of transmitting culture (Authentic Assessment).

Lesson Topics:

1. Methods used to transmit culture in PNG
2. Transmission of culture through oral traditions in PNG
3. Transmission of culture through art, music and customs in PNG
4. Transmission of culture PNG food, clothing and religious rituals in PNG

Purpose of this assessment

To find out if students can be able to use the skills of analyzing to examine the methods by which societies of PNG transmit culture across time.

Note: Assessment should be linked to the performance indicator indicated in the learning objectives

Expected Level of Proficiency

All students are expected to:

- identify the methods used to transmit culture in PNG
- analyse how these methods have been used to transmit culture over time

Performance Task

Students will write a test out of 20 marks. You can use other assessment tools (assignment, projects etc) assess student's proficiency on this benchmark.

Assessment Strategy

A test will be used to measure student's proficiency.

Sample test

Grade 9 Social Science

Test No: 01

Name: _____ Class: _____ Date: _____ Total: ____/10 Marks

There are two parts to this test.

Part A: Multiple Choice

(4 marks)

Circle the correct answer to the questions given.

QUESTION 1

Culture is defined as

- | | |
|--------------------------------|--------------------------------------|
| A. A group of people. | B. <i>People's way of life.</i> |
| C. Daily lives of people wear. | D. The food and clothes people wear. |

QUESTION 2

‘The methods used by people to pass on their cultures from one generation to the next is referred to as

- | | |
|--------------------------|----------------------------------|
| A. Culture. | B. Cultural heritage. |
| C. Cultural transfusion. | D. <i>Cultural transmission.</i> |

QUESTION 3

Which example shows a native PNG culture?

- | | |
|--------------------------------|------------------------------|
| A. Easter Worship | B. Chewing of betel |
| C. <i>Bride price ceremony</i> | D. Regional sports gathering |

QUESTION 4

Which of these is a foreign culture introduced to Papua New Guinea culture?

- | | |
|--------------|---------------------|
| A. Dances | B. <i>Christmas</i> |
| C. Gardening | D. Bride price |

Part B: Short Answers

(6 marks)

Write your answers clearly

QUESTION 1

Name the three common ways culture has been transmitted in Papua New Guinea. (3 marks)

- | | | |
|-----------------|-----------------------|--------------------------|
| (i) <i>Oral</i> | (ii) <i>Practices</i> | (iii) <i>Experiences</i> |
|-----------------|-----------------------|--------------------------|

QUESTION 2

Choose one of the three ways and explain how it has helped transmit culture overtime. (2 marks)

- (i) *Oral transmission has helped culture to be passed onto the next generation through use of the word of mouth by storytelling.*

(ii) Practices has transmitted culture through time, by children being shown the practices through actions of traditional songs and dances, how to perform ceremonies like bride price and funerals and rituals like initiations.

(iii) Experience has transmitted culture through time by children been born into that culture where they are part of that activity or they observe till they are allowed to take part.

QUESTION 3

State a reason why we should maintain our culture? (1 mark)

We should maintain our culture because it is our identity, other people are able to tell where we come from and also to keep it from dying out.

End of test

Assessment Scoring

Rubrics must be developed to articulate the real proficiency of the child. This is an analytical rubrics used to assess the child's learning through the assessment tool a test.

Performance Standard/ Criteria	Advanced 5	Proficient 4	Progressing 3	Not yet 2	Score ___/10
Define culture and cultural transmission (4 marks)	Correctly distinguish culture from cultural transmission and shows clear understanding of their connections	Correctly distinguish culture from cultural transmission	Satisfactorily distinguish culture from cultural transmission	Cannot distinguish between culture and cultural transmission	
Identify the different methods used to transmit cultures in PNG (3 marks)	Identifies all the methods of transmitting culture and writes it correctly	Identifies all the methods of transmitting culture	Identifies two of the methods of transmitting culture	Identifies only one method of transmitting culture	
Analyze these methods to transmit cultures in PNG (3 marks)	Clearly explains how culture is transmitted and maintained and with more than two supporting examples.	Explain how culture is transmitted and maintained and with a supporting examples	Satisfactorily explains how culture is transmitted and maintained but no examples given	Poor explanation of how culture is transmitted and no examples given	

Authentic Assessment

Strand 1: Geography

Unit 1: Geography Skills

Content Standard 1.1: Student will be able to use geographical tools to locate and interpret information about people, places and environment.

Benchmark 9.1.1.4: Record daily maximum and minimum temperature over two weeks and construct a temperature graph and calculate the average daily temperature over two weeks as well as the average maximum and average daily temperature.

Topic 4: Temperature

Learning Objectives: By the end of this topic, students will be able to:

- Record daily maximum and minimum temperature over two weeks.
- Construct temperature line graph.
- Calculate the average daily temperature over two weeks.
- Calculate average maximum and average minimum temperature.

Purpose

The purpose of this assessment is to test students understanding of how temperature is measured using thermometers. To see if students can apply what they have learnt in theory into practice in real life and of course motivate them to become meteorologists in future.

Expected level of proficiency

- Observe and take measurements of the temperature
- Record temperature on a temperature chart
- Construct temperature graph

Performance task

Observing and Recording Temperature Data

Students will observe the temperature each day with the thermometer. They will record the temperature each day for 5 days. *(They can use thermometers provided by the school or use the ones they have created in the STEAM Activity).*

Assessment strategy

Students will do a project (project-based learning) to demonstrate their proficiency of the benchmark. Refer to the performance task.

Materials needed

- Thermometer, pencil, paper to record temperature, temperature chart for one week
- Teacher to communicate with necessary school personnel to let them know that students will be measuring temperatures around the building.

Instructions

- Go outside and observe the temperature at 10:00am, 12:00pm, 2:00pm, each day (Monday-Friday)
- Record the temperature reading on the paper
- Enter the data for the 5 days on the temperature chart
- Calculate the daily average temperature
- Construct average temperature graph (line, bar or column)

Assessment Scoring

DATE: 30th August, 2019					
Performance standard/criteria	Exceeds expectations (5)	Meets expectations (4)	Needs improvement (3)	Inadequate (2)	Score
Observe and take measurements of the temperature	Observations and measurements are accurate. Measurements are taken at the same time each day. Displays careful and correct handling of the thermometer	Accurate measurements taken at the same time each day	Some measurements are not accurate	Observations and measurements at different times each day. Most of the measurements are not accurate	
Record temperature on a temperature chart	Chart has a title Chart captures the time Chart captures the daily temperature recordings at different times Chart captures the daily average temperatures Highlights the minimum & maximum daily temperatures	Chart has a title Chart captures the time Chart captures the daily temperature recordings at different times Chart captures the daily average temperatures	Chart has a title Chart captures the time Chart captures the daily temperature recordings at different times	Chart captures only the daily temperature recordings at different times	
Construct a temperature graph	Graph has a title Axis labeled correctly Graph has accurate intervals Clear and easy to read	Graph has a title Axis labeled correctly Clear and easy to read	Graph has a title Axis labeled incorrectly Easy to read	Has a graph without a title and axis not labeled making it difficult to read	

Strand 2: History**Unit 3: Culture and Society**

Content Standard 2.3: Students will be able to investigate the different ways of transmitting culture and critically think about the reasons culture and cultural diffusion affects the development and maintenance of societies.

Benchmark 9.2.3.1: Examine the methods by which societies of PNG transmit culture across time, such as storytelling, songs, religious services, food, clothing, rituals, holidays, etc.

Topic 1: Culture transmission**Lesson topics:**

- Methods used to transmit culture in PNG
- Transmission of culture through oral traditions in PNG
- Transmission of culture through art, music and customs in PNG
- Transmission of culture PNG food, clothing and religious rituals in PNG

Learning objectives: By the end of the topic, students will be able to:

- Examine the different methods used to transmit cultures in PNG.
- Discuss how PNG's cultures are transmitted through oral tradition.
- Examine how PNG cultures are transmitted through language, art, music and customs.
- Observe and critique how PNG cultures are transmitted through food, clothing and religious rituals.
- Use video recording gadgets to record a video and create a portfolio on one method of transmitting cultures in PNG (Authentic Assessment).

What is to be assessed?

Content of the topic which is transmission of PNG's cultures

Purpose

The purpose of this assessment is for the students to understand how cultures of Papua New Guinea have been transmitted overtime and also to enable them to become aware of their dying cultures which must be preserved through recording and archiving as such the activity that they are doing. They foresee the importance of preserving culture thus is empowered to promote and maintain it.

Expected level of proficiency

Students can;

- Identify the methods of transmitting cultures in PNG
- Analyse the methods used to transmit cultures in PNG

Performance task

'Video Recordings and Portfolio on Methods of Transmitting Cultures in PNG'

Use video recording gadgets (portable cameras/mobile phone cameras) to record a video and create a portfolio of the snap shots of one method used to transmitting culture in PNG. Students will work in groups of 4 to 5 to produce a video and portfolio on the methods of transmitting cultures in PNG. This activity will take up to a month (4 weeks).

Assessment strategy

Students will do a project (project-based learning) to demonstrate their proficiency of the benchmark. Refer to the performance task.

Materials needed

Mobile, camera, biros, papers and questionnaire, (If the required technology is not available at all then, document information through questionnaires)

Instructions

- Students to work in groups of four or five
- Carry out the project according to the criteria
- A period or two of lesson times for Social Science should be made available for students to continue work on this. (Organise trip to museum as refresher as they continue with their assessment tasks)
- Present video and portfolio of the snap shots of the assessment task after the due date.

Assessment scoring

Rubrics must be developed to articulate the real proficiency of the child. This is an analytical rubrics used to assess the child's learning through the assessment tool a project.

'Video recordings and portfolio on methods of transmitting cultures in PNG'

Performance Standard/ Criteria	Advanced 11	Proficient 10	Progressing 9-5	Not yet 4-1	Score ___/30
Identify the methods of transmitting culture in PNG (10 marks)	Correct video recordings and snap shots of the whole range of methods of transmitting and with voice recording as well	Correct video recordings and snap shots of one method of transmitting culture	Fair recordings and snap shots of one method of transmitting culture	Inappropriate recordings and snap shots of one method of transmitting	
Analyze the methods used to transmit culture in PNG (10 marks)	Exceptional title Well explained video recordings and clearly written analysis of snap shots of all the methods of transmitting culture	Very good title Good explanation of video recordings and sound written analysis of the snap shots of one method of transmitting culture	Sound title Fair explanation of video recordings and fair written analysis of the snap shot of one method of transmitting culture	Fair title Poor explanation of the video recordings and poor written analysis of the snap shots of one method of transmitting culture	
Archive of video record and portfolio of the snap shots (10 marks)	Outstanding video records and portfolio of snap shots for archiving	Very good video record and portfolio of snap shots for archiving	Fair video record and portfolio of snap shots for archiving	Poor video record and portfolio of snap shots therefore cannot be archived	

Steam Assessment (Creating/Replicating)

Strand 2: History

Unit 4: Development and Sustainability of Societies

Content Standard 2.4: Students will be able to explain and analyse the roles of individuals and groups within a society as promoters of change or guardians of status quo.

Benchmark 9.2.4.4: Identify individuals and groups in PNG who have made important contributions towards promoting change or sustainability and evaluate the nature of their contribution.

Topic 4: Agents of change in PNG

Learning Objectives: By the end of this topic, students will be able to;

- Identify individuals and groups who have made important contributions to PNG.
- Evaluate the nature of these contributions.
- Research on important figures in PNG's history and create monuments in honour of their contributions to developing our nations.

What is to be assessed?

Content of benchmark which is individuals and groups in PNG who have made important contributions towards promoting change or sustainability and evaluate the nature of their contribution.

Purpose

The purpose of this assessment is for the students to appreciate history of and show respect for important persons who have greatly contributed to the development of PNG.

Expected level of proficiency

Students can;

- Identify individuals and groups who have made important contributions to PNG
- Evaluate the nature of these contributions

Performance task

'Restoration of PNG's Agents of Change'

Students will work in groups of 5 to 6 to research and create monuments for important persons who have contributed to develop PNG. This assessment should be done in collaboration with other subjects such as Technology and Industrial Arts (TIA), English/L&L, Maths, Science and Business Studies. Why these subjects? TIA will assist students draw faces of this important persons and create their sculptures. English to assist write biographies of these figures and also write proper captions to their monuments and Business Studies will capitalize on the idea of making money from these monuments for the school through school fares and other ways. Math on the correct size and measurement of the sculptures and Science on the advice of how much of the content of certain chemicals to maintain lasting effects etc.

Assessment strategy

Students will do a steam project to demonstrate their proficiency of the benchmark. Refer to the performance task.

Materials needed

Biros, pencils, erasers, ruler, tape measures, metals, sculpturing tools, safety gears such as masks, hand clothes, overalls and helmet, calculators, diaries and journals,

Assessment scoring

Rubrics must be developed to articulate the real proficiency of the child. This is an analytical rubrics used to assess the child's learning through the assessment tool a STEAM project.

‘Restoration of PNG’s Agents of Change’

Performance Standard/ Criteria	Advanced 11	Proficient 10	Progressing 9-5	Not yet 4-1	Score ___/30
Identify individuals and groups who have made important contributions to PNG (10 marks)	Identified all the prominent figures and produced biography for each of them	Identified some prominent figures with their biographies	Identified less than 3 prominent figures with their biographies	Identified only one prominent with his/her biography	
Evaluate the nature of these contributions (10 marks)	<ul style="list-style-type: none"> – Exceptional title – Well and detailed explanation of all these persons contributions to development of PNG 	<ul style="list-style-type: none"> – Very good title – Good explanation of all these persons contributions to development of PNG 	<ul style="list-style-type: none"> – Sound title – Fair explanation of these persons contributions to development of PNG 	<ul style="list-style-type: none"> – Fair title – Poor explanation of these persons contributions to development of PNG 	
Monuments/ sculptures of the important persons who contributes to the development of PNG (10 marks)	Excellent sculpture with all details of the person as presented in the photograph and correct caption embedded onto the sculpture	Very good sculpture with all details as presented in the photograph	Good sculpture but a few details missing according to the photograph	Fair sculpture with a lot of details missing as it is not according to the photograph	

Glossary

Terms	Definitions
Assessment	Activities teachers use to help students learn and to measure and monitor their progress towards the attainment of expected levels of proficiency.
Assessment As Learning	Assessment is used to help students understand and reflect on what they have learnt or are having difficulties with, identify areas of strengths and weaknesses, and set clear, measurable, and attainable personal goals to improve their own learning.
Assessment For Learning	A common form of assessment. It is an ongoing assessment process that arises out of the interaction between teaching and learning. Also referred to as formative assessment.
Assessment Of Learning	Provides a summary of students learning over a given period of time and is generally carried out at the end of a course of study. Also referred to as summative assessment.
Assessment Strategies	Different ways or approaches of assessing students work.
Authentic Assessment	A type of broad assessment that involves students actively engaged in completing a task that represents the achievement of a learning objective or standard. Authentic assessment takes place in real life situations.
Benchmarks	Benchmarks are more detailed descriptions of a specific level of performance expected of students at particular ages, grades, school levels or levels of development. They are the specific components of the knowledge, process, skill, concept, principle, or idea identified by a content standard.
Content Standards	Content Standards are broadly stated expectations of what (content) students should know and and be able to do (process). They describe the knowledge, skills, values, and attitudes that students should attain.
Diagnostic Assessment	An assessment given to identify child's strengths and learning needs for improvement.
Evaluation	Assessment information used to assess the effectiveness of teaching and learning and to make improvements to teaching practices in order to improve students learning.
Evidence Outcomes	Evidence outcomes are indicators that indicate students' mastery of essential knowledge, skills, values and attitudes at the end of each grade or school level.
Formative Assessment	A form of assessment used throughout a unit of study in teaching and learning to measure student's understanding and progress.
Curriculum Integration	Curriculum integration in teaching and learning refers to an approach or methodology that cuts across and draws on multiple subject areas to focus on a topic or theme.
Monitoring	General supervision over the teaching and learning of the standards.
Performance Assessment	A form of assessment that is focused on measuring students' mastery of knowledge, skills, values and attitudes taught and learnt in each lesson.

Performance Standards	Performance standards are the indicators of quality that specify how competent a students' demonstration or performance must be.
Proficiency	Mastery of the essential knowledge, skills, values and attitudes in the content standards and benchmarks.
Rubrics	It is a scoring guide used to assess the quality of students responses in an assessment often presented in a table with evaluative criteria at certain levels of achievement.
Self-Assessment	A judgment for official purposes for teachers to make about their abilities, principles or decisions.
Standards	A standard is a level of quality or achievement, especially a level that is thought to be acceptable. It is something used to measure or estimate the quality or degree of something, for example, how good a piece of work is.
Standards-Based Curriculum	Describes what all students should know and be able to do at the end of a grade or school level. The main idea behind standards-based curriculum is standards.
Standards-Based Education	An academic program in which clearly defined academic content and benchmarks are aligned. It spells out what schools and communities need to do to ensure achievement of expectations. The main idea behind standards-based education is standards.
Standards-Based Assessment	A systematic and ongoing process of collecting and interpreting information about students' achievements.
STEAM Education	The teaching and learning in the fields of Science, Technology, Engineering, Arts, and Mathematics in both formal and informal classroom settings.
Summative Assessment	A form of assessment used after completing a unit or topic or at a specific point in time in teaching and learning to measure student's mastery of the content standards and benchmarks.
21st Century Skills	Refers to a broad set of knowledge, skills, work habits, and character traits that are believed by educators, school reformers, college professors, employers, and others to be critically important to success in today's world, particularly in collegiate programs and contemporary careers and workplaces.

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Appendices

Appendix 1: Bloom's Taxonomy

Level of Understanding	Key Verbs
Creating Can the student create a new product or point of view?	Construct, design, and develop, generate, hypothesize, invent, plan, produce, compose, create, make, perform, plan, produce, assemble, formulate,
Evaluating Can the student justify a stand or decision?	Appraise, argue, assess, choose, conclude, critique, decide, defend, evaluate, judge, justify, predict, prioritize, provoke, rank, rate, select, support, monitor,
Analyzing Can the student distinguish between the different parts?	Analyzing, characterize, classify, compare, contrast, debate, criticise, deconstruct, deduce, differentiate, discriminate, distinguish, examine, organize, outline, relate, research, separate, experiment, question, test,
Applying Can the student use the information in a new way?	Apply, change, choose, compute, dramatize, implement, interview, prepare, produce, role play, select, show, transfer, use, demonstrate, illustrate, interpret, operate, sketch, solve, write,
Understanding Can the student comprehend ideas or concepts?	Classify, compare, exemplify, conclude, demonstrate, discuss, explain, identify, illustrate, interpret, paraphrase, predict, report, translate, describe, classify,
Remembering Can the student recall or remember the information?	Define, describe, draw, find, identify, label, list, match, name, quote, recall, recite, tell, write, duplicate, memorise, recall, repeat, reproduce, state,

Appendix 2: 21st Century Skills

Ways of Thinking	<p>Creativity and innovation</p> <ol style="list-style-type: none"> Think creatively Work creatively with others Implement innovations <p>Critical thinking, problem-solving and decision making</p> <ol style="list-style-type: none"> Reason effectively and evaluate evidence Solve problems Articulate findings <p>Learning to learn and meta-cognition</p> <ul style="list-style-type: none"> Self-motivation Positive appreciation of learning Adaptability and flexibility
Ways of Working	<p>Communication</p> <ul style="list-style-type: none"> Competency in written and oral language Open minded and preparedness to listen Sensitivity to cultural differences <p>Collaboration and teamwork</p> <ul style="list-style-type: none"> Interact effectively with others Work effectively in diverse teams Prioritise, plan and manage projects
Tools for Working	<p>Information literacy</p> <ul style="list-style-type: none"> Access and evaluate information Use and manage information Apply technology effectively <p>ICT literacy</p> <ul style="list-style-type: none"> Open to new ideas, information, tools and ways of thinking Use ICT accurately, creatively, ethically and legally Be aware of cultural and social differences Apply technology appropriately and effectively
Living in the World	<p>Citizenship – global and local</p> <ul style="list-style-type: none"> Awareness and understanding of rights and responsibilities as a global citizen Preparedness to participate in community activities Respect the values and privacy of others <p>Personal and social responsibility</p> <ul style="list-style-type: none"> Communicate constructively in different social situations Understand different viewpoints and perspectives <p>Life and career</p> <ul style="list-style-type: none"> Adapt to change Manage goals and time Be a self-directed learner Interact effectively with others

Appendix 3: Teaching and Learning Strategies

Strategy	Teacher	Students
Case study Used to extend students' understanding of real life issues	Provide students with case studies related to the topic of the lesson and allow them to analyse and evaluate.	Study the case study and identify the problem addressed. They analyse the problem and suggest solutions supported by conceptual justifications and make presentations. This enriches the students' existing knowledge of the topic.
Debate A method used to increase students' interest, involvement and participation	Provide the topic or question of debate on current issues affecting a bigger population, clearly outlining the expectations of the debate. Explain the steps involved in debating and set a criteria/ standard to be achieved.	Conduct researches to gather supporting evidence about the selected topic and summarising the points. They are engaged in collaborative learning by delegating and sharing tasks to group members. When debating, they improve their communication skills.
Discussion The purpose of discussion is to educate students about the process of group thinking and collective decision.	The teacher opens a discussion on certain topic by asking essential questions. During the discussion, the teacher reinforces and emphasises on important points from students responses. Teacher guide the direction to motivate students to explore the topic in greater depth and the topic in more detail. Use how and why follow-up questions to guide the discussion toward the objective of helping students understand the subject and summarise main ideas.	Students ponder over the question and answer by providing ideas, experiences and examples. Students participate in the discussion by exchanging ideas with others.
Games and simulations Encourages motivation and creates a spirit of competition and challenge to enhance learning.	Being creative and select appropriate games for the topic of the lesson. Give clear instructions and guidelines. The game selected must be fun and build a competitive spirit to score more than their peers to win small prizes.	Go into groups and organize. Follow the instructions and play to win

Observation Method used to allow students to work independently to discover why and how things happen as the way they are. It builds curiosity.	Give instructions and monitor every activity students do	Students possess instinct of curiosity and are curious to see the things for themselves and particularly those things which exist around them. A thing observed and a fact discovered by the child for himself becomes a part of mental life of the child. It is certainly more valuable to him than the same fact or facts learnt from the teacher or a book. Students <ul style="list-style-type: none"> • Observe and ask essential questions • Record • Interpret
Peer teaching and learning <i>(power point presentations, pair learning)</i> Students teach each other using different ways to learn from each other. It encourages; team work, develops confidence, feel free to ask questions, improves communication skills and most importantly develop the spirit of inquiry.	Distribute topics to groups to research and teach others in the classroom. Go through the basics of how to present their peer teaching.	Go into their established working groups. Develop a plan for the topic. Each group member is allocated a task to work on. Research and collect information about the topic allocated to the group. Outline the important points from the research and present their findings in class.
Performance-related tasks (dramatization, song/lyrics, wall magazines) Encourages creativity and take on the overarching ideas of the topic and are able to recall them at a later date	Students are given the opportunity to perform the using the main ideas of a topic. Provide the guidelines, expectations and the set criteria	Go into their established working groups. Being creative and create dramas, songs/lyrics or wall magazines in line with the topic.
Project (individual/group) Helps students complete tasks individually or collectively	Teacher outline the steps and procedures of how to do and the criteria	Students are involved in investigations and finding solutions to problems to real life experiences. They carry out researches to analyse the causes and effects of problems to provide achievable solutions. Students carefully utilise the problem-solving approach to complete projects.
Use media and technology to teach and generate engagement depending on the age of the students	Show a full movie, an animated one, a few episodes form documentaries, you tube movies and others depending on the lesson. Provide questions for students to answer before viewing	Viewing can provoke questions, debates, critical thinking, emotion and reaction. After viewing, students engage in critical thinking and debate

Appendix 4: Lesson Plan Template

Strand:

Unit:

Content Standard:

Benchmark:

Topic 1:

Lesson Topic:

Grade:

Length of Lesson:

Essential KSAVs

Knowledge:

Skill(s):

Values:

Attitudes:

Performance Indicator:

Materials:

Instructional (lesson) Objective(s): By the end of the lesson, students will be able to:

-
-
-

Essential Questions:

-
-

Lesson Procedure

Teacher Activities	Student Activities
Introduction (time in minutes)	
Body (time in minutes)	
<i>Modeling</i>	
<i>Guided Practice</i>	
<i>Independent Practice</i>	
Conclusion (time in minutes)	

Appendix 5: Assessment Strategies

Strategy	Description
Analogies	Students create an analogy between something they are familiar with and the new information they have learned. When asking students to explain the analogy, it will show the depth of their understanding of a topic.
Classroom presentations	A classroom presentation is an assessment strategy that requires students to verbalize their knowledge, select and present samples of finished work, and organize their thoughts about a topic in order to present a summary of their learning. It may provide the basis for assessment upon completion of a student's project or essay.
Conferences	A conference is a formal or informal meeting between the teacher and a student for the purpose of exchanging information or sharing ideas. A conference might be held to explore the student's thinking and suggest next steps; assess the student's level of understanding of a particular concept or procedure; and review, clarify, and extend what the student has already completed.
Discussions	Having a class discussion on a unit of study provides teachers with valuable information about what the students know about the subject. Focus the discussions on higher level thinking skills and allow students to reflect their learning before the discussion commences.
Essays	An essay is a writing sample in which a student constructs a response to a question, topic, or brief statement, and supplies supporting details or arguments. The essay allows the teacher to assess the student's understanding and/or ability to analyse and synthesize information.
Exhibitions/ demonstrations	An exhibition/demonstration is a performance in a public setting, during which a student explains and applies a process, procedure, etc., in concrete ways to show individual achievement of specific skills and knowledge.
Interviews	An interview is a face-to-face conversation in which teacher and student use inquiry to share their knowledge and understanding of a topic or problem, and can be used by the teacher to explore the student's thinking; assess the student's level of understanding of a concept or procedure and gather information, obtain clarification, determine positions, and probe for motivations.
Learning logs	A learning log is an ongoing, visible record kept by a student and recording what he or she is doing or thinking while working on a particular task or assignment. It can be used to assess student progress and growth over time.
Observation	Observation is a process of systematically viewing and recording students while they work, for the purpose of making programming and instruction decisions. Observation can take place at any time and in any setting. It provides information on students' strengths and weaknesses, learning styles, interests, and attitudes.
Peer assessment	Assessment by peers is a powerful way to gather information about students and their understanding. Students can use set criteria to assess the work of their classmates.

Performance tasks	During a performance task, students create, produce, perform, or present works on “real world” issues. The performance task may be used to assess a skill or proficiency, and provides useful information on the process as well as the product.
Portfolios	A portfolio is a collection of samples of a student’s work, and is focused, selective, reflective, and collaborative. It offers a visual demonstration of a student’s achievement, capabilities, strengths, weaknesses, knowledge, and specific skills, over time and in a variety of contexts.
Questions and answers (oral)	In the question–and–answer strategy, the teacher poses a question and the student answers verbally, rather than in writing. This strategy helps the teacher to determine whether students understand what is being, or has been, presented, and helps students to extend their thinking, generate ideas, or solve problems.
Quizzes, tests, examinations	A quiz, test, or examination requires students to respond to prompts in order to demonstrate their knowledge (orally or in writing) or their skills (e.g., through performance). Quizzes are usually short; examinations are usually longer. Quizzes, tests, or examinations can be adapted for exceptional students and for re-teaching and retesting.
Questionnaires	Questionnaires can be used for a variety of purposes. When used as a formative assessment strategy, they provide teachers with information on student learning that they can use to plan further instruction.
Response journals	A response journal is a student’s personal record containing written, reflective responses to material he or she is reading, viewing, listening to, or discussing. The response journal can be used as an assessment tool in all subject areas.
Selected responses	Strictly speaking a part of quizzes, tests, and examinations, selected responses require students to identify the one correct answer. The strategy can take the form of multiple-choice or true/false formats. Selected response is a commonly used formal procedure for gathering objective evidence about student learning, specifically in memory, recall, and comprehension.
Student self-assessments	Self-assessment is a process by which the student gathers information about, and reflects on, his or her own learning. It is the student’s own assessment of personal progress in terms of knowledge, skills, processes, or attitudes. Self-assessment leads students to a greater awareness and understanding of themselves as learners.
Posters	
Video analysis	
Reflective writing	
Projects	
Observation reports	

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