

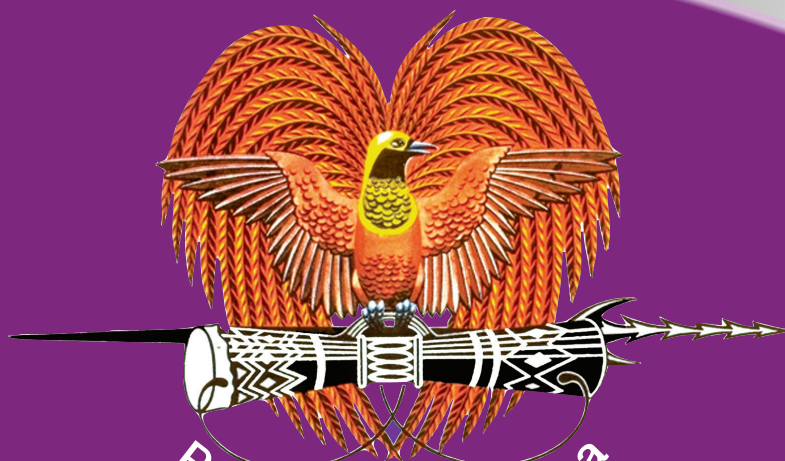
Social Science

Junior High

Grade 10

Teacher Guide

Standards-Based



Papua New Guinea

Department of Education

**'FREE ISSUE
NOT FOR SALE'**

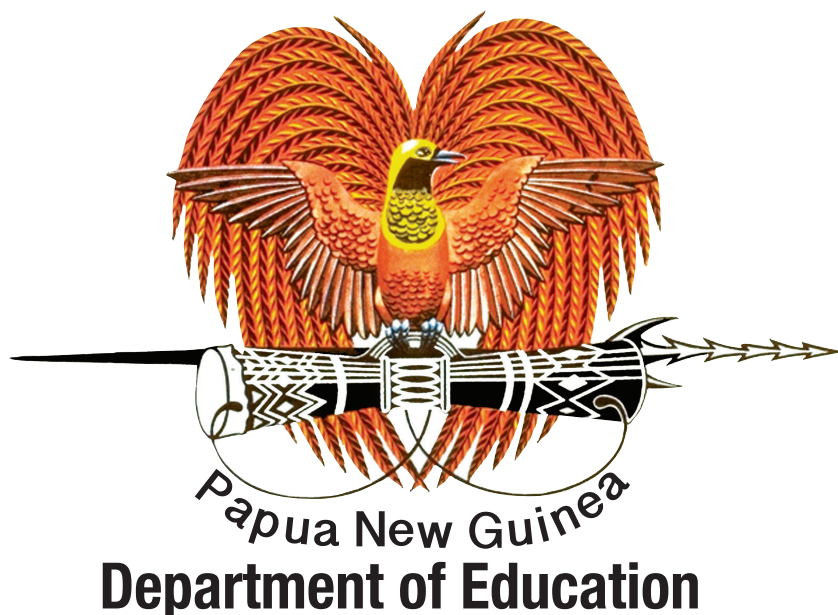
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Issued free to schools by the Department of Education

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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:

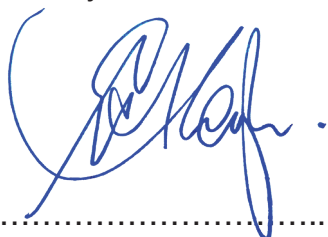
- morals, values and attitudes;
- cognitive, reasoning, decision-making, problem-solving, high level and 21st century skills;
- Science, Technology, Engineering, Arts and Mathematics (STEAM),
- core curriculum.

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 10 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 10.

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
- 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 10 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
Outlines the ultimate aim and goals, and what to teach and why teach it	Describes how to plan, teach, and assess students' performance
<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 	<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

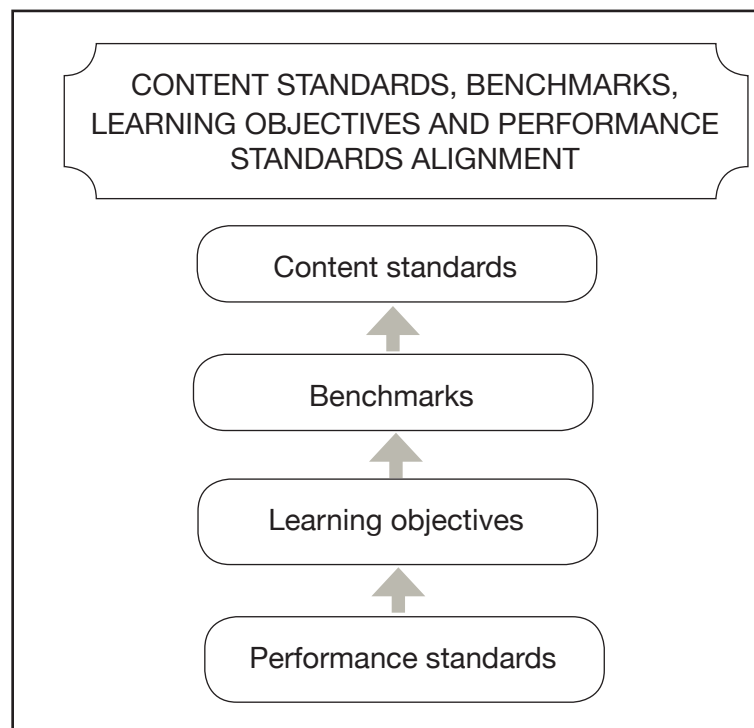
The syllabus outlines the ultimate aim and goals of SBE and SBC, what is to be taught and why it should be learned by students, the underlying principles and articulates the learning and proficiency standards that all students are expected to attain. On the other hand, the teacher guide expands on what 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 10 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

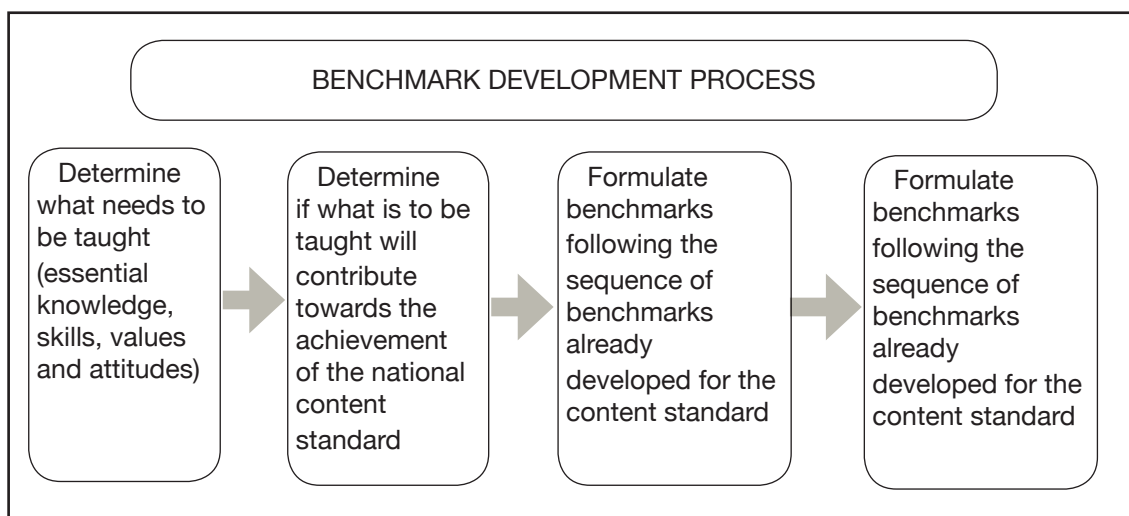


Grade-level Benchmarks

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 extracurricular programs and activities.

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.

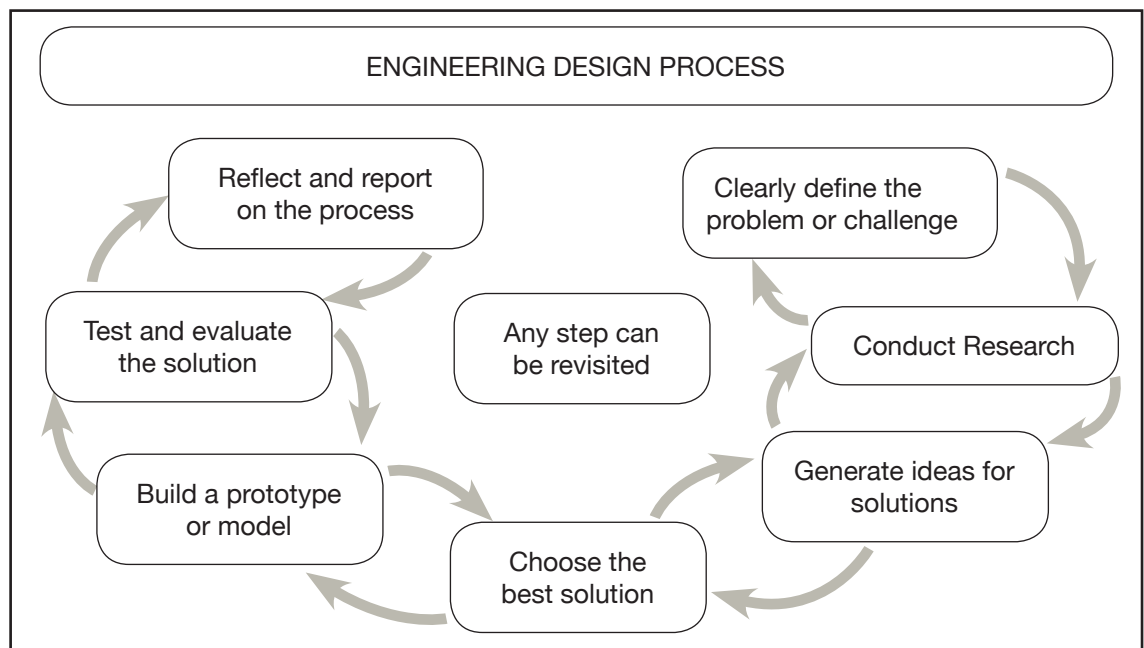
Trial and error

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.



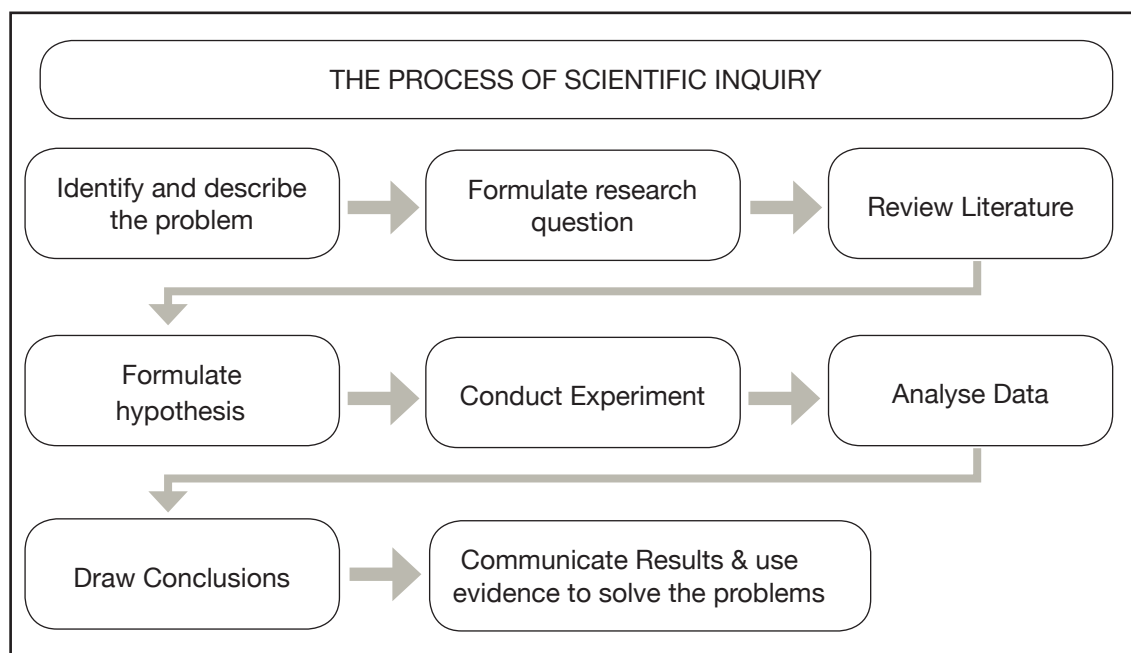
The scientific method and approach to problem-solving

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.

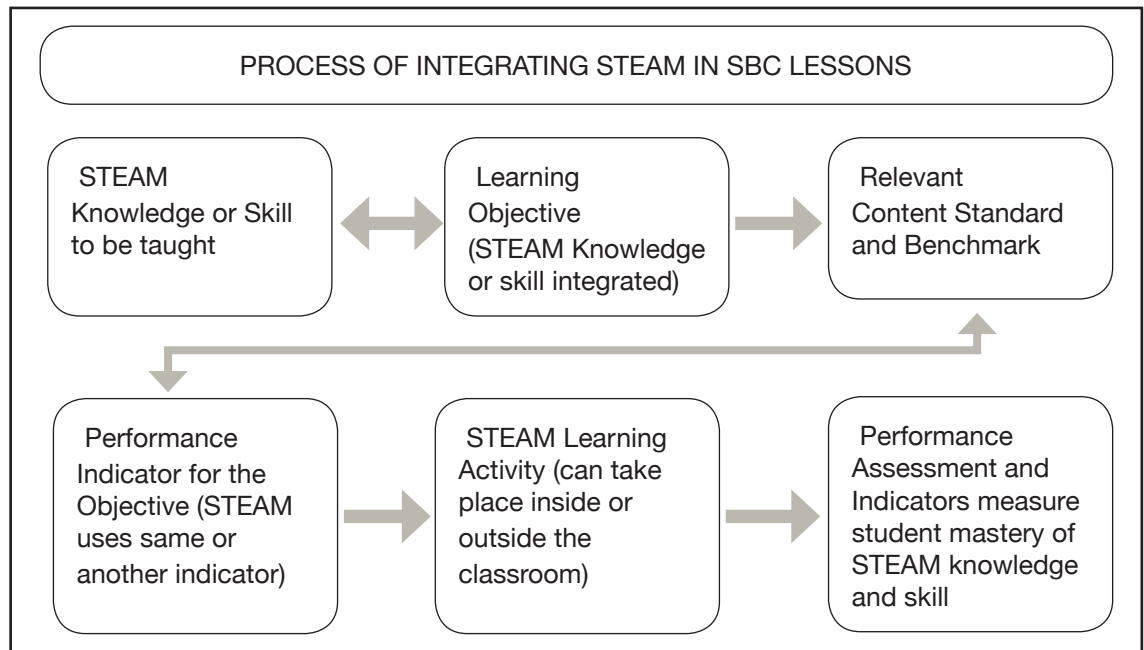
Integration of STEAM problem-solving skills into standards-based lesson plans

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 10 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*).

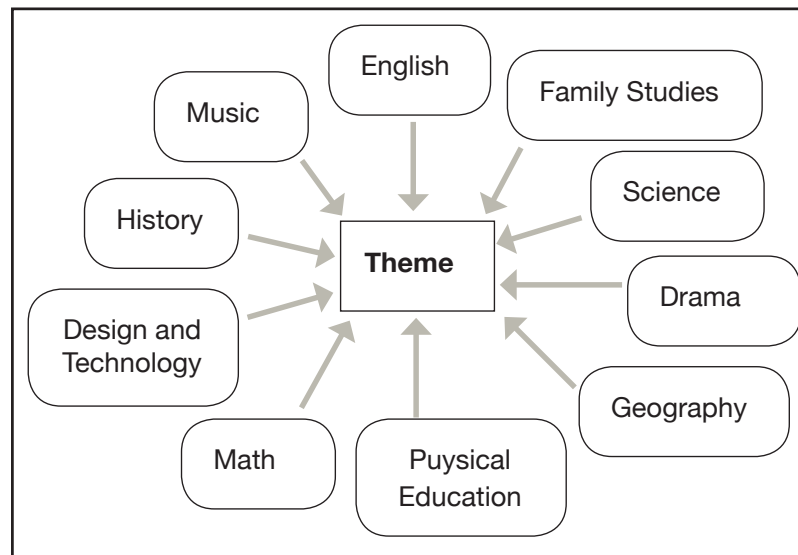
Teachers must develop intriguing curriculum by going beyond the traditional teaching of content based or fragmented teaching to one who is knowledge based and who should be perceived as a 21st century innovative educator. Curriculum integration is a holistic approach to learning thus curriculum integration 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.

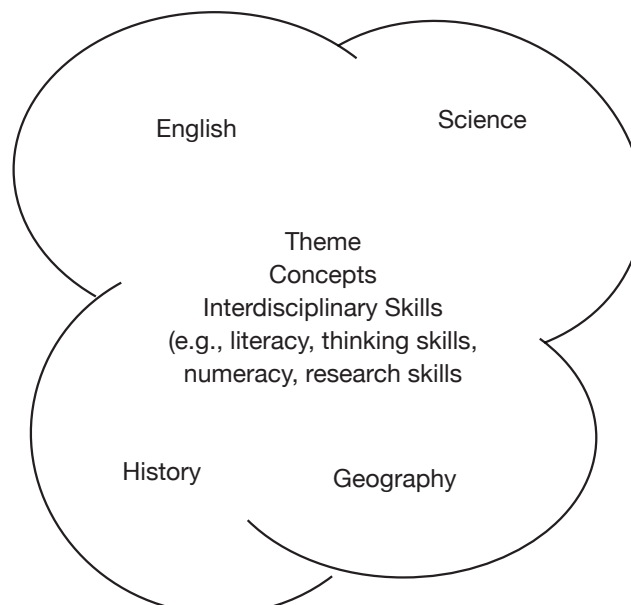
1. Multidisciplinary approach

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*).

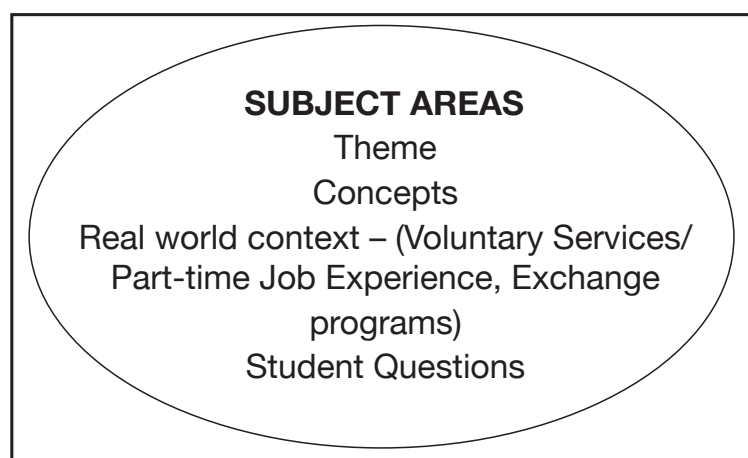
1. Teachers and students select a topic of study based on student interests, curriculum standards, and local resources
2. The teacher finds out what the students already know and helps them generate questions to explore. The teacher also provides resources for students and opportunities to work in the 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 10. 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: Types of population pyramids Topic 2: Constructing population pyramids Topic 3: Features of population pyramids Topic 4: Interpreting population pyramids Topic 5: Factors affecting population growth rate Topic 6: Comparing population pyramids
		People and Places	Topic 1: World's physical geography Topic 2: Features of physical geography and settlement patterns Topic 3: Features of physical geography and economic activities Topic 4: Features of physical geography and population density Topic 5: PNG's demographic features and other countries
		People and Resources	Topic 1: Types of migrants in PNG Topic 2: Internal migration in PNG Topic 3: Impact of human migration in PNG Topic 4: Issues on migration in PNG Topic 5: Migration routes, patterns and trends in PNG
		People and Environment	Topic 1: Land uses Topic 2: Land mobilisation for development Topic 3: Undeveloped Land (UDL) and Special Agricultural Business Lease (SABL) Topic 4: Advantages and disadvantages of developing UDLs and SABL Topic 5: Managing UDLs and SABLs Topic 6: Land grabbing' and its consequences

Terms	Strands	Units	Topics
Two (2)	HISTORY	Making Sense of History	<p>Topic 1: Major events that have shaped the history of the Pacific Region</p> <p>Topic 2: Events that occurred in the Pacific Region</p> <p>Topic 3: Comparison of major events that shaped the history of the Pacific Region</p> <p>Topic 4: Construction, storage, management and dissemination of Pacific History</p> <p>Topic 5: Colonisation in the Pacific</p>
		Systems of Power, Authority and Governance	<p>Topic 1: Change of governments overtime in the Pacific Region</p> <p>Topic 2: Election processes in the Pacific Region</p> <p>Topic 3: Influence of individuals and groups in the Pacific Region</p> <p>Topic 4: Contributions by external organisations to the Pacific Region</p>
		Culture and Society	<p>Topic 1: Transmission of culture in the Pacific Region</p> <p>Topic 2: Dominant and minority groups in the Pacific Region</p> <p>Topic 3: Sustaining culture in the Pacific</p> <p>Topic 4: Colonizers' cultures in the Pacific</p>
		Development and Sustainability of Societies	<p>Topic 1: Government and change in the Pacific</p> <p>Topic 2: Impact of foreign government actions in the Pacific Region</p> <p>Topic 3: Impact of the changes in the Pacific Region</p> <p>Topic 4: Government policies and plans in the Pacific</p> <p>Topic 5: Promoters and sustainers of change in the Pacific Region</p> <p>Topic 6: Religion and change in the Pacific</p> <p>Topic 7: Military force and change in the Pacific Region</p> <p>Topic 8: Intervention of external forces in the Pacific Region</p>
		Economic Needs and Wants	<p>Topic 1: Economic systems in Asia</p> <p>Topic 2: Impact of economic decisions on the people and environment</p> <p>Topic 3: Economic influence on movement of people</p> <p>Topic 4: Economic influence on conflicts in Asia</p>
		Geographical influences on Historical Events, People, Places and Environment	<p>Topic 1: Geographical systems of Asia and Pacific</p> <p>Topic 2: Influence of geographical systems on development and relationships in Asia</p> <p>Topic 3: Asia's development; past and present</p> <p>Topic 4: Regional and global development influences</p>
		Historical Inquiry	<p>Topic 1: Validity and reliability of historical events in PNG</p> <p>Topic 2: Impact of historical events on societies in PNG</p> <p>Topic 3: Impact of national issues or events on individuals</p> <p>Topic 4: Contested events and issues</p> <p>Topic 5: Effects of national events or issues on people and environment</p>

Terms	Strands	Units	Topics
Three (3)	POLITICAL SCIENCE	Government Systems	Topic 1: Legal basis for democratic governments Topic 2: Arms of democratic governments Topic 3: Separation of powers Topic 4: Balance of power Topic 5: Roles and responsibilities of parliamentarians in PNG
		Political Ideologies and Systems	Topic 1: Levels of governments in democratic nations Topic 2: Principles and practices in democratic nations Topic 3: Policies, programs and activities of democratic nations Topic 4: Development goals of developed and developing countries Topic 5: Indicators of democratic countries Topic 6: Profiles of developed and developing commonwealth countries
		International Relations	Topic 1: Relationships between different democratic countries Topic 2: Nature of relations Topic 3: Conflict between people of different democratic nations Topic 4: Factors that affect relations in democratic nations Topic 5: The role of the media in people to people relations
		Civic and Citizenship	Topic 1: Policies and laws on human rights Topic 2: PNG's Constitution on human rights Topic 3: Promoting and protecting human rights using the legal system Topic 4: Enforcement of rights for different groups of people Topic 5: Children's rights

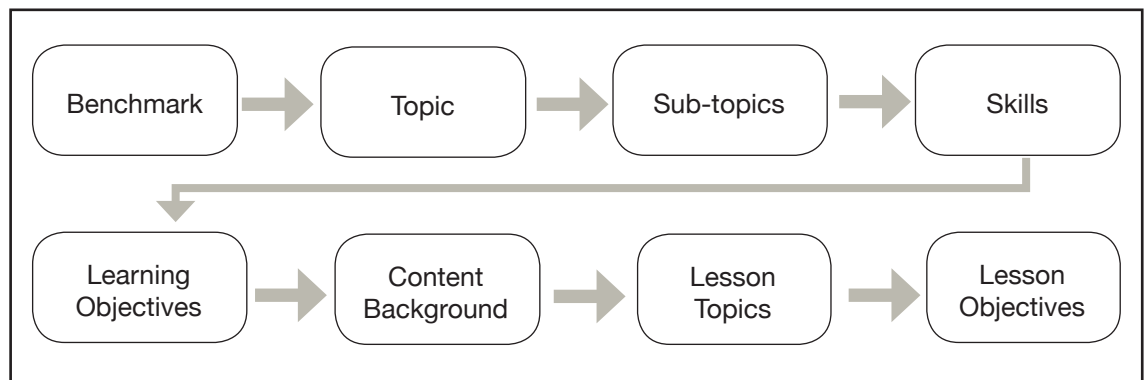
Terms	Strands	Units	Topics
Four (4)	ECONOMICS	Factors of Production and Consumption	Topic 1: Role of labour (trade) unions Topic 2: Impact of labour unions Topic 3: Influence of labour unions on the supply of labour force and goods and services in a market economy Topic 4: Functions of labour unions (trade unions) Topic 5: Effectiveness of Trade Unions Topic 6: Trade union laws and practices
		Methods of Production and Distribution	Topic 1: Changes in the division of labour Topic 2: Labour in the production and distribution of resources Topic 3: Labour laws in PNG Topic 4: Improving the quality of the Labour Force (Workers) Topic 5: Impacts of labour belief systems and practices Topic 6: Labour costs and productivity
		Regulation of Production, Distribution and Consumption	Topic 1: Monetary and fiscal policies Topic 2: Methods of distribution of goods and services Topic 3: The market system Topic 4: Regulation and allocation of goods and services
		Satisfying Needs and Wants	Topic 1: Satisfying needs and wants through technology Topic 2: Socio-economic impact of technology Topic 3: Influence of television on trade Topic 4: Methods of advertisement and their impact on consumers Topic 5: Internet marketing Topic 6: Internet traded items Topic 7: Costs and benefits of technology in trade
		Economic Ideologies	Topic 1: Capitalist ideology Topic 2: Production, distribution and consumption in capitalist economies Topic 3: Allocation of resources under capitalist economic system (capitalism) Topic 4: Strengths and weakness of capitalism (capitalist economic system) Topic 5: Financial institutions in the capitalist economy Topic 6: Exchanging of goods and services in a capitalist economy Topic 7: Producers and consumers behavior in the capitalist state
Term 1 (1)	ENVIRONMENT	Resources and Environments	Topic 1: Resource use and management Topic 2: Impact of energy and resource use on the environment Topic 3: Energy consumption and living standards Topic 4: Resource consumption
		The Earth and Its Systems	Topic 1: The rock cycle Topic 2: Minerals Topic 3: The processes of degradation Topic 4: Shaping the land
		Biological Dynamics of Earth	Topic 1: Effects of limiting factors of population dynamics Topic 2: Causes of population fluctuation Topic 3: Carrying capacity in an ecosystem Topic 4: Endangered species
		Environmental Change and Sustainability	Topic 1: Problems related to water quality Topic 2: Influence of political systems on the environment Topic 3: Problems related to water quality Topic 4: Ecological footprint

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: Types of population pyramids Topic 2: Constructing population pyramids Topic 3: Features of population pyramids Topic 4: Interpreting population pyramids Topic 5: Factors affecting population growth rates Topic 6: Comparing population pyramids
2. People and Places	Topic 1: World's physical geography Topic 2: Features of physical geography and settlement patterns Topic 3: Features of physical geography and economic activities Topic 4: Features of physical geography and population density Topic 5: PNG's demographic features and other countries
3. People and Resources	Topic 1: Types of migrants in PNG Topic 2: Internal migration in PNG Topic 3: Impact of human migration in PNG Topic 4: Issues on migration in PNG Topic 5: Migration routes, patterns and trends in PNG
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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 10.1.1.1: Identify and explain the different types of population pyramids.

Topic 1: Types of population pyramids

Sub-topics:

- Expansive (expansionary) population pyramid
- Constrictive population pyramid
- Stationary population pyramid

Skills: Understanding (identify, explain)

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

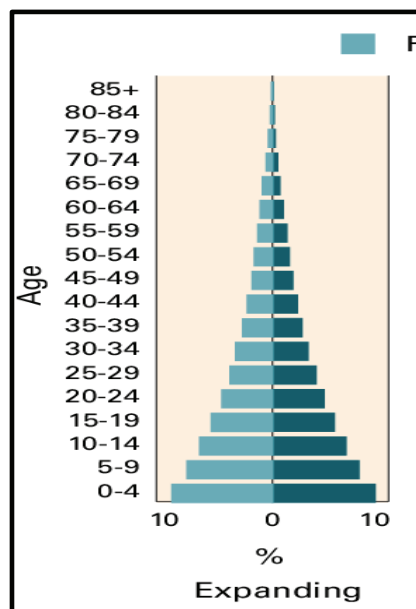
- Identify and examine the features of an expansive, constructive and stationary population pyramid.
- Draw simple structures of the expansive, constructive and stationary population pyramid.
- Identify countries with such population pyramid/structure.

Content Background

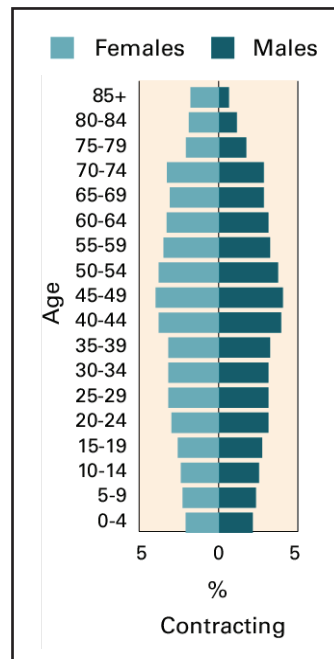
The Types of population and population pyramid (remove the underline)

There are three types of population pyramids: expansive, constrictive, and stationary.

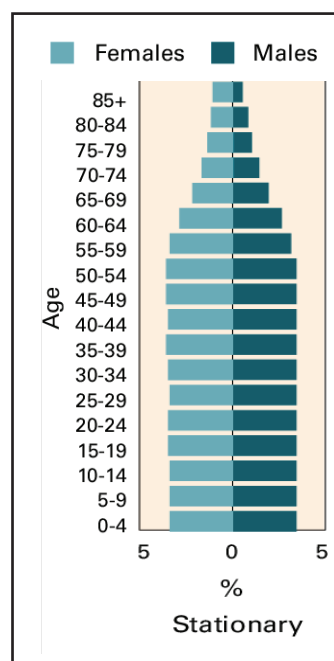
1. Expansive population pyramids depict populations that have a larger percentage of people in the younger age groups. Populations with this shape usually have high fertility rates with lower life expectancies. Many third world countries have an expansive population and are therefore represented by an expansive population pyramid. In other words, third world countries have an expanding population.



2. Constrictive population pyramids are named as such because they are constricted at the bottom. There is a lower percentage of younger people. Constrictive population pyramids show a declining birth rate, since each succeeding age group is getting smaller and smaller. The United States population reflects a constrictive population pyramid.



3. Stationary population pyramids are those that show a somewhat equal proportion of the population in each age group. There is not a decrease or an increase in population; it is stable. For example, Austria has a stationary population pyramid. Therefore Austria is said to have a stationary population or Austria's population is stationary.



The population data of a country is collected through what is called census. Census is an attempt to count every person living in a county at one particular time. Papua New Guinea's census takes about 10 years interval. Some developed countries take census every 5 years. This is because they realize the

significance of population in planning for their countries' continued development. For example, the number of people in a city or part of a city will incite city authorities and planners to either upgrade or establish a school, hospital, road etc.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE
2. Department of Education, (1999). *Papua New Guinea Secondary School Atlas. Australia & New Zealand*, Oxford University Press.
3. Population pyramids. Retrieved from: <https://study.com/academy/>

Benchmark 10.1.1.2: Construct a population pyramid of Papua New Guinea using the 1980, 1990, 2000 & 2011 National Census Data.

Topic 2: Constructing population pyramids

Sub-topics:

- How to construct a population pyramid
- Constructing population pyramid using National Census Data

Skills: Creating (construct)

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

- Examine how to construct population pyramids.
- Construct population pyramids of PNG using the 1980, 1990, 2000 and 2011 National Census Data manually or through the use of computer application (excel).

Content Background

A population pyramid or structure shows the age and the sex composition of a population. Other important information such as the dependency load, life expectancy and the type of country that this population belongs to can be derived from reading this pyramid. Also the rate of the population growth can be determined as in whether it is growing, stationary or declining. The government uses this graph to help plan for its populations need in terms of basic services such as health, education, sanitation and so forth.

Steps to constructing a population pyramid

1. Collect population data
Information such as the age-sex group (intervals of five years) and the population total.
2. Transfer information onto population pyramid
 - i. The population figures should be shown on the horizontal axis of the graph. They are usually given as percentage however; sometimes they are given in figures such as thousands or millions.
 - ii. The vertical axis shows the ages of the males and the females given in intervals of five years.
 - iii. The population figures for each age group must be drawn according to the percentage as per the data collected.
3. Give a title for the pyramid
4. Ensure all parts of the graph is labelled correctly

(Note: Refer to population pyramids given in the prior topic)

Teachers are advised to collect PNG's National Census Information for students to use in this topic.

Suggested Resources

1. National Statistical Office, (2011), National Population and Housing Census 2011 – PNG 2011 National Report, Port Moresby. Retrieved from. <https://actnowpng.org/sites/default/files/2011%20Census%20National%20Report.pdf>
2. How to create a population pyramid. Retrieved from: <https://academy.datawrapper.de/article/153-how-to-create-a-population-pyramid>

Benchmark 10.1.1.3: Compare and contrast the population pyramids of a developed and a developing country in terms of the composition of the different age cohorts and male and female population.

Topic 3: Features of population pyramids

Sub-topics:

- Dependency load
- Life expectancy

Skills: Analysing (compare and contrast)

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

- Identify and explain the features of a population pyramid.
- Compare and contrast the features of different population pyramids.

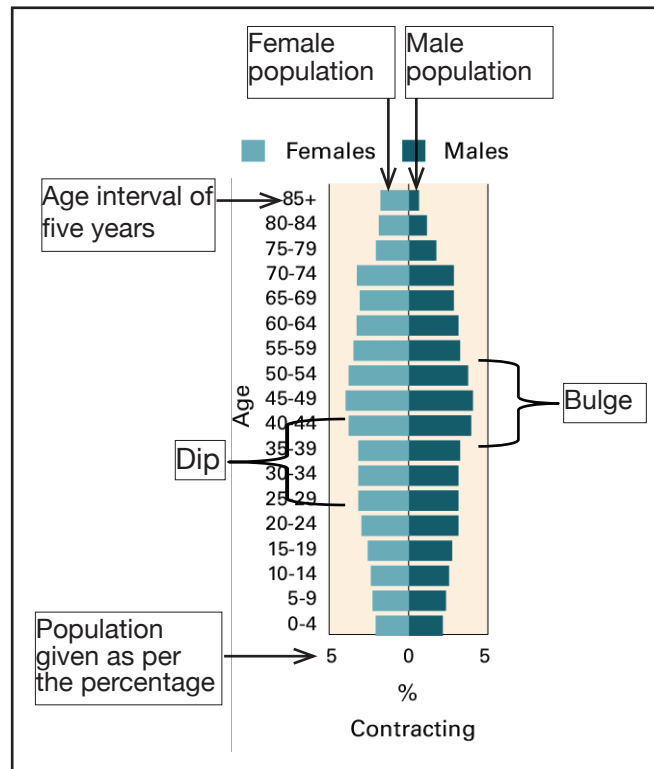
Content Background

As mentioned in the previous topic population pyramids are important in that they provide vital information for the government to plan for its population. Such information include the population growth rate, dependency load and the life expectancy. Dependency load refers to the number of older people or younger people in the population who depend entirely on other people and are not part of the workforce. Life expectancy is the average number of years a person is expected to live.

Features of a population pyramid

- Population is divided into 5 year age groups.
- Population is divided into males and females. .

These features of a pyramid provide vital information on the population of a place.



- The bulge is any part of the pyramid that grows and curves outwards. It usually indicates a sharp growth or increase in that particular age group as a result of a baby boom, mass immigration or a rise in fertility rate.
- The dip is the opposite of the bulge. It is any part of the pyramid that curves inward and form a hollow on the pyramid. It represents a sudden decline in the population as a result of war, disease, pestilence and economic hard times that may cause deaths and out-migration.
- The age and sex group is represented in the middle of the graph starting from the very young age group right at the base of the graph to the very old age group at the top at an interval of five years. Life expectancy is derived from this age 0 age at the base of the pyramid to the oldest at the top of the pyramid.
- Dependency load depends on the type of country, for instance whether it is a developed, semi developed or developing countries like Papua New Guinea. The population pyramid shown here belongs to a developed nation such as Japan, Australia and Europeans nations (Germany, Britain).
- A population pyramid that has a wider base represents a country with a higher growth rate. Developing countries tend to have a wider base than developed countries. The dependency loads are these young children ranging from the ages 0-14 years. On the other hand, a population that has its top wide reflects a population that has a bigger old population who make up the dependency load. The old people make up the dependency load range from ages 75-85.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Department of Education, (1999). *Papua New Guinea Secondary School Atlas*. Australia & New Zealand Oxford University Press.
3. Encarta:2008

Benchmark 10.1.1.4: Interpret the population pyramids to ascertain the age cohort, male and female, and the overall population growth trend and predict future population growth trends and patterns.

Topic 4: Interpreting population pyramids

Sub-topics:

- Age–sex distribution
- Birth rate
- Death rate
- Rate of natural increase
- Growth rate
- Comparing population pyramids of developed and developing world in terms of birth rate, death rate and natural increase

Skills: Understanding (interpret, predict), analysing (ascertain)

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

- Explain age and sex distribution on a pyramid, population growth rate, birth rate, death rate and rate of natural increase.
- Calculate the rate of natural increase.
- Compare the population pyramids of developed and developing world (countries) in terms of their overall growth trend.
- Predict overall population growth trends and patterns.

Content Background

Population data of any country gives rise to the type of population structures they have indicating the category they fall into, that is whether, they are developed, semi-developed or developing countries or nations.

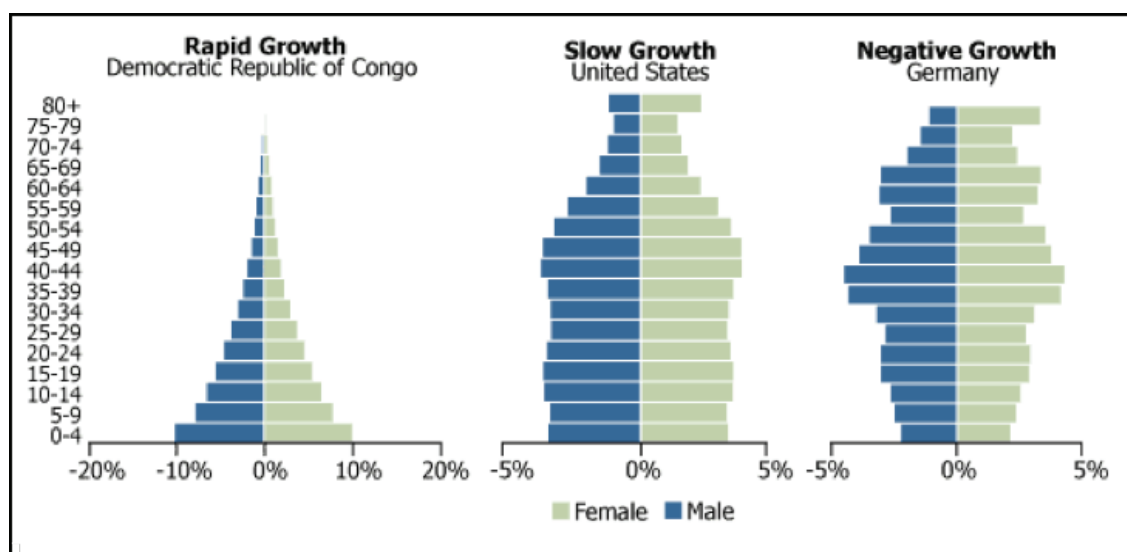
These population pyramids depict the age-sex distribution, birth rate, death rate, rate of natural increases and growth rate of that particular country. The overall shape of the pyramid indicates the potential future growth. These statistics from a population pyramid help a government plan its programmes and budget, for the development of the nation.

Definition of Terms

- **Birth rate** (or crude birth rate) is the number of live births per 1,000 population in a given year. Not to be confused with the growth rate. (Growth rate takes into account birth, death and migration)
- **Death rate** (or crude death rate) is the number of deaths per 1,000 population in a given year.
- **Rate of natural increases** refers to the difference between birth rate and death rate.
- **Population growth rate** is the number of persons added to (or subtracted from) a populations in a year due to natural increase and net migration; expressed as a percentage of the population at the beginning of the time period.

There are four representations of population age-sex structure for different levels of population growth and they are; rapid growth, slow growth, zero growth, and negative growth.

Patterns of population change



Source: United Nations, *World Population Prospects, The 2006 Revision*.

The first pyramid, representing the population of the Democratic Republic of Congo, with its wide base and narrow top, is typical of a young population (bulk of the population is young). This shape is the result of high birth rates that feed more and more people into the lowest bars and in turn shrink the relative proportion at the oldest ages. As the death rate declines, more people survive to the reproductive ages and beyond. The births they have further widen the base of the pyramid. This shape is common in many less developed countries that have experienced improvements in life expectancy but continue to have high birth rates. It reflects both a history of rapid population growth and the potential for future rapid growth.

The second population pyramid is typical of a slowly growing population. The United States is an example of a country in slow growth. The United States has had declining fertility and mortality rates for most of this century. With lower fertility, fewer people have entered the lowest bars of the pyramid, and as life expectancy has increased, a greater percentage of the “births” have survived until old age. As a result, the population has been aging, meaning that the proportion of older persons in the population has been growing. This trend was interrupted by the postwar baby boom, 1946-1964, when birth rates climbed again. (The bulge of the baby-boom generation can be seen in the pyramid for ages 40-59 in 2005.) After 1964, birth rates continued their downward trend until the late 1970s. As the last members of the baby boom approached their childbearing years during the 1980s, the number of births rose again, peaking in 1990. These children, the youngest generation, are represented by the slightly widening base of the pyramid. Even though the number of births per woman is lower than ever before, the population continues to grow because of the children and grandchildren of the huge baby-boom generation.

The third age-sex pyramid shows a situation where few countries have reached zero population growth or are experiencing negative growth because of low

birth rates and an old age structure coupled with minimal net migration. While Germany's death rate exceeds its birth rate, its population continues to grow because of net migration. Pyramids in which the proportions of the population are fairly evenly distributed among all age groups are representative of many highly industrialized societies. Germany's old population reflects an extended period of low birth and death rates. While fewer children have been born, most of those born survive through to old age. The net effect is zero growth or no natural increase. Germany's pyramid also shows the effect of higher mortality among males. In an industrialized society, females generally outnumber males after age 40. This trend is particularly evident in Germany's oldest age group.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Department of Education, (1999). *Papua New Guinea Secondary School Atlas*. Australia & New Zealand Oxford University Press.
3. United Nations, World Population Prospects, The 2006 Revision.
Retrieved from: <https://www.un.org/development/desa/pd/sites/>

Benchmark 10.1.1.5: Ascertain and analyse the contributing factors and the consequences of increasing or decreasing population growth rates (For example, change in marriage patterns, natural and man-made disasters, the supply of labour, use of infrastructure, supply and demand for goods and services and utilization and inheritance of land).

Topic 5: Factors affecting population growth rate

Sub-topics:

- Factors affecting population growth rate
- Consequences of increasing or decreasing population growth rate

Skills: Analysing (ascertain, analyse)

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

- Identify and analyse factors affecting population growth rate.
- Evaluate the consequences of increasing and decreasing population growth rate.

Content Background

Factors that influence human population growth rate include;

1. Migration
2. Healthcare/access to health care/medical technology/ability to fight or *prevent disease*
3. Availability of birth control/availability of family planning education/use of *birth control*
4. Political and/or economic stability/government stability/war/peace/*affluence*
5. Food availability/quality/production
6. Space
7. Technology (industrialization, waste disposal technology, building *technology, agricultural technology, energy technology, etc.*)
8. Culture-social norms, values, and traditions (the use of contraception, the *age at which marriage is socially acceptable, religious beliefs on family planning, gender equality and so forth.*)

There are various consequences of the population growth rate.

Consequences of increasing growth rates	Consequences of decreasing growth rates
Rise in population	Shortage in labour (manpower)
Depletion and degradation of the environment; -Water woes <ul style="list-style-type: none"> - Food and land shortages - Over use and consumption of resources (such as overgrazing, over logging and mining etc.) to cater for increasing energy consumption. 	Government to strategies to close the gap created by decreasing man power thus spends government income to import labour and other items since there is less human resources and man power to produce these items.
War/Political Instability Suppression of minorities with rich resources for instance; West Papua independence stalled because of the need of Indonesia for the resources and land in West Papua to cater for its huge populations needs.	<ul style="list-style-type: none"> - Small domestic and international market resulting in stalled economic growth. - Emigration as in the case of many small Pacific Island nations resulting in 'brain drain'.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Department of Education, (1999). *Papua New Guinea Secondary School Atlas*. Australia & New Zealand Oxford University Press.
3. G.Tyler.Miller, (1982). *Living in the Environment*. Melbourne. Thomas Nelson
4. Human Population. Retrieved from: <https://www.prb.org/>
5. Population Change. Retrieved from: <https://en.wikipedia.org/wiki/>
6. Carl Haub, (2007). World Population Data Sheet. Retrieved from: <https://www.prb.org/2012-world-population-data-sheet-2/>

Benchmark 10.1.1.6: Use research skills to investigate and report on the situation of a country with an increasing birth rate and a country with a declining birth rate and compare their characteristics and experiences.

Topic 6: Comparing population pyramids

Sub-topic:

- Case Study - Papua New Guinea and Japan

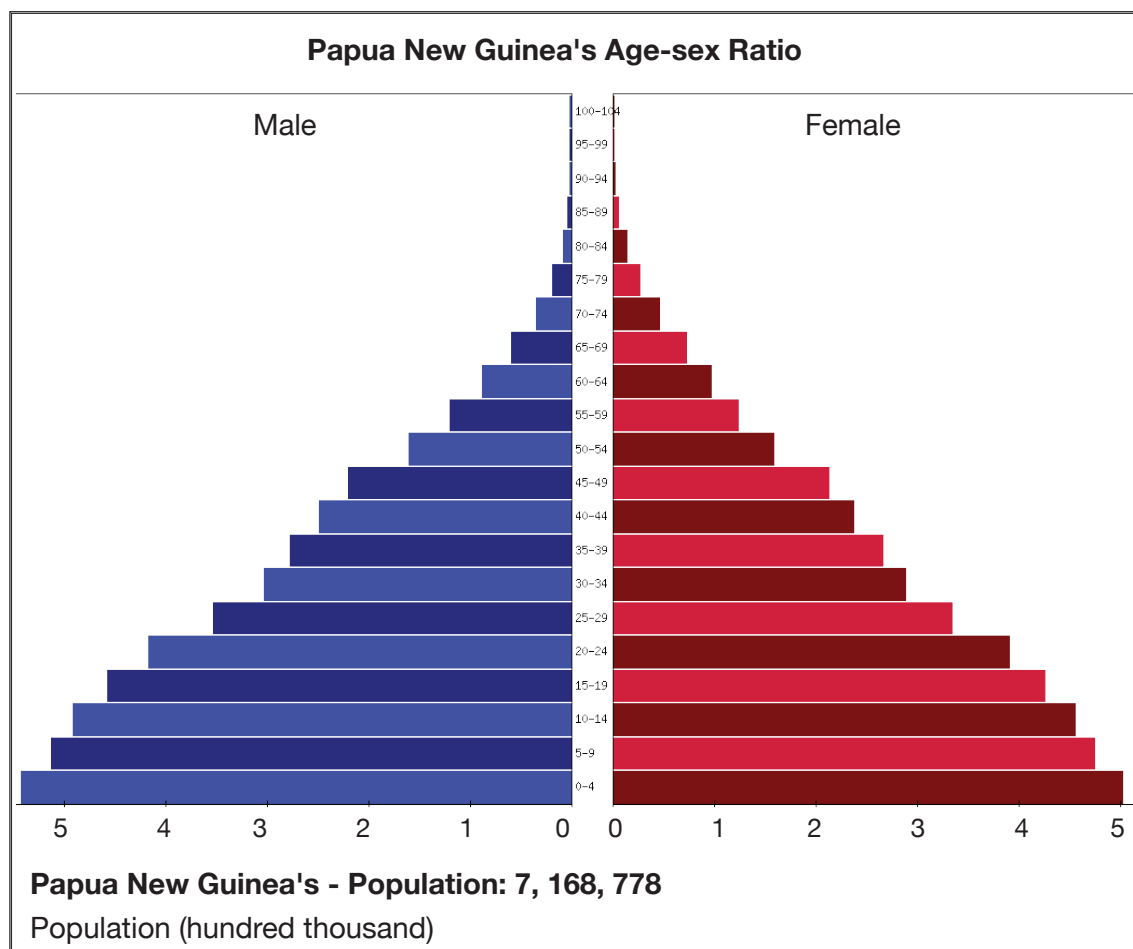
Skills: Analysing (compare), examining (research)

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

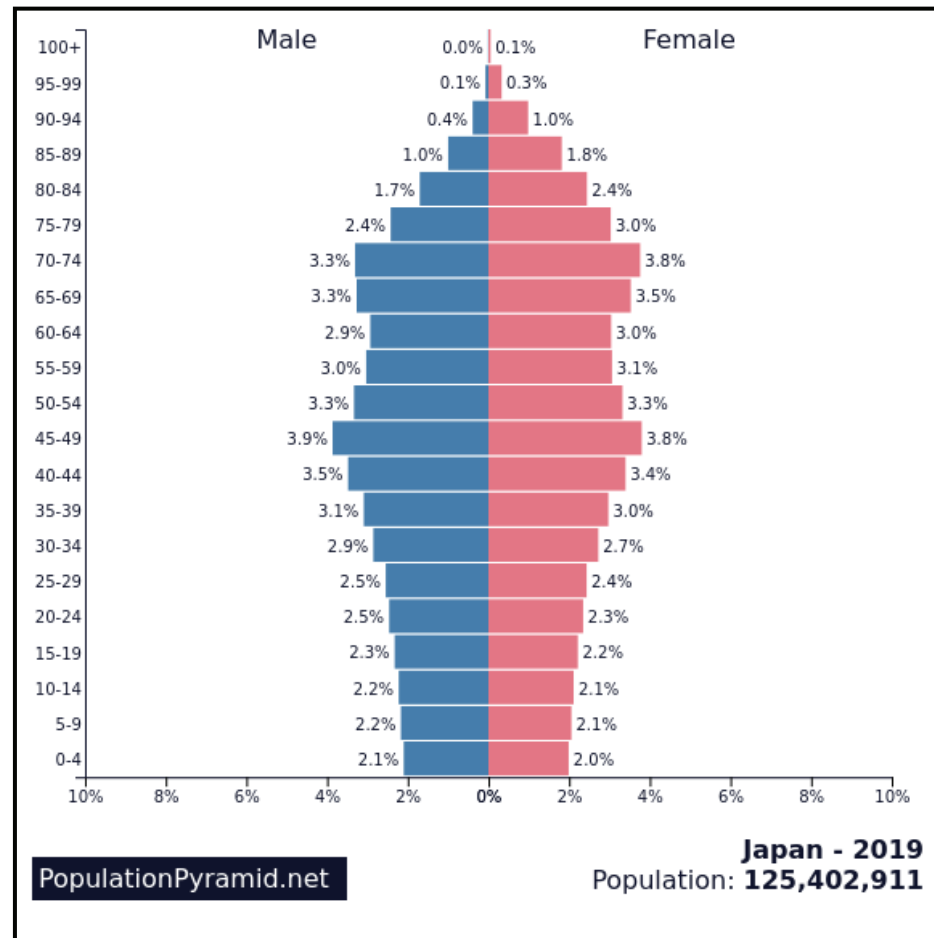
- Identify and compare the population pyramid of Papua New Guinea with Japan's population pyramid.
- Examine and evaluate Papua New Guinea's increasing birth rate to Japan's decreasing birth rate.
- Draw manually or use computer (excel) to create population pyramids for both countries to compare and affirm their structures.

Content Background

Having studied all the topics in this unit this last topic sums up by comparing our country Papua New Guinea's population pyramid with Japan's. These two countries have very contrasting population structures in that Papua New Guinea represents one that belongs to the developing world whilst Japan represents one that belongs to the developed world.



Japan's Age-sex Ratio



This case study can be given as a project.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration. Port Moresby, NDoE.*
2. Department of Education, (1999). *Papua New Guinea Secondary School Atlas. Australia & New Zealand Oxford University Press.*
3. G.Tyler.Miller, (2000). *Living in the Environment.* Melbourne. Thomas Nelson.

Unit 2: People and Places

Content Standard 10.1.2: Students will be able to explain how geographic and human characteristics create culture and define places.

Benchmark 10.1.2.1: Examine the physical geography of various regions of the world.

Topic 1: World's physical geography

Sub-topics:

- World's physical geography
- Physical geography of various regions of the world

Skills: Analysis (examine)

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

- Identify and explain the world's physical geography.
- Examine the physical geography of the various regions of the world.

Content Background

Physical Geography is the branch of natural science, which deals with the study of systems, processes and patterns in the natural environment. It brings together facts from other sciences such as physical, biological and social that constitutes Earth, which incorporates human activities where they interface with the atmosphere.

Five systems to understand the physical world

1. Atmosphere. The atmosphere comprises of numerous gases that perform *different functions. For example, greenhouse gases regulate Earth's average temperature so that Earth can support life. Gases like oxygen, carbon dioxide are important for soil formation and sustain plant and animal life through photosynthesis and respiration. Oxygen and carbon dioxide are also important to the weathering of rocks which contributes to soil formation.*
2. Hydrosphere. Hydro means water, and this is the sphere of water. It *includes all the water on Earth, the lakes, rivers, creeks, streams, ground water, and frozen parts of ice and glaciers. Water is stored as solid, liquid and gas and is recycled in the environment by changing its state through what is called the water cycle.*
3. Lithosphere. Litho means rock, and the lithosphere is all the land, *minerals, soils, sands, landforms and rocks that make up the surface of the earth and its interior. The two main constituents of the lithosphere are;*
 - i. rocks and
 - ii. soils

Rocks are made up of mineral grains cemented together. During the natural process of weathering the minerals are disintegrated to form soils. Soils constitute of;

- i. rock minerals
 - ii. organic matter (both dead and living
 - iii. gases (CO₂,CH₄, O₂,N) and
 - iv. water (moisture)
4. Biosphere. Bio means life, and the biosphere is all living things. This *includes all forms of plant and animal life found on earth. Plants and animals are first and foremost controlled by the climatic factors of temperature and water. These two factors are some of the abiotic factors that determine plants and animals survival. The other factors include sunlight, soil and gases. Plants and animals also need other plants and animals (biotic factors) to thrive in their ecosystems, communities and biomes.*
5. The Solar System. The Sun is the source of all forms of energy on the *surface of the earth. It produces the energy to make the living world. Plants convert sunlight to grow. In the sea, most life is found only as deep as sunlight can penetrate for photosynthesis.*

These five systems make up the physical geographic features that hold the earth together and they are all inter-connected. We separate them to make them easier to understand, but they overlap. For example, soils are made up of the lithosphere biosphere, hydrosphere and the atmosphere. Likewise, the atmosphere and the lithosphere are part of the hydrosphere because water is stored in the atmosphere as water vapour (gas) and as liquid in rivers, lakes, oceans, ground water and soil water. The hydrosphere is part of the atmosphere and part of the biosphere.

Each system is essential to life on Earth. They make the earth work. They provide the environments we live in. They provide resources we need and use. But they can best provide for humans if not interfered by human actions. The functions and processes of these five inter-connected systems is what makes the Earth suitable for living.

Suggested Resources

1. Stephen Ranck, (2011). *Outcomes Edition for Papua New Guinea, Social Science; Grade 10. Oxford.*
2. G.Tyler.Miller, (1982). *Living in the Environment.* Melbourne. Thomas Nelson.

Benchmark 10.1.2.2: Explain the relationship between physical geographic features and settlement patterns.

Topic 2: Physical geographic features and settlement patterns

Sub-topics:

- Settlement patterns
- Relationship between physical geographic features and settlement patterns

Skills: Understanding (explain)

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

- Investigate the physical geographic features.
- Examine settlement patterns.
- Evaluate the relationship(s) between physical geographic features and settlement patterns.
- Visit sites that show physical geographic features under study.
- Dramatize/replicate the relationship(s) between physical geographic features and settlement patterns.

Content Background

Physical geographical features are naturally-created features of the Earth. Natural geographical features consist of landforms and ecosystems.

Categories of physical geographical features

1. Natural features, such as soil, mountains, valleys, deserts, rivers, oceans, *lakes, swamps, forests, clouds, glaciers.*
2. Man-made features, such as cities, languages, buildings, roads, *governments, artificial lakes, drainage systems, dams, waterways, parks and gardens, monuments.*

Settlement patterns

Settlement patterns refer to the way buildings and houses are distributed in an area. The geographic features mostly affect the settlement patterns. People settle in areas where they have access to water, transport, fertile soil for growing food, suitable climate and better schools and health services.

There are three main patterns of settlement

1. Linear settlement – Buildings are arranged in lines especially along roads *and rivers.*
2. Scattered/Dispersed settlement – People live away from each other. They *are scattered over a wide area.*
3. Clustered settlement –People live in groups around a central core (in a *cluster*).

Factors influencing settlement patterns

1.	Availability of water
2.	Quality of soil
3.	Climate
4.	Building materials
5.	Defence
6.	Easy access to basic services
7.	Land-use and pattern of agriculture
8.	Population density
9.	Relief
10.	Natural resources

Suggested Resources

1. Department of Education – FODE, *Grade 8 Environment and Resources* (2017), Port Moresby, NDoE.

Benchmark 10.1.2.3: Examine the relationship between physical geographic features and economic activities.

Topic 3: Physical geographic features and economic activities

Sub-topics:

- Economic activities
- Relationship between physical geographic features and economic activities

Skills: Analysis (examine)

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

- Examine the relationship between physical geographic features and economic activities.

Content Background

Geography and economy are closely tied together. For instance, transport makes trade with widespread areas possible. Water ways such as rivers, lakes and oceans allow for quick transit and even land features, such as oases and mountain passes, have been used to create trade routes over difficult areas.

Economic activities

An economic activity is the activity of making, providing, purchasing or selling goods or services. Any action that involves the production, distribution and consumption of commodities (goods and services) at all levels within a society is known as an economic activity. While the physical environment creates challenges and opportunities, humans' knowledge, skills and technology have helped humans overcome nature's challenges but have at the same time changed the natural systems and cycles to create adverse effects on humans.

Categories of economic activities

1. Primary sector - Raw Materials oriented industries such as Agriculture, Mining, Logging, Quarrying, Fisheries.
2. Secondary sector - Manufacturing and Industry oriented industries such as *Paradise Biscuits, Vitis Industries, Trukai Industries*.
3. Service sector - Tertiary industries such as Banking and Finance, Legal and Medical services, Hospitality and Tourism services (e.g. travel, hotels, recreation services).
4. Knowledge sector - Quaternary industries such as the school systems and other skills training institutions, universities, and colleges.

Factors that affect economic activities	
Positive factors	Negative factors
Landform – flatland Climate – not too hot, not too cold, not too wet, not too dry Water - plentiful Accessibility- through infrastructure and transport Available markets Available raw materials Appropriate level of technology Available capital, machinery & equipment Labour – available & affordable	Landform & climate - too hot, too cold, too dry, too mountainous Not enough available water Lack of road & transport access Less available markets – low demand Inappropriate level of technology Lack of capital, machinery & equipment Lack of available raw materials Labour – limited or too costly to afford

Suggested Resources

1. Department of Education – FODE, *Grade 8 Environment and Resources (2017)*, Port Moresby, NDoE.
2. G.Tyler.Miller, (1982). *Living in the Environment*. Melbourne. Thomas Nelson.
3. How geographic features affect economic activities. *Retrieved from: <https://study.com/academy/lesson/>*

Benchmark 10.1.2.4: Investigate the relationship between physical geographic features and population density.

Topic 4: Physical geographic features and population density

Sub-topics:

- Population density
- Relationship between physical geographic features and population density

Skills: Analysis (examine), evaluating (justify)

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

- Examine the relationship between physical geographical features and population density.

Content Background

Population distribution is a term used to describe how humans are spread across the earth. Population distribution across the earth is uneven. Some areas are densely populated whereas others are sparsely populated.

Population density

Population density is a measurement of population per unit of area or unit of volume. It is frequently applied to living organisms. For humans, population density is the number of people per square kilometre or square mile of land area.

Population density can be calculated by dividing the population by the area. For example, France has a population of 60,561,200 and an area of 551,695 square kilometres, so its population density is about 109.8 persons per square kilometre.

Three types of population density

1. Arithmetic density is the number of people per square unit of land.
2. Physiological density is the number of people per square unit of available *farmland*.
3. Agricultural density is the number of farmers per unit of available (arable *land*) *farmland*.

Factors affecting population density

The distribution of population in a specific or particular area can be affected by factors such as;

1. Physical factors such as relief, climate, water, the availability of resources and *landform type (shape and height of land)*
2. Population change (births, deaths, migration)
3. Life expectancy

For instance, in a mountainous region, population density is low because the area of arable land is limited, and it is difficult to maintain even the existing arable land.

Suggested Resources

1. Department of Education – FODE, *Grade 8 Environment and Resources (2017)*, Port Moresby, NDoE
2. G.Tyler.Miller, (1982). *Living in the Environment*. Melbourne. Thomas Nelson.

Benchmark 10.1.2.5: Use maps to show physical demographic features and settlement patterns, economic activities, and population density of PNG and other countries of the world.

Topic 5: Demographic features of PNG and other countries

Sub-topics:

- Physical demographic features
- Case Study- PNG and China

Skills: Applying (use maps)

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

- Examine demographic features.
- Investigate and analyse demographic features and settlement patterns, economic activities and population density of PNG to China.

Content Background

This topic will summarise what has been studied earlier about the physical geographic features and its relationship to settlement patterns, economic activities and population density. This topic is inclusive of the population study which is referred to as demography.

Physical demographic features or characteristics

Demographic information for a particular country is determined through these following features or characteristics and that is the socioeconomic characteristics of a population expressed statistically, such as age, sex, education level, income level, marital status, occupation, religion, birth rate, death rate, average size of a family and average age at marriage. This information is achieved through census where information is collected on the demographic factors associated with every member of a population.

There are other ways demographic information is presented such as population pyramids (structures), population density maps (choropleth maps) and settlement patterns maps etc.

This case study can be given as a project.

Demographic Information	PNG	China
Population		
Population Distribution by Region		
Annual Growth rate		
Sex ratio		
Doubling time		
GDP		
(Others etc...)		

The table given above is a sample of the information students are required to do research on. Teachers will have to design creative criteria to capture the content of the topic. Figures and graphs such as population pyramids and maps must be provided to substantiate their findings.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration. Port Moresby, NDoE.*
2. G.Tyler.Miller, (1982). *Living in the Environment.* Melbourne. Thomas Nelson
3. Demographic factors. Retrieved from: <https://www.businessdictionary.com>
4. Population demographics. Retrieved from: <https://ibis.health.state.nm.us/>

Unit 3: People and Resources

Content Standard 10.1.3: 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 10.1.3.1: Ascertain the different categories of migrants in PNG

Topic 1: Types of migration migrants in PNG

Sub-topic:

- Categories of migrants in PNG

Skills: Analysis (identify, explain), synthesis (create awareness, dramatize/replicate) Evaluation (justify)

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

- Identify the different categories of migrants in PNG.
- Describe the different categories of migrants in PNG.

Content Background

People have always been on the move (migrating) since history for various reasons. The movement of people from one place to another is called migration and usually refers to a permanent change or semi-permanent change of home. People who move from one place to another are called migrants. These migrants can be categorized as internal or external. Internal migrants in Papua New Guinea are those who move within the country, in most cases from rural to urban areas (rural-urban drift) or between two towns or cities especially on job transfer. External migrants are people who move in or out of Papua New Guinea. This involves movement of people across national boundaries and between countries. Papua New Guineans who move out of the country to live elsewhere are categorized as emigrants. Foreigners who migrate to Papua New Guinea are called immigrants. An emigrant is someone who moves out of a country while an immigrant is someone who moves into a country.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. G.Tyler.Miller, (1982). *Living in the Environment*. Melbourne. Thomas Nelson.

Benchmark 10.1.3.2: Analyse the reasons for people migrating to other places within PNG.

Topic 2: Internal migration in PNG

Sub-topic:

- Reasons for migrating within PNG

Skill: Analyzing (examine)

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

- Analyze the reasons for migrating within PNG.

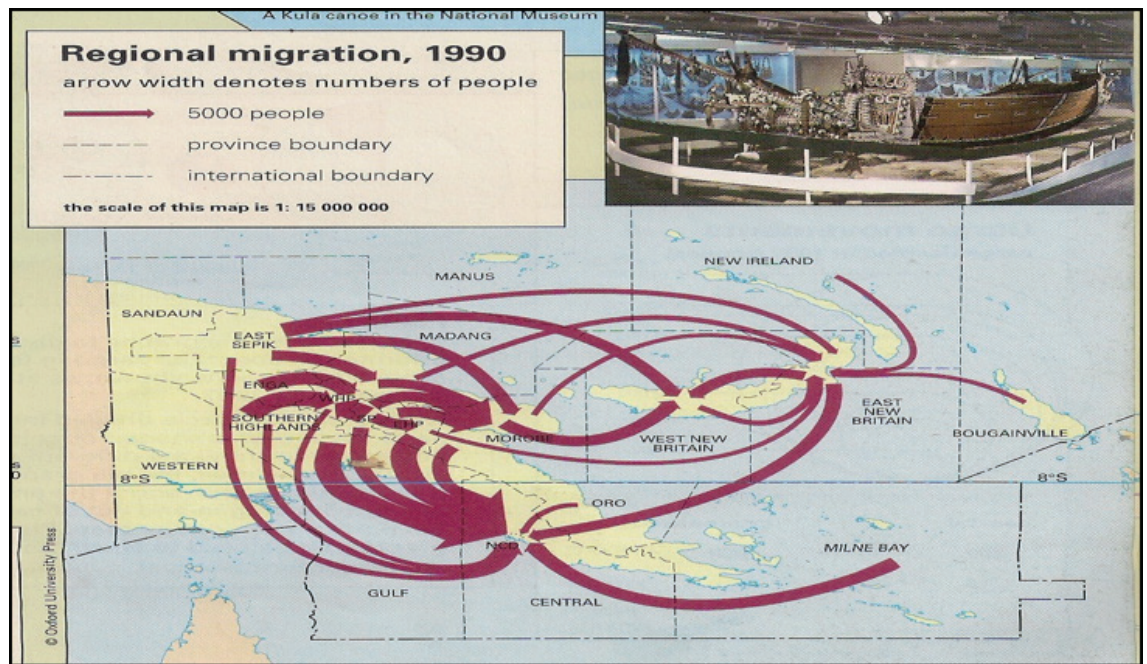
Content Background

Internal migration refers to the movement of people within a country. Most people find internal migration within a country easier than external migration. There are reasons for internal migration in Papua New Guinea. These reasons can be classified as **push** and **pull factors**.

Push factors are those factors which push or force people to move to new areas to live while **pull factors** are those factors that attract migrants to a new location. These are the reasons why people migrate from place to place.

Given below are some examples of push and pull factors.

Push factors	Pull factors
Tribal fights	Job opportunities
Natural Disasters	Better Health Services
None or poor basic services	Better Education Services
Sorcery	Security
Isolation	Easy and safe to do business
Poor infrastructures etc...	Bright light of the city etc...
Lack of economic opportunities	Accessibility to markets



Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. G.Tyler.Miller, (1982). *Living in the Environment*. Melbourne. Thomas Nelson.

Benchmark 10.1.3.3: Research and highlight Analyse the social, economic, political and cultural impact of human migration in PNG.

Topic 3: Impact of human migration in PNG

Sub-topics:

- Social impact of migration in PNG
- Economic impact of migration in PNG
- Political impact of migration in PNG
- Cultural impact of migration in PNG

Skills: Analyzing (examine)

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

- Analyze and evaluate the social, economic, political and cultural impact of human migration in PNG.

Content Background

When people move from place to place they affect both the place they are leaving (rural areas) as well as the place they are migrating to (usually urban areas). These impacts can be social, economic, political and cultural. Given below are some of these effects.

Social	Economic	Political	Cultural
Increase in urban population	Increase business activities in urban areas to meet the demand of increasing population	Leaders are more focused on improving municipal services to meet the demand of the increasing population	Loss of cultural identity through cultural diffusion including – loss of local languages, extinction of culture and traditions
Decrease in rural population	Drop in the sale of primary products as people have turn to do other things in urban areas	Increase voting power of leaders in urban areas	Nepotism in the workforce which affects the quality of labour
Loss of workforce in rural areas	Businesses affected by increased crime rates in the urban areas	Decreasing voting power for leaders in rural areas etc...	Ethnic clash in urban squatter settlements
Increase unemployment in urban areas	People find employment in businesses that will then increase production of goods and services etc.	Rural areas are given less consideration by leaders in improving basic infrastructure and service delivery	
Increase crimes and lawlessness in urban areas.	Puts a strain on the available municipal services.		

Poor living conditions for those living in squatter settlements			
Better living conditions for those who are able to find jobs etc.			
Overcrowding that can lead to the easy spreading of contagious diseases			

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. G.Tyler.Miller, (1982). *Living in the Environment*. Melbourne. Thomas Nelson. (any of the latest publications)

Benchmark 10.1.3.4: Examine the impact of migration on the security of places and people, and the management of conflicts and its consequences in PNG.

Topic 4: Migration issues in PNG

Sub-topics:

- Impacts of migration on the security in PNG
- Management of conflicts in migration and its consequences in PNG

Skills: Analyzing (examine)

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

- Analyze the impacts of migration on security of places and people in PNG.
- Examine how conflicts in migrations are managed.
- Identify and evaluate the consequences of these conflicts.
- Create awareness, policies or systems and models of security systems to control migration and monitor migration within PNG.

Content Background

a. Impacts of migration on the security of people and places

- i. Sending community (where people migrate from)
 - Loss of manpower to defend family, villages or community from enemy attack i.e. tribal fights or to protect young and old women from sexual harassment also stealing from the gardens and houses of the old people and vulnerable women.
- ii. Receiving Community or Host Community (where people migrate to)
 - Creates insecurity for urban dwellers with likelihood of rural migrants becoming involved in crime and other petty offences
 - Increase in ethnic segregation and leads to ethnic violence
 - Creates security issues with law enforcement in urban areas (crowd controlled dilemmas)
 - Increase in security personal for urban communities leading to more expenses for the government to maintain peace in the communities.

b. Management of Conflicts

- i. Management of conflicts in urban areas involves the law enforcing body, political leaders, towns and city managements, groups and individuals.
- ii. In rural areas conflicts are also managed by law enforcing bodies such as provincial leaders, councilors, clan leaders and individuals of notable standing.

c. Consequences

- i. If the conflict is resolved through the law enforcing body it may result in
 - imprisonment, community service, good behavior bond, compensation, restraining orders and alternative dispute resolution.
 - ii. Conflicts resolved in most rural settings results mainly in a consensus or a compensation.
-

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. G.Tyler.Miller, (1982). *Living in the Environment*. Melbourne. Thomas Nelson. (any of the latest publications)

Benchmark 10.1.3.5: Use available data to construct and interpret tables, graphs and maps to show the migration routes, patterns and trends and the origins of migrants in Papua New Guinea.

Topic 5: Migration routes, patterns and trends in PNG

Sub-topics:

- Migration routes of the migrants in PNG
- Migration patterns and trends in PNG

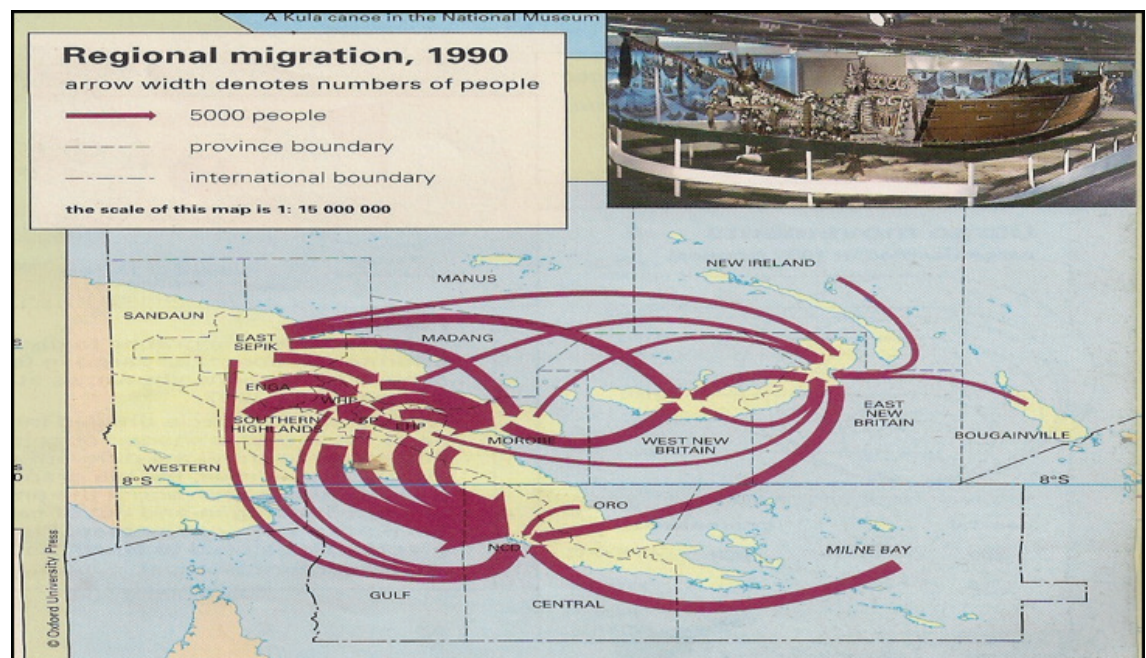
Skills: Applying (use data to show)

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

- Research on the migration routes taken by groups of people who were the first to migrate to other places and provinces within Papua New Guinea.
- Analyze the patterns and trends of migration in PNG.

Content Background

The most common type of migration in Papua New Guinea is the internal migration. It can either be voluntary or forced. The reasons for migrating have been discussed in Topic 2. The destinations of most of the migrants are mainly towns and cities in Papua New Guinea (Rural-Urban Drift). Today, a lot more people in rural areas are moving into big towns and cities like Port Moresby, Lae, Mt Hagen and Rabaul. Rural-Urban drift is now an issue our government is faced with. The map below shows the migration route of Papua New Guinea in 1990.



Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. G.Tyler.Miller, (1982). *Living in the Environment*. Melbourne. Thomas Nelson. (any of the latest publications)

Unit 4: People and Environment

Content Standard 10.1.4: Students will be able to evaluate how geographic processes and human actions modify the environment and how the modified environment affects humans.

Benchmark 10.1.4.1: 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

What is land use? Land use involves the management and modification of natural environment or wilderness into built environment such as settlements and semi-natural habitats such as arable fields, pastures, and managed woods. It also has been defined as "the total of arrangements, activities, and inputs that people undertake in a certain land cover type."

There are five main types of land uses.

(i) Residential

What type of home do you live in? Whether you live in an apartment, townhome, house, or other type of home, the land where you live is used for **residential** purposes. This means the land is used to provide housing for people to live in.

(ii) Agricultural

If you've ever visited a farm, you've witnessed **agricultural** land use. Land used for agriculture primarily produces food for people to eat. This could be growing fruit or vegetables or raising livestock that produce meat, eggs, and poultry. The next time you eat your favorite meal, remember that agricultural land use made it possible!

(iii) Recreational

Do you like to go swimming at the pool or hike at the park? If you do, you have definitely taken advantage of **recreational** land use. This means that the land is being used to provide a place for people to relax and play. Many of the lands used for recreation include natural features of the land that are already there, including hiking on mountains, swimming in seas/rivers and climbing trees.

(iv) Infrastructure

Have you ever wondered why an airport would require such a very large open space and area of land? Definitely, enough land area and space must be made available for easy access for roads, railways, and airports to be built.

(v) Commercial

You see many people commute to work at one particular location because it has been specifically designed to cater for commercial purposes for businesses and factories.

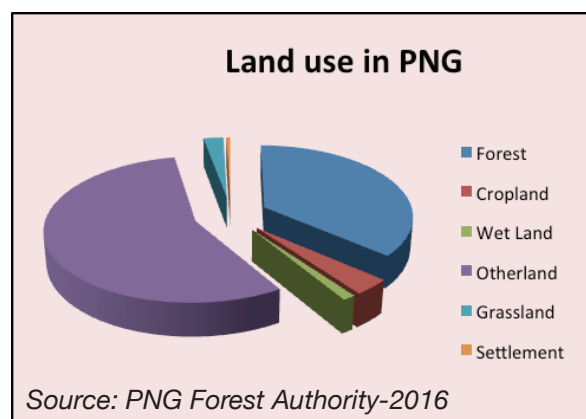
Types of land use in PNG

According to a study conducted and archived by the United Nations University (1993) before independence, the land use was largely for plantations, cash cropping of indigenous food crops and old exploration. Thereafter and to date recent studies have shown an increase in land use and with relation to the five main types of land uses.

According to recent studies Papua New Guinea has a total of about 46.9 million hectare of which 77.8% is forested with 13 natural forest types and forest plantations with various species planted. The second major land use in PNG is cropland, which covers 11.0% of the total land area. Grassland covers 5.3% and wetland comprised 4.8% of the total land mass. Other Land including bare soil and rock covers 0.2% of the total land area. Settlements including villages and cities cover 0.9% of the land area.

Source: Papua New Guinea's National REDD+ Forest Reference Level 2017

Below is a graphical representation of the types of land uses in PNG



Land Uses	Percentage (%)
Forest	80.4
Cropland	8.4
Wet land	2.9
Other Land	1.3
Grassland	5.7
Settlement	1.1

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Siobhan McDonnell, Mathew .G. Allan & Colin Filer (editors), (2017). *Kastom, Property and Ideology – Land transformations in Melanesia*. Australia, Australian National University Press.
3. PNG land use type – 2015. Retrieved from: <https://png-data.sprep.org/>
4. Types of land uses. Retrieved from: <https://study.com › academy/>

Benchmark 10.1.4.2: Analyse the different strategies, policies, and regulations for mobilizing land for development.

Topic 2: Land mobilization for development

Sub-topic:

- Strategies, policies and regulations for mobilizing land for development

Skills: Analyzing (analyse)

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

- Examine and evaluate the different strategies, policies and regulation for mobilizing land for development.
- Create awareness, policies or systems on land mobilization for PNG.

Content Background

According to Gina Koczberski et.al (2017), customary land in Papua New Guinea remains a critical livelihood asset. With less than 5 percent of the land under freehold title or state leases, the management of present and future demands for customary land for housing, services and livelihoods in the rapidly expanding urban and rural growth centers is a critical development challenge. Study by Silloito, 1999 stated that most people in PNG, as in other parts of the Pacific, hold a strong connection and attachment to land. Land is at the heart of economic life, cultural and spiritual beliefs, and an individual and groups' sense of social identity and belonging.

What then is land mobilization?

Land mobilization refers to villages using their land as communal asset to benefit in terms of monies and services supposing there is understanding and cooperation amongst everyone which is highly unlikely in most cases. Villages form what are known as cooperatives, societies or Incorporated Land Groups (ILGs) for lease to the government. According to Allen in Denoon & Snowden (1981;113) this idea came about after World War II (1942), where locals allocated parcels of their land through collective decisions for communal benefits. Their aim was because they wanted to achieve equivalence with Europeans. Thus, they began by launching a series of unprecedented (extraordinary) initiatives such as rice growing and utilised some form of cooperative movement, frequently known as "Kampani". After the Pacific War, important changes occurred in the approach to development and the Administration placed emphasis on the development of communal cash cropping on supposedly "communal" land, such as that initiated for the Mekeo rice schemes. Full cooperatives were developed from loosely formed organizations such as the Rural Progress Societies that evolved in villages all over PNG; however they all failed in the long run. Disputes arising from the use of land for the schemes, problems of leadership and the flagging interest of groups unaccustomed to the new bases of economic cooperation, led to the redirection of emphasis towards family rather than communal enterprise. This policy of encouraging individual family farming was firmly established by 1956 (Denoon in Denoon & Snowden, 1981: 176).

However, the current trend indicates that the customary landowners are dealing out of the legal framework as supported by research (Chimhowu and Woodhouse 2006; Peters 2007; Becker 2013) where land owners who seek to capitalize on the demand for land are developing their own informal arrangements for land mobilization and modifying customary land practices, in most cases successfully. For instance, in several parts of Africa where land remains under customary tenure and demand for land by 'outsiders is great, government efforts in plan reform often lag well behind what is happening on the ground as landowners develop their own informal land arrangements.

Strategies, Policies and Regulation

Under PNG law, customary land cannot be sold; however those wanting to commercialise this land have developed mechanisms to transform its character. The first step is land registration, a process which defines title and opens it up to transactions. An immediate problem of this is that a once priceless asset is opened to the vagaries (ideas) of the commercial world, in a traditional environment where price often has little to do with value. On the few occasions where customary land has been registered, then leased, given over or sold, enormous disputes revolve around loss of benefits, or over sharing the benefits of land. The question of valuing customary land, therefore, is of considerable importance to the small landholders who happen to make up the vast majority of PNG's population (Tim Anderson, Land registration, land markets and livelihoods in Papua New Guinea).

Strategies

These are some of the strategies (plans) that have been developed to assist in achieving a mutual understanding between customary landownership and the government and private sectors in support for development based on recognition and management of customary land tenure and not tenure conversion (Power and Tolopa, 1992, 161).

- Readiness Preparation Proposal (R-PP) Papua New Guinea December 2013
- Forest Carbon Partnership Facility (FCPF)
- Papua New Guinea Vision 2050
- PNG Development Strategic Plan (2010-2030)
- PNG Medium Term Development Plan 2 (2016-2017)
- PNG Development Strategic Plan 2010-2030
- Medium Term Development Goals/post 2015 Goals
- National Agriculture Development Plan (2007-2016)
- National Land Development Program
- National Climate Compatible Development Management Policy (& previous CCDS) 2014
- National Human Development Report – UNDP PNG's National REDD+ Strategy FCPF REDD+
- National REDD+ Strategy 2017-2027 (Reducing Emission, Deforestation and Degradation)

Policies

- Climate Compatible Development Management Policy 2013-2015
- National Protected Areas Policy
- National Food Security Policy

- National Forest Policy
- National Urbanization Policy 2010-2030
- Public Private Partnership Policy
- National Sustainable Land Use Policy 2015

Regulations through the national laws that assists with matters dealing with customary land ownership

National Laws

- Land Act 1996
- Land Registration (Amendment) Act 2009
- Incorporation Land Group (Amendment) Act 2009
- Environment Act 2000
- Physical Planning Act 1989
- National Housing Commission Act
- Building Act Chap.301
- Mining Act 1992
- Informal Sector Development and Control Act 2003
- Organic Law on Provincial Governments & LLGs 1998
- Planning and Monitoring Responsibility Act 1989 Physical Planning Act

International bodies that can assist with customary land ownership matters.

International Legal framework

- Millennium Development Goals 2015
- United Nations Framework Convention on Climate Change
- United Nations Convention on Biological Diversity
- United Nations Convention on Combating Desertification as well as international agreements such as the Agenda 21 or the Declarations on forests
- Sustainable Development Goals (SDGs) 2030
- United Nations Convention on Environment and Development (Rio Declaration)
- United Nations Convention on Biological Diversity (UNCBD)
- United Nations Convention on Human Settlement (UNCHS)
- The Cartagena Protocol on Biosafety
- The Kyoto Protocol on Stabilizing Greenhouse Gas Emissions
- The Paris Agreement on Keeping Global Temperature Well Below Two Degree Celsius
- General Deforestation, legal reform and law enforcement

Support from government such as the Land Mobilization Project assists the Government's Land Mobilization Program, which aims to contribute to economic growth through more productive use of land resources, while promoting equity, employment, participation and social stability. The project supports all six components of the program with technical assistance, additional contract and local staff, equipment, and buildings. These components are: (i) improved land use planning through the establishment of the interdepartmental National Land Management Committee; (ii) general institution building to establish improved land policies, legislation and procedures; (iii) development of an improved and cost effective system for the administration of alienated land; (iv) development of an acceptable and

cost-effective approach to customary land registration and mobilization for economic development; (v) decentralization of the alienated land (Land-Mobilization-Projection process); and (vi) development of an up to date information base for customary and alienated land.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. International Business Publications. (2013). *Papua New Guinea Land Laws and Economic Development Handbook*, USA, International Business Publications.
3. Siobhan McDonnell, Mathew .G. Allan & Colin Filer (editors), (2017). *Kastom, Property and Ideology – Land transformations in Melanesia. Australia, Australian National University Press*.
4. Tim Anderson, Land registration, land markets and livelihoods in Papua New Guinea. Retrieved from: <http://milda.aidwatch.org.au/>
5. Wilson Thompson Orlegge and Mawe Bacchi Gonapa, Melanesian Land Tenure and Management System and Its Impact On agriculture Productivity In PNG. Retrieved from: <http://devpolicy.org/>

Benchmark 10.1.4.3: Explain the difference between Undeveloped Land (UDL) and Special Business Agriculture Land (SBAL)

Topic 3: Undeveloped Land (UDLs) and Special Agricultural Business Lease (SABLs)

Sub-topics:

- Features of UDLs and SABLs
- Differences between Undeveloped Land UDL and Special Business Agriculture Land SBAL

Skills: Understanding (explain)

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

- Research the main features of UDLs and SABLs.
- Analyse the differences between Undeveloped Land (UDL) and Special Business Agriculture Land (SBAL).
- Create awareness, policies or systems on land mobilization for PNG.

Content Background

Land as we have studied earlier is very important to all people (Silloitoe, 1999). It is especially a challenge to the customary land owners to meet the development demands of the government in terms of the growing demand for land for housing, industries, services and others to name a few according to Gina Koczberski et.al (2017).

What is the difference between Undeveloped Land (UDLs) and Special Agricultural Business Lease (SABLs)?

Undeveloped Lands (UDLs)

According to Matt Patryni (2017), undeveloped land is usually an area that lacks the infrastructure, services and buildings that are often characterized as urban development. Often, undeveloped land is improved in the sense that buildings and infrastructure have altered its wild state. More rigorous definitions of undeveloped land may exclude working farms, ranges and forests, and include only wilderness preserves and natural areas.

- **Farm land:** Is often included in the definition of undeveloped land because it is not usually equipped with urban services, largely because fewer people live there. It lacks services such as municipal water and sewer systems that normally support larger population.
- **Forest and Range Land:** A considerable amount of undeveloped land is held by the government. This land is not equipped with the urban services needed to support houses and businesses. The government--through agencies like the Bureau of Land Management--conserves this land for the economic value of timber and pasture.
- **Preserves and Wilderness Area:** Other undeveloped land is set aside in its natural state. A stricter definition of undeveloped land may include only these areas. This land is managed to conserve recreational and ecological value, but is not usually used for its natural resources. Legislation like the Wilderness Act and National Park Service Organic Act sets aside this land for long-lasting protection.

Special Agricultural Business Lease (SABLs)

According to a study conducted by www.actnowpng.org, SABL is a temporary acquisition of customary land for a given period of time for the purpose of establishing a plantation or other agriculture business. It is intended that when the term of an SABL ends, the land will go back to its customary owners. There is no rent or compensation payable for this type of lease and all customary rights in the land, except those, which are specially reserved, are suspended for the period of the lease. The lease can be granted to either a person, a group, or to a company; but the landowners must agree on who gets the lease. Under the Land Act 1996, section 102 (ii) clearly states that the term of an SABL shall not exceed 99 years. Most SABLs have been issued for the maximum term.

An enquiry conducted by Haus Ples in 2018 on land titles stated that according to Mr Benedict Batata, Commissioner for the Land Titles Commission and Mr Aquila Sampson, SABL dates back to colonial periods where land was acquired by colonizers especially for large plantations which are apparent in the New Guinea islands. Though traditional land ownership was recognized by the colonizers the British colonizers went onto introducing their land ownership systems of freehold and leaseholds to profit from the rich resources of Papua New Guinea.

According to Colin Filer (The Formation of a Land Grab Policy Network in Papua New Guinea) SABL was already introduced in the colonial period. In 1979 SABL was reinforced through the invention of the land scheme called the lease-lease back scheme in order to compensate for the absence of any other legal institution that would enable customary landowners to register titles to their own land. This absence was seen as an obstacle to rural development because 97 per cent of PNG's total land area was still customary land, and the ownership of this land was almost entirely illegible (not readable) to the state and to private businesses. The idea behind the **lease-lease back scheme** was that groups of customary landowners could lease some of their land to the government, which would then create a formal title over it and lease it back to the landowners. The landowners would then have a piece of paper that they could use as security for a bank loan or as the basis for granting a sublease to a third party for some developmental purpose.

The current legal form of the lease-lease back scheme is represented in two sections of the Land Act. Section 11 says that the minister 'may lease customary land for the purpose of granting a Special Agricultural And Business Lease Of The Land', while Section 102 (Kastom, Property and Ideology, 170) says that 'a special agricultural and business lease shall be granted: (a) to a person or persons; or (b) to a land group, business group or other incorporated body, to whom the customary landowners have agreed that such a lease should be granted'. Section 11 also says that: an instrument of lease in the approved form, executed by or on behalf of the customary landowners, is conclusive evidence that the State has a good title to the lease and that all customary rights in the land, except those which are specifically reserved in the lease, are suspended for the period of the lease to the State.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Siobhan McDonnell, Mathew .G. Allan & Colin Filer (editors), (2017). *Kastom, Property and Ideology – Land transformations in Melanesia*. Australia, Australian National University Press.

Benchmark 10.1.4.4: Compare and contrast the advantages and disadvantages of developing UDLs and SABLs.

Topic 4: Developing UDLs and SABLs

Sub-topic:

- Advantages and disadvantages of developing UDLs and SABLs

Skills: Analyzing (compare, contrast)

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

- Examine the advantages and disadvantages of developing UDLs.
- Analyse the advantages and disadvantages of developing SABLs.
- Create awareness on the advantages and the disadvantages of developing the UDL's and SABL.

Content Background

Many countries around the world face similar issues and challenges dealing with land ownership regarding land held under freehold and leasehold and Papua New Guinea is no exception. Here in Papua New Guinea landownership are held either as freehold or leasehold and largely customarily owned. Almost 97% the land in Papua New Guinea are customarily owned.

Customary land not utilized for economic benefit or business (capital) activities can be regarded as undeveloped land. With the growing demands of the population for basic amenities and infrastructure the government has a huge challenge of easing these burdens therefore should work collaboratively with the customary landowners to free up their lands for these purposes. Unless and until customary lands are registered as Incorporated Land Groups (ILG)'s can it be allowed for development. The constitution through The Land Act 1996 protects customary land ownership from any misfits or misconstrues from the developers. Thus, the government should work closely with the customary landowners.

Developing Undeveloped Land (UDL)

Land especially customary land not registered means that it is not recognized by the government and thus is at the mercy of the private developers. However, as mentioned the customary land owners have The Land Act 1996 to protect them. Therefore, any deals for land use for development must be closely scrutinized to allow for maximum benefit to the landowners.

Advantage(s)	Disadvantage(s)
<ul style="list-style-type: none"> - Land owners have the discretion to sell land without having to go through lengthy processes as they are not guided by any act but their own informal land agreements pursuant to their society's way of dealing with land. (Chimhowu and Woodhouse 2006; Peters 2007;Becker 2013). 	<ul style="list-style-type: none"> - No form of royalty or compensation supposing the developers cause more damage to their land since their land is not registered. They will now pay the price of spending their own money to sue the company for the damages.

Developing SABLS

The SABL scheme was introduced to give customary landholders an opportunity to participate in economic activities. Sections 11 and 102 of the Land Act give the Minister the power to obtain customary land for agriculture business. The Minister is to negotiate with the customary land holders and sign a contract on behalf of the State. The land is supposed to be taken only after receiving the expressed consent of the customary landholders. The Minister then issues a State Lease over that parcel of land and leases it back to the landholders for “agricultural or economic development purposes”.

Advantage(s)	Disadvantage(s)
<p>The customary land owners receive economic and capital benefit from the government and the private developers.</p> <p>They can claim compensation from the government and the developers upon which encountering damages to their local environment affects their livelihood since their land has been registered.</p>	<p>Once the land is given up for lease it will be in the hands of the developers for the next 99 years meaning local people's land rights are effectively destroyed. (www.coolearth.org>2015/09)</p>

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. International Business Publications. (2013). *Papua New Guinea Land Laws and Economic Development Handbook*, USA, International Business Publications.
3. Siobhan McDonnell, Mathew .G. Allan & Colin Filer (editors), (2017). *Kastom, Property and Ideology – Land transformations in Melanesia*. Australia, Australian National University Press.

Benchmark 10.1.4.5: Critique national strategies and actions for managing and preventing the abuse of these land UDLs and SABLs, and the consequences

Topic 5: Managing UDLs and SABLs

Sub-topic:

- National strategies and actions for managing and preventing the abuse of these (UDLs and SABLs) land

Skills: Evaluating (critique)

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

- Examine and evaluate the national strategies and actions for managing and preventing the abuse of UDLs and SABLs.
- Discuss the consequences of abusing UDLs and SABLs.
- Create awareness on managing these land.

Content Background

Customary landowners, developers, the government and or the private businesses must work collaboratively to maximize benefits from the use of lands which are Undeveloped Land (UDLs) and those given up for Special Agricultural Business Lease (SABLs).

However, according to The Final Report of the Commission of Inquiry (COI) Into Special Agricultural and Business Lease (SABL) by John Numapo et al, 24th June 2013:04), the report purported that the current SABL setup must be completely done away with. This was because of the gross abuse of this form of land lease by the private investors.

The National Constitution of Papua New Guinea protects customary land owners from any serious matters relating to their land.

• **The Law Governing Land Acquisition in Papua New Guinea**

The Land Act 1996 governs the administration of all land in PNG. Section 132 prohibits selling or leasing customary land to foreigners.

There are two types of Land in PNG: 97% is Customary Land and 3% is State Land. The State has three different methods of acquiring land from customary landholders. It can acquire customary land by Agreement (Section 10), through a lease-lease back process (Section 11 and 102) and by compulsory acquisition (Section 12).

• **The cause of abuse and public concerns over SABL**

There are several reasons why SABL has been abused.

- Section 175 of the Land Act states that regulations must be developed for *the administrative procedures for granting SABL. This has never been done.*
- There is also no policy framework developed for SABL. The Department of Lands and Physical Planning (DLPP) has always used informal processes to grant SABL.

- iii. There is no legal limit on the size of an SABL land area and the allowed *length of a lease is too long. This has resulted in areas of more than 100,000 hectares being taken for up to 99 years.*
- iv. A Forest Clearance Authority (FCA) is used in SABL areas to allow *clearing of vegetation but the clearance is not limited to areas for planting. FCA is issued under the Forestry Act but there are no linking provisions to the Environmental Act so there is no control of environmental impacts.*
- v. There is no amalgamated agriculture law that describes the process and *regulates large-scale agriculture projects. The Department of Agriculture is not involved in issuing SABLs, despite the Lease being for agriculture purposes.*

The summary findings of the Commission of Inquiry into SABL (2011) stated that there is;

- i. *Widespread abuse, fraud, lack of coordination between government agencies, and failure and incompetence of government officials to ensure compliance, accountability and transparency within SABL process from application stage to registration, processing, approval and granting of the SABL.*
- ii. *Undue political pressure put on government officers by government ministers and other politicians to fast-track SABL applications and issue titles.*
- iii. *Incompetence, failure, inaction and lack of commitment by government officers and agencies to properly and diligently carry out their statutory functions. Legal requirements were deliberately breached and proper processes and procedures were either bypassed or simply ignored.*
- iv. *Consent of landholders were fraudulently obtained, through misrepresentation, for SABL titles to be issued directly to foreign owned companies, thus landholders were not aware of the particular entities or groups who were granted an SABL over their customary land.*
- v. *SABLs were sold to foreign companies for the whole or balance of the 99 years, leaving NO residual rights for the landowners. The inquiry found that 58 out of 75 SABLs were for 99 years.*

The government is working on improving this issue through the National Land Development Program (NLDP) as stated by the COI (John Numapo, et al, 24th June 2013, (p225). The result should produce tangible outcomes.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. International Business Publications. (2013). *Papua New Guinea Land Laws and Economic Development Handbook, USA, International Business Publications*.
3. Siobhan McDonnell, Mathew .G. Allan & Colin Filer (editors), (2017). *Kastom, Property and Ideology – Land transformations in Melanesia*. Australia, Australian National University Press.

Benchmark 10.1.4.6: Examine the problem of land grabbing and its consequences on the people, places and the environment

Topic 6: Land grabbing and its consequences

Sub-topics:

- Forms of land grabbing
- Consequences of land grabbing on the people, places and the *environment*

Skills: Analysis (examine)

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

- Examine the forms of land grabbing.
- Analyse and evaluate the problem of land grabbing and its consequences on people, places and the environment
- Create awareness on the impact of land grabbing and its consequences on the people, places and the environment

Content Background

Village communities in Papua New Guinea (PNG) are historically, culturally and spiritually connected to their land. 97% of land in PNG is customary land. This means it is communally owned by large tribal groupings and it is impossible to move people easily from one place to another. Customary land in PNG is used for gardening, hunting and gathering and sourcing building materials, fuel and medicines. In theory, the PNG Constitution protects customary landowners from unjust deprivation of traditional land. In the 1970s the government introduced a land scheme called Special Purpose Agriculture Business Leases (SABL) with the intention of helping landowner participation in economic activities. This scheme has been abused since 2003 and it has been used to steal over 5 million hectares of customary land. "...Between 2003-2011, 5.2 million hectares of Customary Land (11% of PNG land area) passed into the hands of national and foreign corporate entities for 99 years. This is twice the amount of land 'grabbed' by corporate interests across 5 African countries in a similar period..." (Filer 2011). Thus this situation will now be termed as land grabbing.

Forms of land grabbing

SABL clearly is a form of land grabbing in the guise of agribusiness and logging. This is supported by reports from investigations through The Commission of Inquiry- 2013 (COI) and The Cairns Declaration (2011). As quoted by Daniel Ase Director of the Centre for Environmental Law and Community Rights (CELCOR) in PNG, 'SABL is massive land grabbing... basically for large scale industrial logging'. CELCOR also added that, 'most of these areas that SABL has been granted for developing are located in areas of high biodiversity'.

Land grabbing and its consequences

A study showed that since 2008 the issue of ‘land grabbing’ gained global attention for its malice in that manipulative tactics were used by private investors as well as the governments for personal gains than for the landowners and the country as a whole. Land grabbing refers to large-scale land acquisition mainly by private investors but also by the public investors and agribusiness that buy farmland or lease it on a long-term basis to produce agricultural commodities.

As quoted by William Laurance, a leading conservationist biologist with James Cook University, “virtually all of Papua New Guinea is owned by one communal group or another and at least these groups have to approve any development on their land. This is one key reason for the SABLs- it’s a way for the government to carve off large chunks of land for major logging and other developments, and to greatly diminish the role of local communities” (Laurance,2008).

He further stated that revenue made from these deals is not aiding poverty alleviation effort in Papua New Guinea. The profits are instead mostly ending up in the hands of foreign corporations and political elites in Papua New Guinea. Further findings by William and a team of 26 experts of biologists, social scientists and NGO staff stated that, land in Papua New Guinea, with its resources, its spiritual attachment to its people and many more is under threat by the fact that the government is using SABLs to grant large sections of land without going through the proper channels. Already 2 million hectares (nearly 5 million acres) of the land has been slated (lined up) for clearing by the aptly named ‘Forest Clearing Authorities’.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. International Business Publications. (2013). *Papua New Guinea Land Laws and Economic Development Handbook, USA, International Business Publications*.
3. Siobhan McDonnell, Mathew .G. Allan & Colin Filer (editors), (2017). *Kastom, Property and Ideology – Land transformations in Melanesia*. Australia, Australian National University Press.

Strand 2: History

This strand has 7 units. 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: Major events that have shaped the history of the Pacific Region Topic 2: Events that occurred in the Pacific Region Topic 3: Comparison of major events that shaped the history of the Pacific Region Topic 4: Construction, storage, management and dissemination of Pacific History Topic 5: Colonisation in the Pacific
2. Systems of Power, Authority and Governance	Topic 1: Change of governments overtime in the Pacific Region Topic 2: Election processes in the Pacific Region Topic 3: Influence of individuals and groups in the Pacific Region Topic 4: Contributions by external organisations to the Pacific Region
3. Culture and Society	Topic 1: Transmission of culture in the Pacific Region Topic 2: Dominant and minority groups in the Pacific Region Topic 3: Sustaining culture in the Pacific Topic 4: Colonizers' cultures in the Pacific
4. Development and Sustainability of Societies	Topic 1: Government and change in the Pacific Topic 2: Impact of foreign government actions in the Pacific Region Topic 3: Impact of the changes in the Pacific Region Topic 4: Government policies and plans in the Pacific Topic 5: Promoters and sustainers of change in the Pacific Region Topic 6: Religion and change in the Pacific Topic 7: Military force and change in the Pacific Region Topic 8: Intervention of external forces in the Pacific Region
5. Economic Needs and Wants	Topic 1: Economic systems in Asia Topic 2: Impact of economic decisions on the people and environment Topic 3: Economic influence on movement of people Topic 4: Economic influence on conflicts in Asia
6. Geographical Influences on Historical Events, People, Places and Environment	Topic 1: Geographical systems of Asia and Pacific Topic 2: Influence of geographical systems on development and relationships in Asia Topic 3: Asia's development: past and present Topic 4: Regional and global development influences

Units	Topics
7. Historical Inquiry	Topic 1: Validity and reliability historical events in PNG Topic 2: Impact of historical events on societies in PNG Topic 3: Impact of national issues or events on individuals Topic 4: Outcomes of a Contested event s and issues Topic 5: Effects of national events or issues on people and environment

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 10.2.1.1: Identify and interpret major social, political, economic, religious and cultural events that have shaped the history of the Pacific Region.

Topic 1: Major events that have shaped the history of the Pacific Region

Sub-topics:

- Political events that have shaped the history of the Pacific Region
- Economic events that have shaped the history of the Pacific Region
- Social events that have shaped the history of the Pacific Region
- Religious events that have shaped the history of the Pacific Region
- Cultural events that have shaped the history of the Pacific Region

Skills: Understanding (Identify, interpret)

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

- Examine the major social, political, economic, religious and cultural events that have shaped the history of the Pacific Region.
- Analyse Interpret and evaluate major events that have shaped the history of the Pacific Region.
- Visit sites of these major events that have shaped the history of the *Pacific Region*.
- Dramatize/replicate these major historical events.

Content Background

The Pacific Region covers a vast area of more than two thousand Islands ranging from continental New Zealand and PNG to the tiny remote islands of the Pacific Ocean. The Pacific people have constructed knowledge of their past from multiple and various type of sources to make sense of historical patterns, periods of time and the relationship among these elements. There are many political, economic, social, religious and cultural events that have shaped the history of the Pacific Region. Warfare, or military coups are political events that have shaped the course of history. One example is the "Tongan expansion wars" fought about 200 to 300 years ago. King George Tupou I, dominated Western Polynesia. King George Tupou 1 is sometimes called "Maker of Modern Tonga" because of his bravery to rule and maintain the Monarchy even when the Europeans defeated Tonga. For example, Colonel Sitiveni Rabuka, who orchestrated two coups in Fiji, seized power in part to protect and propagate Fijian Christian values along with those of chiefly custom.

In PNG, The Bougainville Crisis affected the economy, social and culture of the Bougainville people as well as PNG. Villages, homes, environment, women and children were affected and many were killed. PNG's economy was hard hit as during that time much of the government's budget was coming from Bougainville Copper Mine.

Recently, PNG hosted the APEC Leaders meeting in Port Moresby. It was a global economic event that changed the general perception of our people, those in the Pacific Regions and the world. All events are historical sources that can be studied to make sense of the history of PNG and the rest of the Pacific Region.

Suggested Resources

1. Eric Johns, (2006), PNG History through Stories, Book 1½. Australia, *Pearson Publishing*.
2. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, *Oxford University Press*.
3. Colonisation – Retrieved from: <https://en.wikipedia.org/wiki/>
4. Pacific Region – Retrieved from: <https://en.wikipedia.org/wiki/>

Benchmark 10.2.1.2: Define and investigate a social, political, economic, religious and cultural event that occurred in the Pacific Region.

Topic 2: Events that occurred in the Pacific Region

Sub-topics:

- Political events that occurred in the Pacific Region
- Economic events that occurred in the Pacific Region
- Social events that occurred in the Pacific Region
- Religious events that occurred in the Pacific Region
- Cultural event that occurred in the Pacific Region

Skills: Remembering (define), analyzing (investigate)

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

- Identify and investigate social, political, and economic, religious and cultural events that occurred in the Pacific Region.
- Analyse and evaluate these the impact of social, political, and economic, religious and cultural events on the people of the Pacific Region.
- Dramatize or replicate major historical events.

Content Background

The Pacific Region is divided into 3 Cultural and ethnic groups: Melanesian, Polynesia and Micronesia. Many events that have influenced and shaped the people of the Pacific and its history varies.

Political events like decolonisation and independence did not come the same because of different colonial masters. Most Melanesian countries won independence during the 1970s and are now governed by indigenous elites. Yet it is within these Melanesian countries of the Pacific that more often encounters the most serious political crises. For instance, armed rebellion on Bougainville seeking separation from Papua New Guinea in relation to culture and mainly resources use. Likewise, Fiji's cultural identity and integrity have also caused the military government of Fiji to justify the denial of rights to Indo-Fijians.

In the Pacific, foreign-owned multinational companies extract timber, minerals, oil, fish, and other natural resources in aid of these island nations to sustain their economies. Economic dependence has forced many island governments to promote large-scale development, rapidly expand tourism, and accede to the military ambitions. For example in PNG, Exxon Mobile and Oil Search have gone into large scale extraction of oil and gas in Southern Highlands, Hela and Western Provinces. In terms of religion though nineteenth-century European missionaries met initial resistance in many areas, however, most Islanders now are able to accept and integrate Christianity and its practices into their daily lives.

Suggested Resources

1. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
2. Colonisation – Retrieved from: <https://en.wikipedia.org/wiki/>
3. Pacific Region – Retrieved from: <https://en.wikipedia.org/wiki/>
4. Pacific Region – Retrieved from: <https://www.britishempire.co.uk/>

Benchmark 10.2.1.3: Use available information to document and compare the social, political, economic, religious and cultural history of the people of the Pacific region.

Topic 3: Comparison of major events that shaped the history of the Pacific Region

Sub-topics:

- Documentation of political and economic history of the people of the Pacific region
- Documentation of social, religious and cultural history of the people of the Pacific region
- Historical evidences and information of the Pacific History

Skills: Applying (use), analyzing (compare)

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

- Investigate the social, political, economic, religious and cultural history of the people of the Pacific region through documentation.
- Analyse and evaluate the social, political, economic, religious and cultural history of the people of the Pacific region through documentation.
- Visit location/sites of the places where these events occurred.
- Dramatize these major historical events.
- Replicate these major historical events.

Content Background

The Pacific Islands, home to the world's most diverse range of indigenous cultures, continue to sustain many ancestral life-ways. Fewer than 6.5 million in all, the peoples of Oceania possess a vast repository of cultural traditions and ecological adaptations. Papua New Guinea alone is home to one-third of the world's languages - about 780 distinct vernaculars. Oceania thus has the most to lose, culturally speaking, from the pressures of global political and economic change. The history of our region and what is term:

The Pacific Way, is so rich and unique. It is our identity and our pride. There is a great need to preserve what we have left by practicing and documenting them before we lose it all and suffer from identity crisis. Therefore, documentation of historical events is a challenge to the people of our region however with the use of modern technology we can document the events that take place in PNG and the Pacific Region. Improvements in technology, transportation and communication are keys to the documentation of our history in today's society.

Suggested Resources

1. John. D. Waiko. (2003). *Papua New Guinea; A History of Our Times*. South Melbourne, Oxford University Press.
2. Colonisation – Retrieved from: <https://en.wikipedia.org/wiki/>
3. Pacific Region – Retrieved from: <https://en.wikipedia.org/wiki/>
4. Pacific Region – Retrieved from: <https://www.britishempire.co.uk/>

Benchmark 10.2.1.4: Examine how knowledge of history is constructed, stored, managed and disseminated in different countries of the Pacific Region.

Topic 4: Construction, storage, management and dissemination of Pacific History

Sub-topics:

- Construction of historical knowledge in countries of the Pacific Region
- Storage of historical knowledge in countries of the Pacific Region
- Managing historical knowledge in countries of the Pacific Region
- Dissemination of historical knowledge in countries of the Pacific Region

Skills: Analyzing (examine)

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

- Investigate and analyse how knowledge of history is constructed, stored, *managed and disseminated in countries of the Pacific Region.*
- Analyse Compare and evaluate how knowledge of history is constructed, *stored, managed and disseminated in different countries of the Pacific Region.*
- Visit sites where knowledge of the Pacific History is stored.

Content Background

Historical Knowledge is constructed through daily interaction with their surroundings. The experiences make it possible for people to create history that is constructing as historical knowledge. This knowledge is stored and maintained and disseminated through traditions and cultures that are part of their everyday living. These methods vary from location to location but importantly the Pacific Way is preserved.

Pacific children were inducted into adult life gradually, through observation and participation. There was little in the way of formal schooling or initiation ceremonies in most societies.

Several forms of bodily ornamentation were practiced, mostly performed around puberty or in early adulthood. The most widespread of these was tattooing, practiced by both sexes. This and other forms of bodily adornment were generally done on individual initiative to demonstrate bravery and increase attractiveness. Such events and practices allowed for the construction of historical knowledge which is passed on from generation to generation.

Training in cultural specialties—including medicine, magic, mythology, house building, canoe building, and navigation—was often delayed until young adulthood or middle age. Usually an older relative taught an individual these skills, although sometimes outsiders would be instructed for a payment of food and goods.

The most-formal training in esoteric (secret) knowledge appears to have been given by the specialists known in Chuuk as itang in parts of Micronesia.

In the East Sepik area of PNG, historical knowledge is stored in artifacts and items that are stored in the Haus Tambaran. These were men and women who had trained under an older expert adept in traditional history, oratory, war strategy and tactics, and magic. Those who had earned the title or degree of itang could thenceforth serve as an orator, ambassador, counselor, or executive officer for a chief.

Information or historical knowledge is passed down from parents to children through storytelling, dances, paintings, initiations, rituals etc. For instance, in the East Sepik, young men go through initiations and rituals to confirm their manhood. It is important that we construct, store, maintain and disseminate our historical knowledge that is not lost yet.

Suggested Resources

1. Fischer, S. (2002). *A history of the Pacific Islands*. New York: Palgrave.
2. Harris David, (1996). *Origins and Spread Agric Past*. Smithsonian, Retrieved from: <https://books.google.com.pg/>
3. Patric .V. Kirch and Terry. L. Hunt eds (1997). *Historical Ecology in the Pacific Islands: Prehistoric Environmental and landscape change*. New Haven, Yale University Press. Retrieved from: <https://books.google.com.pg/>
4. Colonisation – Retrieved from: <https://en.wikipedia.org/wiki/>
5. Pacific Region – Retrieved from: <https://en.wikipedia.org/wiki/>
6. Pacific Region – Retrieved from: <https://www.britishempire.co.uk/>

Benchmark 10.2.1.5: Analyse the colonial history of the countries of the Pacific Region in terms of the reasons for colonisation, and social, economic, political and cultural impact.

Topic 5: Colonisation in the Pacific

Sub-topics:

- Reasons for colonisation
- Social impacts of colonisation
- Economic impacts of colonisation
- Political impacts of colonisation
- Cultural impacts of colonisation

Skills: Analyzing (analysis)

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

- Identify the reasons for colonisations in the Pacific.
- Analyse the impacts of colonisation in the Pacific.
- Visit sites on the influence of colonisation (Queen Emma Planation in Rabaul).
- Dramatize these major historical events.
- Replicate these major historical events.

Content Background

Europeans started to colonise distant territories by the end of the 15th Century. The European invasion of the Pacific started with the settlement of Australia by the British in 1788. European traders and whalers spread among the Pacific Islands. The spread of British, French and American whaling along the coast of New Zealand lead the British to annex the Islands. The competition among Europeans for spice, sandalwood, pearl shell, and bêche-de-mer (sea cucumber)—valuable cargoes that attracted ships from the Australian colony and the European world. Sandalwood was found in Fiji in 1804, and for the next decade it attracted European traders. The sealing industry drew seal hunters to New Zealand, and in the 1790s fur traders wintered in Hawaii. The traders and whalers were followed by the missionaries into the Pacific.

Like the spread of the Europeans into Australia and America, the European spread into the Pacific had very destructive effects on the native people and their cultures. Diseases introduced by the Europeans such as measles, influenza, TB and typhoid destroyed whole populations. Alcohols and guns contributed to the moral collapse of the societies. Europeans started to annexed territories without considering traditional boundaries. Great Britain, Germany and the Dutch divided the Island of New Guinea in 1884. Germany and US divided the Samoan Islands in 1899. The development of the sugar and cotton industries in Australia needed cheap labour. Pacific Islands were the main source through Blackbirding. The impact of this colonization process is evident in today world like you have Indians in Fiji, White settlers in Australia, New Zealand and New Caledonia, still a colony of French into the 21st Century.

Suggested Resources

1. Fischer, S. (2002). *A history of the Pacific Islands*. New York: Palgrave.
2. Harris David, (1996). *Origins and Spread Agric Past*. Smithsonian, Retrieved from: <https://books.google.com.pg/>
3. Patric .V. Kirch and Terry. L. Hunt eds (1997). *Historical Ecology in the Pacific Islands: Prehistoric Environmental and landscape change*. New Haven, Yale University Press. Retrieved from: <https://books.google.com.pg/>
4. Colonisation – Retrieved from: <https://en.wikipedia.org/wiki/>
5. Pacific Region – Retrieved from: <https://en.wikipedia.org/wiki/>
6. Pacific Region – Retrieved from: <https://www.britishempire.co.uk/>

Unit 2: Systems of Power, Authority and Governance

Content Standard 10.2.2: 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 10.2.2.1: Investigate and explain how governments in the countries of the Pacific Region have changed overtime.

Topic 1: Change of governments overtime in the Pacific Region

Sub-topics:

- Governments in the countries of the Pacific Region
- Changes in governments overtime in the countries of the Pacific Region

Skills: Analysing (investigate)

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

- Investigate the types of governance system of the countries in the Pacific.
- Analyse and evaluate how governments in the countries of the Pacific Region have changed overtime.

Content Background

Systems of governments started when people began living together. The first simple system of governments probably started in Africa with hunters and gatherers. As people moved and spread out towards the rest of the world, they formed their own systems of governments. Traditional systems of government are different from modern systems.

There are many systems of government in the Pacific and they vary from nation to nation depending on who the colonial powers were. In PNG, we have a Westminster Constitutional Democracy adopted from the British. We have three branches of the government; Legislative, Judiciary and Executive that work together to govern our nation. Elections are held every five years using the preferential voting system. Having many political parties is also a part of the type of government system we have.

Most systems of government in the South Pacific practise and promote democracy. Some of these government systems have a combination of monarchy and democracy like in Fiji, Tonga, Samoa and a few more. Countries like Australia and New Zealand and other former British colonies are part of the Commonwealth of Nations and they have a Westminster Constitutional Parliamentary system of governments like PNG.

Governments of the Pacific regions were reorganized to give indigenous people a part in government. In Western Samoa in 1947, the Legislative Council has given Samoans majority and considerable powers. In American Samoa naval rule was replaced in 1951 by civilian control, and a legislature of two houses was set up, which by 1960 had become a lawmaking body of Samoans.

In French Polynesia and New Caledonia, elected assemblies were given considerable local autonomy in 1956; both territories chose to stay within the French Community in 1958. The trend toward a limited degree of internal autonomy and increased political participation by native residents continued in the 1960s in Fiji, the Cook Islands, and other Pacific dependencies.

Western Samoa was the first country to gain its independence in 1962 and followed by others have changed overtime. These systems of government have changed due to political, social, religious or economic factors over time. These changes can be good or bad, depending on the outcomes.

Suggested Resources

1. Patric .V. Kirch (2000). *On the Road of the Winds: an Archaeological History of the Pacific Islands before European Contact*. Berkeley, University of California Press. Retrieved. <https://books.google.com.pg/>
2. A history of the Pacific Region.
Retrieved from. <https://www.culturalsurvival.org/author/lindstrom>
3. Governance in the Pacific. Retrieved from. <https://www.adb.org/sites/default/files/>

Benchmark 10.2.2.2: Compare the election process of various countries in the Pacific Region and its role in the creation, maintenance or change in the systems of power, authority and governance.

Topic 2: Election processes in the Pacific Region

Sub-topics:

- Role of election in the creation of power, authority and governance
- Role of election in the maintenance or change of power, authority and governance

Skills: Analysis (compare)

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

- Examine and compare the election processes of various countries in the Pacific region.
- Analyse and evaluate the role of election process in the maintenance or change in the systems of power, authority and governance of various countries in the Pacific region.

Content Background

In representative democracy, election is a time when people exercise their rights to vote for person who can represent them in parliament for five years. The purpose for election is to determine who has the political power. Election processes in the Pacific Region do not differ much as most countries practice democracy. With some political setbacks like the coup in Fiji, BRA crisis in PNG, election related crisis in Vanuatu, Solomon Is etc. Everyone has the right to vote now in the Pacific as long as they are 18years and older. Every citizen is expected to be on the common Electoral roll. All citizens have the right to run for office and if elected hold public office. It is a constitutional right for most Pacific Island countries that practice democracy and adopt a Westminster parliamentary system of government. Elections are held every five years in the Pacific Region with a preferential system of voting. All elections should fair and free from any form of violence. The type of leaders voted into parliament determines how they govern their countries. In PNG, 2012 elections, Our Prime Minister Peter O'Neil's People's National Congress Party candidates won most of the seat so they were invited by the Governor General to form the Government. Peter O'Neil's PNC party was in government until the 2017 elections.

Suggested Resources

1. Kirch, P.V. (2000). *On the Road of the Winds: an Archaeological History of the Pacific Islands before European Contact*. Berkeley, University of California Press.
2. A history of the Pacific Region,
Retrieved from: <https://www.culturalsurvival.org/author/lindstrom>

Benchmark 10.2.2.3: Evaluate how individuals and groups influenced governments' decisions, policies and development strategies in different countries in the Pacific Region.

Topic 3: Influence of groups and individuals in the Pacific Region

Sub-topics:

- Individuals influenced on governments' decisions, policies and development strategies in different countries in the Pacific Region
- Groups influenced on governments' decisions, policies and development strategies in different countries in the Pacific Region

Skills: Evaluating (evaluate)

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

- Identify individuals and examine how they have influenced governments' decisions, policies and development strategies in different countries in the Pacific Region.
- Identify groups who have influenced governments' decisions, policies and development strategies in different countries in the Pacific Region.
- Analyse and evaluate how these groups have influenced governments' decisions, policies and development strategies in different countries in the Pacific Region.

Content Background

A nation is made up of a group of people who control a given area or territory, share a common heritage, a common culture, a common language and common beliefs. The Pacific Region is made up of many different nations with governments that steer or guide them. The power of the government can be in the hands of a few or in an individual and that can be done directly or indirectly. Many individuals and groups have been part of the government by influencing its decisions, policies and development strategies. All Prime Ministers and Presidents use venues like the South Pacific Forum, Melanesian Spearhead group. These forums also influence individuals. To start with, Fiji's Prime Minister Frank Bainimarama attended the PIF for the first time after a gap of 10 years thereby signaling the renewed importance of the Forum in Fiji's foreign policy and the delicate relations that Fiji has with both Melanesian and Polynesian countries in the Pacific Islands.

Political groups like monarchies also influence government decisions, policies and development strategies. These monarchies were part of the traditional government systems but are still powerful in shaping today's political, social and economic systems. The chiefs who operate within modern Pacific states today represent national identities and manage the direction of political and economic development for their nations. That is their input and they are respected for their contribution. For example; Tonga is the only monarchy left in the Pacific. King Taufa'āhau Tupou IV.

Suggested Resources

1. Kirch, P.V. (2000). On the Road of the Winds: an Archaeological History of the Pacific Islands before European Contact. Berkeley, University of California Press.
2. A history of the Pacific Region,
Retrieved from: <https://www.culturalsurvival.org/author/lindstrom>

Benchmark 10.2.2.4: Investigate how foreign governments, interest groups, multi-corporations and powerful individuals contribute towards the creation, maintenance or change in the power systems, authority and governance of the countries in the Pacific Region.

Topic 4: Contributions by external organisations to the Pacific Region

Sub-topics:

- Foreign governments contributions towards the creation, maintenance or change in the systems of power, authority and governance of the countries in the Pacific Region
- Interest groups contributions towards the creation, maintenance or change in the systems of power, authority and governance of the countries in the Pacific Region
- Multi-corporations contributions towards the creation, maintenance or change in the systems of power, authority and governance of the countries in the Pacific Region
- Powerful individuals contributions towards the creation, maintenance or change in the systems of power, authority and governance of the countries in the Pacific Region

Skills: Analyzing (investigate)

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

- Investigate ways foreign governments contribute towards the creation, maintenance or change in the systems of power, authority and governance of the countries in the Pacific Region.
- Research ways interest groups contribute towards the creation, maintenance or change in the systems of powers, authority and governance of the countries in the Pacific Region.
- Analyse and evaluate ways multi-corporations contribute towards the creation, maintenance or change in the systems of power, authority and governance of the countries in the Pacific Region.
- Identify and evaluate ways powerful individuals have contributed towards the creation, authority and governance of the countries in the Pacific Region.
- Visit locations of these contributions to gain better insights on the topic under study.

Content Background

Interest groups are any association of individual or organisations that have shared concerns, attempt to influence public policy in its favour usually by lobbying (supporting) members of the government. Interest groups may be classified according to their motivation: (i) economic, including individual corporations and business organisations like Exxon Mobil (ii) professional, including professional groups such as trade unions and farmers like FAO with United Nations (iii) public interest, including human rights groups, environmental groups, among others like Green Peace.

Foreign governments like French still has a colony in the Pacific and USA has its military bases there, interest groups like those opposing Nuclear testing in

the Pacific, Greenpeace who opposes whaling and multi-corporations or MNCs in economic benefits and powerful individuals like the British Monarchy, prime ministers and presidents all contribute towards the creation, maintenance or change in the power systems, authority and governance of the countries in the Pacific Region.

Interest groups like South Pacific Forum, Melanesian Spearhead and Workers Unions; influence on policy making is a key element of the decision-making process. However, some interest group influence may lead to administrative corruption, undue influence, and state capture, favouring particular interest groups at the expense of public interest. Multinational Companies involved in the mining industry can make or influence government for their own benefit like mining in Ok Tedi continued even after report of pollution were reported in PNG. Exxon Mobile is extracting oil and gas in Papua New Guinea. Exxon Mobil is an American Multinational company that extracts oil and gas in countries all over the world. MNCs are tapping into our traditional settings and environment and incorporating it with IT to promote Tourism, now a world leading industry.

The world we live in is getting smaller as groups like MNCs and powerful individuals like President Donald Trump, Prime Ministers like James Marape and Scott Morrison and entrepreneurs like Bill Gates influence and impact it with their ideas and actions.

Suggested Resources

1. Kirch, P.V. (2000). *On the Road of the Winds: an Archaeological History of the Pacific Islands before European Contact*. Berkeley, University of California Press.
2. A history of the Pacific Region,
Retrieved from: <https://www.culturalsurvival.org/author/lindstrom>

Unit 3: Culture and Society

Content Standard 10.2.3: 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 10.2.3.1: Examine the methods by which different societies of the Pacific Region transmit culture across time.

Topic 1: Transmission of culture in the Pacific Region

Sub-topic:

- Methods by which different societies of the Pacific Region transmit culture

Skills: Analyzing (examine)

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

- Identify and evaluate the methods by which different societies of the Pacific Region transmit culture across time.

Content Background

Cultural transmission is the process through which culture, in the form of attitudes, values, beliefs, and behaviours, are passed onto and taught to individuals and groups. Culture represents attitudes, values, beliefs, and behaviours that are generally agreed upon by a group of individuals. It can include language, marriage practices, and governments, to family, greeting behaviours, housing type, and death rituals, to name a few. A primary role of culture is to provide a consistent and stable environment whose goal is to ensure the survival of the group. Culture is the ideas, customs and social behaviour of a particular people or society. Transmission of cultural values, beliefs, and traditions from one generation to another rely on many factors within a variety of societies. Most people learn their language and religious beliefs from their parents or other close relatives.

Methods by which different societies of the Pacific Region transmit culture vary. Culture can be transmitted through learning to speak our own language. Culture can also be transmitted through attitudes and behaviours like respecting the elderly, respecting your parents, being obedient etc. Culture can be transmitted through arts, tattoos, music and dances. In today's world, our cultures can be transmitted through our education systems as part of the curriculum. For instance, traditional art, music and dances can be taught in schools in Drama and Expressive Arts curriculum.

Suggested Resources

1. Culture of the Pacific Region.
Retrieved from: <https://en.wikipedia.org/wiki/>
2. Pacific Region Culture – Culture Introduction.
Retrieved from: <https://www.zegrahm.com/>
3. Pacific Region. *Retrieved from: <https://www.everyculture.com>*
4. Pacific Region – Daily Life and Social Custom.
Retrieved from: <https://www.britannica.com>

Benchmark 10.2.3.2: Compare and contrast the culture of the politically and economically dominant groups with the culture of minority groups in different societies of the Pacific Region.

Topic 2: Dominant and minority groups in the Pacific

Sub-topics:

- Culture of the politically and economically dominant groups in the Pacific Region
- Culture of minority groups in the Pacific Region

Skills: Analysis (compare and contrast)

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

- Investigate the culture of the politically dominant groups in societies in the Pacific Region.
- Identify and analyse the culture of minority groups in different societies of the Pacific Region.
- Compare the culture of the politically and economically dominant groups with the culture of minority groups in different societies of the Pacific Region.
- Debate on this issue.
- Create awareness on the fair treatment of the minority groups in societies in the Pacific Region.
- Dramatize/replicate this issues understudy.

Content Background

In the Pacific societies are made up of dominant and minority groups. Only in Australia, Guam, Hawaii, New Caledonia, and New Zealand are indigenous Islanders minorities in their own homelands (see also comments on Irian Jaya in the Southeast Asia region). After the United States acquired Japanese colonies in the northern Pacific, it established a major military facility in the Marshall Islands and expanded its bases in Guam and Hawaii. U.S. designs on Palau as a possible site for future military operations have stalled decolonization and produced nearly 20 years of chaos. (Author: Lindstrom Geoffrey M. and Lamont; White, Cultural Survival Quarterly Magazine. Oceania: Islands, Land, People, September 1993)

Most of the Pacific Islands are dominant groups in their own country. More than two thirds of the population is natives or indigenous people. In PNG, 90-98% of the population is made up of natives. The German and Chinese were here before WW1 but were gone after the war. The British and the Australians were here but were gone after 1975 when PNG became independent. The impact of colonization in PNG is not as great as in other countries of the Pacific like New Caledonia, places in Micronesia and Fiji. In Fiji, half of the population is native Fijians while the other half is Indians. The Indians have been brought to Fiji on work on Sugar Cane plantations by the British colonizers. The Indians have become a group that has influenced Fiji in a big way. Do carry out a research to find out about the impact of Indians in Fiji upon the natives there.

Suggested Resources

1. Culture of the Pacific Region.
Retrieved from: <https://en.wikipedia.org/wiki/>
2. Pacific Region Culture – Culture Introduction.
Retrieved from: <https://www.zegrahm.com/>
3. Pacific Region. *Retrieved from: <https://www.everyculture.com>*
4. Pacific Region – Daily Life and Social Custom.
Retrieved from: <https://www.britannica.com>

Benchmark 10.2.3.3: Investigate how culture or aspects of culture are (re)constructed, represented, regulated and transmitted in different places in the Pacific Region.

Topic 3: Sustaining culture in the Pacific

Sub-topic:

- Reconstruction, representation, regulation and transmission of the aspects of cultures

Skills: Analysis (investigate)

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

- Identify and analyse ways culture or aspects of culture is reconstructed in different places in the Pacific Region.
- Analyse and assess ways culture or aspects of culture are represented in different places in the Pacific Region.
- Examine and evaluate ways culture or aspects of culture are regulated in different places in the Pacific.
- Analyse and critique ways culture or aspects of culture are transmitted in different places in the Pacific.
- Visit sites or location of showing ways cultures are (re)constructed, represented, regulated and transmitted.
- Dramatize/replicate ways cultures are (re)constructed, represented, regulated and transmitted.
- Create awareness on sustaining cultures.
- Debate on sustaining the cultures of the people of the Pacific.

Content Background

The Oceanic world has given rise to traditional indigenous ways of life that are unique to the region and expressed through outstanding cultural landscapes and seascapes, settlements and monuments and in the intangible heritage of traditions, knowledge, stories, song, music and dance. This heritage reflects the common origin and interaction of many Pacific Island societies and the distinct traditional ways of life that have developed in each island nation.

Pacific Island societies include the linguistically diverse communities of Melanesia, those of Polynesia where histories tell of a single homeland and the Micronesians, some of the world's most isolated communities that attest to the great navigational and seafaring skills of their ancestors.

The cultural landscapes of the region, while diverse, are nevertheless bound through common voyaging, kinship, trade and other relationships. The maintenance of traditional knowledge, land tenure and land use systems across much of the region is expressed in land and seascapes that speak of the inseparable relationship between Pacific Island people and their environments, their distinctive social and cultural systems, and their unique and shared histories.

Suggested Resources

1. Culture of the Pacific Region.
Retrieved from: <https://en.wikipedia.org/wiki/>
2. Pacific Region Culture – Culture Introduction.
Retrieved from: <https://www.zegrahm.com/>
3. Pacific Region. *Retrieved from: <https://www.everyculture.com>*
Pacific Region – Daily Life and Social Custom. Retrieved from: <https://www.britannica.com>

Benchmark 10.2.3.4: Discuss the ways in which Pacific Region countries dealt with the introduction, influence or imposition of colonisers' cultures.

Topic 4: Colonisers' cultures in the Pacific

Sub-topic:

- Introduction and influences of the coloniser's cultures

Skills: Understanding (discuss)

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

- Identify and analyse how colonisers' cultures were introduced and its influences or imposition in the Pacific Region.
- Discuss how Pacific Islanders dealt with the introduction, influence and the imposition of the coloniser's cultures.
- Dramatize/replicate these impositions.
- Debate issues with relation to these impositions that is having an impact on our culture.

Content Background

Colonization had severely disrupted traditional life on the islands by the late 19th century. Colonizers from Europe and North America were attracted to the Pacific Region for many reasons as we studied earlier. Colonizers came with their own cultures and traditions. They had their own systems of government and religion, way of doing things. The colonizers set up administrative and religion stations to promote their education and spread their religion. Schools were built to impart their culture and religion.

New languages were developed to make communication easier like Tok Pisin in PNG. Ancestral worship and other forms of traditional system of worship were branded as pagan and the missionaries imposed the Christian faith. The Methodist, Catholics and Lutherans set up mission stations throughout the Pacific. Natives who were half covered or even naked were covered by clothes brought in from Europe. The natives of East New Britain in PNG were naked and so the colonisers taught them to cover themselves with banana leaves and then with laplaps.

The islands were mostly governed by colonial administrative groupings that disregarded historical culture and resource use patterns. Plantations of sugar cane, coffee, tea and cacao were introduced, as well as mining of gold, copper, nickel, manganese, petroleum and natural gas. The lives of the natives were further disrupted by importation of alien laborers, which included Indians to Fiji, Chinese to French Polynesia, Koreans to Guam, Palau, and the Northern Mariana, Vietnamese to New Caledonia, and Japanese to Micronesia.

Therefore, what we see today in PNG and the vast Pacific Region is a combination of traditional and western culture.

Suggested Resources

1. Culture of the Pacific Region. *Retrieved from: <https://en.wikipedia.org/wiki/>*
2. Pacific Region Culture – Culture Introduction. *Retrieved from: <https://www.zegrahm.com/>*
3. Pacific Region. *Retrieved from: <https://www.everyculture.com>*
4. Pacific Region – Daily Life and Social Custom. *Retrieved from: <https://www.britannica.com>*

Unit 4: Development and Sustainability of Societies

Content Standard 10.2.4: 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 10.2.4.1: Examine how different governments have contributed to change or sustainability in the Pacific Region.

Topic 1: Government and change in the Pacific

Sub-topics:

- How did foreign governments introduce changes in the Pacific Region?
- Changes by foreign governments in the Pacific Region
- Maintaining the status quo in Pacific Region

Skills: Analyzing (examine)

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

- Examine and assess the role played by foreign governments in contributing to change in the Pacific Region.
- Examine and evaluate the changes introduced by the colonial governments in the Pacific Region.
- Analyse and critique foreign governments influence on change in the Pacific Region.
- Evaluate how foreign governments contributed towards maintaining the status quo in the Pacific Region.

Content Background

Colonisation occurred in all the three (3) main island groups of the Pacific Region, namely in Micronesia, Polynesia and Melanesia. These island groups were colonized by different groups of Europeans who have contributed a lot to the development of these Island countries. There were many changes seen in the lives of the island people as a result of direct control by various foreign governments.

Colonisation in Micronesia

Micronesia includes the Republic of the Marshall Islands, the Federated States of Micronesia, the Republic of Palau (Belau), the U.S Territory of Guam and the Commonwealth of the Northern Marianas Islands. Historically, Micronesians descended from seafarers who populated the atolls between 2000BC and 500BC. Since the first contact with the Westerners, starting with the Portuguese and Spanish explorers, the Islands have been colonized by various Europeans and Asians countries. For example, Pohnpei, an island state of the Federated States of Micronesia, was first “discovered” in 1526 when the Spaniards named it the “New Philippines”. Spain later “claimed sovereignty” over most of Micronesia. Germany was the official colonizer for one year before Spain formally occupied Pohnpei in 1866. Germany “bought” the island from Spain in 1899 after the conclusion of the Spanish American War. Japan annexed the island in 1914 and Pohnpei became a US territory after the defeat of the Japanese empire during World War II.

In 1979, Pohnpei joined three other island states to become the Federated States of Micronesia. The country has had a compact of free association with the US since 1982 (Ashby, 1993). A similar political history occurred for the Republic of Palau. Palau was “discovered” in 1710 by Spain. It too was sold to the Germans, annexed by Japan and later became part of the US-managed Trust Territory of the Pacific Islands after World War II. Independence came to Palau in 1994 and it has had a compact of free association with the US since 1994 (Barbour, 1995).

The island of Guam, also a part of Micronesia, was ceded to the US by Spain in 1898. Captured by the Japanese in 1941, it was retaken by the US three years later and today remains, along with Saipan and other neighbouring islands, an unincorporated US territory. In the 2000 Census, 37% of the Guam population is native Chamorro (Central Intelligence Agency, Accessed September 2, 2007).

A sad legacy of the World War II is the nuclear weapons testing in the Marshall islands starting 1946. As a result the whole atolls were destroyed or made uninhabitable, populations moved away from their ancestral homelands, and ways of life were changed as the people were involuntarily exposed to radiation. Residual effects initially included radiation sickness, but later increased rates of thyroid as well as lung cancer, breast cancer, ovarian cancer, leukemia and lymphoma (Anderson et al., 2006). Today, these island nations struggle with the legacy of the colonization and westernization of their island homelands. Social structures and ways of life are changing and diseases associated with western lifestyles such as obesity, coronary artery disease and substance abuse are having devastating effects (Kermode & Tellei, 2005)

Colonisation in Polynesia

The Polynesia triangular region stretches from Fiji and Tonga to the west, Easter Island to the east, Hawaii to the North and New Zealand to the south. Samoans are the largest population of Polynesians in the US after Native Hawaiians. The Samoan islands were populated more than 2000 years ago and subsequent migrations settled the rest of Polynesia further to the east. Contact with Europeans began in the early 1700’s but did not intensify until the arrival of English missionaries and traders in the 1830s. At the turn of the 20th century, the Samoan islands were split into two sections. The eastern islands became territories of the United States in 1904 and today are known as American Samoa. The western islands became known as Western Samoa (now the Independent States of Samoa), passing from Germany to New Zealand in 1914.

The New Zealand government administered Western Samoa under the auspices of the League of Nations and then as a UN trusteeship until independence in 1962. Western Samoa was the first Pacific Island country to gain its independence (US Department of State, Accessed September 2, 2007). Tonga was settled about 500BC. The Dutch explorers visited in 1643 after the islands were sighted in 1616. By 1845, all of the Tongan islands had been united by ancestors of the current dynasty. Under British protection by 1900, Tonga retained its independence and autonomy and became fully independent in 1970 (US Department of State, Accessed September 2, 2007).

Colonisation in Melanesia

Fiji was settled by both Polynesian and Melanesian people around 1500BC. Europeans arrived in the early 1800s and Fiji ceded to Britain in 1874. Fiji became an independent nation in 1970 and today continues to struggle with the large immigrant population from India who came to Fiji as servants.

Suggested Resources

1. *British Solomon Island Protectorate, Administration.*
Retrieved from: www.solomonencyclopaedia.net
2. *Kiribati: History.* Retrieved from: <https://www.commonwealth.org>
3. *Samoa: History.* Retrieved from: <https://www.commonwealth.org>
4. *Solomon Islands History.* Retrieved from: <https://www.commonwealth.org>
5. *Tonga: History.* Retrieved from: <https://www.commonwealth.org>
6. *Tuvalu: History.* Retrieved from: <https://www.commonwealth.org>
7. *Vanuatu History.* Retrieved from: <https://www.commonwealth.org>

Benchmark 10.2.4.2: Analyse how the actions of different governments have impacted the Pacific Region.

Topic 2: Impact of foreign government actions in the Pacific Region

Sub-topics:

- Foreign government actions
- Nature of foreign government actions
- Impact of foreign government actions on the Pacific Region and its people

Skills: Analyzing (analysis)

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

- Identify and analyse the foreign government actions in the Pacific region.
- Examine and describe the nature of foreign government actions in the Pacific region.
- Evaluate the effects of these changes on the Pacific region and its people.

Content Background

Foreign governments have played an important role in influencing many changes in the world including the Pacific region. These influences come in various forms from political leaders to foreign aid, international organizational support like the United Nations and the European Union plus international financial organizations such as the IMF, World Bank and Asian Development Bank.

During the ethnic conflict in the Solomon Islands between 1999 and 2003, countries like Australia and New Zealand played a key role in bringing peace to the country. In June 2003 the then Prime Minister of Solomon Islands, Sir Allan Kemakeza with the support of the parliament of the country plus regional leaders, accepted Australia's offer to lead an international intervention force, the Regional Assistance Mission to Solomon Island (RAMSI) to restore law and order. The force of some 2,200 soldiers and police from Australia, New Zealand, Fiji, Kiribati, Papua New Guinea, Samoa, Tonga and Vanuatu, began operations in July 2003. Its first priority was to disarm the various militias and restore order. By 2005 the force had been reduced to a few hundred.

Suggested Resources

1. *Solomon Island: History* – thecommonwealth.org
2. *Vanuatu: History* – thecommonwealth.org
3. *Historical Background: Colonization of the Pacific Islands*
4. *Australian Imperialism in the Pacific: the Expansionist Era 1820 – 1920* – Roger C. Thompson
5. *The Australian Presence in the Pacific: Burns Philip 1914 – 1946* – Ken Buckley and Kristine Klugman

Benchmark 10.2.4.3: Compare how governments of different countries in the Pacific Region react to and contribute to social, economic, political, cultural or religious change and sustainability in the Pacific region.

Topic 3: Impact of changes by Government in the Pacific Region

Sub-topics:

- Government reactions and contributions to change in the Pacific Region
- Purpose of government response to change in the Pacific Region
- Examples of governments' interventions in the Pacific region

Skills: Analysis (compare)

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

- Examine changes influenced by governments in the Pacific Region.
- Analyze and evaluate the purpose of Pacific governments' interventions for change and sustainability.
- Compare government intervention programs to influence social, economic, political, cultural and religious change in the Pacific region.

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.

In addition, governments of the Pacific region respond or react to local challenges like most governments of the world through policy or legislations. For instance, during economic recessions, governments use the Fiscal and Monetary Policies of their various states to maintain control and ease the economic tensions on the people, and the country.

Suggested Resources

1. *Samoa History*. Retrieved from: [https:// thecommonwealth.org](https://thecommonwealth.org)
2. *Solomon Island History*. Retrieved from: <https:// thecommonwealth.org>
3. *Monetary Policy Vs Fiscal Policy: What's the Difference?* Retrieved from: <https://www.investopedia.com>

Benchmark 10.2.4.4: Evaluate the sustainability or change policies and plans of different governments in the Pacific Region.

Topic 4: Government policies and plans in the Pacific

Sub-topics:

- Tuition Fee Free (TFF) Policy – PNG
- PNG Australian Policing Partnership (PNGAPP)
- Climate Change – Kiribati
- Solomon Islands

Skills: Evaluating (evaluate)

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

- Investigate various sustainability or change policies and plans of different governments in the Pacific region.
- Ascertain the purposes of these policies or plans in those particular countries.
- Evaluate these policies and plans to establish how they will sustain the status quo or influence change in the Pacific region.

Content Background

Governments around the world use various policies and plans to either sustain the status quo of the state or to effect change as a means of addressing issues. These policies and plans vary from place to place and produce mixed results both positive and negative. For instance, in 1999 the PNG Government under Sir Julius Chan opted to engage a British Mercenary Company to quell the Bougainville Conflict however, this decision backfired and the Prime Minister was forced to step down. In recent times, the Peoples National Congress Party under Peter O’Neil introduced the Tuition Fee Free (TFF) Policy to address the Universal Basic Education (UBE) Program to afford education opportunities for hundreds of thousands of school aged children in PNG to be educated to Grade 12 level. This policy has produced mixed results, much of which has been negative especially when earmarked funds have been delivered late to schools throughout the country, and also the funds handed out have been insufficient to meet operational costs of schools. These policies and plans plus others are some examples of the ways in which governments of the Pacific region try to sustain the status quo or effect changes to resolve problems within their localities.

Suggested Resources

1. PNG Cybercrime Code Act 2016
2. Tuition Fee Free (TFF) Policy - PNG

Benchmark 10.2.4.5: Identify individuals and groups in the Pacific Region who have made important contributions towards promoting change or sustainability and evaluate the nature of their contribution.

Topic 5: Promoters and sustainers of change in the Pacific Region

Sub-topics:

- Queen Emma of East New Britain PNG
- Sitiveni Rabuka of Fiji
- Asians in the Pacific
- United Nations

Skills: Understanding (Identify), evaluating (evaluate)

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

- Identify individuals or group who have contributed to change in the Pacific region.
- Analyse the nature of the contributions of these individuals or groups to the changes they initiated.
- Evaluate and describe how these changes impacted the Pacific region.

Content Background

Pacific states have experienced sustainability and change in different ways and certain individuals both local and foreign as well as specific international institutions have made significant contributions to the Pacific region as a whole. The nature of the contributions of these individuals and groups also vary greatly between different states of the Pacific. For example, Emma Forsyth or popularly known as “Queen Emma” contributed immensely to the copra plantation scheme in the East New Britain province during the reign of the German administration. This influence spread to other parts of the New Guinea Islands region, particularly neighbouring West New Britain, New Ireland, Autonomous Region of Bougainville and Manus Province. The plantation economy is still widely practiced today in a majority of these provinces still. Apart from business leaders, other Pacific islanders have demonstrated exceptional leadership. One that comes to mind is the first coup leader of Fiji, Sitiveni Rabuka. He was the first Pacific leader to assume power in the region through a successful military coup to overthrow a largely Indian composed Fijian parliament in 1987. He was later appointed by the Commonwealth Secretary- General on two occasions to broker peace in the Solomons Islands during the height of the ethnic conflict between the Malaita Eagle Force and the Isatabu Free Movement in 1999.

Other groups who have contributed to change in the Pacific region include various ethnic groups from other parts of the world and international organizations such as the IMF, European Union, the United Nations and the World Bank. One ethnic group that has a great degree of influence in the region is people of Asian origin. Nearly every country in the Pacific region has a migrant Asian population who own and operate many types of businesses. These individuals are the descendants of some of the early migrants from Asia that settled during the colonial era and started businesses which are still active today. In recent time, the growth of the Asian nations has seen a marked

increase in Asian populations throughout the Pacific region. All together Asians have contributed greatly in terms of economic development of some of the Pacific states through their involvement in business ventures.

In addition, certain international organizations continue to play significant roles in affecting change or maintaining the status quo of the Pacific region through many of their intervention programs. For instance, the European Union has continued to provide financial and technical support to several Pacific states governments. These range from agriculture, commerce, trade, education and government support activities which have greatly assisted many island states to increase their human resource skills and capabilities resulting in better productivity levels, and performance. Further intervention programs offered through organizations such as the World Health Organization, UNDP, UNESCO and others have provided much needed support in addressing many of the issues faced by smaller Pacific states.

Suggested Resources

1. Carmen Voigt-Graf. *The changing composition of PNG's foreign workforce –PNGNRI. Devpolicy blog*
2. Keith Jackson. Chinese businesses pose problems for PNG
R. G. Crocombe (Google Books). *Asians in the Pacific Islands: Replacing the west.*
3. *ADB Welcomes New Public-Private Partnership Act in PNG.*
Retrieved from: <https://www.adb.org>
4. *Solomon Island History. Retrieved from: [https:// thecommonwealth.org](https://thecommonwealth.org)*

Benchmark 10.2.4.6: Examine the roles and responsibilities of religions in bringing in change or in maintaining the status quo in the Pacific Region.

Topic 6: Religions and change in the Pacific Region

Sub-Topics:

- First Christian Missions in the Pacific Region
- Changes and impact of Christian Missions in the Pacific Region

Skills: Analysing (examine)

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

- Investigate the different Christian Missions that arrived in the Pacific Region.
- Examine the roles and responsibilities of the Christian Missions.
- Analyse and evaluate the impact of the changes Christian Missions had on the indigenous people and the region as a whole.

Content Background

Christian Missions have had a very profound influence and impact on societies in the Pacific since they first arrived and settled in various parts of the region. Their presence and influence is still experienced throughout the region today. The evidence of the influence and impact of Christian Missions in the region is so widespread that one would not miss the sight of a church building in any part of the Pacific region. Pacific people are devout followers of the Christian faith and this is clearly depicted in the large number of Christian denominations spread through the entire region. Another clear example of the influence of religion is the presence of church run schools and health facilities provided by various Christian denominations in the Pacific.

In fact, the Christian Missionary presence is experienced right across the region in a variety of other ways as well. These influences include 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 in the region than the governments.

Suggested Resources

1. John Waiko, (1993). *A short History of Papua New Guinea*: Oxford University Press, Australia
2. Robert W. Robin. *Missionaries in contemporary Melanesia : Crossroads of cultural change*.

Benchmark 10.2.4.7: Analyse cases where military force was used or been used to bring about change or maintaining the status quo in the Pacific Region.

Topic 7: Military force and change in the Pacific Region

Sub-topics:

- Regional Assistance Mission to the Solomon Islands (RAMSI)
- Vanuatu Rebellion of Jimmy Stevens
- Fiji Military Coups
- Bougainville Conflict

Skills: Analysing (analyse)

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

- Identify and analyse foreign governments involved in promoting change in the Pacific Region.
- Evaluate the reasons for these governments' interventions in promoting change or maintaining stability in the Pacific Region.

Content Background

Inter-communal tensions growing in 1998 between the indigenous people of Guadalcanal and settlers from the other islands especially, from Malaita who dominated the national public service and the private sector in the capital Honiara led to violence. The violence intensified and many thousands of Malaitans (including many long standing residents of Guadalcanal where driven to take refuge in Honiara or return to Malaita. In June a state of emergency was declared and at the government's request, the Commonwealth Secretary-General sent Sitiveni Rabuka, former Prime Minister of Fiji to broker a peace deal. Agreement was reached on restoring peace and on the longer term achievement of a more equitable ethnic balance in the national public service and the police force. A Commonwealth peace-monitoring group was to be provided. The Commonwealth brokered another peace agreement known as the Panatina Agreement which included a reduction in police presence in Guadalcanal Province with effect from mid-August.

In September 1999, the state of emergency was ended and in October a Commonwealth peace-monitoring group began supervision of the handover of arms by the militants. However, ethnic violence continued into 2000, led by opposing militia – Malaita Eagle Force and the Isatabu Freedom Movement.

In June 2000, the Malaita Eagle Force took the Prime Minister and Governor General captive and compelled the Prime Minister to resign. When it was able to convene a quorum of members on an Australian warship, parliament elected Manasseh Sogavare as Prime Minister and he formed a new government. With the support of the Australian and New Zealand Governments, the warring militia and the national and provincial governments engaged in a peace process leading in October 2000 to the signing of a Peace Agreement in Townsville, Australia.

However, sporadic outbreaks of violence continued until the then Prime Minister, Allan Kemakeza with the support of parliament and regional leaders

accepted Australia's offer to lead an international intervention force, the Regional Assistance Mission to the Solomon Islands (or RAMSI) to restore law and order. The force comprised of 2,200 soldiers and police from Australia, New Zealand, Fiji, Kiribati, Papua New Guinea, Samoa, Tonga and Vanuatu. Its first priority was to disarm the various militias. And and restore order. By 2005 the force had been reduced to a few hundred soldiers.

Suggested Resources

1. Mary Louise O'Callaghan. *Weaving consensus: The Papua New Guinea – Bougainville peace process*
2. *Bougainville Civil War*. Retrieved from: <https://wikipedia.com>
3. *Solomon Islands History*. Retrieved from: www.commonwealth.org

Unit 5: Economic Needs and Wants

Content Standard 10.2.5: Students will be able to investigate and discuss how economic needs and wants affect individual and group decisions.

Benchmark 10.2.5.1: Assess and analyse the development of various economic systems in the Asian Region.

Topic 1: Economic systems in Asia

Sub-topics:

- What are economic systems?
- Types of economic systems
- Development of economic systems

Skills: Analyzing (analyze), evaluating (examine)

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

- Examine what an economic system is.
- Analyze and evaluate the 4 main types of economic systems.
- Analyze and assess how economic systems develop.

Content Background

What are Economic systems? Economic systems mainly deal with the relationship between production/supply and consumption/demand: manufacturing, regulations, circulation and distribution (*P. Hall & D. Soskice – 2001*). In recent times the Asian economies have been the fastest growing in the entire world largely due to demographic factors, technological advancements and increased investments. With the region holding the largest populations and around 58% of this demographic been in the young adult ages of between 19 – 35 years, this provides an economic advantage as they have a very significant influence on consumer spending growth, labour market and other economic prospects. Most importantly, this age group is more supportive of free market than their previous generations with countries like Vietnam and the Philippines coming out on top.

In addition, advancements in technology like smartphone usage and online connectivity means that people in the region are more connected than before and this has contributed to growing trends in entrepreneurship and startups. Easy access to information, services, support needed to start a business is much easier for young hopeful entrepreneurs. Together with government support in strengthening digital infrastructures, young entrepreneurs are enjoying increased ease of doing business and are more able to digitize significant portions of their businesses. This helps them to manage their costs better.

Furthermore, with the region's emerging markets and promising talent, countries in Asia are also enjoying increased venture capital investment in their startup. Over the past years increased government investment in startup, improved education facilities and investments in technology has allowed the growth of industries outside traditional agriculture and service sectors. E-commerce is a very good example

Suggested Resources

1. *Economic System*. Retrieved from: <https://en.m.wikipedia.org>
2. *Three factors Contributing to the Rise of Southeast Asian Entrepreneurs and Startups* Retrieved from: www.fnst.org
3. *Population Change and Economic Development*. Retrieved from: www.eastwestcenter.org

Benchmark 10.2.5.2: Examine the impact of economic decisions that individuals, groups and governments make on people and the environment.

Topic 2: Impact of economic decisions on the people and environment

Sub-topics:

- Factors that influence economic decision making
- Impact of economic decisions on people
- Impact of economic decisions on the environment

Skills: Analysing (examine)

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

- Examine the different factors that influence economic decision-making.
- Identify and analyse the impact of economic decisions on people.
- Evaluate the impact of economic decisions on environment.

Content Background

Some people say that if you've made a few big decisions in your life, and you're generally pleased with the outcomes, then you can make economic decisions, too. Human life is centred on decision-making and choices and every day of our lives; some are good and others are not so good but the consequences of our choices are the end result we are left with.

Economic decisions are one part of human aspect and the choices we make. For instance, decisions on what we spend our money for, and how much we save. There are so many other decisions and choices we make every day.

On a larger scale, groups and governments also make economic decisions and results of some decisions affect people and the environment we live in. For instance, the decision by the Chinese Government to move away from the pursuit of an export-oriented path to industrialization to diversify into other sectors of the economy in the last ten years has accelerated unprecedented growth of the country's economy. The rapid industrial growth in China has resulted in the need for more employees causing many rural farmers to migrate to urban areas seeking paid employment. It is estimated that 500, 000 million people will leave the country-side in search of work in urban areas thus creating rural unemployment as farms have become highly mechanized, as well as increasing rural-urban migration. In turn rural villages are being demolished and new manufacturing settlements are built in their place at rapid pace for former agricultural families to move in to.

On the downside, China's decision to embark on increasing its local energy supply to meet its industrial needs by choosing to use a massive coal-fired power station will add to its already highly polluted air, especially in its major urban cities.

In PNG, government's decision to allow foreign logging and mining companies to operate without proper coordination destroys the natural environment (flora and fauna).

Suggested Resources

1. *How does Economics Affect Our Daily Lives?* Retrieved from: <https://www.theclassroom.com>
2. *Basic Factors of Economic Decision Making.* Retrieved from: <https://smallbusiness.chron.com>
3. *Factors Explaining the Rapid Economic Growth of China In Recent Decades.* Retrieved from: www.tutor2u.com

Benchmark 10.2.5.3: Explain the ways in which economic factors have influenced the movement of people in the Asian Region.

Topic 3: Economic influence on movement of people

Sub-topics:

- Economic factors causing migration
- Impact of migration on the home and host country's economy

Skills: Understanding (explain)

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

- Identify and analyze the economic causes of migrations.
- Examine and describe trends of immigration in the Asian Region.
- Evaluate the impacts of immigration on the home and host country's economy.

Content Background

Annually, millions of people around the world decide to emigrate to another country, and this rate is expected to increase over time. In 2005, the United Nations reported that there were nearly 191 million international immigrants worldwide which represent about 3% of the total world population.

In 2006, Europe, the United States and Asia were found to host the largest number of immigrants at 70 million, 45 million and 25 million respectively.

So why are people migrating in large numbers in different parts of the world is an important questions worth noting, and answering to ascertain the factors behind this mass movement of people. Before we answer that question, let us firstly define the term immigration. Immigration is defined as the movement of people from their home country or region to another country, of which they are not native, to live. There are basic economic factors that contribute to immigration including:

- The desire to obtain higher paying jobs
- Improve one's standard of living
- Have access to better education opportunities and health services
- In search of better investment opportunities

Due to improved transportation and technology, emigration has become increasingly common worldwide. Immigration numbers impact both the home or sending country and the host or receiving country. These impacts are either positive or negative and are as follows:

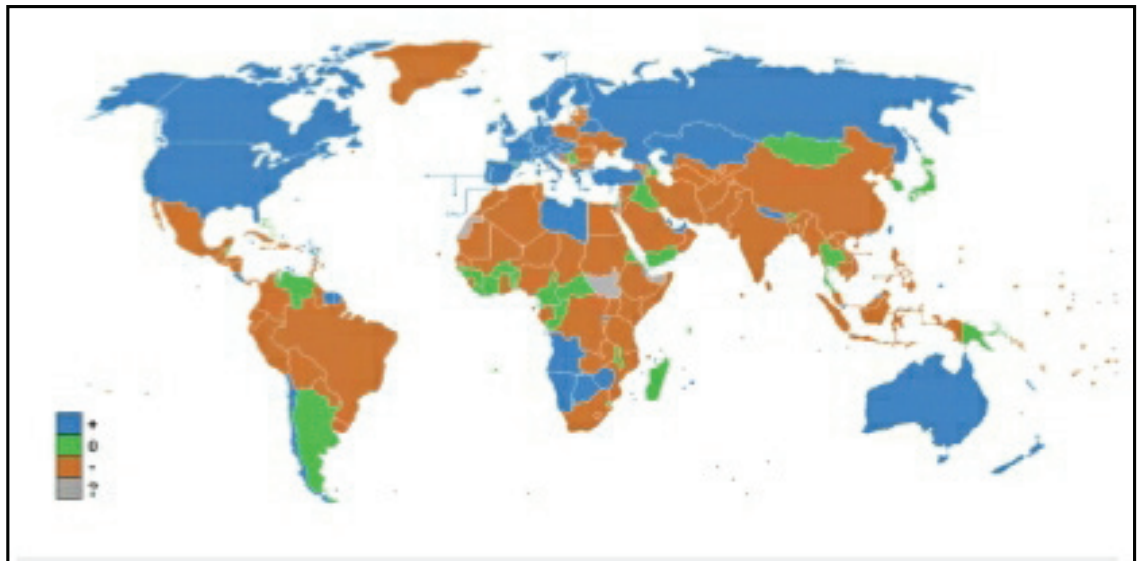
Positive impact

- Immigrants add to the workforce of the host country
- Skilled immigrants benefit the host country, i.e. specialists like doctors, engineers, etc.
- Reduces population of the sending country

Negative impact

- Increases the host country's population
- Places strain on available services like accommodation, municipal services
- Unskilled labour can lead to increased unemployment population
- Immigrants may not succeed in securing employment
- Immigrants find it difficult adjusting to the life or culture of the host country
- Creates a brain drain in the sending country

Immigration Rates



This map shows the migration rates worldwide in 2011. The blue countries experienced positive rates, orange indicates negative rates, green shows stable rates, and the gray shows where no data was available. Immigration involves individuals moving from their home country to live in a non-native country. In 2005, Europe, the United States, and Asia had the highest levels of immigration worldwide.

Suggested Resources

1. *Economic Effects of Migration I Globalization 101.*
Retrieved from: www.globalization101.org
2. *Economic results of migration.* Retrieved from: <https://en.m.wikipedia.org>
3. *The economic effects of migration.* Retrieved from: <https://bruegel.org>
4. *Demographic and economic determinants of migration.* Retrieved from: <https://wol.iza.org>
5. *Introduction to Immigration Economics I Boundless Economics.*
Retrieved from: <https://courses.lumenlearning.com>

Benchmark 10.2.5.4: Analyse the role of economic factors in conflicts and decisions to use military force in the Asian Region.

Topic 4: Economic influence on conflicts in Asia

Sub-topics:

- Conflict and economic growth in Asia
- Subnational conflict and its causes
- Subnational conflict – A Case Study

Skills: Analyzing (analysis)

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

- Evaluate the relationship between economic growth and conflict in Asia.
- Analyse the role of economic factors in causing conflicts.
- Examine subnational conflict and its causes.
- Research an example of a Subnational conflict in Asia.
- Assess the impact Subnational conflicts have on countries.

Content Background

How do conflicts and economic growth go together in Asia? Conventional thinking is that when countries experience greater economic growth, they are less vulnerable to large-scale violent conflicts. However, this has not been the case in Asia. Asia's economic rise has been momentous. Since early 1960s, Asia has grown richer faster than any other region in the world. In 1990, 56% of people in East Asia and 54% in South Asia lived on less than US\$1.25 a day. By 2010, these rates had fallen to 12% and 31% respectively. Last year, East Asia grew by 7.1% and South Asia by 5.2%, faster than any other region in the world.

Even though these countries have become much richer, the number of so-called subnational conflicts has grown in the region, an occurrence that defies the common political belief that prosperity reduces the likelihood of violent conflicts. Between 1999 and 2008, more people died in Asia than all other types of conflict (interstate war, terrorism) combined.

Patrick Barron of The Asian Foundation's regional director for conflict and development stated the growth-stimulating strategies chosen by Asian countries have led to such subnational conflicts. The ingredients of these strategies include a strong focus on centralizing power and an emphasis on creating a dominant national culture and identity. Subnational conflicts involve violent armed struggles between states and non-state insurgent groups who are trying to gain self-rule – either independence or greater autonomy. They differ from regular civil wars because they don't involve battles for control of the central state. Usually they occur in the remote peripheries of states, where the minority population is a religious or ethnic minority within the broader country. Examples of subnational conflicts are found in Tibet which is controlled by China and Xinjiang, the Deep South of Thailand involving Malay-Muslim which account for only 6% of Thailand's population, and the Tamils of Sri Lanka, Mindanao in the Philippines'.

What are the causes of subnational conflicts? The underlying causes are a trampling over local cultural identity, accompanied by relative economic deprivation, often creates the initial sparks of violence. However, over time it is often different issues that keep these conflicts going and that cause them to escalate. One is the repressive state security policies which sometimes lead to rights abuses, in turn reinforcing hatred towards the state.

Suggested Resources

1. *Introduction to Immigration Economics I Boundless Economics.*
Retrieved from: <https://courses.lumenlearning.com>
2. *How do conflicts and economic growth go together In Asia?*
Retrieved from: <https://m.dw.com>
3. *Conflict and development: Lessons from South Asia.* Retrieved from:
<https://voxeu.org>

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

Content Standard 10.2.6: 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 10.2.6.1: Map out and interpret the geographical systems of the Asian Region.

Topic 1: Geographic systems of the Asian Region

Sub-topics:

- What is a geographical system?
- Geographical systems of Asia
- Geographic systems and its impact on Asian History

Skills: Understanding (interpret), applying (map out)

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

- Research on geographical systems.
- Identify and analyze the geographic systems of Asia.
- Map out and interpret the geographic systems of Asia.
- Analyse and describe how the geographic systems of Asia influenced its history.

Content Background

What is a geographical system? A geographic system comprises of the physical or natural systems of landform and water in a particular area or region. Asia is the largest of the world's continents. It can be divided into five major physical landforms:

- i. Mountain systems
- ii. Plateaus
- iii. Plains, steppes and deserts
- iv. Freshwater environments
- v. Saltwater environments

(i) Mountain System

Some of the mountain systems of Asia include Himalaya, Tien Shan and Ural.

(ii) Plateaus

Examples of plateaus in Asia include the Iranian, Deccan and Tibetan plateaus.

(iii) Plains, Steppes and Deserts

The West Siberian Plain and Steppe are large areas of flat, unforested grass-land in Asia. Its deserts include the Gobi, and Rub' al Khali.

(iv) Freshwater

Examples of freshwater in Asia include the Yangtze, Yellow, Mekong and Gan- ges rivers.

(v) Saltwater/Seas

The major seas in the Asian region include the Indian Ocean, North Pacific Ocean, South and China Sea.

The map below shows some of the major physical features of the Asian Region.



Suggested Resources

1. David Waugh, *Geography- An integrated Approach*
2. *East Asia*. Retrieved from: <https://khanacademy.org>
3. *Asia: Physical Geography*. Retrieved from: <https://www.nationalgeographic.org>
4. *How does geography influence China?* Retrieved from: <https://www.quora.com>
5. *Kids History: Geography of Ancient China*. Retrieved from: www.ducksters.com

Benchmark 10.2.6.2: Identify the impact of geographic systems (physical and human) on the social, economic, political, religious and cultural development of the Asian Region.

Topic 2: Impacts of geographic systems on development and relationships in Asia

Sub-topics:

- Relationship between geography and history
- Geographical systems and its impact on the development of Asia
- Geographical influence on China – Case Study

Skills: Understanding (identify)

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

- Examine the relationship between geography and history.
- Identify and analyse the impact of geographical systems on Asia's development.
- Use the case study of China to describe how geographical systems affects people, places and history.

Content Background

Geographic factors are circumstances associated with a physical location that affect humans living within a specific area. Behaviour, health, beliefs, income and education are examples of factors that can be affected by geography. The idea of geographic effect on human life is called geographic determinism. This theory holds that characteristics of particular cultures are affected by conditions specific to a location. The theory addresses the impact of localized conditions on political, economic and social aspects of a society. The theory was first described in the early 1900s by Yale Professor Ellsworth Huntington as it pertained to the Roman Empire.

Geography indeed shapes the way civilization and culture of a particular place develops. For instance, the Asian continent is the largest of the world's continents, covering approximately 30% of the Earth's land area. It is also the world's most populous continent, with roughly 60% of the total population. Its diverse physical and cultural landscape had dictated its development from surrounding regions, and the world at large. Asia's geographical attributes such as rivers, mountains, barriers, landforms and climate have played a major role in its history and development. For instance, its early human civilization and settlement along the Yangtze and Ganges Rivers provided the basic foundation such as constant clean, freshwater for humans, their crops and animals, provided easy means of transportation and exploration, protection against invasion and food. Other geographical features like mountains also had significant impact on the development of the region too.

Moreover, Asia is home to the world's earliest civilizations. Its indigenous cultures pioneered many practices that have been integral to societies for centuries, such as agriculture, city planning, and religion. The social and political geography of the continent continues to inform and influence the rest of the world.

Suggested Resources

1. *How does geography influence China.*
Retrieved from: <https://www.quora.com>
2. *Asia: Physical Geography I National Geographic Society.*
Retrieved from: <https://www.nationalgeographic.org>
3. *Kids History: Geography of Ancient China.*
Retrieved from: www.ducksters.com

Benchmark 10.2.6.3: Compare the development of the region in the past to the present citing reasons for the rate of development.

Topic 3: Asia's development: past and present

Sub-topics:

- Asia's Development in the Past
- Asia's development in the Present
- Contributing factors to Asia's Growth in the past and present

Skills: Analysing (compare) Asia's development from the past to the present times); evaluation (appraise Asia's development from the past to the present times)

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

- Compare Asia's development in the past and present.
- Identify and analyze the factors that contributed to the region's growth today.
- Assess the future implications of this growth for the region.

Content Background

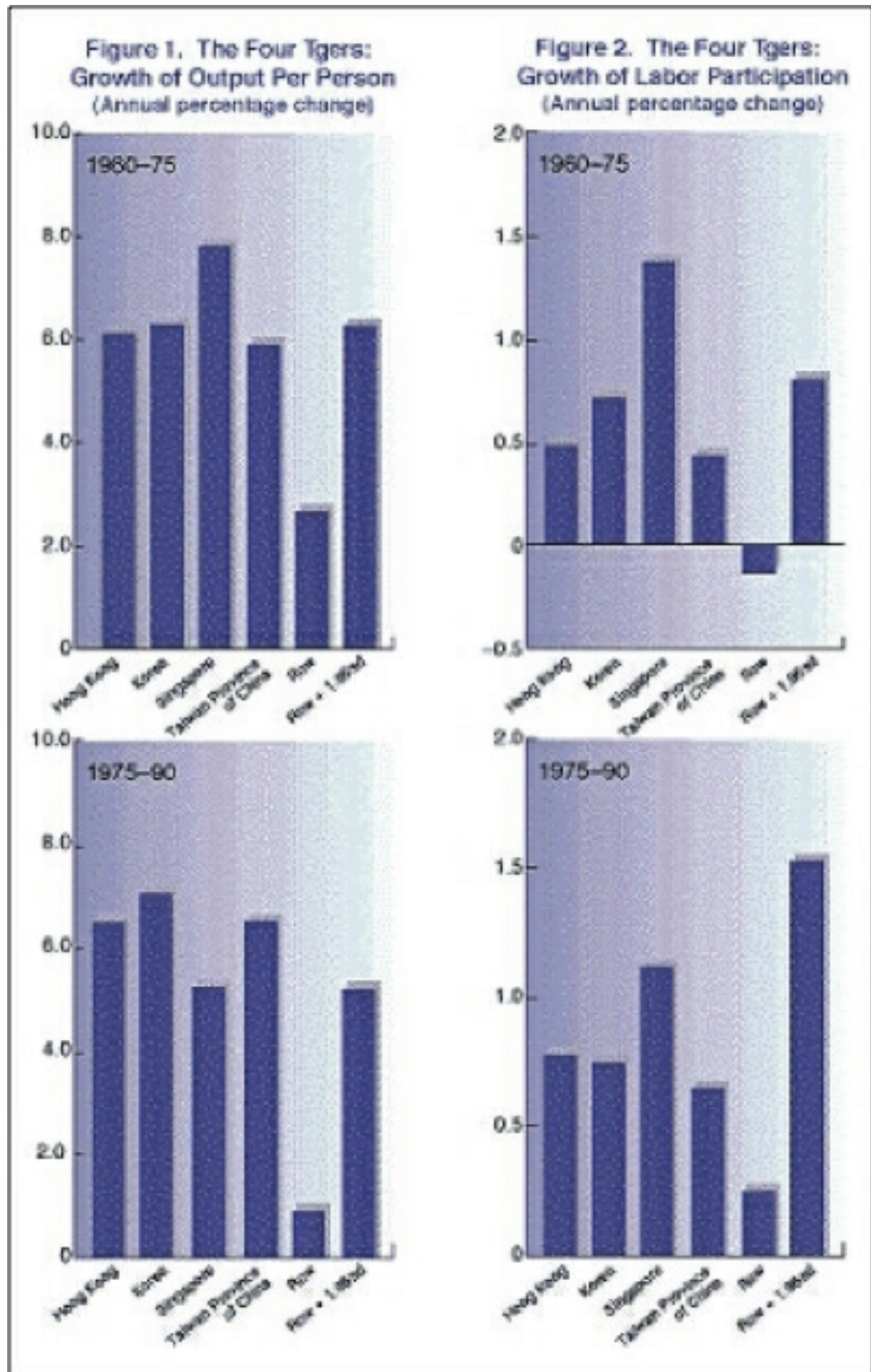
Growth is picking up in two thirds of economies in developing Asia, supported by higher external demand, rebounding global commodity prices, and domestic reforms, making the region the largest single contributor to global growth at 60% according to an Asian Development Bank (ADB) report. Asia's exponential growth in the last two decades is unprecedented and the region's economies are doing far better than all other economies of the world. In its new Asian Development Outlook (ADO) of 2017, the ADB forecasted gross domestic product (GDP) growth in Asia and the Pacific to reach 5.7% in 2017 and 2018.

The four Asian Tigers — Hong Kong, Singapore, South Korea, and Taiwan — are some of the most vibrant and growing economies in the world. Between the early 1960s and 1990s, they underwent rapid industrialization and maintained exceptionally high growth rates. By the early 21st century, they developed into high-income economies, specializing in areas of competitive advantage. Hong Kong and Singapore have become leading international financial centres, whereas South Korea and Taiwan are leaders in manufacturing electronic components and devices.

So what are the underlying factors behind this rapid acceleration in growth of the Asian economies? Some factors which have contributed to the growth of the Asian economies include:

- Reduction in poverty
- Rapid industrial growth
- Impressive growth in agriculture
- Rising domestic income
- Technological innovations and access
- Influx of investment of business startup
- Shift from entirely agriculture based economies to industrialization
- Openness to international trade

In order to remain competitive and further develop export industries, Asian economies need to keep on adapting to changes in the global competition environment with an eye to the future direction of changes, and to keep on pushing into new frontiers.



Suggested Resources

1. Michael Sarel, Growth in East Asia: *What We can and What We Cannot Infer – An academic Paper*
2. *Factors Explaining the Rapid Economic Growth of China in Recent Decades. Retrieved from: <https://www.tutor2u.net>*
3. *The Rise of Asia: Implications and Challenges I Global-is-Asian. Retrieved from: <https://lkyspp.nus.edu.sg>*
4. *Rapid growth of selected Asian economies: Lessons. Retrieved from: www.fac.org*

Benchmark 10.2.6.4: Examine how developments in the region influence and are influenced by regional and global development policies, priorities, geographic and political, cultural, social and economic climates, development perspectives and agenda.

Topic 4: Regional and global development influences

Sub-topics:

- Asia's development and influence on the world
- Influence of global policies on Asia's development

Skills: Analysis (examine)

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

- Examine how development in Asia has influenced global development policies, priorities and agenda.
- Analyse and explain why Asia has a great influence on the world economy.
- Relate how global development policies, priorities and development perspectives influence Asia's development.

Content Background

The Asian Region's unprecedented rise, particularly China and India as world powers in recent times have brought created many new challenges for the global community in terms of control and dominance. The rapidly increasing economic strength and prowess have enabled Asian countries, especially China and India to expand their influence or power rapidly in world affairs, resulting in a shift of power from the West to the East. This shift in power has raised serious concerns and anxiety over its implications such as:

- The rise of Asian countries like China and India posts a serious challenge to the established world and may lead to a clash with the leadership or dominance of the US thus, resulting in a global war in the Asia –Pacific;
- The end to the decline of the Western world;
- The rise in tensions between Western powers and Asian states due to the West been threatened by the emergence of the Asian region's economic strength and influence as well as the growth or buildup of its military capability;
- A rise in economic tensions between the US and China as well as differences in economic policies, For instance, traditional Western powers like the US and Australia view China's Belt and Road Economic Policy as "Cheque Book Diplomacy" because it has been used by China to extend her influence and power over the West's traditional partners or allies.

Similarly, Asia's peaceful rise is largely attributed to Western influence and practices:

- The adoption and integration of democracy into communist-socialist systems of government had contributed to the success of its growth. For instance, even China's authoritarian leadership has publicly endorsed democratic development to be integrated with Chinese characteristics.

- Furthermore, the Asian region's adoption of Capitalism and market economy together with democracy has given rise to overwhelming growth of the region;
- In addition, the adoption of Western values and practices together with the integration of its traditional religious systems has worked wonders and led to its fast development as an economic and political power.

Suggested Resources

1. *Expanding Economies in Asia Deliver 60% Global Growth: ADB.*
Retrieved from: <https://www.adb.org>
2. *Africa looks to learn from east Asia's development experiences.*
Retrieved from: <https://www.theguardian.com>
3. *China's Growing Economic and Political Power: Effects on the Global South.* Retrieved from: <https://apjjf.org>

Unit 7: Historical Inquiry

Content Standard 10.2.7: Students will be able to use historical inquiry skills and relevant methods to analyse and interpret historical events and issues.

Benchmark 10.2.7.1: Critique the representation of a past event or issue in the local community, district or province of PNG in terms of its validity and reliability.

Topic 1: Validity and reliability of historical accounts in PNG

Sub-Topic:

- Determining the validity and reliability of historical accounts
- Case Study The Roselle Island Massacre of PNG's significant historical events

Skills: Evaluating (critique)

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

- Analyse the importance of validity and reliability of historical accounts.
- Evaluate ways to validate historical accounts for reliability.
- Critique historical accounts for validity and reliability using the Case Study of the Roselle Island Massacre, in the Milne Bay Province.

Content Background

There is a popular saying that goes like this; “a photograph cannot lie.” How true that statement is anyone's guess but are we to believe everything we see or hear? Historical accounts are no different when it comes to determining their validity and reliability because all humans view occurrences under different lenses and thus, it affects our interpretation very much. In light of this statement, every historical account should not be accepted at face value but thoroughly analysed and evaluated to determine its validity and reliability before it is accepted or rejected. One major factor behind this approach is because all humans possess a certain degree of bias either for or against someone or something, and this affects one's view and judgment.

So what is validity and reliability? Validity is the quality or extent to which a concept, conclusion or measurement is correct or true and likely corresponds accurately to the real world. Reliability is a source evaluation skill which asks you to draw a conclusion about the trustworthiness of a source.

In all, reliability and validity are important factors of research studies. They allow us to gain firm and accurate results, as well as helping us to generalize our findings to a wider population and, in turn, apply research results to the world to improve aspects of people's lives.

By critically analysing and assessing historical accounts we aim to identify these biases to ensure our view of those happenings are accurate, balanced and dependable. Eliminating biases in historical accounts can be done in a number of ways including comparing different accounts of individuals or witnesses, careful assessment of the information presented, and examination

of all available evidences to arrive at a justifiable conclusion.

The reliability of a source can be established based upon the;

- Origin - The creator is someone who can be trusted. For example, an eye-witness or an academic expert. The type of source is particularly valuable. For example, a personal letter or an academic journal.
- Perspective - The creator has a specific perspective on the topic. For example, a particular nationality or career
- Context - The source was created at an important point in time regarding the event. For example, it was made on the same day.
- Audience - The intended audience of the source is particularly important. For example, those who would have known key details.
- Motive - The specific purpose of the source was to record specific information about the topic.

Here is an example of how a source can be evaluated for its reliability.

Source 'A' is a very reliable source regarding the experience of Australian troops at Gallipoli because;

- *it is a letter written by John Smith (origin),*
- *an Australian soldier who was personally involved in the event itself (perspective).*
- *This source was written a few days after the Gallipoli landing on the 25th of April 1915 (context)*
- *and was intended to be a recount of his experiences (audience)*
- *to be read by his family in Australia (motive).*

As a result, it is likely to be a very trustworthy account of a soldier's experience of the Gallipoli landing.

Suggested Resources

1. Eric Johns, (2006). PNG History Through Stories, Melbourne. Pearson Education Australia
2. John Waiko, (1993). A short History of Papua New Guinea: Oxford University Press, Australia

Benchmark 10.2.7.2: Examine the social, political, economic, cultural and religious context of an issue or an event that happened in the past in terms of the perspectives and actions of the key players, the purpose and the intended outcomes, impact on citizens and the environment and the influence on community, district, provincial and national development.

Topic 2: Impact of historical events on societies in PNG

Sub-topics:

- Bougainville Conflict
- Impact of the conflict on people, and environment
- Influence of conflict on the community and national development

Skills: Analyze (examine)

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

- Examine the social, political, economic, cultural and religious context of the Bougainville Conflict.
- Evaluate the impact of the conflict on people and the environment.
- Analyse the influence of the conflict on the community and national development.

Content Background

The Bougainville Conflict was an armed conflict fought between the PNG Government and the self-styled Bougainville Revolutionary Army (BRA) between 1988 and 1998. The total estimated human loss stands between 15, 000 and 20, 000 Bougainvilleans for the 10 year conflict. The conflict ended in 1998 after the signing of the Bougainville Peace Agreement between the PNG Government and the BRA. Under this agreement, the Government of PNG agreed to the establishment of the Autonomous Bougainville Government (ABG) and certain rights, or authorities which the ABG would have over the Autonomous Region of Bougainville (AROB) including its outer islands.

Teachers are advised to allow students to research further on this historical event and analyse its causes and effects. What impact did this conflict have on the people and the environment of Bougainville as well as the rest of Papua New Guinea? How did it influence and impact the social, political, economic, cultural and religious aspects of Bougainville and PNG?

Suggested Resources

1. *Bougainville Civil War*. Retrieved from: <https://www.wikipedia.com>
2. Mary-Louise O'Callaghan. *The origins of the conflict*. Retrieved from: www.conciliationresources.com

Benchmark 10.2.7.3: Use research skills to ascertain how a national issue or an event affected an individual in terms of his or her thinking, feelings and perspectives, behavior, relationships, survival, and belief system.

Topic 3: Impact of national events on an individuals

Sub-topics:

- Bougainville Conflict – Late Francis Ona
- PNG Independence – Sir Michael Somare
- World War II – Yauwiga

Skills: Analyze (research)

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

- Research on the impact of different national events on various individuals in PNG.
- Present their findings in writing on the effect the event had on the individual's thinking, feelings and perspectives, behavior, relationships, survival, and belief system.

Content Background

Different experiences in life have varying levels of effect on individual thinking, feelings or perspectives because all humans are unique in their own ways. Two people may experience the same incident but view things differently from one another. The impact different experiences have on all humans affect our world view and ultimately shape our behaviours, attitudes and perceptions greatly. The perceptions one has on issues or life are primary the result of the experiences one has encountered in life and it moulds the characters we possess. Negative experiences often generate fear, doubt, anxiety, low esteem and certain characters that are detrimental to a person. Likewise positive experiences on the other hand can create worthwhile traits which lead to a positive outlook.

Teachers are advised to allow students to research on the historical events mentioned and examine its impact on the individual's thinking, feelings and perspectives, behavior, relationships, survival, and belief system.

Suggested Resources

1. John Waiko, (1993), *A short History of Papua New Guinea*: Oxford University Press, Australia
2. Bougainville Civil War. Retrieved from: <https://www.wikipedia.com>
3. Mary-Louise O'Callaghan. *The origins of the conflict*. Retrieved from: www.conciliationresources.com

Benchmark 10.2.7.4: Evaluate the outcomes of a contested event or issue in the past in terms of improvement in social, economic, political, cultural, religious and the overall quality of life outcomes.

Topic 4: Contested events and issues

Sub-topics:

- Outcomes of disputed events and issues in PNG
- Improving the overall quality of life

Skills: Evaluating

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

- Identify and evaluate the outcomes of disputed events and issues in PNG.
- Examine and propose how the outcomes of the contested event or issue can be improved for better life.

Content Background

Suggested Resources

Benchmark 10.2.7.5: Investigate the effect of a past national event or issue on the environment and people and on the sustainability of places.

Topic 5: Effects of national events and issues on people and the environment

Sub-topics:

- Effects of national events and issues on people
- Effects of national events and issues on the environment
- Effects of national events and issues on the sustainability of

Skills: Analysing (investigate)

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

- Investigate the effects of national events and issues on people.
- Examine how national events and issues affect the environment.
- Explain how national events and issues affect sustainability of places.

Content Background

Suggested Resources

Strand 3: Political Science

This strand has 4 units. They are;

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

Units	Topics
1. Government Systems	Topic 1: Legal basis for democratic governments Topic 2: Arms of democratic governments Topic 3: Separation of Powers Topic 4: Balance of power Topic 5: Roles and responsibilities of parliamentarians
2. Political Ideologies and Systems	Topic 1: Levels of governments in democratic nations Topic 2: Principles and practices in democratic nations Topic 3: Policies, programs and activities of democratic nations Topic 4: Development goals of developed and developing countries Topic 5: Indicators of democratic countries Topic 6: Profiles of developed and developing commonwealth countries
3. International Relations	Topic 1: Relationships between different democratic countries Topic 2: Nature of relations Topic 3: Conflict between people of different democratic nations Topic 4: Factors that affect relations in democratic nations Topic 5: The role of the media in people to people relations
4. Civic and Citizenship	Topic 1: Policies and laws on human rights Topic 2: PNG's Constitution on Human Rights Topic 3: Promoting and protecting human rights using the legal system Topic 4: Enforcement of rights for different groups of people Topic 5: Children's rights

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 10.3.1.1: Examine the legal bases (for example the National Constitution) for the democratic government in Papua New Guinea and other countries.

Topic 1: Legal basis for democratic governments

Sub-topic:

- The National Constitution of Papua New Guinea

Skills: Analysis (examine)

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

- Explain the importance of the Constitution as the basis for democratic government in Papua New Guinea.

Content Background

Legal aspects of democratic governments

There are different government systems in the world that govern the people of a nation. A government institutes and forms the basis of leadership and decision-making in a country. Its prime role is the day-to-day management, control, monitoring and supervision of the people and the affairs of the nation.

Papua New Guinea is a constitutional monarchy. This means that Papua New Guinea has its own Constitution, which was derived from our people's own views and ideas and not adopted from other countries. Papua New Guinea has a unique aspect of how the Constitution was made that provides the foundation of our nation and our independence from the colonial administration.

The Constitution is an important aspect of democracy in the process and seeks for good governance of the society. Without the Constitution, there can be no democratic society. All members including those in authority are subject to the law.

Section 99(2) of the Constitution of Papua New Guinea spells out a structure of government consisting of three arms: Parliament, Executive and Judicial System. The Constitution also allocates to each of these arms specific functions: law-making, executive government of Papua New Guinea, exercise of judicial authority respectively. The Constitution goes on to uphold the principle "the three arms shall be kept separate from each other".

Source: Transparency International - National Integrity Systems, Country Study Report, PNG (2003) (edited)

Suggested Resources

1. Celia Meehan and Shirley Sydenham. Civics Australia “World Governance ,Macmillan Library.
2. Introduction to the Legal system of PNG
3. A Law awareness for PNG
4. Decolonization and the Birth of Papua New Guinea’s Constitution 1959 – 1975
5. Social and Spiritual Strand – Social Science (Student Support Material) PASTEP Primary and Secondary Teacher Education Project

Benchmark 10.3.1.2: Identify the different arms of a democratic government (Legislative, Executive, and Judicial) and describe their principles and functions.

Topic 2: Arms of democratic governments

Sub-topics:

- Branches of democratic government The Legislative Arm
- Principles of governments The Executive Arm
- Functions of democratic governments The Judicial Arm

Skills: Understanding (identify)

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

- List the basic principles of democratic governments.
- Explain the functions of democratic governments.
- Examine the principles and functions of the legislative arm of the government.
- Analyse the principles and functions of the executive arm of the government.
- Identify the principles and describe the functions of the judicial arm of the government.
- Draw a diagram illustrating the branches arms of government in democratic governments.

Content Background

Papua New Guinea is an independent parliamentary democracy, with Queen Elizabeth II as the Head of State, represented in PNG by a Governor General. Democratic governments have certain principles to guide their functions. These principles often become a part of the constitution or bill of rights in a democratic society. Though no two democratic countries are exactly alike, people in democracies support many of the same basic principles and desire the same benefits from their government.

Principles of democratic governments

- Citizen participation
- Equality
- Political tolerance
- Accountability
- Transparency
- Regular free and fair elections
- Economic freedom
- Control of the abuse of power
- Bill of rights
- Accepting the results of elections
- Human rights
- Multi-party system
- Rule of law

In PNG, the Constitution of PNG is represented or guided by these the following principles:

- **Limited Government** - The principle that the power of the government is limited by the Constitution; a system of government in which the government is given only the powers specifically listed in written documents.
- **Separations of Powers** - There are three branches of government, each with its own powers and duties.
- **Checks and Balances** - Each branch checks the powers of the other two branches.

The Constitution sets up three arms of the government. They are; the **National Parliament** or the Legislative, The **National Executive Council** and the **Judiciary** or the Courts. Each arm of the government is independent.

This is called the ‘separation of, power”. Both the national and provincial governments have these branches.

Functions of the three (3) arms of the government:

1. **The Legislative Branch** makes the laws and the plans. This is the Parliament in national government and the provincial assembly in the provincial government.
2. **The Executive Branch** decides on questions of policy and directions for PNG. In the national government, the National Executive Council (Cabinet) is made up of the Ministers assisted by the National Public Service. In the provincial government, the Executive Branch is the Provincial Executive Council assisted by the Provincial Public Service.
3. **The Judicial Branch** is an independent body which protects the basic rights as stated in the Constitution. The Judiciary solves conflicts and punishes lawbreakers. It works through the national, supreme, district and local courts in the national government and the village courts in the provincial government. It interprets (work out) and enforces the constitutional rules and develops the body of legal rules, expanding on the PNG laws to cover any new situations.

Suggested Resources

1. Celia Meehan and Shirley Sydenham. Civics Australia “*World Governance*”, Macmillan Library.
2. Introduction to the Legal system of PNG
3. A Law awareness for PNG
4. Decolonization and the Birth of Papua New Guinea’s Constitution 1959 – 1975
5. Social and Spiritual Strand – Social Science (Student Support Material) PASTEP Primary and Secondary Teacher Education Project??
6. Visit the National Archives website to find the full text of the U.S. Constitution.

Benchmark 10.3.1.3: Explore historical and contemporary examples of how the branches of government have checked each other and the consequences.

Topic 3: Separation of Powers

Sub-topics:

- Importance of the 'Separation of Powers'
- The Three Powers
- Abuse of 'Separation of Powers' in PNG

Skills: Analysis (explain)

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

- Examine and discuss the importance of 'Separation of Powers'.
- Investigate the three powers in a democratic government.
- Identify and analyse cases in PNG that abused the 'Separation of Power'.
- Discuss the consequences of these actions.

Content Background

History has time and again shown that unlimited power in the hands of one person or group in most cases means that others are suppressed or their powers curtailed or reduced. The separation of powers in a democracy is to prevent abuse of power and to safeguard freedom for all.

The system of separation of powers divides the tasks of the state into three branches: legislative, executive and judicial. These tasks are assigned to different institutions in such a way that each of them can check the others. As a result, no one institution can become so powerful in a democracy as to destroy this system.

Checks and balances make sure that the three powers interact in an equitable and balanced way. The 'Separation of Powers' is an essential element of the Rule of Law, and is enshrined in the Constitution.

The Legislature

Papua New Guinea government has one legislative house which is the National Parliament, previously known as the House of Assembly. It has 111 seats, with 89 elected from single-member "Open" electorates and 22 from province level – "Provincial" electorates. Members are elected by popular vote to serve five-year terms.

The 111 member Parliament in turn elects the prime minister, who appoints his cabinet from members of his party or coalition.

Members of Parliament are elected from 22 provinces and the National Capital District of Port Moresby. Parliament introduced reforms in June 1995 to change the provincial government system, with regional (at large) members of parliament becoming provincial governors, while retaining their national seats in Parliament.

The Executive Branch

Cabinet: National Executive Council appointed by the Governor General on the recommendation of the Prime Minister.

Papua New Guinea has a constitutional monarchy which recognises the Queen of England as head of state. She is represented by a Governor General who is elected by Parliament and who performs mainly ceremonial functions. (Source: U.S. Department of State – Background Notes)

Following legislative elections, the leader of the majority party or the leader of the majority coalition usually is appointed prime minister by the Governor General. (Source: The world Fact Book – Papua New Guinea.) There are maximum of 29 ministers allowable under the Constitution and they are appointed from members of parliament. Most governments have appointed the full complement of Ministers since Independence.

The Judiciary Branch

Papua New Guinea's judiciary is independent of the government. It protects constitutional rights and interprets the laws. There are several levels of court, culminating in the Supreme Court of Papua New Guinea. Supreme Court: - the chief justice is appointed by the governor general on the proposal of the National Executive Council after consultation with the minister responsible for justice: other judges are appointed by the Judicial and Legal Services Commission. The Supreme Court is the final court of appeal and has original jurisdiction on constitutional matters. The National Courts hear most cases and appeals from the lower district courts established at the provincial level. There are also village courts headed by lay persons (generally local chiefs, known as "big-men"), who judge minor offences under both customary and statutory law. (Source: U.S. Department of State – Background Notes (edited))

An example of a case of abuse of the 'Separation of Power' is given. Teachers are advised to have an open discussion with the students and allow them to analyse and evaluate the consequences of this case. Students must be given the opportunity to identify more of such cases so they can discuss and analyse and even debate on the consequences.

Separation of power essential

THE doctrine of separation of power among the three government arms; legislator, executive and judiciary, is being abused by the current regime. New laws are being passed but not in the interest of the people.

The legislator has control over the executive and judiciary arms, which allows corruption to take place.

In a democratic system, the principle of separation of power is a vital element simply to protect gross abuse by such dictatorial rule. This is already evident in the interference of the RPNGC and PNGDF.

There are also interferences in government corporations, such as Telikom, PNG Ports and the Electoral Commission. Soon they may also interfere with the Ombudsman Commission. The Constitution established these institutions so that they can perform their roles and functions without legislator control.

I am surprised at some senior statesmen, who preach about good governance and are often very vocal, but are now silent in the current regime. What are their motives?

How can the current regime pass very important laws in the span of eight months, when they have not been adequately debated and are destructive to PNG's democracy? It would appear that the current regime has hidden agendas for a dictatorship rule by having no respect for the Constitution.

I wonder how the faceless lawyers involved can have any integrity when they have truly compromised their profession.

Suggested Resources

1. (Source: U.S. Department of State – Background Notes (edited)
2. Visit the National Archives website to find the full text of the U.S. Constitution.
3. The National Newspaper

Benchmark 10.3.1.4: Predict how a democratic nation like Papua New Guinea will function without checks and balances of the powers of the three branches of government.

Topic 4: Balance of Power

Sub-topics:

- Checks and balance in democratic governments
- Compromising checks and balances in democratic governments

Skills: Understanding (predict)

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

- Explain concepts of check and balance in democratic Governments (separation of power- concepts of checks and balances of the three arms of government).
- Discuss the effects of compromising checks and balance.
- List examples of compromising check and balance in the history of democracy in PNG. E.g. the Nahau Rooney case in 1980.

Content Background

In Papua New Guinea the principle of separation of powers has been accorded a constitutional status that stipulated in s.99 (3) of the constitution. Section 99 provides the structure of the three arms of government i.e. the legislature, the executive and the judiciary. Sub-section (3) states that: in principle, the respective powers and functions of the three arms shall be kept separate from each other.

The Constitutional Planning Committee was very cautious on this that it provided certain recommendations to regulate and impose certain powers and functions for each arm of government so that they do not trespass each other's constitutional duties and to abuse powers. Thus it is apparent that the constitution separates the three arms of Government and provides their respective powers and functions so that they do not intrude into each other's functions. The constitution is a device for limiting the power of government. It lists the rights of citizens and in doing so, creates limits and duties for the government. Therefore, it provides checks and balances within the three arms of government so that the power is not concentrated or centralized in one body but are distributed among the three arms of government. Hence the doctrine of separation of power avoids violation by the executive into judicial function or vice versa.

Suggested Resources

1. Decolonization and the Birth of Papua New Guinea's Constitution 1959 – 1975
2. Social and Spiritual Strand – Social Science (Student Support Material) PASTEP Primary and Secondary Teacher Education Project?
3. Legal Studies for Grade 11 & 12 students in Papua New Guinea
4. Introduction to Legal systems in Papua New Guinea

Benchmark 10.3.1.5: Analyse the roles and responsibilities that parliamentarians play and their impact on local and national development.

Topic 5: Roles and responsibilities of parliamentarians

Sub-topics:

- Roles and responsibilities of parliamentarians
- Impact of leadership on local and national development

Skills: Analysing (analyse)

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

- Describe the roles and responsibilities of parliamentarians in democratic country.
- Examine the roles of parliamentarians in PNG.
- Explain the impact of leaders on local and national development.

Content Background

Role of Parliamentarians

Parliamentarians are members of parliament or, in other words, representatives elected by the voters of an electoral district to a parliament. They are legislators and monitors of government policy at the national level, as well as the guardians of the public will and conscience as elected representatives of the population.

As the decision-makers of policies, governmental plans and budgets, the parliamentarians are the main players in deciding on legislation deriving from decisions from the Conference of the Parties to the Convention. By creating, amending and ratifying laws, they can therefore translate the consensus reached internationally under the Convention on Biological Diversity into tangible actions at the national and local levels.

A parliamentarian typically serves as an adviser on the proper conduct of a meeting. In the federal and state legislatures, the parliamentarian interprets the body's rules and advises the presiding officer on the legislative process. In other organizations, the parliamentarian may be a formal or informal title for a person who advises on the proper conduct of a meeting. Professional parliamentarians also offer their services for conventions and special purpose meetings.

Roles of Members of Parliament in PNG

The roles of the MPs are varied. A MP is elected and expected to be a spokesperson for the people he or she represents. Members of parliament are law makers, examiners of how the government works in spending the money raised from taxation and contribute meaningfully to the debates on national issues. The Parliamentarians establish a direct link between their electorate and the parliament. They are the spokespeople of their constituents.

Suggested Resources

1. Ron Bell. John Mark. The Political Systems of Australia, Russia and USA ;VCE Political Studies Book 2
2. John.B.Varey, (2016). *Know your Parliament with Theo Zurenuoc*. Port Moresby. Office of the Speaker, PNG National Parliament.
3. Legal Studies for Grade 11 & 12 students in Papua New Guinea
4. Introduction to Legal systems in Papua New Guinea

Unit 2: Political Ideologies and Systems

Content Standard 9.3.2: 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 10.3.2.1: Describe how ward councillors, Local Level Government (LLG) presidents and provincial members and national leaders exemplify the ideals of the democratic ideology.

Topic 1: Levels of governments in democratic nations

Sub-topics:

- Levels of government in PNG
- Decentralisation of power

Skills: Remembering (describe)

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

- Examine and analyse the levels of government in Papua New Guinea.
- Analyse the concept of decentralisation of power.

Content Background

Papua New Guinea is a constitutional monarchy. The Head of State is Her Majesty Queen Elizabeth II, represented in Papua New Guinea by a Governor-General. The Governor-General is elected directly by Members of the National Parliament and performs mainly ceremonial functions.

The three levels of government in Papua New Guinea are the national, provincial and Local Levels Government (LLG). Provincial government system was introduced in 1976 each with provincial assembly which comprise of national members from each province including a governor. There are about more than 150 local councils.

As studied earlier in unit 1 the highest level of government which is the National Government has three branches or arms that keeps the governance of Papua New Guinea in order. Crucial matters relating to the governance of the country is normally debated at the floor of the parliament and is solved with views from members who are representatives of their people in the districts.

The Prime Minister is the Head of the Government. He or she is elected by Parliament. However, the Prime Minister of Papua New Guinea is appointed and dismissed by the Governor-General on the proposal of Parliament. The Prime Minister chooses and recommends the other members of the cabinet, known as the National Executive Council or NEC is appointed by the Governor-General on the recommendation of the Prime Minister. The cabinet executes decisions within the first two arms of the government; the legislature and the executive arms.

Each ministry is headed by a cabinet member, who is assisted by a permanent secretary, a career public servant, who directs the staff of the ministry. The cabinet consists of members, including the Prime Minister and ministers of executive departments. They answer politically to the parliament.

Papua New Guinea has a unicameral National Parliament, previously known as the House of Assembly. It has 111 seats, with 89 elected from single-member "Open" electorates and 22 from province-level "Provincial" electorates. Members are elected by popular vote to serve five-year terms. The most recent election was held in June–July 2017.

Members of Parliament are elected from the **twenty-one** provinces and the National Capital District.

After independence in 1975, members were elected by the first past the post system, with winners frequently gaining less than 15% of the vote. Electoral reforms in 2001 introduced the Limited Preferential Vote system (LPV), a modified version of alternative vote, where voters number their first three choices among the candidates. The first general election to use LPV was held in 2007.

Parliament introduced reforms in June 1995 to change the provincial government system, with Provincial members of Parliament becoming provincial governors, while retaining their national seats in Parliament. However, if a provincial member accepts a position as a cabinet minister, the role of governor falls to one of the Open members of Parliament from the province. The government through the Minister of Provincial and Local Level Government Affairs is responsible for the provincial and local level government respectively. The Provincial Government is responsible for imposing taxes and provide for local education, industry and business development.

The legality of the Local Level Government is provided for in the Organic Law under LLG Administration Act 1997. There are 325 LLG in 89 districts. The LLG is run by a president and the president has been mandated to create revenue opportunities, collect taxes and fees and receive transfers (monies) from the national government to cover for salaries and development projects.

They are also responsible for water supply and joint projects with the provincial government for health and environment protection, waste disposal and roads and economic infrastructure. The LLG president works with the elected ward councilors to implement these projects to achieve the goals of the government of the day at their levels of governance.

Citizen participation and appropriate political representation in Papua New Guinea are the foundation of democracy. The local level governments and provincial governments are closest to the daily lives of citizens. They promote mechanisms to facilitate citizen participation in politics, especially in local, autonomous and national government elections.

Decentralisation is the transfer of authority from central to the local government. As covered already the LLG presidents have been given the power to collect taxes, create income earning opportunities, and working

together with the provincial government to implement projects such as roads, aid posts and other infrastructure.

Suggested Resources

1. Commonwealth countries.
Retrieved from: <https://en.www.commonwealthgovernance.org>
2. Meehan Celia & Sydenham Shirley, (2003). *World Governance*

Benchmark 10.3.2.2: Analyse the social, economic, cultural, and religious principles and practices in a democratic nation or amongst democratic nations.

Topic 2: Principles and practices in democratic nations

Sub-topics:

- Social principles and practices in democratic nations
- Economic principles and practices in democratic nations
- Cultural principles and practices in democratic nations
- Religious principles and practices in democratic nations

Skills: Analysing (analyse)

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

- Identify and explain the social principles and practices in democratic nations.
- Investigate and discuss the economic principles and practices in democratic nations.
- Evaluate the cultural principles and practices in democratic nations.
- Discuss and highlight religious principles and practices in democratic nations.

Content Background

Countries around the world embrace a kind of government system which they have belief in that it will keep tack the people and the country as a whole for years ensuring growth and development in terms of social, economic, religious and cultural aspects of life. These government systems where derived from ideologies proposed by renowned scholars like Karl Maxist, Fredrich Engels, Lenin, Aristotle and the likes of these men.

The question of resource ownership, resource distribution and consumption, income and wealth gave birth to these fundamental ideologies. An ideology is a collection of ideas. Typically, each ideology contains certain ideas on what it considers to be the best form of government (example; autocracy or democracy) and the best economic system (for instance; capitalism or socialism). The same word is sometimes used to identify both an ideology and one of its main ideas. For instance, socialism may refer to an economic system, or it may refer to an ideology which supports that economic system. The same term may also be used to refer to multiple ideologies and that is why political scientists try to find consensus (agreement) definitions for these terms.

What then are the principles and practices of democracy?

To understand this, let us define what democracy is. Democracy is a system of government that is formed by whole population or eligible members, through elected representatives. (Oxford Dictionary). Any democratic government is guided by key principles (rules or regulations) and practices of democracy. The following are key elements or principles of democracy put forward by American Political Scientist Larry Diamond;

1. A political system for choosing and replacing the government through free and fair elections

2. The active participation of all citizens in political and civil (public) life
3. Protection of the Rights of all citizens
4. A rule of law in which the laws and procedures apply equally to all citizens.

Countries with democratic governance system conform to these principles and practices to provide and meet the socio-economic, cultural and religious needs of its citizens.

Since democracy is a universal ideal its beliefs have been upheld as one of the core values and principles of the United Nation (UN). United Nations is a global organization that aims for universal peace and prosperity for all mankind. For instance; All humans have the right to life so they must socialize and improve their quality of life, all humans have right to income earning opportunities so they can have access to basic goods and services. Humans have their right to religion, they also have the right to preserve their cultures. So any country practicing democracy should base their governance on these key elements or principles.

Teachers are advised to research on the social, cultural, economic and religious practices in democratic nations.

Suggested Resources

1. Democracy. Retrieved from: <https://en.m.wikipedia.org/wiki>
2. Sustainable Development Goals. Retrieved from: <https://en.m.wikipedia.org/wiki>
3. Commonwealth Countries.
Retrieved from: <https://en.www.commonwealthgovernance.org>
4. Meehan Celia & Sydenham Shirley, (2003). *World Governance*.

Benchmark 10.3.2.3: Examine the social, political, economic, and cultural policies, programs, and activities of democratic governments in terms of their purposes, impact, and outcomes.

Topic 3: Policies, programs and activities of democratic nations

Sub-topics:

- Social, political, economic, and cultural policies, programs and activities of democratic government
- Purposes, impacts, and outcomes of these policies, programs and activities

Skills: Analysis (examine)

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

- Research and explain the social, political, economic, and cultural policies, programs, and activities of democratic governments.
- Analyse and evaluate the purposes, impacts, and outcomes of policies, programs and activities of democratic nations.

Content Background

Countries who exercise democracy should align their social, political, economic and cultural policies, programs and activities in line with the United Nations Development Goals. Member countries especially democratic nations with the United Nations met in 2000 and developed the Millennium Development Goals (MDG). Democratic member countries of the UN have the advantage in that the UN advocates for peace and equality for all its members. From the summit (conference) at that time the following were the eight development goals prepared for 2015. This followed the adoption for the United Nations Millennium Declaration. A total of 191 United Nations members states at that time and at least 22 international organisations committed to help achieve the following millennium Development Goals by 2015;

1. To eradicate extreme poverty and hunger
2. To achieve universal primary education
3. To promote gender equality and empower women
4. To reduce child mortality
5. To improve maternal health
6. To combat HIV/AIDS, malaria and other diseases
7. To ensure environmental sustainability
8. To develop a global partnership for development

Since 2000 Papua New Guinea is still struggling to achieve all these goals just like the other developing countries nevertheless it has already developed its goals and working towards achieving them.

Suggested Resources

1. Democracy. Retrieved from: <https://en.m.wikipedia.org/wiki>
2. Sustainable Development Goals. Retrieved from: <https://en.m.wikipedia.org/wiki>
3. Millennium Development Goals. Retrieved from: <https://en.wiki.org/wiki/>

Benchmark 10.3.2.4: Compare the development policies, plans, programs, and activities of developed and developing democratic countries.

Topic 4: Development goals of democratic countries

Sub-topic:

- Development goals of developed and developing democratic countries

Skills: Analysis (compare)

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

- Identify and explain development policies, plans, programs, and activities of developed democratic countries.
- Examine development policies, plans, programs, and activities of developing democratic countries.
- Discuss and evaluate the development goals of PNG. E.g. Vision 2050, National Goals and Directive Principles, Medium Term Development Goals.
- Identify and explain the similarities and differences in the development policies, plans, programs and activities between developed and developing democratic nations.

Content Background

Government in both developed and developing democratic countries have designed and developed policies, plans, programs and activities envisaged to promote prosperity for all their citizens. As studied in the previous topic this has come about with the assistance of the United Nation with its Millennium Development Goals (MDG). Papua New Guinea was able to develop its goals such as the Vision 2050 and the Medium Term Development Goals (MTGD) where it seeks to find its place in a world where all its citizens should live as healthy, wealthy and wise society come 2050.

The developed worlds who are members to the UN have plans to promote the goals of the United Nations by providing financial aid for development to the underdeveloped or less developed world (LDW) through development aid or assistance, technical assistance, international aid and Official Development Assistance (ODA).

The following are the Sustainable Development Goals (SDG) under the Millennium Development Goals (MDG) set by the UN General Assembly 2015 for the year 2030 which was part of the Resolution 70/1 of the UN summit. The outcome of the meet saw 17 goals set to end poverty, protect the planet, and ensure all people enjoy peace and prosperity. They are as follows;

- | | |
|------------------------------------|--|
| 1. No poverty | 11. Sustainable cities and communities |
| 2. Clean water | 12. Responsible consumption and production |
| 3. Good health and well-being | 13. Climate action |
| 4. Quality education | 14. Life below water |
| 5. Gender Equality | 15. Life on Land |
| 6. Clean water and sanitation | 16. Peace justice and strong institution |
| 7. Affordable and clean energy | 17. Partnership for goals |
| 8. Decent work and economic growth | |
| 9. Industry and infrastructure | |
| 10. Reduced inequalities | |

As mentioned earlier Papua New Guinea aims to achieve this by year 2050 with its Vision 2050.

Suggested Resources

1. Sustainable Development Goals. *Retrieved from: <https://en.m.wikipedia.org/wiki>*
2. Millennium Development Goals. *Retrieved from: <https://en.wiki.org/wiki/>*

Benchmark 10.3.2.5: Collect, analyse, and interpret data on the social, political, and economic indicators of democratic countries.

Topic 5: Indicators of democratic countries

Sub-topics:

- Interpreting data on the social, political, and economic indicators of democratic countries
- A study of Human Development Index (HDI) of democratic nations

Skills: Understanding (interpret), applying (collect), analyzing (analyze)

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

- Research and gather data/information on the indicators (social, political, economic) of democratic nations.
- Examine the data collected on the indicators of democratic nations.
- Present the information on the indicators of democratic countries on graphs, tables and charts.
- Discuss the Human Development Index (HDI) of democratic nations.
- Compare the similarities and differences in social, political, and economic indicators of democratic countries.

Content Background

What is democracy indicator?

Democracy indicators are yardsticks used to measure the level of growth and development of countries that practice democracy. A system called the Democracy Index is used. Democracy Index is an index compiled by the Economist Intelligent Unit (EIU) a UK-based company. Its intention is to measure the state of democracy in 167 countries, of which 166 are sovereign states and 164 are UN member states. The index was first published in 2006, with updates from 2008, 2010 and later years.

The following three are categories that questions are poised at, to measure index of democracy.

1. Pluralism

Pluralism means variety or diversity. It is in fact a political philosophy (belief) wherein opposing values, interests, conviction (views) and lifestyle to a political body is facilitated by this body through compromise for mutual understanding. It perseveres and permits for coexistence of peace from all aspect of governance.

2. Civil liberties

This deals with personal guarantees and freedoms that the government cannot abridge, either by law or by judicial interpretation without due process. This includes freedom of conscience, freedom of press, freedom of religion, freedom of expression, freedom of assembly, the right to security and liberty, freedom of speech, the right to privacy, the right to equal treatment under law and due process and the right to a fair trial. (Source: www.m.wikipedia.org/wiki/Democracy_Indicator)

3. Political cultures

This refers to a set of attitudes, beliefs and sentiments (opinion) that give order and meaning to a political process and which provides the underlying assumption and rules that govern behaviour in the political system. (Source: International Encyclopaedia of the Social Science)

EIU findings from these categories show that countries with higher index have captured all aspects of these three categories. Culminating from these categories are the 4 regime types of democracy that democratic countries are actually exercising. They are;

1. Full democracy: Democracy exercised at its best
2. Flawed Democracy: Some form of democratic aspects manipulated.
3. Hybrid Democracy: Both democratic and autocratic are practised however; there is no checks and balance of those in power.
4. Authoritarian Regime: Governance is drawn more towards dictatorship.

From the EIU findings, Papua New Guinea stands in the category of low index achieving countries at the rate of 0.544 placing PNG at 153 out of 167 democratic countries. This finding was done in 2017. (Source; [wikipedia.org/wiki/Democracy-Index/](https://en.wikipedia.org/wiki/Democracy-Index/))

Suggested Resources

1. Democracy. Retrieved from: <https://en.m.wikipedia.org/wiki/>
2. Human Development Index. Retrieved from: <https://m.economictimes.com/>
3. List of countries. Retrieved from: <https://en.m.wikipedia.org/wiki/>

Benchmark 10.3.2.6: Develop and interpret the social, economic, and political profile of one developed and one developing commonwealth country.

Topic 6: Profiles of developed and developing commonwealth countries

Sub-topics:

- A case study of a commonwealth developed country
- A case study of a commonwealth developing country

Skills: Understanding (interpret), creating (develop)

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

- Create a social, economic, and political profile of developed country.
- Create a social, economic, and political profile of developing country.

Content Background

Commonwealth countries or the Commonwealth of Nations are those countries that recognise the British monarchy (The Queen) as their Head of State. The representative of the Queen in the commonwealth countries is the Governor-General.

All members of the Commonwealth share certain beliefs, which cater for the social, economic and political needs of the people which is:

- peace order and international law leading to world security and prosperity
- equal rights and access to democratic processes are basic rights for all people
- racial prejudice and intolerance are threat to healthy development
- sustainable world economic development is urgently needed to remove the huge difference in living standards of member countries
- sustainable development tackles problems such environmental damage, migration and refugees, infectious diseases and drug production and trafficking
- a flow of public and private funding must occur from the developed to the developing nations in order to achieve such goals.

(Source: World Governance p12, Meehan and Sydenham, 2003)

There are about 53 countries that are members of the Commonwealth, two are in Europe, twelve are in North America, one in Central America, ten in the West Indies, one in South America, nineteen in Africa, eight in Asia and eleven in Oceania.

Following are names of some of these countries and the types of government they have.

Country	Type of Country	Government
Great Britain	Developed	Constitutional Monarchy (Prime Minister is Head of Government)
Australia	Developed	Constitutional Monarchy (Prime Minister is Head of Government)
New Zealand	Developed	Constitutional Monarchy (Prime Minister is Head of Government)
Papua New Guinea	Developing	Constitutional Monarchy (Prime Minister is Head of Government)
Fiji	Developing	Developing Democracy (Prime Minister is Head of Government)
The Bahamas	Developing	Constitutional Monarchy (Prime Minister is Head of Government)
Bangladesh	Developing	Republic (Prime Minister is Head of Government)

Teachers may allow the students to write up country profiles for some of the commonwealth countries (developed & developing countries).

Suggested Resources

1. Meehan Celia & Sydenham Shirley, (2003). *World Governance*.
2. Member states of the commonwealth.
Retrieved from: <https://en.m.wikipedia.org/wiki/>

Unit 3: International Relations

Content Standard 10.3.3: 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 10.3.3.1: Identify and appraise the different ways people from different democratic countries relate to each other.

Topic 1: Relationships between different democratic countries

Sub-topics:

- Political relations
- Social relations
- Cultural relations
- Economic relations

Skills: Understanding (identify), evaluating (appraise)

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

- Identify and explain political relations between people in different democratic countries.
- Examine social relations between people in different democratic countries.
- Identify and evaluate economic relations between people in different democratic nations.
- Evaluate and describe economic relations between people in different democratic nations.

Content Background

People, groups and governments of different democratic countries relate to each other in many ways. They have political, cultural, social and economic relations. They share and learn knowledge and skills from each other to improve their standard of living as well as for the good of their countries. The table below outlines some of the ways, people of different democratic countries relate to each other.

Relations	Examples
Cultural	Integrating regional and international cultural relations to strengthen and empower local cultures for inclusive and sustainable development. For instance; 'The Melanesian Festival of Arts' hosted every four years to preserve and promote Melanesian cultures
Economic	Trade between governments as well as between individuals People from different countries buy and sell goods and services to each other Being part of global economic organisations to share knowledge and skills to improve global economy (Asia Pacific Economic Corporation - APEC) AID from developed governments to developing governments
Political	Sharing political ideas on how to run their countries
Social	Education Student scholarships to study in other democratic countries Student 'Exchange Programs' where students visit schools in other countries Sports – 'Commonwealth Games'

Suggested Resources

1. Department of Education –FODE (2015). *International Relations – Grade 10 Project #3*. Port Moresby, NDoE.

Benchmark 10.3.3.2: Examine the purpose, impact, and the outcomes of these relationships.

Topic 2: Nature of relations

Sub-topics:

- Purpose of international relations
- Impact and outcomes of international relationships

Skills: Analysing (examine)

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

- Discuss the purpose of international relations.
- Explain the impact and the outcomes of international relationships.

Content Background

There are many reasons for international relations between individuals, groups and governments. They are economic, cultural, political and social reasons of relationships. Establishing relationships is the fundamental purpose of international relations. Listed below are some factors that encourage international relations;

- Economic development
- Foreign trade
- Power and change (World super powers and their impact)
- Distribution of economic resources
- War and peace
- Cultural exchanges

International relations is all about promoting fruitful trade policies, encourages travel related to businesses, tourism and provides people with opportunities to enhance their lives. Moreover, international relations allow countries to corporate and share information to face global issues such as *global warming, COVID -19 Pandemic and terrorism*.

Impact of international relations	
Positive	Negative
<ul style="list-style-type: none"> • Economic growth and development • Global conventions to discuss global issues • Education – opportunities for scholarships offered in other countries • Provide aid to developed countries • Employment and labour – provides employment opportunities in other countries • Sharing knowledge and skills – <i>The Australian Defence Forces & PNGDF</i> 	<ul style="list-style-type: none"> • Weakening the local culture • Open to terrorism • Introduction of low quality good • Too much foreign loans and unable to repay

Suggested Resources

1. Viewpoints. Retrieved from: <https://www.politicsforum.org/forum/viewtopic.php?t=119317>
2. What is international relations? Retrieved from: <https://www.internationalrelationsedu.org/>
3. Third world countries and international relations. Retrieved from: <http://www.liaise-kit.eu/>
4. Culture. Retrieved from: <http://www.liaise-kit.eu/>

Benchmark 9.3.3.3: Evaluate cases of conflict between people of different democratic nations in terms of the purpose(s), impact, and outcomes.

Topic 3: Papua New Guinea's international trade relations

Sub-topics:

- Reasons for conflicts between democratic nations
- Case study; Purpose, impacts and effects of conflicts in democratic nations relations

Skills: Synthesis (provide)/Evaluation (evaluate)

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

- Discuss the reasons for conflicts encountered by between democratic nations. For example; Bougainville Crisis.
- Deduce from selected case studies the purpose, impacts, and effects of conflicts faced by democratic nations example, (Brexit Deal).

Content Background

Reasons for conflicts

There are many cases of conflicts between individuals, groups and governments all around the world. International conflicts occur because;

- economic gain – powerful and developed countries take over less
- powerful or developing countries to have control over their resources (raw materials)
- religion – different belief systems (religions) cause a lot of conflict
- territorial gain – countries extending their boundaries for bigger living space or for agricultural uses
- nationalism (superiority) – conflict arising as a result of one country invading another to show that they are superior and powerful
- revenge – pay back or fight back for wrong doing

Philippine –American War (1899 -1902)

The Philippine- American war started on the 4th of February 1899 and ended on the 02nd of July, 1902. It was a war between Pilipino and America. This war erupted as a result of Philippine's resistance against the orders of America. There were massive destructions to the environment as well as the death of 200 000 Filipinos. Many died due to famine and diseases. The Americans won the battle in 1902. After the war, the occupation of the Americans in Philippines had a great impact on many of the islands.

Some of these changes include;

- re-establishment of the catholic church and became the state religion
- introduction of English language as a medium of communication
- the creation of Philippine Organic Act, which paved the way for the creation of the Philippine Assembly
- self-governance
- granted independence by the United States of America

The Brexit Conflict

Brexit is the abbreviation for “British Exit”. It refers to the exit or withdrawal of British membership from the European Union. The EU is an organisation made up of 28 countries that are dependent on each other.

UK voted to leave the European Union due to the following reasons;

- to protect the country’s sovereignty, that is, they want UK to make decisions rather than EU making certain decisions for them
- UK wants to have control over immigration and not leaving it to the EU to decide who enters UK
- UK wants to be independent voice for free trade and speak freely at the World Trade Organisation

Impact of leaving the European Union

What will happen if UK leaves EU?

- It will have a great effect on trade relations for UK as well as other member countries
- UK believes that there will be reduction in tax when contributions to the EU is withdrawn
- minimise the number of immigrants
- Britain has to pay off outstanding EU bills
- foreign investment will be reduced
- Lower level of employment in UK

International organisations, such as the IMF and the OECD, have risen concern that;

UK leaving the EU will impact UK as well as pose threat to the global economy. It will have implications for jobs and the effects on the public finances.

Suggested Resources

1. Main reasons for war. Retrieved from: <https://owlcation.com/>
2. American War. Retrieved from: <https://en.wikipedia.org/wiki/>
3. World Brexit News – United Kingdom.
Retrieved from: <https://www.vox.com.world.brexit.news.uk.eu.questions>
4. Bretix Arguments. Retrieved from: <https://www.vox.com/>
5. Causes of the vote in favour of Brexit. Retrieved from: <https://en.wikipedia.org/wiki/>
6. Bretix Update. Retrieved from: <https://edition.cnn.com/2018/11/17/uk/>
7. The impact of Brexit on jobs and economic growth summary.
Retrieved from: <https://www.lse.ac.uk/europeanInstitute/>

Benchmark 10.3.3.4: Identify and analyse the factors that hinder and promote people to people relationships in democratic contexts.

Topic 4: Factors that affect relations in democratic nations

Sub-topics:

- Factors promoting relationships
- Factors that hinder relationship

Skills: Understanding (Identify), analyzing (analyze)

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

- Identify and examine factors that promote relationships between people in democratic nations.
- Discuss and analyse factors that promote relationships between people in democratic nations.
- State the cultural differences among democratic nations.
- Explain the common beliefs, in terms of political, social, economic, and religion in democratic nations.

Content Background

International relations have become more complex due to the fact that individuals, groups and governments have different motives of establishing relationships. It encourages business travels, tourism and provides opportunities for people to enhance their lives. Regardless of different motives, there are certain features that encourage or discourage these relationships.

Factors promoting relationships between people in democratic countries

- Same type of government structure, for instance, democratic government
- Distribution of economic resources
- Technology – effective communication and transportation systems
- Effective national security
- Foreign policies

Factors hindering relationships between people in democratic contexts

- Geography of a country (landscape, climate, vegetation)
- Distance
- Cultural differences among democratic nations
- Different religions in democratic nations
- Law and order problems

Suggested Resources

1. Foreign policy. Retrieved from: <https://en.wikipedia.org/wiki/>
2. Features of international relations: Retrieved from: <https://www.google.com/>

Benchmark 10.3.3.5: Evaluate the role of media in promoting, protecting, or undermining people to people relationships in democratic contexts.

Topic 5: The role of the media in people to people relations

Sub-topics:

- Importance of media in relations
- The roles and functions of media in relations
- Impacts of media on relationship – Globalisation

Skills: Evaluating (evaluate)

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

- Describe the importance of media in relations.
- Explain the roles and functions of the media in international relations.
- Discuss the impact of media in international relations.

Content Background

Media refers to the communication tools used to store and deliver information. For instance, in PNG there are several media outlets; newspapers (national, post courier, Sunday chronicle, weekender), radio (NBC, wantok radio light), internet and television (EMTV, TV wan).

Why is media important in relationships?

Media has increased peoples' awareness on issues around PNG as well as the rest of the world. It makes people understand their religion, culture, ideologies, and place in PNG and the world. Media deepens interdependence by distributing information to the global community. Media allows people to express views and opinions about issues.

How do media promote relations?

In order to establish relations, people need to understand other peoples' culture, religion, government structure, geography of their country, current issues and many other information so that they have a better relationship. Therefore, media plays an important role making sure these needed information is brought to the public. Through media, people learn the facts about whom they would like to have relations with. They strengthen their relationships by communicating effectively and efficiently through different modes of media.

Impact of media in relations

Media has made communication become easier between people around the world. The flow of information has changed the social, economic, political and cultural structures of societies very quickly which has led to globalisation. Information can now be shared easily, regardless of their physical location. Some medium of communication such as the internet has become the mass medium which has eliminated physical and national boundaries between people.

Suggested Resources

1. What is the role of mass communication in international relations?
Retrieved from: <https://www.quora.com/>
2. The influence of media on international relations – essay.
Retrieved from: <https://www.proessay.com/>

Unit 4: Civics and Citizenship

Content Standard 10.3.4: Students will be able to evaluate and explain the purposes, ideologies, concepts, structures, functions, and processes of different government systems.

Benchmark 10.3.4.1: Examine policies and laws on human rights in Papua New Guinea and create contexts to appropriately implement or apply each policy or law.

Topic 1: Policies and laws on human rights

Sub-topic:

- Policies and laws on human rights in PNG

Skills: Analysing (examine)

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

- Examine what human rights are.
- Discuss and analyse PNG's policies on human rights in PNG.
- Examine and evaluate the laws on human rights in PNG.
- Deduce, from selected case studies, issues surrounding human rights.

Content Background

Papua New Guinea has policies and laws in place that protect as well as promote the rights of its citizens in terms of human rights at the local and international level. It has its laws in the constitution that addresses human rights issues at the local level and it is a party to several international treaties that ensure policies of human rights are enforced to safeguard the rights of its citizens.

What are human rights?

According to the Human Rights Commission of Britain in conjunction with United Nations Universal Declaration on Human Rights, June 19, 2019, **human rights** are the basic **rights** and freedoms that belong to every person in the world, from birth until death. These basic **rights** are based on shared values like dignity, fairness, equality, respect and independence. These values are defined and protected by law.

This is further affirmed and elaborated by the Consultative Implementation and Monitoring Council partnering with World Vision PNG (2016) stating that human rights are inherent to all human beings, regardless of nationality, place of residence, sex, sexual orientation, or ethnic origin, colour, race, political belief, economic status, religion, age, language or any other status. We are all equally entitled to our human rights discrimination (Universal Declaration on Human Rights)

Laws on Human Rights in PNG

The following are the laws for human rights in Papua New Guinea.

- The Criminal Code and Evidence Act 2002
- Sexual Offences Amendment Act 2003
- The Lukautim Pikinini Act (Child Protection) Act 2009
- Family Protection Act 2013
- Family Protection Act 2013: The new offence of Domestic Violence
- Criminal Code Amendment 2013
- The Criminal Code (Amended) Act 2014

Policies on Human Rights in PNG

- Vision 2050 –Pillar 1 - Human Capital Development, Gender, Youth and People Empowerment
- DSP 2030 (zero tolerance for violence against women and children by 2030)
- National Public Service Gender Equity & Social Inclusion (GESI) Policy 2013
- National Strategy on SGBV 2015 (Draft)

International treaties on Human Rights

These are the international treaties that PNG is part of and implements its policies advocating human rights within PNG and globally.

- The International Covenant on Civil and Political Rights (ICCPR)
- International Covenant on Economic, Social and Cultural Rights (ICESCR),
- The International Convention for the Elimination of All Forms of Racial Discrimination (CERD),
- The Convention on the Rights of the Child (CRC),
- The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)
- The Convention on the Rights of Persons with Disabilities (CRPD), ratified in 2013.

According to Wikipedia, despite PNG being part of these treaties the most recent Amnesty International submission prepared for the Universal Periodic Review (UPR) of PNG in May 2011 found that reporting by the government of PNG on its obligations under the international human rights treaties to which it is party has been very poor.

PNG joined the United Nations (UN) in 1975 and on the 11 May 2011 extended a standing invitation to all the thematic mechanisms of the United Nations Commission on Human Rights to visit the country.

In May 2010 the United Nations Special Rapporteur on Torture visited PNG and suggested that the country urgently Ratify the Convention Against Torture (CAT) and its Optional Protocol. As well as this the rapporteur also suggested that PNG ratify the first Optional Protocol to the ICCPR which provides for the right of victims to lodge individual complaints to the United Nations Human Rights Committee and also the second Optional Protocol aiming at the abolition of the death penalty. PNG has not yet ratified these instruments.

Suggested Resources

1. Legal Literacy Book 1. *Retrieved from: www.inapng.com*
2. CPC Report. *Retrieved from: www.paclii.org*
3. CP. Report.- Human Rights in Papua New Guinea. *Retrieved from: <http://www.paclii.org>*
4. Countries of the Asian Region. *Retrieved from: <https://www.ohchr.org/>*

Benchmark 10.3.4.2: Identify and evaluate the types of human rights spelt out in the Papua New Guinea Constitution.

Topic 2: PNG's Constitution on Human Rights

Sub-topic:

- Constitution as the basis for protecting human rights

Skills: Understanding (identify), evaluating (evaluate)

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

- Analyse the constitution as the basis for protecting human rights.
- Identify and describe the types of human rights spelt out in the PNG Constitution.

Content Background

The Constitution of PNG came into effect on September 16th 1975. The laws in the constitution were designed and created to run an independent state of PNG by the founding father of this nation Sir Michael Somare and other prominent Papua New Guineans like Sir Julius Chan, late Sir John Guise and Sir Peter Lus to name a few.

The Constitution of Papua New Guinea according to Wikipedia is one of the few unique constitutions around the world because it contains almost all the rights and freedoms stated in the United Nations Charter and the Universal Declaration of the Human Rights of 1948. This is affirmed by a report from Tony Sii of Post Courier 27th November 2017, wherein an Australian human rights lawyer; a Dr Carolyn Graydon stated that PNG's constitution was one of the best in the world in terms of its emphasis on protecting human rights. As quoted by Dr Graydon, "It is even better than Australia's, but the challenge is on its enforcement".

The PNG Constitution contains many civil (public) and political rights that are able to be enforced by the judiciary. The following are the types of rights and freedom enshrined in our Constitution;

1. Rights to freedom (Section 32)
2. Right to life (Section 35)
3. Freedom from inhuman treatment (Section 36)
4. Freedom of conscience, thought and religion (Section 45)
5. Freedom of expression (Section 46)
6. Right to vote and stand for public office (Section 50)

The economic, social and cultural rights are not included in the constitution and are instead provided for in the National Goals and Directive Principles.

There are state departments and authorities that promote and protect the rights of humans such as;

- Law and Justice Sector
 - Dept. of Community Development
 - Department of Police
-

Suggested Resources

1. The Constitutional Planning Committee (CPC), (1974), *Constitution of the Independent State of Papua New Guinea*. Port Moresby.
2. Universal Declaration of Human Rights – Articles.
Retrieved from: <https://www.youthforhumanrights.org/>
3. PNG best constitution human-rights: *Retrieved from: <https://postcourier.com.pg>*

Benchmark 10.3.4.3: Probe the difference between inalienable rights and other rights and how each is promoted and protected using the legal system.

Topic 3: Promoting and protecting human rights using the legal system

Sub-topics:

- Inalienable rights and other rights
- Promoting and protecting inalienable rights and other rights using the legal system

Skills: Analysing (probe)

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

- List and explain inalienable rights and other rights.
- Suggest ways of promoting and protecting inalienable rights and other rights using the legal system.

Content Background

There are two types of rights;

- i. Natural (inalienable) rights and
- ii. Legal rights

According to Wikipedia, the study of ‘Natural and Legal Rights’ by an 18th century researcher Francis Hutcheson in 1725 (An Inquiry into the Original of Our Ideas of Beauty and Virtues) affirms that inalienable rights can be seen as natural rights. Inalienable rights are aspects of a person and they are not things. So what are inalienable rights? Inalienable rights refer to the rights that cannot be transferred to someone else, especially a natural right such as a person’s birthright. For instance, land passed on from one male generation to the next in a patrilineal society and vice versa in matrilineal societies. This is supported by the definition from Wikipedia in that; natural rights are those that are not dependent on the laws or customs of any particular culture or government, and so are universal and inalienable.

Alienable rights or other rights are those that can be easily transferred from one person to another. These are made possible through the legal system. As supported by Wikipedia, legal rights are those bestowed onto a person by a given legal system (they can be modified, repealed and restrained by human laws).

In Papua New Guinea, both rights are protected and promoted through the Constitution. For instance, for matters relating to inalienable rights such as land matter are protected by the Land Act 1996. State organisations such as the courts System (Local, provincial and national courts), Department of Community Development and policing and correctional services help protect and promote these rights.

Suggested Resources

1. Inalienable Rights. *Retrieved from: <https://definitions.uslegal.com>*
2. Inalienable Rights Law and Legal Definition. *Retrieved from: <https://definitions.uslegal.com>*
3. Legal Literacy Book 1.
Retrieved from: www.inapng.com
4. CPC Report. *Retrieved from: www.paclii.org*
5. CP. Report.- Human Rights in Papua New Guinea. *Retrieved from: <http://www.paclii.org>*
6. Countries of the Asian Region. *Retrieved from: <https://www.ohchr.org/>*

Benchmark 10.3.4.4: Investigate and report on how the rights of women and girls, people with a disabilities disability, and other marginalized and vulnerable groups are enforced in Papua New Guinea.

Topic 4: Enforcement of rights for different groups of people women, people with disability marginalised and vulnerable groups rights

Sub-topics:

- Enforcement of rights of women and girls
- Enforcement of rights of people with disability disabilities
- Enforcement of rights of marginalized and vulnerable groups

Skills: Analyzing (investigate and report)

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

- Describe the application of the rights of women and girls in PNG.
- Identify and discuss cases in PNG where the rights of women and girls have been abused.
- Evaluate how Papua New Guinea has executed the rights of people living with disabilities.
- Explain how the rights of the marginalised and vulnerable people have been enforced in PNG.
- Compile a report on the application and administration of the rights of different groups (women & girls, people with disabilities and others) in PNG.
- Analyse and evaluate ways of protecting and promoting the rights of women and girls, the disabled, marginalised, and vulnerable groups of people in PNG.

Content Background

In PNG the Constitution is the highest law in the country. As studied earlier, Papua New Guinea's constitution captures nearly all the rights and freedom stated in the Universal Declaration of Human Rights by the United Nations. Thus, rights of women and girls, people with disability and marginalised and vulnerable groups should be given prominence for that matter. There has been forum and seminars to address this group of people's rights and the outcomes have been successful in terms of policies and laws created to protect them.

According to the Constitution and Implementation & Monitoring Council (CIMC) and World Vision PNG, Parliament must ensure that all other laws are consistent with the Constitution. This means that other laws or customary practices cannot take away rights given by the Constitution. If a law goes against what is in the Constitution, Parliament needs to change the law. The Constitution gives rights and freedoms to every PNG person. These are human rights.

The Government of PNG is responsible for making sure that everyone's rights are protected – this makes the Government the duty bearer. All women, men, girls and boys in PNG are entitled to the rights and freedoms included in the Constitution – this makes you, rights holders. As a rights holder, you also need to make sure that you do not do anything that takes away another person's basic rights.

Enforcement of women and girls rights

According to Global Fund for Women, **Women's rights** inclusive of **girls** are the fundamental **human rights** that were enshrined by the United Nations for every human being on the planet nearly 70 years ago. These **rights** include the **right** to live free from violence, slavery, and discrimination; to be educated; to own property; to vote; and to earn a fair and equal wage. As the now-famous saying goes, “women’s rights are human rights.” That is to say, women are entitled to all of these rights. Yet almost everywhere around the world, women and girls are still denied, often simply because of their gender.

Winning rights for women is about more than giving opportunities to any individual woman or girl; it is also about changing how countries and communities work. It involves changing laws and policies, winning hearts and minds, and investing in strong women’s organizations and movements.

In PNG women and girls rights are now given increasing support from outside through aid organizations and NGO’s advocating for non-violence against women.

Following are the polices, laws and organization enforcing women and girls rights;

Laws

- The Criminal Code and Evidence Act 2002
- Sexual Offences Amendment Act 2003
- The Iukautim Pikinini Act (Child Protection) Act 2009
- Family Protection Act 2013
- The Criminal Code (Amended) Act 2014
- UN Convention on the Elimination of Discrimination Against Women (CEDAW)

Organisations

- Department for Community Development
- Department of Justice and Attorney General
- Department of Health
- Department of Police
- Family Support Centre (Funded by World Wide Fund PNG)
- Meri Safe (Haus Ruth)
- Equal Playing Field
- A National Council of Women
- Royal PNG Constabulary
- Consultative Implementation and Monitoring Council (CIMC) through The Family and Sexual Violence Action Committee (FSVAC)

Programs

- Safe City Program
- We Al-li Trust

Policies

- Medium Term Development Plan
- National Health Plan 2011-2010

Enforcement of rights of people with disability

There are no official statistics for the number of people with disabilities but the World Health Organization (WHO) estimates that 15% of the world's populations have some form of disabilities or impairments. This will be approximately 975,000 people in PNG who are living with some form of disability or impairment. Of this group about 2% or about 19,500 people receive services. This means that the bulk of people with disabilities that is the remaining 98%, or 955,500 people, are not receiving any support. Despite the existence of a national disability policy here in PNG, people with disabilities are often unable to participate in community life, go to school, or work because of lack of accessibility, stigma, and other barriers associated with disability. Access to mental health care is limited, and traditional healers are the only option for many people with psychosocial disabilities.

National Disability Resource and Advocacy Centre (NDRAC) is therefore established as an effective advocacy and awareness centre, which would help people with disabilities, achieve their potential, reintegrate into society, and find access to facilities and resources while in collaboration with NBDP and PNG Assembly of Disabled People.

Enforcement of rights of marginalise and vulnerable people

Marginalised and vulnerable people are those who are at the mercy of their care givers they maybe children, adults, disabled and those with gender issues mainly lesbians, gays, bisexuals, transgender and intersexual.

As purported by OGP (Open Government Partnership) despite the progress the world has seen over the past 30 years, one third of the global population continues to live in extreme poverty, and communities everywhere struggle with deeply-rooted systems of discrimination, including economic, political, social, and cultural beliefs and norms thus giving rise to people categorized as marginalized and vulnerable. According to OGP its members have made 200 commitments to engage with marginalized or under-represented communities. These commitments focus on how to better understand their unique needs and remove barriers to information and services.

In PNG laws and policies have been created to alleviate the problems faced by the marginalised and vulnerable people. For instance, The National Policy for Gender and Equity and Women's Empowerment 2011-2015, which focuses on the three main components; Women Equality and Representation, Women Economic representation and Gender Based Violence and Vulnerability.

Suggested Resources

1. Women- Human Rights.
Retrieved from: <https://www.globalfundforwomen.org>
2. World Report – Human Rights (2017). *Retrieved from: <https://www.hrw.org>*
3. Introduction to Human Rights Law - PNG

Benchmark 10.3.4.5: Examine the rights of children and evaluate the policy and legal frameworks as well as the processes for enforcing and protecting these rights.

Topic 5: Children's rights

Sub-topics: Policies and legal frameworks for Children's rights

Skills: Analyzing (examine)

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

- Explain children's rights.
- Analyse the policies and legal frameworks for the rights of children. For instance; United Nations Conventions on the rights of Children- Lukautim Pikinini Act.
- Examine and evaluate the processes involve in enforcing and protecting children's rights.

Content Background

Study by UNICEF PNG (2018), reported that the most challenging issue with relation to human rights is violence, including physical, sexual and emotional violence as well as neglect, which is a daily reality for most children in Papua New Guinea, making them feel unsafe in their very own homes and communities. Violence of any kind, be it physical, emotional or sexual can be devastating with short and long-term repercussions (effects) on a child's health and well-being. It impairs children's cognitive development and perpetuates inequalities. The advent of new technologies, particularly mobile phones and internet access, are also bringing new opportunities and risks.

Further research and findings by UNCEF PNG stated that nearly half of reported rape victims are under 15 years of age and 13% are under 7 years of age, while a report by ChildFund Australia citing former Parliamentarian Dame Carol Kidu claimed 50% of those seeking medical help after rape are under 16, 25% are under 12 and 10% are under 8.

The child protection system in Papua New Guinea suffers from limited financial and human resources capacity; weak governance and coordination mechanism, inadequate access to both preventive and responsive services as well as lack of reliable data. However, after working for five years since 2013 UNCEF PNG report on Children's Right shows that Papua New Guinea has made significant progress in improving legal and policy frameworks for the protection of children that provide a strong foundation for a national child protection system.

For instance, *The Papua New Guinea Medium Term Development Plan* and *National Health Plan 2011-2010* both highlight the need for enhanced responses to family and sexual violence as part of longer term sustainable development. In 2002, the *Criminal Code and Evidence Act* were amended to include provisions for sexual offences and other abuses against children and to include provisions for prosecution of marital rape respectively. In 2003 the Sexual Offences Amendment Act was introduced. It also clarified sexual

offences against children and made the issue of consent irrelevant for victims under the age of 16. Protection against abuse by a person in a position of trust was extended up to the age of 18, more categories of child sexual abuse were defined, and special arrangements were introduced for child witnesses giving evidence.’ (Bradley 2013).

In 2009, magisterial services introduced the Interim Protection Orders (IPO), to assist survivors and the police in preventing further violence in the home and community. In the same year, the *Lukautim Pikinini Act* or Child Protection Act was passed, which included more comprehensive orders protecting the rights and wellbeing of all children, regardless of gender. Moreover, the Chief Magistrate issued *Practice Directions for Family and Sexual Violence Protection Order Rules*, which were “intended to provide consistency in the District Courts and to enable the District Courts to issue Interim Protection Orders expeditiously at any time and at no cost to the applicant”.

In September 2013, Parliament passed the *Family Protection Act* explicitly defining acts of domestic violence as a criminal offence, and outlining more stringent rules regarding protection orders than were previously in place. In the same year the Sorcery Act of 1971 was repealed, which allowed for sorcery related killings to be prosecuted as murder, attracting the death penalty.

Between 2007 and 2013, the RPNGC (Royal Papua New Guinean Constabulary) established eleven Family and Sexual Violence Units (FSVU) in police stations across the country.

The Lukautim Pikinini Act (2009) has undergone a review. Its revised version was passed in June 2015 (superseding the 2009 Act). The new Act requires the establishment of a National Child & Family Council, Office and Courts and emphasizes greater involvement of families and communities in prevention and protection of children. It calls for stronger penalties for crimes against children and prohibits corporal punishment and child marriages.

There is continuous support from UNICEF PNG and other aid partners of PNG working with the Government to support the implementation of these laws and policies to be able to effectively prevent and respond to violence against children; improve access to justice and effect long-term change. It’s Child Protection Programme for children addresses the underlying causes of violence through supporting the implementation of a positive parenting programme, promoting skills education programmes for adolescents and undertaking community and media based awareness campaigns.

Suggested Resources

1. Women- Human Rights.
Retrieved from: <https://www.globalfundforwomen.org>
2. World Report – Human Rights (2017). Retrieved from: <https://www.hrw.org>
3. Introduction to Human Rights Law - PNG

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
Factors of Consumption and Production	Topic 1: Role of labour (trade) unions Topic 2: Impact of labour unions Topic 3: Influence of labour unions on the supply of labour force and goods and services in a market economy Topic 4: Functions of labour unions (trade unions) Topic 5: Trade union laws and practices
Methods of Production and Distribution	Topic 1: Changes in the division of labour Topic 2: Labour in the production and distribution of resources Topic 3: Labour laws in PNG Topic 4: Improving the quality of the Labour Force (Workers) Topic 5: Impacts of labour belief systems and practices Topic 6: Labour costs and productivity
Regulation of Production, Distribution and Consumption	Topic 1: Monetary and fiscal policies Topic 2: Methods of distribution of goods and services Topic 3: The market system Topic 4: Regulation and allocation of goods and services
Satisfying Needs and Wants	Topic 1: Satisfying needs and wants through technology Topic 2: Socio-economic impact of technology Topic 3: Influence of television on trade Topic 4: Methods of advertisement and their impact on consumers Topic 5: Internet marketing Topic 6: Internet traded items Topic 7: Costs and benefits of technology in trade
Economic Ideologies	Topic 1: Capitalist ideology Topic 2: Production, distribution and consumption in capitalist economies Topic 3: Allocation of resources under capitalist economic system (capitalism) Topic 4: Strengths and weakness of capitalism (capitalist economic system) Topic 5: Financial institutions in the capitalist economy Topic 6: Exchanging of goods and services in a capitalist economy Topic 7: Producers and consumers behavior in the capitalist state

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 10.4.1.1: Identify and analyse the role of labour unions in the processes of production and the distribution of resources.

Topic 1: Role of labour (trade) unions

Sub-topics:

- Trade unions and its importance
- Factors influencing trade practices of trade unions

Skills: Understanding (identify), analysing (analyse)

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

- Identify and analyse explain the importance of trade unions.
- Investigate and analyse the factors that influence trade practices of trade unions.
- Examine the roles of labour unions.

Content Background

A trade union is an association of workers forming a legal unit or legal personhood, usually called a "bargaining unit". The trade union acts as a bargaining agent and legal representative for a unit of employees in all matters of law or right arising from or in the administration. They are created for the purpose of securing improvements in pay, benefits, working conditions, or social and political status of workers through collective bargaining. In Papua New Guinea, we have the 'Papua New Guinea Trade Union Congress' (PNGTUC).

Why is it important to have labour unions?

It is important to have a trade union in place for workers because they are helpful in effective communication between the employees and the employer. Trade unions provide advice and support to make sure differences in opinions between the workers and the management do not turn out into major conflicts.

What is the role of labour unions?

Trade unions play an important role through the bargaining process. Hence, collective bargaining is a processes of negotiation where the employer and the labour union meet to discuss issues regarding the employees' terms and conditions of employment. The issues are wages, working conditions, retirement benefits, worker's compensation, number of working hours and many others. It is important that a mutual agreement satisfies both parties that supplies and utililises labour respectively.

The macro-level range of factors that affect the trade union includes labour union association, mass media, cultural factors, labour relations law, economic, political, and population changes and finally the role of government. On the

other hand, the micro-level (or firm-level) factors are collective bargaining, labour union policies, union member unity, employer policies, financial status of labour union, union president and board committees and the relationship between labour union and employer.

Suggested Resources

1. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies* (20 ed.). New York,USA: McGraw Hill Books.
2. Kemp, G. P. a. S. (1989). *Pathways in Economics*. South Perth. Western Australia: Tactic Publication.
3. R.J.Brown. (1987). *Student Economics*. (Part2. 7th edition ed.). Melbourne. Australia: Brooks Waterloo.
4. R.J.Brown. (1989). *The Australian Economy in perspective: (Vol. 2)*. Queensland, Australia.: Brooks Waterloo. .
5. Shade, R. J. M. E. D. (1980). *Foundations of Economics* (4 ed.). 95 Coventry Street Melbourne 3205 Australia: Longman Australia Pty Ltd.

Benchmark 10.4.1.2: Examine the impact of labour unions on the production and distribution of resources.

Topic 2: Impact of labour unions

Sub-topics:

- Collective Bargaining Process
- Positive and negative impact of labour unions

Skills: Analysing (examine)

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

- Explore and explain examine the collective bargaining process.
- Examine and evaluate the positive and negative impact of labour unions.

Content Background

The important role of labour unions is to assist workers to exercise their rights, where workers are given the power to negotiate for favourable working conditions and other benefits through a process known as collective bargaining.

Collective bargaining is the negotiation process that takes place between an employer and the representative of employees concerning series of issues of employment. The employees rely on a union to represent them during the bargaining process, and the negotiations often relate to issues such as working conditions, employee safety, training, wages, and layoffs. When an agreement is reached, the resulting collective bargaining agreement becomes the contract governing employment issues. Specific rules in support of collective bargaining include:

- a. The limit of representation for each groups of employees.
- b. Representatives must promote and follow all procedures.
- c. Employers must bargain with the employees' representatives
- d. Employees and their representatives have the right to discuss issues.

Not all employers and employees are covered under the act. However, workers cannot be prevented from joining labor unions if they wish to do so. Given below are the steps involved in collective bargaining.

The collective bargaining process;

1. *Preparation* - The union and the management prepare discussions to be carried out during the meeting. Both parties must be well versed with the issues to be raised at the meeting.
2. *Discussion* – The union and the management decide ground rules to guide the discussion. Management team leads the discussion by identifying the issues.
3. *Proposal* – This is the brainstorming stage where both parties put forth their demands and opinions which lead to arguments.

4. *Bargain* – This is where the negotiation begins. Each party tries to win over the other until a final agreement is reached.
5. *Settlement* – Final stage where both parties agree on a common solution to the issues discussed. They reach a mutual agreement which is signed by both parties to be acceptable by every member concerned.
6. *Proposal* – This is the brainstorming stage where both parties put forth their demands and opinions which lead to arguments.
7. *Bargain* – This is where the negotiation begins. Each party tries to win over the other until a final agreement is reached.
8. *Settlement* – Final stage where both parties agree on a common solution to the issues discussed. They reach a mutual agreement which is signed by both parties to be acceptable by every member concerned.

Collective bargaining can either result in good and bad consequences from a dispute concerning an employer and employee.

The positive and negative impacts on the economy are outlined in the table below;

Positive impacts of labour unions	Negative impacts of labour unions
(i) Wages increase for union members It is of benefit for the employees, because after a collective bargaining, their wages increase which then leads to increased spending in the economy.	(i) Cost of production increase When the wages increase, the cost of production also increases because employees are one of the factors of production leading to a decrease in production.
(ii) Productivity increase With increased wages, employers set standards for best performance by the employees. This will result in an increase in productivity.	(ii) Unemployment (non-union members) Employers will be forced to lay off workers who are not members of the union, due to an increase in wages. When there is unemployment, productivity decreases.
(iii) Better working conditions Through collective bargaining, working conditions are improved for employees.	(iii) Encourage confrontations and strikes Sometimes, labour unions create controversial attitude leading to disputes between the employer and the employees. This leads to time lost and decreasing production.
(iv) Labour Efficiency Efficiency of labour quality and welfare contribute to efficiency in production and distribution of resources.	(iv) Employers have minimal disciplinary measures to impose over their employees Employers cannot penalize lazy and unproductive employees who are members of the union.

Suggested Resources

1. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies* (20 ed.). New York,USA: McGraw Hill Books.
2. Kemp, G. P. a. S. (1989). *Pathways in Economics South Perth*. Western Australia: Tactic Publication.
3. R.J.Brown. (1987). *Student Economics*. (Part2. 7th edition ed.). Melbourne. Australia: Brooks Waterloo.
4. R.J.Brown. (1989). *The Australian Economy in perspective: (Vol. 2)*. Queensland, Australia.: Brooks Waterloo. .
5. Shade, R. J. M. E. D. (1980). *Foundations of Economics* (4 ed.). 95 Coventry Street Melbourne 3205 Australia: Longman Australia Pty Ltd.

Benchmark 10.4.1.3: Explain the different ways labour unions contribute to increasing supply or vice versa in a market economy.

Topic 3: Influence of labour unions on the supply of labour force and goods and services in a market economy

Sub-topics:

- Influence of labour unions on the supply of labour force in a market economy
- Influence of labour unions on the supply of goods and services in a market economy
- Influence of Trade Unions demand for goods and services

Skills: Understanding (explain)

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

- Examine how trade unions influence the supply of labour force in a market economy.
- Explain how trade unions influence the quantity (supply) of goods and services in a market economy.

Content Background

A market economy is an economy where most of the resources are owned by individuals, meaning the government has very limited control over production and distribution of goods and services. This means that the quantity of goods and services and the labour force are based upon free enterprise (competition between firms). It is rather difficult for trade unions to protect workers; however, economies have chosen to create rules to protect the workers.

How do trade unions influence the supply and demand of labour?

Employment in the private sector is greatly affected by unions' bargains especially in a market economy where resources are owned by individuals. They either employ more or lay off workers depending on the agreement reached by the union and the management team.

Unions affect the supply of labour by influencing wages through collective bargaining. For instance, if an agreement is reached for a pay rise for the union members. Pay increase means production costs increase forcing businesses to reduce the number of employees. Many people will be looking for jobs. That is, the demand for labour by the businesses will decrease and the supply of labour will increase. There will be a decrease in total employment in the economy.

How do trade unions influence the supply of goods and services?

Trade union actions will either have positive or negative impacts on the supply and demand for goods and services. Let us revisit the scenario above; an agreement is reached to increase wages for union members, which leads to an increase in the cost of production forcing businesses to lay off non-union members. In doing so, production will decrease meaning the supply of goods and services in the market will fall or there will be a shortage. Why? Because, workers have been laid off. Who will do the job? Few workers may not be able

to produce everything to satisfy the needs and wants of everyone in the economy.

Unions' actions may sometimes encourage workers to initiate strikes leading to workplace closures where there is no production of goods and services. and other major problems. There is a decrease in the supply of goods and services.

Suggested Resources

1. Greenlaw, S. A., Dodge, E., Gamez, C., Jauregui, A., Keenan, D., Mac Donald, D., . . . Openstax. (2014). *Principles of Economics* (1 ed.): Openstax.
 2. Mankiw, G. (1998). *Principles of Macroeconomics*. 6277 Sea Harbour Drive Orlando, FL 32887-6777: The Dryden Press.
 3. Taylor, T., Greenlaw, S. A., Dodge, E. R., Gamez, C., Jauregui, A., Keenan, D., . . . Open Textbook, L. (2014). *Principles of economics*. Houston, Texas: OpenStax College, Rice University.
 4. Walstad, W. (2008). *Study Guide for Use with Economics* (C. M. S. Brue Ed. 7 ed.). New York: McGraw-Hill Irwin.
 5. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies* (20 ed.). New York,USA: McGraw Hill Books.
 6. 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.
 7. R.J.Brown. (1987). *Student Economics*. (Part2. 7th edition ed.). Melbourne. Australia: Brooks Waterloo.
 8. R.J.Brown. (1989). *The Australian Economy in perspective: (Vol. 2)*. Queensland, Australia.: Brooks Waterloo. .
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Benchmark 10.4.1.4: Analyse the main functions of labour unions and ascertain if these functions are being actually performed in the interest of the workers and the economic system.

Topic 4: Functions of labour unions (trade unions)

Sub-topics:

- Purpose of International Labour Organisation (ILO)
- Purpose of Labour Unions (LU)

Skills: Analytical (analyse, ascertain)

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

- Ascertain and explain the purpose of International Labour Organisations.
- Identify and analyse the effectiveness of the functions of labour union.

Content Background

The main aims of International Labour Organization (ILO) is to promote rights at work, encourage decent employment opportunities, enhance social protection and strengthen dialogue on work-related issues. This is the unique tripartite structure which gives an equal voice to workers, employers and governments to ensure that the views of the social partners are closely reflected in labour standards and in shaping policies and programmes among many countries. International Labour Organizations' mandate revolves around four interrelated and mutually reinforcing strategic objectives to achieve the decent work agenda. These include:

- i. creating jobs
- ii. guaranteeing employee rights at work
- iii. extending social protection of employees, and
- iv. promoting social dialogue between employer and employee.

The main aims of labour unions include;

- i. negotiating wages and working terms and conditions.
- ii. regulating the relations between the workers and their employer.
- iii. taking collective actions to enforce the terms of collective bargaining.
- iv. raising new demands on behalf of its members.

It is important for the labour unions to assist in improving the lives and working conditions of workers in terms of better and safe working conditions and environments. Importantly, labour unions exist to get rid of child labour and labour exploitation.

Suggested Resources

1. Greenlaw, S. A., Dodge, E., Gamez, C., Jauregui, A., Keenan, D., Mac Donald, D., . . . Openstax. (2014). *Principles of Economics* (1 ed.): Openstax.
2. Mankiw, G. (1998). *Principles of Macroeconomics*. 6277 Sea Harbour Drive Orlando, FL 32887-6777: The Dryden Press.
3. Taylor, T., Greenlaw, S. A., Dodge, E. R., Gamez, C., Jauregui, A., Keenan, D., . . . Open Textbook, L. (2014). *Principles of economics*. Houston, Texas: OpenStax College, Rice University.
4. Walstad, W. (2008). *Study Guide for Use with Economics* (C. M. S. Brue Ed. 7 ed.). New York: McGraw-Hill Irwin.

Benchmark 10.4.1.5: Propose ways of improving trade union laws and practices so that they enable trade unions to effectively address workers' conditions and, at the same time, contribute effectively to the economic system.

Topic 5: Trade union laws and practices

Sub-topics:

- Trade union laws
- Ways to improve trade union laws and practices

Skills: Evaluating (evaluate)

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

- Identify and discuss trade union laws.
- Evaluate the practices or application of trade union laws in PNG.
- Outline ways to improve trade union laws and practices.

Content Background

Union members come together to make workplace improvements. Labour Unions advocate for working people to ensure a safer, healthier and enjoyable to enjoy a higher quality of life. All working people have the freedom to join a labour union to make their workplaces better and negotiate for the wages and benefits they deserve.

In order for these to be effective, there are laws in place to assist workers.

1. Workers trade union law
2. Labour law
3. Law on trade unions (2005)
4. Industrial Organisation Act 1962 (PNG)
5. Unions law
6. Employment Act (PNG)

There is a list of laws on unions in PNG. Have these laws been applied in Papua New Guinea accordingly to assist workers? To what extent are they practised?

Teachers are advised to allow students to research and do a presentation on this issue. Students must be guided well with rubrics so they do not deviate.

Suggested Resources

1. E.D.Shade, C.G.Latty and P.M. Scott.1989. *Fundamentals of Economics* (3rd.ed.Vol 1.Page.177 -178) McGraw Hill Book Company. Australia
2. R.J.Brown.1987. *Student Economics*. (Part2. 7th edition. Page.48-81) Brooks Waterloo, Melbourne. Australia
3. Tony Drinan and Mal Cater.1995. *Human Resource Management* (Page.95-150).Hoddler Education, NSW. Australia.
4. E.D.Shade and R.J.Miller.2000. *Foundations of Economics*. (4th Edition. Page.172 -173).Addison Wesley Longman. Melbourne. Australia.
5. Campbell McConnell, Stanley L.Brue and Sean M.Flynn.2015. *Micro economics Principles, Problems and Policies* (page 338-358). McGraw Hill Books.20th Edition. New York.USA

Unit 2: Methods of Production and Distribution

Content Standard 10.4.2: Students will be able to explain and analyze the methods and processes of production and the distribution of goods and services.

Benchmark 10.4.2.1: Examine the changes in the division of labour from hunting and gathering societies to farming communities to urban societies.

Topic 1: Changes in the division of labour

Sub-topics:

- Nomadic lifestyle and specialisation
- Dual economic system

Skills: Analyzing (examine)

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

- Explore and examine the dual economic system in PNG.
- Examine and analyse nomadic lifestyle and specialization of labour in PNG.

Content Background

Dual economy is an economy where the modern economy and the traditional subsistence economy is operating together with minimal interaction with each other. In other words, this topic examines the technologically-based economic practices with the agricultural or nomadic economic system. Both economic systems exist to answer questions relating to economic resources scarcity of past, present and future.

During the nomadic lifestyle period, people have been moving from place to place in search of food and shelter in smaller groups. Most economic decisions were made on food and shelter. The extent of division of labour was minimal and every members of the nomadic household was able to perform almost all of the tasks with minimal specialization and output.

In the traditional economic system (subsistence economies), people began to settle. There were few households and most of the decisions were made by the head of the family. People produced goods mainly for their own consumption or family use or were shared among the whole family or tribe. Each person's share depended on his or her contribution to production.

The table below shows division of labour between men and women in subsistence economies.

Men	Women
Hunting and fishing	Cooking
Making tools	Care of children
Carving and painting	Collecting water and food
Adminidtering laws	Care of animals and gardens
Care of sacred onjects and sites	Making baskets, clay pots
Organusing ceremonies	
Building houses & canoes	

Although there was division of labour, particularly between the sexes, there was limited specialisation. So what is; specialisation' and 'division of labour'? 'Specialisation' is concentrating on producing one particular type of good or service.

'Division of labour' is the breaking down of the production process into a number of steps and the specialisation of workers in particular tasks. In division of labor, each worker is assigned to a different task, or step, in the manufacturing process, and as a result, total production increases.

However, as we moved into the future, people began to specialise in trades. Labour was divided up according to what good or service they produced. These were groups of skilled trades people trained to be bakers, engineers, butchers and carpenters. Since then, the production process has been broken down into series of separate operations, each one performed by a separate person or a group of people.

However, with the advent of modern technologically advanced economic systems, specialisation has increased considerably with mass production. Machines have taken over most of the production activities and information technology has increased the quantity and quality of output. Trade from far and within the country has greatly improved.

Suggested Resources

1. Bandara, P. (2013). Save Buk 11 Economics. 253 Normanby Road, South Melbourne: Oxford Univeristy Press.
2. Mannur, H. G. (1996). Foundation Economics. Port Moresby, Papua New Guinea: UPNG Press & Bookshop.
3. Mickleburgh, A. (1992). Economics for Developing Nation (Vol. Book 1). Level9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.

Benchmark 10.4.2.2: Justify the importance of labour in the production and distribution of resources.

Topic 2: Labour in the production and distribution of resources

Sub-topics:

- Labor force in Papua New Guinea
- Importance of labour in the production and distribution of resources
- Impact of unemployment on production and distribution of resources

Skills: Evaluating (justify)

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

- Explore and assess labour force in Papua New Guinea.
- Analyse the importance of labour in the production and distribution of resources.

Content Background

Labour is the human effort, which can be physical or mental, put into the production of goods and services. It is the work done by human beings to produce something. Construction and plantation workers provide physical labour, whereas engineers, managers and accountants provide mental or conceptual labour. Both groups are equally important to the production process and the economic growth of a country.

The Labour Force in Papua New Guinea refers to the total number of people who are capable of working. Therefore, the actual workforce in Papua New Guinea and other developing nations is more difficult to count because many children are economically active from an early age.

Therefore, workforce refers to those who are actively working or participating in the production of goods and services. They are actually employed and contributing towards the economy.

In Papua New Guinea, people are engaged in different types of activities to earn money for their living. These activities are divided into two main sectors.

- i. The formal sector labour force
- ii. Informal sector labour force

Furthermore, there are a number of factors that affect the labour force in PNG namely;

- Population size
- Working age population
- Labour force participation rate
- Qualification and training

Labour force is inseparably linked to employment and unemployment. The former refers to those people who are actively participating in the labour force whereas the latter refers to those people who are active, willing and able to work but there is no employment opportunities available or due to personal and economic reasons where they are out of work.

Unemployment and underemployment are basically to do with being out of job. Specifically under-employment means not being fully engaged in the workforce whereas unemployment is when you are fully out of job. The types of unemployment are seasonal, cyclical, structural and frictional. The effects of labour force being employed; unemployed and underemployed have consequences on the overall economy.

When unemployment increases, there will be a reduction in the production and distribution of resources. That is, the supply of goods and services will reduce, because not many people are working to increase production.

Suggested Resources

1. Bandara, P. (2013). *Save Buk 11 Economics*. 253 Normanby Road, South Melbourne: Oxford University Press.
2. Bank of Papua New Guinea. (2007). *Money and Banking* (2 ed.). Victoria, Australia: Melbourne University Publishing Ltd.
3. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby, Papua New Guinea: UPNG Press & Bookshop.
4. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
5. Shade, R. J. M. E. D. (1980). *Foundations of Economics* (4 ed.). 95 Coventry Street Melbourne 3205 Australia: Longman Australia Pty Ltd.

Benchmark 10.4.2.3: Evaluate labour laws in Papua New Guinea in terms of their promotion of workers' interests, responsibilities, and obligations.

Topic 3: Labour laws in PNG

Sub-topic:

- Impacts of having labour laws in PNG

Skills: Evaluating (evaluate)

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

- Identify and discuss the labour laws in PNG.
- Evaluate and explain the application of labour laws in Papua New Guinea.

Content Background

These are two sets of laws implemented for the interests and responsibilities of the workers. These are;

1. Employment Act 1978 and
2. Industrial Relations Act 1962.

The following is the overview of the Industrial Relations Act 1962.

Basically, this Act governs the labour unions and their affiliation to both the employers and employees which includes the government and private sector employees.

1. It gives significance to the body that forms the Industrial Council for the purpose of;
 - a. fostering improvement of industrial relations between those employers and employees; and
 - b. encouraging free negotiation of the terms and conditions of employment of those employees; and
 - c. promoting peaceful settlement of disputes or differences as to the terms and conditions of employment of those employees.
2. An Industrial Council consists of;
 - a. such representatives of the employers and employees; and
 - b. such members of any registered organizations representing the employers or employees,
 - c. as the employers and employees, or the registered organizations, as the case may be, determine.
3. The members of an Industrial Council–
 - a. shall appoint, or may request the Departmental Head to appoint, as occasion requires one of their number to be Chairman of the Council; and
 - b. may terminate the appointment of the Chairman of the Council at any time.

4. The method of calling of, and the procedure to be followed at, meetings of an Industrial Council are as determined by it.

The function of the labour union or Industrial Council; may–

- a. make arrangements for the alteration of, or for the settlement of disputes or differences as to, the terms and conditions of employment of the employees represented on the Council by;
 - i. free negotiation; or
 - ii. conciliation or arbitration otherwise than under Part III.; or
- b. subject to Section 33, agree as to such terms and conditions of employment.

The Employment Act 1978 stipulates the responsibility of the employer in issuing an employment contract and the employee to conform to the terms of employment if they wish to remain employed. It further protects and upholds a wide range of issues concerning the interest of workers in their capacity as employees.

Teachers are advised to allow students to research on the application and the implementation of these Acts. Provide an avenue for the students to discuss and debate.

Suggested Resources

1. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies* (20 ed.). New York, USA: McGraw Hill Books. 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.
2. Cater, T. D. M. (1995). *Human Resource Management* NSW, Australia. : Hoddler Education.
3. Government of Papua New Guinea. (1978). Port Moresby, Papua New Guinea: Government Printing (PNG) Retrieved from <http://www.ilo.org/>
4. Government of Papua New Guinea. (1962). *Labour and Industrial Relations Act 1962*. Port Moresby: Government Printing , Retrieved from <http://www.ilo.org/>
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.

Benchmark 10.4.2.4: Explain how the quality of workers could be improved in order to boost production and economic outcomes.

Topic 4: Improving the quality of the labour force (workers)

Sub-topics:

- Factors affecting labour force
- Improving the quality of the labour force

Skills: Understanding (explain)

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

- Identify and evaluate the factors affecting labour force.
- Explore how the quality of labour force will be improved.

Content Background

Labour is required to perform various tasks in the production and distribution process and must be knowledgeable.

Factors such as higher education, training, experience and health status are important as they enable a worker to perform an activity. More people are willing to work at higher wage rates because the incentive of earning more compared to lower wages. Higher wages also attract workers from other industries that require similar skills.

Two ways to improve the quality of the labor force;

1. education (training)
2. incentives (motivation)

Listed below are the areas that contribute to labour improvement;

- a. Gather employee feedback – Get feedback on critical issues while the labour force imitates their routine tasks and gather any recurring issues that affect productivity.
- b. Examine available data – examine the available data to build a baseline matrix for productivity on a periodic basis and implement changes after noting its impacts on productivity.
- c. Build better processes – establish primary problems with labour and production and find ways on how to improve the processes where new models and technologies are to be used.
- d. Employee training programs – Train the labour force about the new processes, systems and technologies.
- e. Motivate the Labor Force – motivate to increase productivity by including motivational packages (incentives) for employees on a routine basis.

Suggested Resources

1. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies* (20 ed.). New York,USA: McGraw Hill Books.
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. Cater, T. D. M. (1995). *Human Resource Management* NSW, Australia. : Hoddler Education.
4. John Sloman, K. N. D. G. (2014). *Principles of economics* (4 ed.). Unit4, Level 3 14 Aquatic Drive, French Forest NSW 2086: Pearson Australia.
5. Kemp, G. P. a. S. (1989). *Pathways in Economics* South Perth. Western Australia: Tactic Publication.
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, Papua New Guinea: UPNG Press & Bookshop.

Benchmark 10.4.2.5: Assess the impact of positive and destructive labour belief systems and practices on production and distribution of resources and other aspects of the economic system.

Topic 5: Impacts of labour belief systems and practices

Sub-topics:

- Worker Management System
- Impacts of positive labour belief systems and practices
- Impacts of negative labour belief systems and practices

Skills: (Evaluating (assess))

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

- Identify and analyse the worker management systems.
- Investigate the labour belief systems and practices on production and resources and on the other aspects of economic system.

Content Background

An Employee management system is designed to simplify the process of record maintenance of employees of organisations. It helps in managing the information of employees for human resource functions which is part of a comprehensive human resource management system.

Labour systems with appropriate skills or knowledge will benefit an organization through increased efficiency and productivity, cost reduction, improved motivation amongst workers and improved quality of output. In any organization that focus on labour, worker management is paramount as it deals with issues such as recruitment, employee management, performance management, compensation, professional developments and many other issue relative to labour.

Education, training and experience enables a worker to be productive in implementing the allocated duties and responsibilities in a production process. Training and development also improve performance, skills or knowledge within the organization.

Labour affiliated to industrial union could work collaboratively through their union bargaining process. This results in reduced consumption and profits when their employers decline to favorably respond to their demands for improvement to working conditions.

The most contentious conflicts is between an employee's desire to take time which could potentially reduce productivity and profitability. There is no collective bargaining agreement that expressly delineates the rights of employer and employee regarding belief systems and practices.

However, an employer must provide reasonable accommodation of an employee's religious beliefs and practices. Furthermore, an employer cannot refuse to reasonably accommodate an employee's religious observances, unless accommodation would constitute an undue hardship for the business.

Suggested Resources

1. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies* (20 ed.). New York,USA: McGraw Hill Books.
2. Cater, T. D. M. (1995). *Human Resource Management* NSW, Australia. : Hoddler Education.
3. 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.
4. Roa, P. S. (2010). *Management Theory and Practices* (Text and Cases). Mumbai, India: Himalaya Publishing House.
5. Stone, R. J. (2008). *Human Resource Management* (6 ed.). Milton,Queensland, 4064, Australia: John Wiley & Sons Australia Pty.

Benchmark 10.4.2.6: Analyse the cost of labour and explain its impact on the production, distribution, and consumption of goods and services.

Topic 6: Labour costs and productivity

Sub-topics:

- Costs of labour in production, distribution and consumption
- Impact of costs of labour on production, distribution and consumption

Skills: Analyzing (analyze)

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

- Identify and analyse the costs of labour on productivity.
- Analyse and explain the effects of costs of labour on productivity.

Content Background

The price of labour is wages and salaries, which is paid to the employee by the employer. Individuals and businesses provide labour in economic activities. Productivity refers to how efficiently the factors of production in labour are used. The levels of productivity with the use of labour have a significant effect on the economy and how efficiently it performs in achieving its economic goals or objectives. The measure of productivity includes output per worker, output per hour worked and marginal productivity using labour.

The following factors affect labour productivity namely;

- i. Skills and training
- ii. Use of new technology
- iii. Levels of innovation
- iv. Transfer of knowledge
- v. Levels of unemployment
- vi. Levels of competition in the economy.

Labour is one of the factors of production. Therefore, when the wages and salaries increase, the costs of production and distribution also increases which might possibly lead to decrease in productivity. On top of that, the wage and salaries increase may lead to an increase in production of goods and services. The content below also assess measures to improve productivity including;

- i. *Tax incentives* for unemployed workers to join the labour market, or to gain new skills.
- ii. The promotion of *greater competition in labour markets*, through the removal of restrictive practices and labour market restrictions such as the protection of employment.
- iii. Measures to improve labour mobility with positive effect on labour productivity.
- iv. Improvement in education system to develop general skills of numeracy and literacy.
- v. The adoption of performance-related pay in the public sector.
- vi. Providing *grants, subsidies or tax incentives or credits* to firms to upgrade their technology.
- vii. *Deregulation* of product markets and removal of unnecessary bureaucracy

which can bring down barriers to entry, and encourage new and dynamic market entrants.

The cost of labour is not only wages and salaries but also includes other costs such as recruitment and selection costs, training costs, fringe benefits, salary increases through performance appraisals, school fees, housing allowances and other offers to remunerate workers.

Activities involved in production (manufacturing), distribution (transportation) and consumption (retail) are constantly seeking economies of scale in order to improve their competitiveness and increase their market share.

Content Background

1. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies* (20 ed.). New York,USA: McGraw Hill Books.
2. Cater, T. D. M. (1995). *Human Resource Management* NSW, Australia. : Hoddler Education.
3. 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.
4. O'Neil, E. (1996.). *Principles of Economics*. . Victoria. Australia.: Dellasta Pacific.
5. R.J.Brown. (1989). *The Australian Economy in perspective: (Vol. 2)*. Queensland, Australia.: Brooks Waterloo. .
6. Shade, R. J. M. E. D. (1980). *Foundations of Economics* (4 ed.). 95 Coventry Street Melbourne 3205 Australia: Longman Australia Pty Ltd.
7. Stone, R. J. (2008). *Human Resource Management* (6 ed.). Milton,Queensland, 4064, Australia: John Wiley & Sons Australia Pty.

Unit 3: Regulation of Production, Distribution and Consumption

Content Standard 10.4.3: 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 10.4.3.1: Explain how the budgetary/fiscal and the monetary policies influence overall levels of employment, interest rates, production and prices.

Topic 1: Monetary and fiscal policies

Sub-topics:

- Expansionary and contractionary monetary policies
- Expansionary and contractionary fiscal policies

Skills: Understanding (explain)

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

- Explore and explain the influence of expansionary monetary policies on employment, interest rate, production and prices.
- Examine the influence of contractionary monetary policies on employment, interest rate, production and prices.
- Examine the influence of expansionary fiscal policies on employment, interest rate, production and prices.
- Analyse the influence of contractionary fiscal policies on employment, interest rate, production and prices.

Content Background

To influence money supply and economic activities in an economy, the central bank (BPNG) uses certain policy instruments. This is done in order to achieve certain monetary targets.

Monetary policy is a policy formulated by the central bank to control the amount of money in the economy and the way it is used. The application of monetary instruments affects monetary conditions with the use of interest rates, liquid assets ratio, special deposits, moral suasion, open market operations and control over lending.

Monetary policy can either be contractionary (restrictive) or expansionary (stimulative).

A contractionary monetary policy is implemented during the period of higher inflation in order to reduce economic growth and higher inflation in the economy.

Basically, economic growth refers to increase in the level of business activities, increase in employment, increase in Gross Domestic Product (GDP) etc... and inflation is a general increase in the prices of goods and services.

A contractionary monetary policy is applied by;

- increasing the required LGS ratio
- increasing interest rate
- reducing lending by commercial banks
- selling government securities to the public
- introducing/increasing special deposits with the central bank

On the other hand, an expansionary money policy aims to increase the availability of credit and increase the money supply. It is used to expand the economy or increase economic activities (increase employment, increase business activities etc.) in the economy. An expansionary monetary policy is achieved by;

- reducing LGS ratio
- decreasing interest rate
- increasing lending by commercial banks
- buying back government securities
- abolishing/decreasing special deposits with the central bank

On the other hand, the government adjusts the level and composition of taxation and government expenditure to achieve its economic objectives through the implementation of fiscal policies. Budget, taxation and borrowing by the government affect the level of economic activities in the country. Fiscal policies can either be expansionary or contractionary.

The government uses expansionary fiscal policy to achieve a desired outcome on the economy. For instance,

- decreasing taxation,
- increasing government spending,
- increasing money allocated to provinces

The expansionary fiscal policies are used to spend more in the economy in order to stimulate economic activities. Such would result in high employment levels and greater growth in production, consumption and distribution of goods and services.

However, contractionary fiscal policies such as;

- increasing taxation,
- reduce government spending,
- decreasing money allocated to provinces

The contractionary fiscal policies are used to spend less in the economy in order to deflate economic activities. Such would result in low employment levels and decrease in production, consumption and distribution of goods and services.

Suggested Resources

1. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby, Papua New Guinea: UPNG Press & Bookshop.
2. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
3. Shade, R. J. M. E. D. (1980). *Foundations of Economics* (4 ed.). 95 Coventry Street Melbourne 3205 Australia: Longman Australia Pty Ltd.

Benchmark 10.4.3.2: Analyse the different methods that can be used for the allocation of goods and services.

Topic 2: Methods of distribution of goods and services

Sub-topics:

- Business to Business allocation method
- Business to Customer allocation method

Skills: Analyzing (analyze)

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

- Analyse and explain the Business to Business (B2B) allocation method.
- Identify and explore Business to Customer (B2C) allocation method.

Content Background

The basic economic questions all societies must answer is, *Who will share in what is produced?* or *For whom will the good or service be produced?* To answer this question, students will learn about the different allocation strategies a society can use. Consider the strategies which a society uses to deliver in order to meet the respective economic goals favored by changing society and economy.

E-commerce (electronic commerce) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These business transactions occur either as business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer (C2C) or consumer-to-business (C2B). The terms e-commerce and e-business are often used interchangeably. The term e-tail is also sometimes used in reference to the transactional processes for online shopping.

Distribution is the process of getting your products to customers. By choosing the right distribution channel, you can reach the largest number of potential customers and make it easy and convenient for them to buy your products. A distribution channel such as a network of retailers or the internet also gives your business a greater geographical reach, enabling you to expand beyond your local marketplace.

The channels of distribution and marketing are Business-to-Business (B2B) and Business-to-Customer (B2C). Producers sell through a single distribution channel or through multiple channels that may include wholesaler/distributor, direct/internet, direct/catalog, direct/sales Team, Value-Added Reseller (VAR), consultant, dealer and retail.

Producers market their products to retailers indirectly by dealing with wholesalers. Wholesalers buy products in bulk from a manufacturer and distribute them to other resellers, such as retailers or industrial distributors. By dealing with wholesalers, you do not have to commit resources to selling your products to individual retailers; the wholesaler deals with retailers in addition to holding stock of products.

By setting up a website, producers reach customers around the country, or anywhere in the world. Place details of range on a product page, including photographs, product information, prices and delivery charges. Incorporate ready-made e-commerce software in your website, enabling customers to place orders and pay for products online. If producers don't offer online ordering, provide a telephone number where customers can place orders and pay by debit or credit card.

Suggested Resources

1. Bandara, P. (2013a). *Economics for Grade 12*. 94/1 Arthurugiriya Road, Kottawa, Sri Lanka: Sara Publications.
2. Kutz, M. (2016). *Introduction to E-Commerce - Combining Business and Information Technology*
3. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby, Papua New Guinea: UPNG Press & Bookshop.
4. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
5. Rickard Fletcher, H. C. (2011). *International Marketing* (5 ed.). NSW Australia: Pearson Australia Group Pty Ltd.
6. Schneider, G. P. (2016). *Electronic Commerce* (12 ed.). Boston, United States of America: Cengage Learning, Nelson Education Limited.

Benchmark 10.4.3.3: Evaluate the benefits and costs of different methods of producing, distributing, and allocating resources to ensure a more effective overall market system.

Topic 3: Costs and benefits of the market system

Sub-topics:

- Methods of producing, distributing and the allocation of resources in the market system
- Costs of the methods used in the market system
- Benefits of the methods used in the market system

Skills: Evaluating (evaluate)

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

- Examine the methods of production, distribution and allocation of resources in the market system.
- Identify and explain the costs of the market mechanism in producing, distributing and allocating resources for an effective overall market system.
- Identify and explain the costs and benefits of market mechanism in the production, distribution and allocation of resources for an effective overall market system.

Content Background

Market mechanism is often interpreted as a free market system where Adam Smith used to describe it as the invisible hand of the market where the market decides the allocation of resources. Invisible hand refers to the individual actions/decisions of economic agents which lead to maximum welfare for the market. It is as if an invisible force strings together decisions, taken in self-interest by different persons, to give a result which is best for all people in the market economy.

Many different types of markets can be found within most economies. Market in this context can be referred to as competition. So we will use the term market and competition interchangeably. Understanding how markets work and how they differ helps you to understand the behaviour of firms in the real world.

Advantages	Disadvantages
Goods available are many and in variety.	Factors of productions are not to be employed if it is unprofitable.
Competition between businesses creates high quality products	The market may not produce certain goods and services.
The market responds and adjusts to the expectations of the people's wants	Market may encourage or discourage harmful goods to be sold.
Efficiently delivery of goods and services	Production may lead to negative externalities.
There is competition whereby businesses always try to be efficient in their economic activities.	It may widen the gap between the rich and the poor.
The government does not have to make decisions on basic economic questions.	

Suggested Resources

1. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies* (20 ed.). New York, USA: McGraw Hill Books.
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. Greenlaw, S. A., Dodge, E., Gamez, C., Jauregui, A., Keenan, D., Mac Donald, D., . . . Openstax. (2014). *Principles of Economics* (1 ed.): Openstax.
4. Kemp, G. P. a. S. (1989). *Pathways in Economics* South Perth. Western Australia: Tactic Publication.
5. Mankiw, G. (1998). *Principles of Macroeconomics*. 6277 Sea Harbour Drive Orlando, FL 32887-6777: The Dryden Press.
6. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby, Papua New Guinea: UPNG Press & Bookshop.
7. Richard , F. H., Crawford. (2011). *Interantional Marketing: An Asia Pacific Perspective*. NSW, Australia: Pearson Australia.

Benchmark 10.4.3.4: Aware that people can act individually or collectively through the government to choose methods to regulate and allocate different kinds of goods and services.

Topic 4: Regulation and allocation of goods and services

Sub-topics

- Private goods and services
- Public goods and services
- Types of goods and services
- Methods of regulation and allocation of goods and services

Skills: Analyzing (aware)

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

- Examine and identify private goods and services.
- Identify and assess public goods and services.
- Investigate and evaluate the types of goods and services which are regulated.
- Identify and explain the methods of regulating and allocating goods and services.

Content Background

Private good refers to products or services produced by privately owned business and purchased to increase the utility, or satisfaction of the buyer. The majority of the goods and services consumed in a market economy are private goods, and their prices are determined to some degree by the market forces of supply and demand. Pure private goods are both excludable and rivalrous. Excludability means that producers can prevent some people from consuming the good or service based on their ability or willingness to pay and rivalrous means that one person's consumption of a product reduces the amount available for consumption by another. In reality, private goods exist along a continuum of excludability and rivalry and can even show only one of these characteristics.

Public goods are types of goods and services that are collectively consumed. The national defence, police force, street lightings etc...shows non-excludable and non-rivalrous characteristics. In a market economy, private public goods lead to a free-rider problem where the consumers enjoy the benefits of the good or service without paying for it. These goods are unprofitable and inefficient to produce in a private market and must be provided by the government.

Inefficiency in production and consumption of private goods can also arise when there are spillover effects, or externalities. A positive externality exists if the production and consumption of a good or service benefits a third party not directly involved in the market transaction. For example, education directly benefits the individual and also provides benefits to society as a whole through the provision of more informed and productive citizens.

Private markets will under-produce in the presence of such positive externalities because the costs of production for the firm are overstated and the profits are understated. A negative externality exists when the production or consumption of a product results in a cost to a third party. Examples include air and noise pollution. When negative externalities are present, private markets will overproduce because the costs of production for the firm are understated and profits are overstated.

Public goods contrast with private goods, which are both excludable and depletable respectively. Food is a straightforward example of a private good where one person's consumption of a piece of food deprives others of consuming it (depletable). It is possible to exclude some individuals from consuming it by assigning enforceable private property rights to food items.

Suggested Resources

1. Mankiw, G. (1998). *Principles of Macroeconomics*. 6277 Sea Harbour Drive Orlando, FL 32887-6777: The Dryden Press.
2. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby, Papua New Guinea: UPNG Press & Bookshop.
3. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
4. O'Neil, E. (1996.). *Principles of Economics*. . Victoria. Australia.: Dellasta Pacific.
5. R.J.Brown. (1989). *The Australian Economy in perspective: (Vol. 2)*. Queensland, Australia.: Brooks Waterloo. .
6. Shade, R. J. M. E. D. (1980). *Foundations of Economics* (4 ed.). 95 Coventry Street Melbourne 3205 Australia: Longman Australia Pty Ltd.

Unit 4: Satisfying Needs and Wants

Content Standard 10.4.4: 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 10.4.4.1: Examine how different types of technologies are used to satisfy needs and wants and their purposes.

Topic 1: Satisfying needs and wants through technology

Sub-topics:

- Types of technologies used to satisfy needs and wants
- Purpose of technology in satisfying needs and wants

Skills: Analyzing (examine)

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

- Identify and examine the different types of technologies used to satisfy needs and wants.
- Examine the purpose of using technology to satisfying needs and wants.

Content Background

All societies face the basic *economic problem* of how to make the best use of limited, or scarce resources to satisfy needs and wants. Economic problem exists because the needs and wants of people are endless or unlimited whereas resources available to satisfy those needs and wants are limited. Resources are *limited in physical quantity* such as in the case of land. Resources are also *limited in use* such as in the case of labour and machinery, where it can only be used for one purpose at any one time.

The purpose of technology

Given that resources are limited, producers and consumers have to make choices between competing alternatives. Individuals must choose how best to use their skill and effort, firms must choose how best to use their workers and machinery, and governments must choose how best to use taxpayer's money. Making an economic choice creates a sacrifice because alternatives must be given up.

Making a choice result in the loss of benefit that an alternative would have provided. The loss of the next best option represents the real sacrifice called opportunity cost. For instance, the opportunity cost of choosing to build a school is the loss of the factory plant, and what could have been produced. It is necessary to appreciate the fact that opportunity cost relates to the loss of the next best alternative, and not just any alternative. The true cost of any decision is always the closest option not chosen.

Technological platforms such as websites and internet have become business necessity when it comes to marketing products so as to satisfy needs and wants (economic problem). Internet is a medium that allows businesses and individuals to share product details, review pictures and videos that engages

potential customers. Mobile phones, email marketing and social media have played a new dimension in providing goods and services to solve some of the basic economic problems. Examples of technologies are computers, laptops, iPad, Mac and mobile phones. The advancement on technologies have profoundly helped producers enhance the sale of goods and services in order to meeting and satisfying the ever-increasing demand to meeting the needs and wants of customers. The use of digital technologies in trading goods and services is made efficient and faster through technology enabled advancement such electric-commerce.

Suggested Resources

1. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby, Papua New Guinea: UPNG Press & Bookshop.
2. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
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. Shade, R. J. M. E. D. (1980). *Foundations of Economics* (4 ed.). 95 Coventry Street Melbourne 3205 Australia: Longman Australia Pty Ltd.

Benchmark 10.4.4.2: Evaluate the impact of different types of technologies on the lives of people (for example, television, poker machines, and internet).

Topic 2: Socio-economic impact of technology

Sub-topic:

- Socio-economic externalities of technology

Skills: Evaluation (evaluate)

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

- Investigate and evaluate the socio-economic externalities of technology on people's lives.

Content Background

Technology has improved so fast and had influenced people greatly all around the globe. Technology has enabled globalization and made people's lives easy and better. However, the changes in technology have social and economic costs and benefits attached to it.

Type of technology	Social impact		Economic impact	
	Positive	Negative	Positive	Negative
Internet	Informative on happenings around you	Having access to pornography	Enables trade	
Poker Machine	Form of entertainment	People become addicted to it		Excess spending
Television	Informative on happenings around you		Helps businesses to advertise products	
Mobile Phone/ telephone	Easy communication regardless of distance	Since 2007 when digicel started its operation in PNG, couples have separated		Excess spending on bills (flex/top cards)
Face Book (Social Media)	Establish friendship with others	Cybercrime		Excess spending on bills (flex/top cards)
E-mail	Easy communication regardless of distance	Scam	Enables trade	Involves costs in setting up and paying the bills

Technology has changed the mindset of many people and the way they live. It is the individuals' decision to adopt and adapt to the changes in technology to improve their way of living.

Moreover, in the business arena, there are private and social costs and benefits that come with technology.

Private firms in a market economy are conscious of the significance of research, innovation and technology. If a firm builds a factory or buys a piece of equipment, the firm receives all the economic benefits that result from buying such good. However, when a firm invests in new technology, the **private benefits** or profits which the firm receives are only a portion of the overall social benefits.

The **social benefits** of an innovation and research take into consideration the value of all the positive externalities. Basically, positive externalities refer to the benefit enjoyed by a third party as a result of an economic transaction. For instance, the positive externalities of new idea or product is the benefit enjoyed by other companies or society as a whole including the private benefits received by the firm that developed that new technology. **Positive externalities** are beneficial spillovers to a third party, or parties.

Market competition can provide an incentive for discovering new technology because a firm can earn higher profits by finding a way to produce products more cheaply or to create products with characteristics consumers want. For example, advertising on television by a company can possibly lead to positive externality for the company in terms of economic benefits. The relentless pursuit of new innovation is the key principle where businesses enable consumers to discover a world of possibilities with technology. An innovative firm knows that it will usually have a temporary edge over its competitors and thus an ability to earn above normal profits before competitors can catch up.

However, innovation and research can also result in negative externalities. Negative externalities simply refers to the costs that outweigh private costs. For instance, some advertising are bad for certain group of people like children. It will influence the students in negatively. The use of mobile phones to texting and engaging in social media like Facebook might possibly lead to dismal performances at school.

Suggested Resources

1. 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.
2. Harcourt, S. V. (1981). *Commerce and Development in Papua New Guinea*. Mebbourne, Australia: Longman Cheshire.
3. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
4. O'Neil, E. (1996.). *Principles of Economics*. . Victoria. Australia.: Dellasta Pacific.

Benchmark 10.4.4.3: Examine the influence of television on the trade of goods and services by people.

Topic 3: Influence of television on trade

Sub-topics:

- Positive impact of television on trade
- Negative impact of television on trade

Skills: Critical thinking (examine)

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

- Investigate and explain the positive impacts of television on trade.
- Discuss the negative impacts of television on trade.

Content Background

Suggested Resources

Benchmark 10.4.4.4: Analyse the different ways goods and services are advertised on the television and their impact on consumer values and belief systems, choice of goods and services, and consumption attitudes and behaviours.

Topic 4: Methods of advertisement and their impact on consumers

Sub-topics:

- Methods of advertisement
- Impact of advertisements on consumers

Skills: Critical thinking (analyse)

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

- Identify and describe the methods of advertisement.
- Evaluate the impact of advertisements on consumers.

Content Background

Suggested Resources

Benchmark 10.4.4.5: Justify the importance of the internet in the trade of goods and services.

Topic 5: Internet marketing

Sub-topic:

- Significance of buying and selling using internet

Skills: Evaluate (justify)

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

- Identify and explain the importance of trading by internet.
- Assess the importance of trading by internet.

Content Background

With the rapid growth of technology, business organizations have switched over from the traditional method of selling goods to electronic method of selling goods and services. Some business organizations use internet as a main vehicle to conduct commercial transactions.

Online stores do not have space constraints and a wide variety of products can be displayed on websites. It helps the analytical buyers to purchase a product after a good search. With reasonable convenience of online shopping, customers can purchase items from the comfort of their own homes or work place. Shopping is made easier and convenient for the customer through internet. It is also easy to cancel the transactions.

The following table depicts the factors which motivate the online shoppers to buy products online. The following are some of the reasons given by shoppers who buy through the internet namely;

- Saving of time and efforts.
- Convenience of shopping at home.
- Wide variety / range of products are available.
- Good discounts / lower prices.
- Getting of detailed information of the product.
- Comparing various models / brands.

Suggested Resources

1. Bandara, P. (2013). *Save Buk 11 Economics*. 253 Normanby Road, South Melbourne: Oxford University Press.
2. Kutz, M. (2016). *Introduction to E-Commerce - Combining Business and Information Technology*
3. Schneider, G. P. (2016). *Electronic Commerce* (12 ed.). Boston, United States of America: Cengage Learning, Nelson Education Limited.

Benchmark 10.4.4.6: Identify the different goods and services that are traded on the internet and their benefits.

Topic 6: Internet traded items

Sub-topic:

- Types of goods and services traded on the internet

Skills: Understanding (Identify)

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

- Identify and assess the types of goods and services traded on the Internet.

Content Background

Trading is one of the oldest social activities of human beings. With the use of internet, that is the platform to buy goods and services, right around the world people now have access to anything they desire that could satisfy their needs and wants. There are over thousands of items traded though the internet. Items such as;

- Food
- Clothing
- White goods (fridge, stove etc)
- Machineries (for industries)
- Vehicles
- Building materials
- Chemicals
- Niche market items (hospital items-drugs, vaccination/hotel items/Educational items)
- Accessories

Websites or search engines such as Google, Wikipedia, Yahoo, Bing, Baidu, Yandex, Amazon, Alibaba, Ask, Aol to name a few that one can use to trade items.

Suggested Resources

1. Kutz, M. (2016). *Introduction to E-Commerce - Combining Business and Information Technology*
2. Schneider, G. P. (2016). *Electronic Commerce* (12 ed.). Boston, United States of America: Cengage Learning, Nelson Education Limited.

Benchmark 10.4.4.7: Evaluate the advantages, disadvantages, and the barriers for trading goods and services using different types of technology.

Topic 7: Costs and benefits of technology in trade

Sub-topics:

- Advantages and disadvantages of technology in trade
- Barriers of trade using different technologies

Skills: Evaluating (evaluate)

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

- Examine the advantages and disadvantages of using different types of technology in trading goods and services.
- Identify and evaluate the barriers for trading goods and services when using different types of technologies.

Content Background

There are costs and benefits to technology in terms of trade. While trade is essential, there are advantages and disadvantages of trade;

The advantages of online trading;

- a. Ease of use
- b. Quick, efficient and easy way to purchase a product.
- c. Gather valuable information about a product before buying it.

The major disadvantages of online shopping include;

- a. Delay in delivery
- b. Lack of discounts in online shopping
- c. Lack of touch and feel of merchandise in online shops.
- d. Lack of interactivity in online shopping
- e. Lack of shopping experience
- f. Lack of close examination in online shopping
- g. Fraud in online shopping

Customers have to be careful in revealing their personal information. Some e-tailers are unreliable. Merchants must pay attention to the stumbling blocks and ensure secure payment system to make online shopping effective.

Suggested Resources

1. Bandara, P. (2013). *Save Buk 11 Economics*. 253 Normanby Road, South Melbourne: Oxford University Press.
2. Kutz, M. (2016). *Introduction to E-Commerce - Combining Business and Information Technology*
3. Schneider, G. P. (2016). *Electronic Commerce* (12 ed.). Boston, United States of America: Cengage Learning, Nelson Education Limited.

Unit 5: Economic Ideologies

Content Standard 10.4.5: 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 10.4.5.1: Articulate the capitalist ideology and analyse its fundamental principles.

Topic 1: Capitalist ideology

Sub-topic:

- Principles of capitalism

Skills: Analyzing (articulate, analysis)

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

- Identify and analyse the principles of capitalism.

Content Background

The principle of capitalism is founded on the pillars of private property or self-interest. It allows people to own tangible assets such as land and houses and intangible assets such as stocks and bonds; self-interest, through which people act in pursuit of their own good, without regard for sociopolitical pressure. In particular, it makes reference to the different degrees or levels of commitment to the ideals of capitalism. The several characters common among all capitalists are profit motive, competition, willingness to change and less government interference.

For this reason, capitalism is *production for exchange* driven by the desire for personal accumulation of money receipts in such exchanges, mediated by free markets. The markets themselves are driven by the needs and wants of consumers and those of society as a whole in the form of the bourgeois state. These wants and needs would be the driving force, it would be production for use. Contemporary mainstream (bourgeois) economics particularly that associated with the right holds that an *invisible hand* through little more than the freedom of the market, is able to match social production to these needs and desires.

Hence, capitalism as this money-making activity has existed in the shape of merchants and money-lenders who acted as intermediaries between consumers and producers engaging in simple commodity production since the beginnings of civilization.

What is specific about the *capitalist mode of production* is that most of the inputs and outputs of production are supplied through the market and essentially all production is in this mode. For example, in prosperous feudalism most or all of the factors of production including labor are owned by the feudal ruling class outright and the products may also be consumed without a market of any kind, it is production for use within the feudal social unit and for limited trade.

Suggested Resources

1. Bandara, P. (2013). *Save Buk 11 Economics*. 253 Normanby Road, South Melbourne: Oxford University Press.
2. Bank of Papua New Guinea. (2007). *Money and Banking* (2 ed.). Victoria, Australia: 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, R. M. (1995). *Fundamentals of Economics*. (4 ed. Vol. 1). Longman House, Kings Garden, 95 Coventry Street, Melbourne 3205, Australia: Longman Australia Pty Ltd.
5. Harcourt, S. V. (1981). *Commerce and Development in Papua New Guinea*. Melbourne, Australia: Longman Cheshire,.
6. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
7. O'Neil, E. (1996.). *Principles of Economics*. . Victoria. Australia.: Dellasta Pacific.

Benchmark 10.4.5.2: Explain how capitalist principles influence the production, distribution, and consumption of resources.

Topic 2: Influence of capitalism on Production, distribution and consumption in capitalist economies

Sub-topic:

- Influence of capitalism on production, distribution and consumption

Skills: Understanding (explain)

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

- Identify and explain the influence of capitalism on production, distribution and consumption.

Content Background

The capitalist mode of production refers to the system of organising production and distribution within capitalist societies. Such analysis was made in Karl Marx's critique of political economy. Economic return or profit motive took various forms such as renting, banking, merchant trade, production for profit etc... This preceded the development of the capitalist mode of production based on wage labour and private ownership means of production and on industrial technology which grew in Europe and later expanded throughout the rest of the world.

A mode of production is the distinctive way of producing which could be defined in terms of how it is socially organized and what kinds of technologies and tools are used. Both the inputs and outputs of production are mainly privately owned, priced goods and services purchased in the market. Production is carried out for exchange and circulation in the market, aiming to obtain a net profit income from it. The owners of the means of production (capitalists) are the dominant class who derive their income from the surplus product produced by the workers and appropriated freely by the capitalists.

This has the important consequence that the whole organization of the production process is reshaped and reorganized to conform to economic rationality bounded by capitalism. Such is expressed in price relationships between inputs and outputs including wages, non-labor factor costs, sales, profits. Another way of saying this is that capital accumulation defines economic rationality in capitalist production. In the flourishing period of capitalism, these are not operating at cross purposes and thus capitalism acts as a progressive force.

An economic system in which production and distribution questions are answered through prices and profits (supply and demand). Economic decisions are based on Free Enterprise (competition between firms). Important economic questions are not answered by government but by individuals. That is, individuals and private businesses decide on, what goods and services to produce, how to produce, how much to produce and for whom it shall be produced.

Suggested Resources

1. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies* (20 ed.). New York,USA: McGraw Hill Books.
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. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
4. O'Neil, E. (1996.). *Principles of Economics*. Victoria. Australia.: Dellasta Pacific.

Benchmark 10.4.5.3 Analyse the management and control of the means of production in a capitalist economic system.

Topic 3: Allocation of resources under capitalist economic system (capitalism)

Sub-topic:

- Management and control of the means of production in capitalist economy

Skills: Analyzing (Identify, explain)

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

- Identify and explain how the capitalist economic system decides what goods and services it should produce.

Content Background

In capitalist economy, Karl Marx and the supporters of the theory of state capitalism reject the definition of the capitalist mode of production. The revolutionary view is that of what really defines the capitalist mode of production. It asserts that the;

- means of production dominated by direct producers. (Most of the resources are owned by private citizens).
- existence of a wage-earning working class that does not hold or have power.
- existence of an elite or ruling class who control the country, exploiting the working population in the technical Marxist sense.

If true, then ownership relations generally and private ownership in particular are irrelevant to the definition of capitalism. The existence of commercial relations and commodity production are also irrelevant. Many of the state capitalist theories define capital only as a social relation of power and exploitation.

This idea is based on some passages from Marx, where Marx emphasized that capital cannot exist except within a power-relationship between social classes which governs the extraction of surplus-labour. It is this power-relationship that is most important for the proponents of theories of state capitalism.

Suggested Resources

1. Campbell McConnell, S. L. B. a. S. M. F. (2015). *Microeconomics Principles, Problems and Policies* (20 ed.). New York, USA: McGraw Hill Books.
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. Harcourt, S. V. (1981). *Commerce and Development in Papua New Guinea*. Melbourne, Australia: Longman Cheshire,.
4. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
5. O'Neil, E. (1996.). *Principles of Economics*. Victoria. Australia.: Dellasta Pacific.

Benchmark 10.4.5.4: Evaluate the strengths and the weaknesses of the capitalist economic system.

Topic 4: Strengths and weakness of capitalism (capitalist economic system)

Sub-topics:

- Strengths of capitalism
- Weakness of capitalism

Skills: Evaluating (evaluate)

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

- Identify and explain the strengths of capitalism.
- Identify and explain weaknesses of capitalism.

Content Background

Capitalism is a form of economic systems where productions of goods and services are owned and managed by private individuals and businesses/firm. The individuals are the ones who decide what and how much to produce and be distributed. Businesses and individuals with capitalist views try to apply any technique of production and produce anything they like. In this form of economic system, government is to take care of only internal and external security of the country and therefore plays a minimal role. Adam Smith who is the founder of economics assumed the presence of perfect competition. The state is more or less non-existent so far as the economic matters are concerned. The state job was restrained to enforcement of contracts, protection of property, maintain law and orders. According to the opinion the state/government has no right to interfere in the country economic activities. This type of principle is called laissez-faire.

A weakness of private enterprise in capitalism essentially characterizes the existence of business fluctuations and considerable unemployment. Hence with capitalism, there are considerable ups and downs particularly the swings of business cycle which affect the people. There are two types of capitalism namely classical capitalism and monopoly capitalism. **With monopoly capitalism**, there is no more room for classical capitalism in today's economic system. Free market, perfect competition and State's non-interference in the economic activities are prevalent in any economy. Perfect competition is yielded to imperfect competition. Government is intervening in the activities of their economic systems. The **main characteristics of capitalism** include right to own property, profit motive, private ownership of means of production, consumer's sovereignty, economic freedom, social division of people and price mechanism. Further, the advantages and disadvantages of capitalism are stated below.

The strengths of capitalism include;

- Reduction in cost of production due to efficient control
- Efficient control of production process
- Improved quality of goods
- Consumer's choice is given full weight
- Varieties of products.

The weaknesses of capitalism include;

- Inequality in the distribution of national wealth
- Fluctuations in the level of employment
- Class conflicts
- Waste of talents
- High expenses on publicity result into increase in cost and price of the commodity.

Suggested Resources

1. Bandara, P. (2013b). *Save Buk 11 Economics*. 253 Normanby Road, South Melbourne: Oxford University Press.
2. Bank of Papua New Guinea. (2007). *Money and Banking* (2 ed.). Victoria, Australia: 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, R. M. (1995). *Fundamentals of Economics*. (4 ed. Vol. 1). Longman House, Kings Garden, 95 Coventry Street, Melbourne 3205, Australia: Longman Australia Pty Ltd.
5. Harcourt, S. V. (1981). *Commerce and Development in Papua New Guinea*. Melbourne, Australia: Longman Cheshire,.
6. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
7. O'Neil, E. (1996.). *Principles of Economics*. Victoria. Australia.: Dellasta Pacific.

Benchmark 10.4.5.5: Explain how financial institutions function in a capitalist economic system.

Topic 5: Financial institutions in the capitalist economy

Sub-topics:

- Functions of commercial banks
- Functions of insurance companies
- Functions of superannuation funds
- Functions of stock markets
- Functions of microfinance banks
- Functions of development banks
- Functions of International Monetary Fund (IMF) and Asian Development Bank (ADB)

Skills: Understanding (explain)

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

- Identify commercial banks and explain their functions.
- Explain the functions of micro finance banks.
- Identify insurance companies and explain their operations.
- Examine the roles of superannuation funds.
- Expound on the operations of stock markets.
- Identify and explain the purpose of development banks
- Identify and explain the roles of IMF and ADB.

Content Background

The primary functions of commercial banks is deal with accepting of deposits and lending funds in the form of loans. Deposits are savings, current, or time deposits. Also, a commercial bank lends funds to its customers in the form of loans and advances, cash credit, overdraft and discounting of bills. Accepting deposits and advancing loans can be termed as primary functions of bank, while the secondary functions of the bank include;

- Agency services and
- General utility services

Commercial banks play a significant role in fulfilling the short-term and medium-term financial requirements of businesses/firms.

The commercial banks and microfinance institutions while providing loans to businesses, consider various factors, such as nature and size of business, financial status and profitability of the business, and its ability to repay loans. Agency functions of commercial banks include;

- a. Collecting Checks/Cheques
- b. Collecting income
- c. Paying expenses
- d. Safe keeping facilities
- e. Issuing traveler's checks/cheques
- f. Dealing with foreign exchange
- g. Transferring funds

- h. Creating money
- i. Electronic banking

Included services are debit cards, credit cards and internet banking.

Insurance is a means of protection from financial loss. It is a form of risk management which is primarily used to hedge against the risk of a contingent or uncertain loss. An entity which provides insurance is known as an insurer, insurance company, insurance carrier or underwriter. Insurance is a contract in which an insurer promises to pay the insured party a sum of money if one or more specified events occur in the future, in return for regular small payments - known as premiums. The purpose of insurance is to reduce your business' exposure to the effects of particular risks. Insurance enables to mitigate loss, financial stability and promotes trade and commerce activities those results into economic growth and development. Thus, insurance plays a crucial role in sustainable growth of an economy.

Superannuation is a way to save for your retirement benefit. The money comes from contributions made into your super fund by your employer and, ideally, topped up by the contributors' own money. Sometimes the government will add to it through co-contributions and the low-income super contribution.

The stock market is an avenue where investors connect to buy and sell investments — most commonly, stocks, which are shares of ownership in a public company. It is a place where shares of public listed companies are traded. The primary market is where companies float shares to the general public in an initial public offering (IPO) to raise capital. A stock may be bought or sold only if it is listed on an exchange. The main function of stock market is to provide ready market for sale and purchase of securities. The presence of stock exchange market gives assurance to investors that their investment can be converted into cash whenever they want.

Development bank or development finance company is a financial institution that provides risk capital for economic development projects on non-commercial basis. National Development Bank is an example of local development bank whose purpose is to develop and support small-scale indigenous businesses in Papua New Guinea.

The International Monetary Fund (IMF) was created in 1945 and is governed by and accountable to its 188 member countries. The IMF functions in three main areas namely; overseeing the economies of member countries, lending to countries with balance of payments issues and offering technical assistance to its member countries.

The role of the World Bank is to address failures in international markets and end poverty. It offers grants, zero interest credits and low-interest loans or investments as well as advice and training. World Bank, also provides financing, policy advice, and technical assistance to governments of developing countries.

The Asian Development Bank was formed to foster economic growth and co-operation in the region of Asia and the Pacific and to contribute to the

acceleration of economic development of the developing countries of the region. The basic objective of the Bank is to encourage economic and financial co-operation among the regional members.

Suggested Resources

1. Bandara, P. (2013). *Save Buk 11 Economics*. 253 Normanby Road, South Melbourne: Oxford University Press.
2. Bank of Papua New Guinea. (2007). *Money and Banking* (2 ed.). Victoria, Australia: Melbourne University Publishing Ltd.
3. 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.
4. Harcourt, S. V. (1981). *Commerce and Development in Papua New Guinea*. Melbourne, Australia: Longman Cheshire,.
5. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
6. O'Neil, E. (1996.). **Principles of Economics**. Victoria. Australia.: Dellsta Pacific.

Benchmark 10.4.5.6: Examine the influence of the capitalist system on the exchange of goods and services between governments and between people.

Topic 6: Exchanging of goods and services in a capitalist economy

Sub-topics:

- Influence of capitalist system on the exchanging goods and services between government
- Influence of capitalist system on the exchanging of goods and services between people

Skills: Analyzing (examine)

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

- Identify and analyse the exchange of goods and services between governments in a capitalist economic system.
- Examine and evaluate the exchange of goods and services between people in a capitalist economic system.

Content Background

Suggested Resources

1. Bandara, P. (2013). *Save Buk 11 Economics*. 253 Normanby Road, South Melbourne: Oxford University Press.
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. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.

Benchmark 10.4.5.7: Evaluate producer and consumer behaviour patterns in capitalist economies.

Topic 7: Producers and consumers behavior in the capitalist state

Sub-topics:

- Producer behavior patterns in a capitalist economies
- Consumer behavior patterns in a capitalist economies

Skills: Evaluating (evaluate)

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

- Identify and explain the producers behavior patterns in a capitalist state.
- Identify and explain the consumers behavior patterns in a capitalist state.

Content Background

In capitalist economies, consumer behavior theories predict how consumers make purchasing decisions and show marketers how best to capitalize on predictable behaviors. Though impulse purchases are a significant part of a consumer's buying patterns, rational decision-making processes dominate consumer behavior and affect marketing theory. Several factors go into the definition of consumer behavior, including the following:

- consumers behave individually or in groups
- consumers behavioral pattern change based on the types of products and services they purchase
- consumers likeliness of making a purchase
- customer direct feelings before buying a product
- feeling of consumers from direct purchasing
- consumers' questions or objections in the buying decisions

The above are some of the factors that are essential in understanding customer behavior.

The firm or producers ultimate goal is profit maximization which require an understanding of costs and revenues. Producers will optimally respond to a given market price by finding the profit maximizing output. The level of profits at this maximum profit point will help determine. The producers are also mindful of variable costs, total costs, average costs, marginal costs, total revenue and marginal revenue. Their beaviour on how much to produce at a given period largely depends on above factors.

Suggested Resources

1. Bandara, P. (2013). *Save Buk 11 Economics*. 253Normanby Road,South Melbourne: Oxford Univeristy Press.
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. Harcourt, S. V. (1981). *Commerce and Development in Papua New Guinea*. Mebbourne, Australia: Longman Cheshire,.

4. John Sloman, K. N. D. G. (2014). *Principles of economics* (4 ed.). Unit4, Level 3 14 Aquatic Drive, French Forest NSW 2086: Pearson Australia.
5. Mannur, H. G. (1996). *Foundation Economics*. Port Moresby, Papua New Guinea: UPNG Press & Bookshop.
6. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
7. O'Neil, E. (1996.). *Principles of Economics*. Victoria. Australia.: Dellasta Pacific.
8. Kutz, M. (2016). *Introduction to E-Commerce - Combining Business and Information Technology*
9. Richard , F. H., Crawford. (2011). *Interantional Marketing: An Asia Pacific Perspective*. NSW, Australia: Pearson Australia.
10. Schneider, G. P. (2016). *Electronic Commerce* (12 ed.). Boston, United States of America: Cengage Learning, Nelson Education Lintied.

Benchmark 10.4.5.8: Illustrate how private enterprise and business organizations operate in a capitalist environment.

Topic 8: Operations of private and public enterprise in a capitalist state

Sub-topics:

- Private enterprise operations in a capitalist state
- Public enterprise operations in a capitalist state

Skills: Understanding (illustrate)

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

- Identify and examine private and public enterprise in capitalism.

Content Background

Capitalism is an economic system that is based on the private ownership of the means of production and consequently profit. Characteristics central to capitalism include private property, capital accumulation, wage labor, voluntary exchange, a price system and competitive markets. In a capitalist market economy, decision-making relating to production whereas prices and distribution of goods and services are mainly determined by competition in goods and services markets.

A private enterprise is characterized by competition, open markets, private ownership, and private initiative. Producers take production initiative on the basis of price and profit-and-loss signals essentially given by consumers. Private enterprise is open to all comers. Characteristics of a private enterprise system include freedom in the marketplace, private property, limited government control, competition, the profit motive, and the price-directed system. However, the disadvantages of private enterprise include periods of unemployment, poverty, and unequal distribution of wealth.

On the other hand, public enterprise is a business organization wholly or partly owned by the state and controlled through a public authority. Some public enterprises are placed under public ownership because, for social reasons, it is thought the service or product should be provided by a state monopoly. A well-functioning public administration and public sector provide conditions for the prosperity of private enterprise by creating an optimum and rational infrastructure by means of modernizing communication networks, systems of information services for citizens and businesses, through providing professional assistance. Some of the key characteristics/feature of public enterprise include government ownership, government controlled and managed, separate legal entity, perpetual succession, autonomy, service motive, public accountability together with business motive.

Suggested Resources

1. Bandara, P. (2013b). *Save Buk 11 Economics*. 253 Normanby Road, South Melbourne: Oxford University Press.
2. Harcourt, S. V. (1981). *Commerce and Development in Papua New Guinea*. Melbourne, Australia: Longman Cheshire,.
3. 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.
4. Mickleburgh, A. (1992). *Economics for Developing Nation* (Vol. Book 1). Level 9 5 Queens Road Melbourne 3004 Australia: Pearson Education Australia.
5. O'Neil, E. (1996.). *Principles of Economics*. Victoria. Australia.: Dellsta Pacific.

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: Resource use and management Topic 2: Impact of energy and resource use on the environment Topic 3: Energy consumption and living standards Topic 4: Resource consumption
2. The Earth and Its Systems	Topic 1: The rock cycle Topic 2: Minerals Topic 3: The processes of degradation Topic 4: Shaping the land through the earth's movements
3. Biological Dynamics of the Earth	Topic 1: Effects of limiting factors of population dynamics Topic 2: Causes of population fluctuation Topic 3: Carrying capacity in an ecosystem Topic 4: Endangered species
4. Environmental Change and Sustainability	Topic 1: Problems related to water quality Topic 2: Influence of political systems on the environment Topic 3: Problems related to water quality Topic 4: Ecological footprint

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 10.5.1.1: Examine how different resources are produced, rates of use, renewal rates, and limitations of resources.

Topic 1: Resource use and management

Sub-topics:

- Types of natural resources
- Production of natural resources
- Rates of consumption and renewal of resources
- Limitation of resources

Skills: Analysis (examine)

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

- Investigate the types of natural resources.
- Examine how these different natural resources are produced.
- Evaluate rates of resource consumption and renewal.
- Analyze the limitations of these types of natural resources.

Content Background

Types of natural resources

A natural resource is anything found in the natural or physical environment that is deemed useful for satisfying a need or want at a given place and time. The act of giving value to an object so as to make it become a resource is called resource evaluation. An object may gain or lose its value as a resource depending on the culture or society that use of not use that object. For example, a laptop is considered as a resource by a university student but to a type villager who lives a subsistence lifestyle, a laptop is not a resource.

Resources comprise of abiotic and biotic resources. Abiotic resources originate from the non-living part of the environment and include such objects as soil, water, gases, metals such as phosphate, sand, gravel). Biotic resources have their origin from living things and they include resources such as plants and animals (biodiversity). All the resources found in the natural environment can also be classified as renewable and non-renewable depending on their ability of renewing themselves. Renewable resources are those that continuously renew themselves especially with the energy from the sun (for example; trees, fresh air, fresh water, running water, wind, fertile soils).

Non-renewable resources are resources that have taken geological time (Earth time) to form. Non-renewable resources were formed hundreds of millions of years ago from pre-historical plants and animals coupled with the geological process and volcanism processes of weathering, erosion and deposition. For example, fossil fuels like coal, oil and gas were formed from the remains of dead plants with the help of diastrophism during the carboniferous period of

Earth's time (geological time scale). Metallic minerals such as gold, silver, and copper are formed from weathering, erosion and deposition over hundreds of million years.

Some resources are used directly from nature, for example, fresh water, fresh air (oxygen and carbon dioxide), fertile soils and biodiversity (plants and animals). Other resources are processed into other products, for example, metamorphic rocks such as diamond that is used in drilling and marble that is used for various purposes.

Since the industrial revolution coupled with an increases world population, some of the renewable resources have gained the status of “potentially renewable resources”. This is because the rate at which these resources are consumed is affecting the rate at which they are being naturally produced. For example, overharvesting of plants and animals as well as harvesting of immature plants and animals is affecting their rate of reproduction leading to a decline in species population. Thus, soon, these plants and animals species would not be able to meet the demand of people. When resources are not adequate to meet human demand then there is a resource scarcity. We also refer to this as the environment exceeding its ‘carrying capacity’. This is case of the natural cycles and processes being affected to the point of not producing enough continuously to meet human demands. The potential of renewable resources such as freshwater, fresh air, fertile soil and diversity (plants and animals) is severely threatened today due to population increase, industrialization and affluence which have fostered unsustainable methods of harvesting and extracting resources.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Tyler, D. Miller (2009). *Living in the Environment* (or any of his latest publications)
3. Types of Natural Resources.
Retrieved from: <http://www.eschooltoday.com/>

Benchmark 10.5.1.2: Investigate how energy and other resource utilization impact the environment and recognize that individuals as well as large entities (businesses, government, etc.) have impact on energy efficiency.

Topic 2: Impact of energy and resource use on the environment

Sub-topics:

- Impact of utilization of resources on the environment
- Individuals and large entities' impact on energy efficiency

Skills: Analyzing (investigate or examine, recognize or distinguish)

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

- Analyze and evaluate the impacts of resource use on the environment.
- Investigate the different uses of energy.
- Analyse and evaluate impacts of individuals on energy efficiency.
- Analyse and evaluate impacts of large entities on energy efficiency.

Content Background

There are four main uses of energy. They include

1. Residential
2. Commercial
3. Transportation
4. Industrial

Heating and cooling our homes, lighting office buildings, driving cars and moving freight, and manufacturing the products we rely on in our daily lives are all functions that require energy. If projections are correct, we're going to keep needing more. Global consumption is expected to increase by 40% over the same time period.

The use of energy and other resources have sustained and made lives comfortable (affluent) for the population however their effects on the environment has now become a growing concern for the globe. Apart from the depletion of natural resources, the burning of fossil fuels and other home and industrial wastes has caused negative impact on our environment. These effects include

- Air pollution
- Water pollution
- Land pollution
- Enhanced greenhouse effects
- Global warming and
- Climate change

These human induced environmental defects have become a global concern and are now addressed by individuals, groups, large entities and governments around the world.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Tyler, D. Miller (2009). *Living in the Environment* (or any of his latest publications)
3. Energy Use. Retrieved from: <http://needtoknow.nas.edu/energy/m>

Benchmark 10.5.1.3: Reflect on the relationship of energy consumption and the living standards of societies.

Topic 3: Energy consumption and living standards

Sub-topic:

- Relationship of energy consumption and living standards of societies

Skills: Creating (reflect/reproduce)

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

- Examine energy consumption.
- Identify and analyse ways energy is consumed by developed societies.
- Examine ways energy is consumed by developing societies.
- Evaluate the impacts of energy consumption.
- Analyse the relationship between energy consumption and living standards.
- Evaluate energy consumption and living standards of developed societies to developing societies.

Content Background

Since the beginning of the industrial revolution, global energy consumption has increased in line with rising living standards. But increased energy use has not been a consequence of greater wealth and prosperity; it has been a driving force.

It has been estimated that, annually, the world consumes an amount of fossil fuel that took about 1 million years to produce, and that the rate of consumption is constantly increasing. This consumption of energy is not evenly distributed over the globe. At present, the 83% per cent of people living in the 'developing' countries consume only 47 per cent of the total energy supply. United State with only 5% of the world population is with its high living standard consumes 25% of the total global energy. It has been noticed that the countries with higher per capita energy consumption also have a higher per capita GDP, i.e. far better standards of living. On the other hand, countries that consume very little energy have low standards of living.

Recently the consumption of energy in 'developed' countries has begun to slow down, due to industrial decline and environmental concerns while developing countries are advancing along a similar but much faster track than developed economies once did, (especially in the Asian region) as modern fuels have replaced less efficient ones like wood and are much more abundant and affordable. Consider China and other non-member Organization for Economic Co-operation and Development (OECD) countries as examples. China has probably already overtaken the U.S. as the world's largest energy user. China's energy consumption has increased dramatically since 2000 and is forecast to keep rising in the next several decades due to continuous economic growth resulting in a higher living standard in the country. Also, with a population exceeding 1.4 billion (2019) China is consuming huge amounts of energy.

The two factors that affect the rate of resources consumptions are;

1. affluence
2. population size

Affluence refers to the level of luxury and wealth in living. The more affluent societies of the world are the developed or western countries. The less affluent societies are the third world countries. In considering the factor of affluence and population size with respect to resources and consumption, India's population today (2019) stands at over 1.3 billion but despite this huge population it consumes less resources than USA with a population of over 250 million, this is because USA is an affluent society with a great deal of money and wealth. Consider this case, an average family of four in the USA could own two family cars, 2 refrigerators, a 3 bedroom house, several laptops, mobile phones, a gas/ electric stove, washing machines and so on. On the other hand, an average Indian family of 4 may have no family car, a one bedroom house and none of the household goods found in the house of an American family of 4. In this case, we say that the USA family of 4 has a larger 'ecological footprint' compared to the Indian family of 4 due to the factor of affluence.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Tyler, D. Miller (2009). *Living in the Environment* (or any of his latest publications)

Benchmark 10.5.1.4: Evaluate the need for informed decision making of resource utilization (i.e. energy and water usage allocation, conservation, food and land) and long-term depletion.

Topic 4: Resource management and sustainability Resource consumption

Sub-topics:

- Energy consumption
- Water distribution and consumption
- Resource conservation
- Food management
- Land management
- Sustainable practices

Skills: Evaluating (evaluate, justify)

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

- Investigate and discuss energy consumption.
- Analyse the distribution and consumption of water.
- Research and identify resource conservation acts and policies.
- Identify and explain conservation methods for energy, water, food and land.
- Examine and evaluate sustainable practices for energy, water, food and land consumption.

Content Background

The world's resources including energy, water, food and land are obviously not distributed evenly because they depend upon many physical factors like geology, climate and altitude. The distribution of resources is unequal because these factors differ from place to place on this earth. This means that one particular place can be rich in one resource but poor in another. Generally, much of the world's resources are consumed by well-developed and industrialised nations compared to many developing countries.

Many of these important resources are scarce and at the same time the world's population is increasing at an alarming rate, especially in countries with poor birth control measures in place. This has put a strain on the environment in replenishing and supplying necessary resources to support the population. Individuals, groups, organizations and different governments have come to realize the importance of conservation and sustainability and have put in place measures such as policies, laws and educational awareness to educate people to use resources sustainably to avoid long term resource depletion.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Tyler, D. Miller (2009). *Living in the Environment* (or any of his latest publications)
3. The Earth. Retrieved from: <https://www.e-education.psu.edu/>

Unit 2: The Earth and Its Systems

Content Standard 10.5.2: 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 10.5.2.1: Illustrate and interpret the processes of the rock cycle

Topic 1: The rock cycle

Sub-topic:

- The processes of rock cycle

Skills: Understanding (Illustrate and interpret)

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

- Examine the stages of rock formation in the rock cycle.
- Identify and describe the types of rocks formed in each of the stages of the rock cycle.
- Illustrate the process of the rock cycle.
- Identify examples of the different types of rocks formed.
- Create profiles of the different rock type with real samples of the different rocks.

Content Background

All the physical objects found in the physical or natural environment are produced and recycled through natural processes and cycle. Rocks are one example of these physical elements. Rocks are made up of mineral grains cemented together.

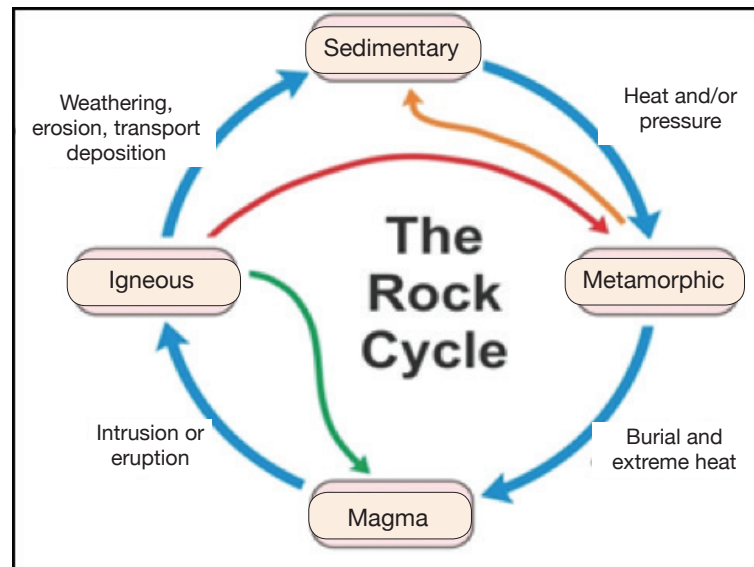
Rocks are produced and recycled through what is known as the rock cycle. About 4.6 billion years ago, the Earth was formed. About a billion years later, the original rocks were formed through volcanism to form the Earth's crust. These original rocks are called igneous rocks. They are formed from the expulsion and cooling or crystallization of magma. Once formed, the igneous rocks are exposed to the geomorphic forces of weathering, erosion and deposition.

The sediments from these igneous rocks are then compresses or cemented together by the geological force of diastrophism (folding and faulting). The end product is the second group of rocks called the sedimentary rocks. Both the igneous rocks and the sedimentary rocks can be further transformed into the third type of rocks called the metamorphic rocks. The metamorphism process takes place deep within the earth due to great heat and pressure that transform rocks to metamorphic rocks.

Igneous rocks are found in areas of volcanism. Sedimentary rocks are found in depositional areas such as swamps, shallow seas and plains. In some highlands areas of PNG, such as the Simbu Province, the sedimentary rock called limestone is found here because of diastrophic force of an uplift.

Metamorphic rocks consists of the gem stones such as diamond, rubies, sapphire and burly which are very smooth, glassy and colourful and used as jewelry. All rock types also dive back into the mantle during the subduction process when the thin oceanic crust dives under the thick continental crust and the minerals are melted again. They then become new rocks through the escape of magma called volcanism.

The diagram below shows the process of rock cycle.



Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Tyler, D. Miller (2009). *Living in the Environment* (or any of his latest publications)
3. The rock cycle.
Retrieved from: <https://www.topperlearning.com/doubts-solutions/>

Benchmark 10.5.2.2: Categorise the type and composition of various minerals.

Topic 2: Minerals

Sub-topics:

- Composition of minerals
- Types of minerals
- Uses of minerals

Skills: Analysing (categorize)

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

- Examine the compositions of various minerals.
- Investigate and describe the classification of different types of minerals.
- Evaluate the uses of various minerals.
- Identify and categorize the minerals in the rocks using real rock samples of the various rocks.






Content Background

What are minerals?

Geologists have a very specific definition for minerals. A material is characterized as a mineral if it meets all of the following traits. A mineral is an inorganic, crystalline solid and is formed through natural processes and has a definite chemical composition. Minerals can be identified by their characteristic physical properties such as crystalline structure, hardness, streak, and cleavage.

Mineral classification can be very difficult and challenging and with over 3,000 different types of minerals a system is needed to make sense of them all. Mineralogists group minerals into families based on their chemical composition. There are different grouping systems in use but the Dana system is the most commonly used. This system was devised by Professor James Dana of Yale University in 1848. The Dana system divides minerals into eight basic classes. The classes are: native elements, silicates, oxides, sulfides, sulfates, halides, carbonates, phosphates, and mineraloids.

The chart below has pictures and descriptions of different types of minerals each class with a link

Mineral Classification	
	<p><u>Native Elements</u></p> <p>This is the category of the pure. Most minerals are made up of combinations of chemical elements. In this group, a single element like the copper shown here are found in a naturally pure form.</p>
	<p><u>Silicates</u></p> <p>This is the largest group of minerals. Silicates are made from metals combined with silicon and oxygen. There are more silicates than all other minerals put together. The mica on the left is a member of this group.</p>
	<p><u>Oxides</u></p> <p>Oxides form from the combination of a metal with oxygen. This group ranges from dull ores like bauxite to gems like rubies and sapphires. The magnetite pictured to the left is a member of this group.</p>
	<p><u>Sulfides</u></p> <p>Sulfides are made of compounds of sulfur usually with a metal. They tend to be heavy and brittle. Several important metal ores come from this group like the pyrite pictured here that is an iron ore.</p>
	<p><u>Sulfates</u></p> <p>Sulfates are made of compounds of sulfur combined with metals and oxygen. It is a large group of minerals that tend to be soft, and translucent like this barite.</p>
	<p><u>Halides</u></p> <p>Halides form from halogen elements like chlorine, bromine, fluorine, and iodine combined with metallic elements. They are very soft and easily dissolved in water. Halite is a well-known example of this group. Its chemical formula is NaCl or sodium chloride commonly known as table salt.</p>
	<p><u>Carbonates</u></p> <p>Carbonates are a group of minerals made of carbon, oxygen, and a metallic element. This calcite known as calcium carbonate is the most common of the carbonate group.</p>
	<p><u>Phosphates</u></p> <p>Phosphates are not as common in occurrence as the other families of minerals. They are often formed when other minerals are broken down by weathering. They are often brightly colored.</p>
	<p><u>Mineraloid</u></p> <p>Mineraloid is the term used for those substances that do not fit neatly into one of these eight classes. Opal, jet, amber, and mother of pearl all belong to the mineraloids.</p>

Forty common minerals and their uses

Of the ninety two elements found in the Earth, forty of them are used in our daily lives. Some of the names are common and well known, and others seem obscure until one sees that it helps create something we cannot live without. The following is a list of those most commonly in use:

Minerals	Uses
Antimony	Antimony is a metal that is used along with alloys to create batteries for storing grid power. It is silvery gray and can be found in its pure form in nature, an uncommon characteristic.
Asbestos	Asbestos has an unsavory reputation for causing cancer in people who work around it. It is a fibrous mineral with incredible fire retarding properties. Although asbestos has a bad reputation, when polished it becomes the well-known and popular 'Tiger Eye' stone.
Barium	Barium is a common element used in x-ray technology, fireworks, rubber and glass making and rat poison. It is a soft, white metallic element and alkaline.
Bauxite	Bauxite is a sedimentary rock that is an important ore of aluminum. The aluminum content in it is leached from the soil above.
Beryllium	Beryllium is an alkaline metallic element that is highly toxic. It is known for its sugary sweet taste and some of its common uses are in X-rays and fluorescent lights.
Chromite	Chromite is the ore of chromium and is a very hard metal, and diamond is the only thing harder. This hardness is what allows a chrome finish to take a high polish.
Cobalt	Cobalt is famous for the incredible blue color it imparts to glass and pigment. It has been found in meteorites and is used in invisible ink. It is a brittle metal and resembles iron.
Columbite-tantalite	Columbite-tantalite group is a mineral used widely in technology. Electronics, automotive systems and health products like the pacemaker need this mineral to operate. It is mined in Africa and has earned the name of Coltan over the last few years.
Copper	Copper is a common metal throughout the world. It is used for currency, jewelry, plumbing and to conduct electricity. It is a soft, orange-red metal.
Feldspar	Feldspar is the most common mineral on Earth. Since it is most commonly found in granite, this mineral is used mostly as a building material.
Fluorite	Fluorite (fluorspar) is commonly used to create fluorescent pigment and since it is very beautiful, it is used for gem material. It is mined all over the world.
Gold	Gold is the most familiar metal to most people. It is used for jewelry, dentistry, electronics and a host of other applications. It is the most malleable metal which increases the way it can be used.
Gypsum	Gypsum is a very soft mineral with a variety of uses, most commonly in drywall, also known as sheet rock. It is also used as a fertilizer and road construction.
Halite	Halite (sodium chloride--salt) is used for seasoning food and softening water. It is also used to make certain acids, in fire extinguishers and melting ice on the road.
Iron Ore	Iron Ore is perhaps as important to civilization today as gold historically has been. It is used in all sorts of construction from vehicles to buildings.

Lead	Lead has a bad reputation for its poisoning capabilities, some of which may have been exaggerated by fear. It cannot be absorbed by the skin or breathing, but it is harmful if it touches food or drink. It was at one time used in paint, pencils and eating utensils.
Lithium	Lithium is used in several applications including medication for bipolar symptoms and batteries. Lithium has become very popular with the advent of electric cars.
Manganese	Manganese with iron impurities can be slightly magnetic. It is essential in the steel making process, and petroglyphs were carved into it in the Southwest.
Mica	Mica is the mineral responsible for putting a sparkle on many rocks. This mineral is very flexible, and large sheets of it were used as window glass in the past.
Molybdenum	Molybdenum is essential for supporting all life forms because it is essential for utilizing nitrogen.
Nickel	Nickel is a common metal in everyday life. It has been used in currency, jewelry and eating utensils and is used in alloys as well.
Platinum	Platinum Group Metals (PGM) are rare and therefore expensive. They are commonly used in jewelry but technology also benefits from them. The largest source of platinum and the members of its family is from the by product of nickel mines.
Perlite	Perlite is created from volcanic rock. It is a lightweight substance with great water bearing characteristics. It is the white stuff found in some potting soils.
Phosphate	Phosphate is necessary for all life on earth
Potash	Potash is the old fashioned term for Potassium. Potassium is a major component in crop fertilizer around the world. It is very important in the human body since it works with salt regulating the pressure inside and outside the body's cell walls. It is also used in soap manufacture.
Pyrite	Pyrite is commonly known as 'fools gold.' It is frequently seen in granite rocks where it adds sparkle. Native Americans polished it to use as a mirror, and it is occasionally used in jewelry. Its byproduct is used in ink and disinfectants.
Quartz	Quartz (silica) is the most abundant mineral on earth. It is the name for a large family of rocks including the jaspers, agates, onyxes and flints. Quartz is used in concrete, glass, scientific instruments and watches. Most importantly today, it is used to make silicon semiconductors.
Rare Earth Elements	Rare Earth Elements (lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium ytterbium and lutetium) Many of these are used to create nuclear power.
Silica	Silica is used in desiccants to remove moisture from the air. It is also used in sandpaper and glass making.
Silver	Silver is one of the precious metals. It is used as currency and in jewelry making. It is also used in medicine due to its anti-microbial properties.
Sodium Carbonate	Sodium Carbonate (soda ash or trona) is used to control the pH of products. It is used to make glass, paper, detergents and for softening.
Stibnite	Stibnite is a major ore of antimony which is used in fireworks, rubber and glass making. It is mined principally in Romania.
Sulfur	Sulfur is one of the only minerals to be found in its pure form in nature. It is a major ingredient in acid rain but it also is used in wine making and fruit preservation.
Tantalum	Tantalum is used when an alloy needs a high melting point and strength. It is used in missiles, aircraft parts and vacuums.

Titanium	Titanium is one of the most abundant and toughest metals on Earth. It is used extensively in human body repair.
Tungsten	Tungsten is a metal that is stronger than steel and a high melting temperature. It is also used to make saw blades and used in welding.
Uranium	Uranium is a highly radioactive element. It is used in cancer treatments, X-rays, military weapons and fuel for the space shuttle.
Vanadium	Vanadium is found in many foods and helps bones grow. It is useful in regulating blood sugar in diabetics and helps grow muscles for bodybuilders.

Suggested Resources

1. Department of Education, (1987). *The Changing World*. Port Moresby, NDoE.
2. Tyler, D. Miller (2009). *Living in the Environment* (or any of his latest publications)
3. Mineral Classification.
Retrieved from: <https://www.rocksandminerals4u.com>

Benchmark 10.5.2.3: Examine the processes of degradation by weathering and erosion and their effects.

Topic 3: The processes of degradation

Sub-topics:

- Weathering
- Erosion

Skills: Analysing (examine)

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

- Examine denudation processes.
- Investigate and identify the three weathering processes.
- Examine the agents of erosion.
- Analyse the effects of weathering and erosion.

Content Background

The shape of the land or landforms such as mountains, valleys, plains and plateaus, to name a few, are the results of two forces acting on the crust. One set of forces acts within the crust to change its shape and another set of forces act outside the crust to change its form or shape. The forces acting inside the crust are called 'endogenous' forces and those acting on the outside are called 'exogenous' forces. The endogenous forces include;

- i. volcanism
- ii. diastrophism (folding and faulting)

The exogenous forces include;

- i. weathering
- ii. erosion
- iii. deposition

Some of these forces build new landforms while others wear down these land forms. The action of wearing down landforms is commonly termed as 'denudation'.

What is denudation and agents of denudation?

Denudation is an erosive process of breaking and removing the rocks from the surface of the earth. It is the wearing away of the terrestrial land by weathering, erosion, moving water, ice waves. It is a long term process in which the wearing and tearing of the surface of the Earth takes place.

The three types of Weathering

Weathering refers to the disintegration of rocks in block or in grains near or act at the earth's surface. Rocks are weathered down by different agents or elements. Broadly, there are three types of weathering;

1. Physical weathering: the breakdown of rocks in blocks by water, temperature, ice, pressure and salt.

2. Chemical weathering: the chemical disintegration of rocks grain by grain caused by water, carbon dioxide and oxygen
3. Biological weathering: includes both physical and chemical weathering broken down by living things (plants and animals) in their day to day living.

Weathering is the first process formation because soils are largely made up of rock minerals that are also called inorganic matter. Without weathering, there would be no soil.

1. Physical Weathering

In physical weathering the rocks are broken down into smaller pieces, but the chemical composition of the rock remains the same. These are some of the types of physical weathering;

i. Temperature Change

Hot temperatures can give rise to thermal expansion in rocks and cool temperatures can cause rocks to contract. In areas such as deserts where the temperature is hot during the day, rock particles get hot and can expand by a small amount. During the night the temperature can drop significantly making it very cold and so the rock particles contract. This continuous expansion of the rock particles during the day and contraction during the night exerts stress on the rock and cracks form eventually causing pieces of the rock to fall away.

ii. Freeze-thaw

Water expands by 9% when it freezes. So when water enters the cracks in a rock and freezes it expands and pushes the cracks further apart. When the water melts it can travel further into the bigger cracks making the cracks even bigger when the water freezes again. This process occurs continuously until the crack is big enough to break off a piece of the rock.

2. Chemical Weathering

Chemical weathering occurs when rocks are broken down by a chemical change. Rainwater can become slightly acidic by absorbing carbon dioxide in the atmosphere and this reacts with the mineral grains in the rock giving rise to new minerals and salts. Salt minerals in rocks are removed through a solution

The degree of chemical weathering depends on the type of rock for example limestone is more readily chemically weathered than granite. Other factors such as temperature also play a role as the chemical reactions occur more quickly in areas of high temperatures.

Acid rain is also a contributor to chemical weathering. When fossil fuels such as coal, gas and gasoline are burnt they release oxides of sulphur, carbon and nitrogen into the atmosphere. These gases combine with moisture in the air to form sulphuric acid, carbonic acid and nitric acid, making the resulting rainwater more acidic than normal.

Carbon dioxide in the presence of water attacks calcium carbonate in limestone. This type of chemical weathering is called carbonation.

Oxygen also breaks down iron minerals in rocks through a process called oxidation. This happens in the presence of water.

3. Biological Weathering

Biological weathering takes place when rocks are worn away by living organisms. Trees and other plants can grow within the cracks in a rock formation. As the roots grow bigger they push open cracks in the rocks making them wider and deeper. Over time the growing tree eventually prizes the rock apart.

Tiny organisms like bacteria, algae and moss can grow on rocks and produce chemicals which can break down the surface layer of the rock.

Burrowing animals such as rabbits can accelerate the weathering of rocks as they search for food and shelter. The decomposition of dead plants and animals can also chemically break away rocks. Also the normal biological processes of animals including waste removal and salivation can chemically break away rock minerals. Thus plants and animals can break down rocks physically and chemically.

iii. Wind, Rain and Waves

Wind can carry small particles or sand and rocks such as in sandstorms in deserts. When these particles collide with rocks they can have a 'sand paper' effect on the rock. Rainfall can also wear away at rocks as can the action of waves over a long period of time.

Erosion

Erosion is the action of surface processes (such as water flow or wind) that removes soil, rock, or dissolved material from one location on the Earth's crust, and then transports it to another location (not to be confused with weathering which involves no movement). This natural process is caused by the dynamic activity of erosive agents, water, ice (glaciers), snow, wind, plants, animals, and humans. Erosion is sometimes divided into water erosion, glacial erosion, snow erosion, wind (aeolic) erosion, zoogenic erosion, and anthropogenic erosion. The particulate breakdown of rock or soil into clastic sediment is referred to as physical or mechanical erosion; this contrasts with chemical erosion, where soil or rock material is removed from an area by dissolving it into a solvent (typically water), followed by the flow away of that solution. Eroded sediment or solutes may be transported just a few millimeters, or for thousands of kilometers. Erosion is essentially the transporting of weathered materials by wind, water or ice.

Effects of weathering and erosion

When human activities overpower the natural environment then the likely results are quite drastic and degrading. Soil is the earth's fragile skin that anchors all life on Earth. It is comprised of countless species that create a dynamic and complex ecosystem and is among the most precious resources to humans. Increased demand for agricultural commodities generates incentives to convert forests and grasslands to farm fields and pastures. The transition to agriculture from natural vegetation often cannot hold onto the soil and many of these plants, such as coffee, cotton, palm oil, soybean and wheat, can actually increase soil erosion beyond the soil's ability to maintain itself.

Half of the topsoil on the planet has been lost in the last 150 years. In addition to erosion, soil quality is affected by other aspects of agriculture. These impacts include compaction, loss of soil structure, nutrient degradation, and soil salinity. These are very real and at times severe issues.

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. And degraded lands are also often less able to hold onto water, which can worsen flooding. Sustainable land use can help to reduce the impacts of agriculture and livestock, preventing soil degradation and erosion and the loss of valuable land to desertification.

The health of soil is a primary concern to farmers and the global community whose livelihoods depend on well managed agriculture that starts with the dirt beneath our feet. While there are many challenges to maintaining healthy soil, there are also solutions and a dedicated group of people, including WWF, who work to innovate and maintain the fragile skin from which biodiversity springs. Soil erosion by wind is common in temperate grasslands after the harvesting of wheat. In wet areas, erosion by water is common on steep unvegetated slopes.

Suggested Resources

1. Department of Education, (1987). *The Changing World*. Port Moresby, NDoE.
2. Tyler, D. Miller (2009). *Living in the Environment* (or any of his latest publications)
3. Soil Erosion and Degradation. Retrieved from: <https://www.worldwildlife.org › threats › soil->

Benchmark 10.5.2.4: Use research skills to investigate the processes of mountain building and earth movements by volcanism, diastrophism (folding and faulting).

Topic 4: Shaping the land

Sub-topic:

- Mountain building processes

Skills: Analysing (research or examine/investigate)

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

- Examine mountain building processes.
- Explain the different types of mountains formed.

Content Background

The shape of the land or landforms such as mountains, valleys, plains and plateaus, to name a few, are the results of two forces acting on the crust. One set of forces acts within the crust to change its shape and another set of forces act outside the crust to change its form or shape. The forces acting inside the crust are called 'endogenous' forces and those acting on the outside are called 'exogenous' forces. The endogenous forces include;

- i. volcanism
- ii. diastrophism (folding and faulting)

The exogenous forces include;

- i. weathering
- ii. erosion
- iii. deposition

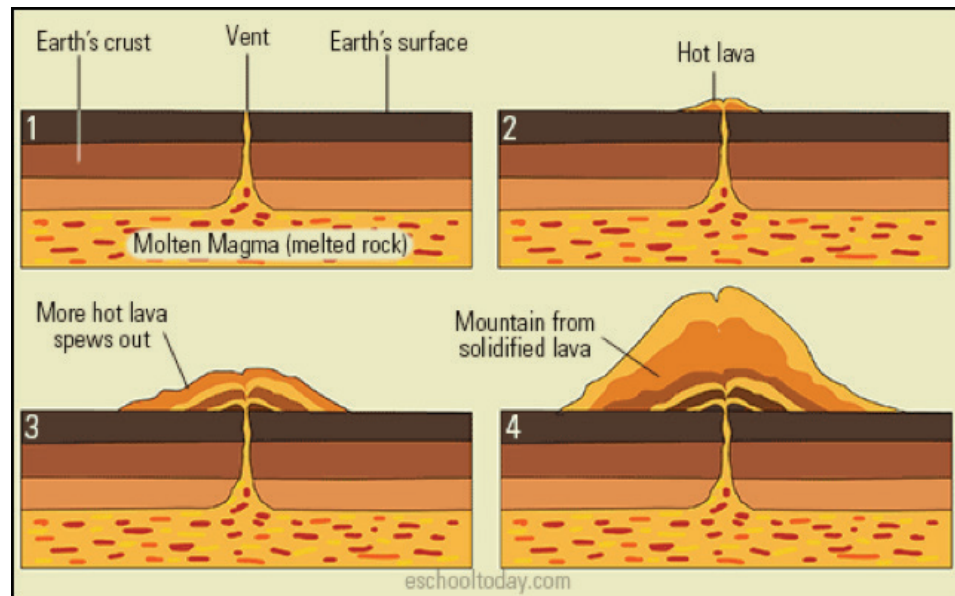
Some of these forces build new landforms while others wear down these land forms.

Mountain formation refers to the geological processes that underlie the formation of mountains. These processes are associated with large-scale movements of the earth's crust (plate tectonics). Mountain formation is related to plate tectonics. Folding, faulting, volcanic activity, igneous intrusion and metamorphism are all parts of the orogenic process of mountain building. The understanding of specific landscape features in terms of the underlying tectonic processes is called tectonic geomorphology, and the study of geologically young or ongoing processes is called *neotectonics*.

Types of mountains

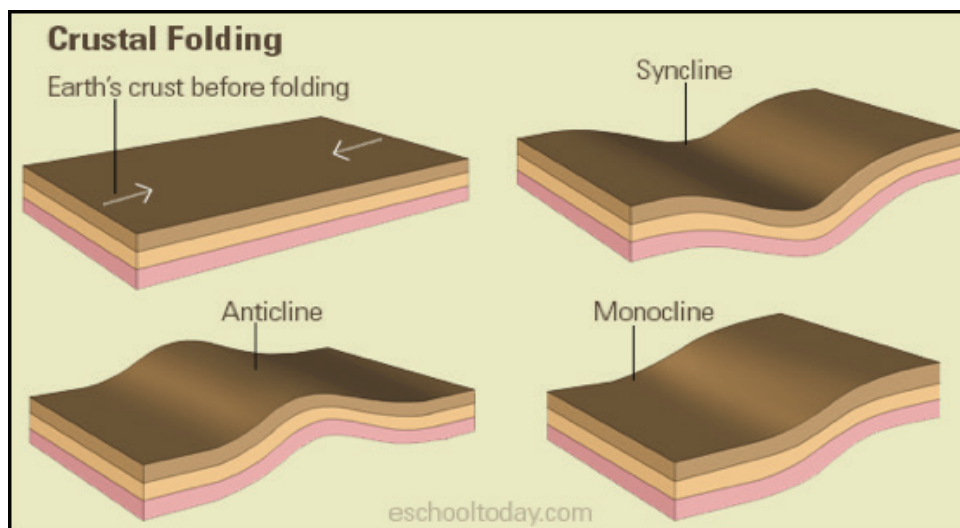
1. Volcanic Mountains

Volcanoes are **formed** when magma from within the Earth's upper mantle works its way to the surface. At the surface, it erupts to form lava flows and ash deposits. Over time as the **volcano** continues to erupt, it will get bigger and bigger.



2. Fold Mountains

When plates collide or undergo subduction (one dives another), the plates tend to buckle and fold, forming mountains. Most of the major continental mountain ranges are associated with thrusting and folding or orogenesis. Examples are the Jura and the Zagros mountains.



3. Fault Mountains

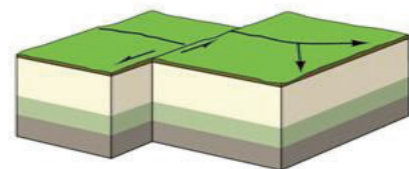
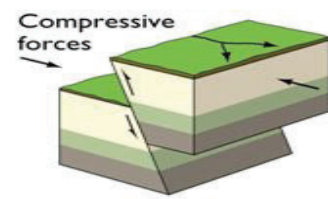
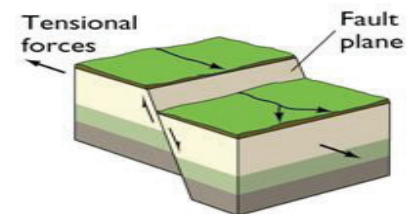
When a fault block is raised or tilted, block mountains can result. Higher blocks are called horsts and troughs are called grabens. A spreading apart of the surface causes tensional forces. When the tensional forces are strong enough to cause a plate to split apart, it does so such that a center block drops down relative to its flanking blocks.

An example is the Sierra Nevada Range, where delamination created a block 650 km long and 80 km wide that consists of many individual portions tipped gently west, with east facing slips rising abruptly to produce the highest mountain front in the continental United States.

Normal: One blocks displaced up, the other down. Due to tension.

Reverse: A block is pushed up and over the other. Due to compression.

Strike-slip: Adjacent blocks are displaced laterally. Movement is entirely horizontal. Due to shearing.



Suggested Resources

1. Department of Education, (1987). The Changing World. Port Moresby, NDoE.
2. Mountain Formation. Retrieved from: <https://courses.lumenlearning.com/earthscience/>
3. Landforms – Folds and Faults. Retrieved from: <https://www.umsl.edu/>

Unit 3: Biological Dynamics of the Earth

Content Standard 10.5.3: Students will be able to investigate and interpret the biological dynamics of the Earth.

Benchmark 10.5.3.1: Examine the effects of limiting factors of population dynamics on population growth, extinction of plants, animals, and organism, provision of labour, demand for and use of resources and settlement patterns.

Topic 1: Effects of limiting factors of population dynamics

Sub-topics:

- Limiting factors of population dynamics
- Effects of limiting factors on population dynamics

Skills: Analysing (examine)

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

- Investigate and identify limiting factors of population dynamics.
- Identify and explain effects of limiting factors on population growth.
- Describe the effects of limiting factors on the extinction of plants, animals and organisms.
- Examine the effects of limiting factors on the provision of labour.
- Analyse the effects of limiting factors on the demand and use of resources.
- Interpret the effects of limiting factors on settlement patterns.

Content Background

Limiting factors are resources or other factors in the natural environment that can lower the growth rate of animal and plant populations. Limiting factors are usually expressed as a lack of a particular resource. Limiting factors include a low food supply and lack of space. Limiting factors can lower birth rates, increase death rates, or lead to emigration.

In an ideal environment with unlimited resources, population growth rate would be exponential, as each reproduction cycle produces a larger pool of candidates for the next cycle.

In nature, however, there are always limiting factors that cause the growth to level off. These factors are weak when the population is low and become stronger as the population increases. This causes the population to reach a level of stable equilibrium, known as **carrying capacity**.

Types of limiting factors:

1. Disease – as the population of a species in an environment increases, communicable diseases become a powerful limiting factor. Once population density exceeds a certain point, highly communicable and lethal virus affects a high enough percentage of the population to reduce population growth. For example, the Spanish influenza.

2. Food scarcity – food is a near universal limiting factor of population growth. Every ecosystem has a specific amount of resources that can only sustain population levels of a species to a certain point. Competition and starvation limit the growth of the population beyond that point. Moreover, when the food source is affected by an environmental factor such as a pest or a drought, death from starvation will lead to a drastic decline in species population.
3. Predation – every environment also comes with a variety of predators that limit the growth of a population.
4. Environmental factors – environmental factors such as pollutants caused by humans, and climate extremes also act to limit a populations' growth. Two most important climate factors that determine the survival of a species are;
 - i. temperature and
 - ii. water that comes from precipitation.

All species, including humans thrive within an optimum range of temperature. This is why a coconut palm cannot grow in the highlands of PNG nor can strawberry grow in the coastal areas. Water is also significant. Plants are grouped into 3 groups according to their moisture requirements. There are plants that live in or on the water which are called hydrophytes. There are also plants that need a lot of water to survive which are called agrophytes and there are plants that need very little water to survive such as those found in deserts. They are called xerophytes.

Climate change today is greatly affecting both the optimum range of species and the average amount of water through global warming, extremely low winter temperature, frosts, droughts and flood.

Categories of limiting factors:

1. Biotic or biological factors - involves interactions between organisms such as predation, competition, parasites.
2. Abiotic or physical factors – include temperature, water availability, oxygen, salinity, light, food, and soil nutrients.

Suggested Resources

1. Department of Education, (1987). The Changing World. Port Moresby, NDoE.

Benchmark 10.5.3.2: Examine the possible causes of population fluctuations (for example, low birth rate, migration, mortality rates, natural and man-made disasters such as tsunami or tidal waves, volcanic eruptions, earthquakes, and nuclear leaks, ethnic cleansing, religious conflicts, and wars.

Topic 2: Causes of population fluctuation

Sub-topics:

- Birth and mortality (death) rates
- Migration
- Natural disasters
- Man-made disasters

Skills: Analysing (examine)

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

- Explain how birth and death (mortality) rates cause population change.
- Examine the effect of migration on population change.
- Explain how natural and man-made disasters contribute to the change in population.

Content Background

Population fluctuation is when there is a dramatic increase or decrease in the number or the density of a population from one time period to the next.

Possible causes of population fluctuation:

1. Birth rate- the rate at which populations increase naturally. If the birth rate is low there is a reduction in the population growth rate.
2. Migration – the movement of people and animals from one place to another. Emigration reduces the population and immigration increases the population.
3. Natural disasters – are various phenomena in nature that cause a rapid change in both the physical as well as human environments. For example: tsunami, volcano, earthquake, flood, cyclone, hurricane, droughts. They are a result of changes in the occurrences of natural processes and systems. Natural disasters cause a decline in population numbers and density.
4. Man-made disasters – these are hazards and disasters that are caused by human behaviour and human error, or by mechanical default particularly in the human environment. For example: conflicts, wars, religious and political persecution, genocides, ethnic cleansing and nuclear leaks. Man-made disasters also cause a decrease in the population.

These activities affect all populations regardless of their size and densities. In most cases there is always a decrease in the population from year to year.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Tyler, D. Miller (2009). *Living in the Environment* (or any of his latest publications)

Benchmark 10.5.3.3: Explain and illustrate the concept of carrying capacity in an ecosystem.

Topic 3: Carrying capacity in an ecosystem

Sub-topics:

- Ecosystems
- Carrying capacity in ecosystems

Skills: Understanding (explains and illustrate)

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

- Investigate ecosystems.
- Examine and analyse carrying capacity in ecosystems.

Content Background

An ecosystem is a community of living things (plants & animals) interacting with one another and with the abiotic elements in their physical environment.

Two categories/types of ecosystems

1. Aquatic – in water
 - *Freshwater and Marine ecosystems*
2. Terrestrial – on the land
 - *Forests ecosystems*
 - *Grassland ecosystems*
 - *Desert ecosystems*
 - *Tundra ecosystems*

What is the ‘carrying capacity’ of ecosystems?

Carrying capacity is the maximum number of a species an environment can support indefinitely without threatening other species in that habitat. The carrying capacity of an ecosystem is the size of the population that can be supported indefinitely upon the available resources and services of that ecosystem. If resources are being used faster than they are being replenished, then the species has exceeded its carrying capacity. If this occurs, the population will then decrease in size.

Factors affecting carrying capacity

1. Available food
2. Water
3. Shelter/Habitat
4. Prey
5. Predator

What happens when carrying capacity is reached?

The birth rate may decrease, the death rate may increase, until they are about equal thus creating an equilibrium in the population, when carrying capacity is reached again.

How have humans expanded their carrying capacity?

Human population, now almost 8 billion, cannot continue to grow indefinitely. There are limits to the life-sustaining resources earth can provide us. There is also a carrying capacity for human life on our planet. The natural cycles and systems that produce renewable resource have to be protected so the Earth can carry the current world population of 7.6 billion (2019). When the natural environment is not able to carry such a population because it cannot produce enough renewable resources on time then we say that the human population has reached the carrying capacity of the natural environment.

That is why it is very critical and crucial to respect and protect the natural cycles and systems that produce the resources we need daily. Some of these cycles include the carbon cycle, nitrogen cycle, rock cycle, soil cycle, sulphur cycle and the phosphorous cycle. Humans must always realize that living things, including humans thrive on non-living components of the environment which include, heat, sunlight, soil nutrients, water and gases. All these abiotic components together with the diversity of plants and animals are vital in carrying the Earth's human population through the years to come.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Tyler, D. Miller (2009). *Living in the Environment* (or any of his latest publications)

Benchmark 10.5.3.4: Examine how organisms become classified as threatened or endangered and evaluate the regulations, policies, strategies, and programs targeted at saving them and increasing their populations.

Topic 4: Endangered species

Sub-topics:

- Threatened or endangered species
- Saving and increasing the population of endangered species

Skills: Analysis (examine)

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

- Examine threatened or endangered species of plants and animals.
- Identify regulations and policies in PNG that govern endangered species.
- Evaluate the implementation of these policies and regulations in protecting the endangered species.
- Investigate and outline strategies and programs aimed at protecting the endangered species in PNG.
- Identify and discuss evidences of measures taken to protect endangered species in PNG.

Content Background

Endangered species are those plants and animals, which have been categorised as very likely to become extinct in the near future. Threatened species are plants and animals that are likely to become endangered in the near future.

Top ten most endangered animals

1. Amur Leopard
2. Gorillas
3. Sea turtles
4. Orang-utan
5. Sumatran Elephant
6. Saola
7. Vaquita
8. Tiger
9. Rhinos
10. Pangolin

Threats to endangered species

The leading causes of extinction are human activities which include habitat loss and degradation, the introduction of non-native species, over exploitation, over harvesting (whaling, fishing, logging), and pollution and disease. Secondary causes of extinction are global issues such as global warming, sea level rise, climate change, melting of ice, ozone depletion, water pollution, air pollution and mine waste disposal in the oceans.

Natural environments are home to a large number of animals and plants. By destroying environments, people are taking away these homes. There are many animals and plants that cannot adapt to changing conditions, so they die.

Preserving the environment and conserving wildlife

Many environmentalists' around the world today are concerned with reducing the damage that a very large human population is doing to the environment. Environmentalists are mainly concerned with preserving (protecting) living things and the environments that are still unaffected by human activities. They also try to conserve (prevent further exploitation of) natural resources in the environment.

Environmentalists use strategies such as demonstrations and peaceful marches, blocking roads and sitting in front of machinery, social media platforms such as Facebook and Twitter to bring messages of conservation and preservation to governments and authorities, and provide conservation education and awareness to the general public.

Groups which aim to protect the world's wildlife

1. International Union for the Conservation of Nature and Natural Resources (IUCN)
2. Worldwide Fund for Nature (WWF)
3. Greenpeace
4. Habitat for Humanity
5. Friends of the Earth

The Endangered Species Act (ESA) was passed into a law in 1973 by the United States Congress and it clearly defines and outlines the management and care of threatened and endangered species. Government funded, regulated and monitored activities in preventing the loss of biodiversity includes:

- Habitat management
- Habitat restoration
- Food control
- Fire control

Conservation in Papua New Guinea

In 1983, laws were passed in PNG for the creation of Wildlife Management Areas. A Wildlife Management Area is an area of land, usually under traditional ownership, which is protected under the Conservation Areas Act 1978.

Landowners can catch animals for food but must limit their hunting to what the area can ecologically support. There are more than fourteen National Parks in PNG, owned and controlled by the government. No-one is allowed to hunt in, or take living things out of, a National Park.

Suggested Resources

1. Department of Education, (1987). Changing World. Port Moresby, NDoE.
2. Retrieved from:
 - <https://googleweblight.com>
 - <https://sciencing.com>
 - <https://www.epa.gov>
 - <https://www.fws.gov>
 - <https://www.worldwildlife.org>

Unit 4: Environmental Change

Content Standard 10.5.4: Students will be able to critique and make sense of the impact of human activities on the environment.

Benchmark 10.5.4.1: Appraise common problems related to water quality; regarding conservation, usage, supply, treatment and pollutants (point and non-point pollution).

Topic 1: Problems related to water quality

Sub-topics:

- Water supply
- Water usage
- Water pollutants
- Treatment of water
- Water conservation

Skills: Evaluating (appraise/asses)

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

- Explore and discuss the supply of water on the surface of the earth.
- Identify the amount of fresh water on the surface of the earth.
- Examine the uses of water (especially fresh water).
- Identify and analyse the causes of water pollution.
- Explain the impacts of using polluted water.
- Propose and explain ways on how to treat polluted water for usage.
- Investigate and discuss water conservation methods.

Content Background

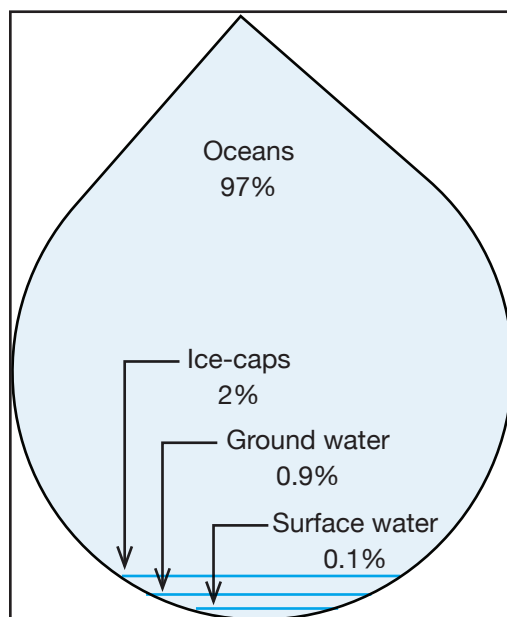
Teachers are advised to allow students to carry out a detailed research on water pollution in relation to the topics given.

Water pollution (poor quality of water) is the **contamination of water bodies**, usually as a result of human activities. These human activities include farming, town development and factories that discharge large amount of toxins into water bodies for example lakes, rivers, oceans, aquifers and groundwater. Water pollution results when contaminants are introduced into the natural environment.

Effects of water pollution

This widespread problem of water pollution is jeopardizing our health. Unsafe water kills more people each year than war and all other forms of violence combined. Meanwhile, our drinkable water sources are finite: Less than 1 percent of the earth's freshwater is actually accessible to us. Without action, the challenges will only increase by 2050, when global demand for freshwater is expected to be one-third greater than it is now. Thus, this requires immediate action by all countries to design policies and create measures that must help to conserve and sustain consumable water for its increasing population. It also affects the natural environment through the ecosystem. Water is an essential part of the ecosystem and contamination of the water bodies will directly

affect the plants and animals within the ecosystem as they absorb these toxic substances in the process of surviving. Thus, human life is at stake because they will have consumed more toxic substances through the intake of vegetables and protein from plants and animals in a toxic ecosystem.



The diagram above shows sources of water on earth. Note that less than 1 percent of water is fresh and suitable for human consumption. Thus, people should take very good care of the water that is available for consumption.

Ways to preventing water pollution

1. *With your actions*

We are all accountable to some degree for today's water pollution problem. Fortunately, there are some simple ways you can prevent water contamination or at least limit your contribution to it:

- Reduce your plastic consumption and reuse or recycle plastic when you can.
- Properly dispose of chemical cleaners, oils, and non-biodegradable items to keep them from ending up in the drains.
- Maintain your car so it doesn't leak oil, antifreeze, or coolant.

If you have a yard, consider landscaping that reduces runoff and avoid applying pesticides and herbicides that encourage the pollution of freshwater called 'eutrophication'.

2. *With your voice*

It is one of the most effective ways to protect our waters. We must speak out in support of policies for clean water. Such policies like Clean Water Act protects our drinking waters.

We can tell the government and the local elected officials to assist us give more support to such policies. The public must have a say in the policy making of this vital issue which is of paramount importance to all people. We should all have a say in how they are protected. If water bodies in rural areas or villages are being polluted via mining or farming or some other ways than those responsible must be charged accordingly as per the policies in place.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Pollution. Retrieved from: <https://en.wikipedia.org/wiki/>

Benchmark 10.5.4.2: Research how political systems influence environmental decisions.

Topic 2: Influence of political systems on the environment

Sub-topics:

- Laws on environment and conservation
- Management policies on the use and sustainability of our environment
- Political systems influence on environmental decisions

Skills: Analyzing (research/examine)

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

- Investigate and examine laws that govern the environment in PNG.
- Analyze government policies on environment and conservation.
- Justify how political systems influence environmental decisions.

Content Background

Environmental law, or sometimes known as environmental and natural resources law, is a term used to explain regulations, statutes, local, national and international legislation, and treaties designed to protect the environment from damage and to explain the legal consequences of such damage towards governments.

The Department of 'Environment and Conservation' (DEC) of Papua New Guinea was established in 1985 and vested with the powers to protect the **environmental** values of air, water, soil and biodiversity and the sustainable use of natural resources as mandated by the Fourth Goal of the National Constitution; **Papua New Guinea's** natural resources. Its mission was approved by the National Executive Council (NEC) on 22 August 1989.

The key legislations (regulations) administered by the Department (PNG) are:

1. Environmental Planning Act 1978
2. Environmental Contaminants Act 1978
3. Conservation Act 1978
4. National Parks Act
5. International Trade (Fauna and Flora) Act 1979
6. Fauna (Protection and Control) Act 1966
7. Crocodile (Protection) Act 1974
8. Water Resources Act 1982
9. Forests Act 1992

Political systems do have an immense impact on environmental decisions. Powerful individuals within these systems create policies and influence environmental decisions because they think these policies and decisions are for the common good of the people.

According to C.G.Kaua, political party's vested interest in environmental matters gives rise to the following issues;

- Leads to subjectivity, that is; decisions are biased to the interest of a few
- Decisions made not for environmental integrity but for political ends, for example, to please one's political constituency or pay political debts
- Influences environmental legislations which can be positive as in the case of the greens (Green Peace) or negative
- Leads to corruption in environmental management example; hiring of personal or distribution of resources based on affiliations or connections
- Lack of political will can lead to low support of environmental management example low budgetary allocations
- Marginalization of parties having little influence example; the minority groups
- Leads to conflicts in resources as environment is used as the playground for political contests and feuds (quarrels)
- Has implications on environmental legislations
- Has implications on enforcement and compliance of the set legislations

Thus, people themselves can make a difference by taking actions against political decisions which are not addressing correctly the issues of the environment in their best interest.

Otherwise, everyone including the government of the day of Papua New Guinea must be aware of global environmental movements such as; 'The Greenbelt Movement' and 'The Green Peace Movement' that address environmental issues by upholding principles and values of green politics. Green politics is a political ideology that aims to create an ecologically sustainable society. Therefore, politics definitely influences the environmental decisions of a country.

Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.

Benchmark 10.5.4.3: Examine the effect of large population and affluence on the carrying capacity of the environment.

Topic 3: Carrying capacity of the environment

Sub-topics:

- Effects of large population on the environment
- Effects of affluence on the environment

Skills: Analysing (examine)

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

- Examine and evaluate the effects of large population on the carrying capacity of the environment.
- Examine and evaluate the effects of affluence on the carrying capacity of the environment.

Content Background

What is carrying capacity?

The carrying capacity of a biological species (plants, animals, people) in an environment is the maximum population size of the species that the environment can sustain indefinitely, given the food, habitat, water, and other necessities available in the environment (Wikipedia).

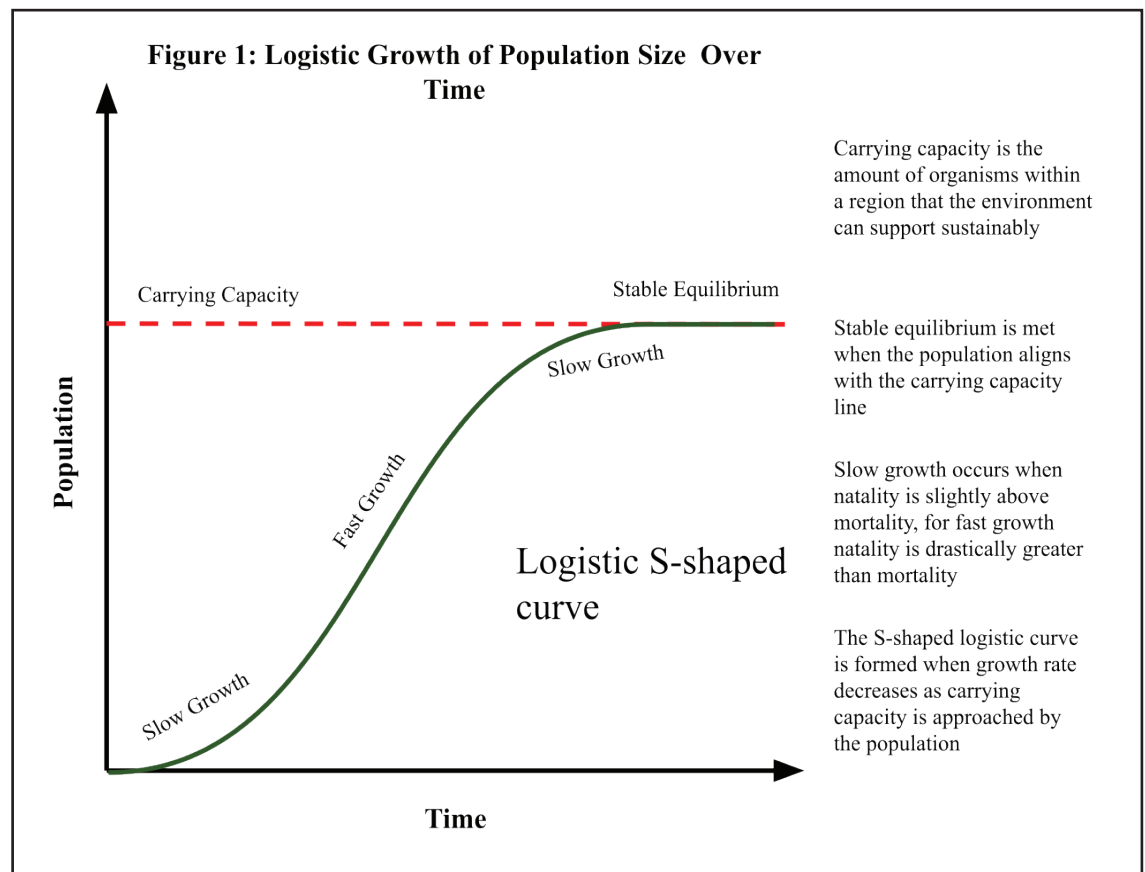
Carrying capacity was originally used to determine the number of animals that could graze on a segment of land without destroying it. Later, the idea was expanded to more complex populations, like humans. For the human population, more complex variables such as sanitation and medical care are sometimes considered as part of the necessary establishment. As population density increases, birth rate often increases and death rate typically decreases. The difference between the birth rate and the death rate is what is called the "natural increase". The carrying capacity could support a positive natural increase or could require a negative natural increase. Thus, the carrying capacity is the number of individuals an environment can support without significant negative impacts to the given organism and its environment. Below carrying capacity, populations typically increase, while above, they typically decrease. A factor that keeps population size at equilibrium is known as a **regulating factor**. Population size decreases above carrying capacity due to a range of factors depending on the species concerned, but can include insufficient space, food supply, or sunlight.

The carrying capacity of an environment may vary for different species and may change over time due to a variety of factors including: food availability, water supply, environmental conditions and living space. The origins of the term "carrying capacity" are uncertain, with researchers variously stating that it was used "in the context of international shipping" or that it was first used during 19th-century laboratory experiments with micro-organisms. A recent review finds the first use of the term in an 1845 report by the US Secretary of State to the US Senate.

In the natural world or environment, populations of species are always kept under or within the carrying capacity of the environment because when population exceeds the availability of food, water and living space, the death rate increases to reduce the population to the carrying capacity of the environment.

Large populations challenge the carrying capacity of the environment so that some of the rural areas of third world countries with large populations have exceeded the carrying capacity of the environment. For instance, in rural India firewood for fuel is a major concern that has resulted in the rising number of deaths in the winter due to lack of fuel to keep people warm.

Affluence or the luxurious style-life widespread in western or developed countries of the world is putting a huge strain on the ability of the natural environment to provide more and in quicker time the resources used to support such a life-style. Thus, the affluent (wealthy) life-style of industrialized countries such as USA, Germany and Japan, to name a few, is challenging the carrying capacity of the planet (Earth) as a whole.



Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Carrying Capacity. Retrieved from: <https://en.wikipedia.org/wiki/>

Benchmark 10.5.4.4: Investigate and explain the notion of “ecological foot print”.

Topic 4: Ecological footprint

Sub-topic:

- Notion of “ecological foot print”

Skills: Analysing (investigate, explain and examine)

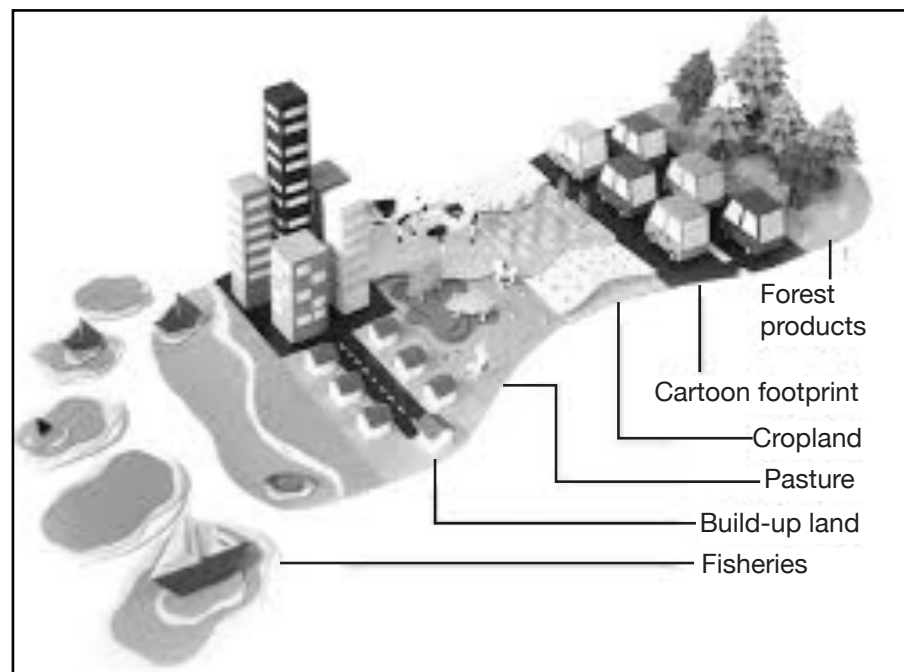
Learning Objective: By the end of the topic, students will be able to:

- Examine the concept of “ecological foot print”.

Content Background

What is ecological footprint?

The simplest way to define ecological footprint would be to call it the impact of human activities measured in terms of the area of biologically productive land and water required to produce the goods consumed and to assimilate the wastes generated. More simply, it is the amount of the environment necessary to produce the goods and services necessary to support a particular lifestyle. For example, the developed countries contain $\frac{1}{4}$ of the world population but consumes $\frac{3}{4}$ of the world’s resources while the developing countries contain $\frac{3}{4}$ of the world’s population but consume $\frac{1}{4}$ of the world’s resources. The affluent societies have a bigger ecological footprint than the developing affluent societies of the world despite their large populations.



Suggested Resources

1. Department of Education, (1987). *Population, Resources and Migration*. Port Moresby, NDoE.
2. Ecological Foot Print. Retrieved from: Internet:<https://www.panda.org/>

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: Skills in Geography

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

Benchmark 10.1.1.1: Identify and explain the different types of population pyramids.

Topic 1: Types of population pyramids

Lesson Topic: Expansive population pyramid

Grade: 10

Length of Lesson: 40 minutes

Essential knowledge, skills, values and attitude

Knowledge:

- Population pyramid
- Features of an expansive population pyramid

Skills: Analysis (identify), Synthesis (sketch manually or using the computer), Evaluate (justify and make judgments as to why the structure is described as expansive).

Values: Be responsible by controlling the number of births per family

Attitudes: Appreciate the fact that there are varying population pyramids because of the size of the population

Performance Indicator: Illustrate an expansive population pyramid with its features clearly labeled.

Materials:

Instructional (lesson) Objective(s): By the end of the lesson, students will be able to:

- Identify and explain the features of an expansive population pyramid.
- Sketch a simple structure of an expansive population pyramid.

Essential Questions:

- What is a population pyramid?
- What are the features of an expansive population pyramid?

Lesson Procedure

Teacher Activities	Student Activities
Introduction (time in minutes)	
<p>Ask questions in relation to the lesson topic.</p> <ul style="list-style-type: none"> • Do you think the government takes care of you? • How does the government know you exist in Papua New Guinea? <p>Build on the answers given by students to ask more relating questions about population pyramid.</p> <p>Tell the students the importance of learning about population pyramid.</p>	<p>Listen carefully and answer questions (possible answers)</p> <ul style="list-style-type: none"> • Yes, by providing basic services like health and education etc... • Because my name is registered in the census book of PNG
Body (time in minutes)	
<i>Modeling</i>	
Show and explain a sample of an expansive population pyramid	Listen and observe
<i>Guided Practice</i>	
Ask students to name features of an/the expansive population pyramid	Listen and answer questions
<i>Independent Practice</i>	
<p>Give students handout showing expansive population pyramid</p> <p>Ask students to use the handout to do the following;</p> <ul style="list-style-type: none"> • Identify features of an expansive population pyramid • Name countries with such a population pyramid <p>Ask students to draw a sketch of the expansive population pyramid and explain its features</p>	<p>Use the handout to identify the expansive population pyramid</p> <p>Make a list by writing down the;</p> <ul style="list-style-type: none"> • Features of the expansive population pyramid • Name countries with such a population pyramid <p>Draw a sketch of the expansive population pyramid and describe its features</p>
Conclusion (time in minutes)	
Ask students to name the features of an expansive population pyramid	Listen carefully and answer

Sample 2

Strand 5: Environment

Unit 3: Resources and Environments

Content Standard 5.1: Students will be able to examine and make sense of different resources and different environments.

Benchmark 10.5.1.1: Examine how different resources are produced, rates of use, renewal rates, and limitations of resources.

Topic 1: Resource use and management

Lesson Topic: Production of natural resources

Grade: 10

Length of Lesson: 40 minutes

Essential knowledge, skills, values and attitude

Knowledge:

- The two main types of natural resources-renewable and non-renewable
- How these types of natural resources are produced
- Some resources can be completely used up and not replaced by nature.

Skill(s): Understanding (identify), Evaluate (justify and make judgments on the types of natural resources used).

Values: Use resources wisely for the common good of mankind because some resources cannot be renewed.

Attitudes: Being responsible by caring for the natural resources such as advocating on reforestation in areas that have been logged or mined or on plains and barren land.

Performance indicator: Illustrate an expansive population pyramid with its features clearly labeled.

Materials:

Instructional (lesson) Objective(s): By the end of the lesson, students will be able to:

- Identify the types of natural resources.
- Explain these types of natural resources.

Essential Questions:

- What are the two main types of resources?
- How are these types of resources produced?

Lesson Procedure

Teacher Activities	Student Activities									
Introduction (time in minutes)										
<p>Bring into class two samples of the two types of natural resources.</p> <p>Example:</p> <ul style="list-style-type: none">• Renewable - water• Nonrenewable - fuel (petrol, diesel, bottled gas) <p>Ask questions</p> <ul style="list-style-type: none">• Name the two items I have in my hands/on the table?• How have you benefited from these items? <p>Build on the answers given by students to ask more relating questions about the types of natural resources</p> <p>Tell the students the importance of studying this topic</p>	<p>Observe, listen and answer (possible answers)</p> <ul style="list-style-type: none">• Water and fuel (petrol, diesel, bottled gas)• Water: Keeps us alive, for cooking, drinking washing etc...• Fuel: Used by vehicles, airplanes and ships to transport us from one place to another, power up homes, officers etc...									
Body (time in minutes)										
Modelling										
Show and explain samples of the two types of natural resources	Listen and observe									
Guided Practice										
Ask students to name resources that come under the two types of natural resources	Listen and answer questions									
Independent Practice										
<p>Give students handout on the two types of natural resources</p> <p>Ask students to use the handout to do the following;</p> <ul style="list-style-type: none">• List examples of the two types of natural resources• Explain how they are produced (created)	<p>Use the handout to identify the two types of natural resources and how they are produced (formed)</p> <p>Draw up a table like the one shown below to answer the questions.</p> <table><tr><th>Resource type</th><th>Examples</th><th>How produced (formed)</th></tr><tr><td>Renewable resources</td><td></td><td></td></tr><tr><td>Non-renewable resources</td><td></td><td></td></tr></table>	Resource type	Examples	How produced (formed)	Renewable resources			Non-renewable resources		
Resource type	Examples	How produced (formed)								
Renewable resources										
Non-renewable resources										
Conclusion (time in minutes)										
Ask students to name one of the types of resources and explain how it is produced (formed)	Listen carefully and answer									

Sample 3

Strand 2: History

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 10.2.1.1: Identify and interpret major social, political, economic, religious and cultural events that have shaped the history of the Pacific Region.

Topic 1: Major events that have shaped the history of the Pacific Region

Lesson Topic: Major political events that have shaped the history of the Pacific Region

Grade: 10

Length of Lesson: 40 minutes

Essential knowledge, skills, values and attitude

Knowledge:

The major political events that have shaped the history of the Pacific Region

Skill(s): Analysis (identify), Evaluate (justify and make judgments as to why there was political upheaval (disturbances)

Values: Promote and advocate for peace and harmony, independence, patriotism and freedom and liberty for all.

Attitudes: Appreciate the knowledge of the major political events that happened in the past that has shaped us to be what we are today.

Performance indicator:

Describe the major political events that have shaped the history of the Pacific Region

Materials:

Instructional (lesson) Objective(s): By the end of the lesson, students will be able to:

- Identify major political events that have shaped the history of the Pacific Region
- Explain major political events that have shaped the history of the Pacific Region

Essential Questions:

- What were the major political events that have shaped the history of the Pacific Region?

Lesson Procedure

Teacher Activities	Student Activities								
Introduction (time in minutes)									
<p>Show photographs of two prominent political figures in the Pacific Region; Prime Ministers</p> <ul style="list-style-type: none">• Sir Michael Somare (PNG)• Solomon Mamaloni (Solomon Island) (relate to other Pacific Island countries) <p>Ask questions;</p> <ul style="list-style-type: none">• Can you recognize these two men?• Where are they from?• What is special about them? <p>Build on the answers given by students to ask more relating questions about the political history.</p> <p>Tell the students the importance of studying this topic.</p>	<p>Observe, listen and answer (possible answers)</p> <ul style="list-style-type: none">• Yes;• Sir Michael Somare (PNG - First Prime Minister of PNG from 1975-1980,1982-1985 and 2002- 2011. He was ousted through vote of no confidence in 2011 by Former Prime Minister Mr. Peter O'Neill)• Late Solomon Mamaloni (Solomon Islands - Former Prime Minister from 1981-1997 and was in parliament for three terms)								
Body (time in minutes)									
Modeling									
Show pictures/photographs of prominent political leaders	Listen and observe								
Guided Practice									
Ask students to name these political figures and explain why they are seen as prominent figures in their country	Listen and answer question								
Independent Practice									
<p>Give students handout on the political history of the Pacific Region</p> <p>Ask students to use the handout to do the following;</p> <ul style="list-style-type: none">• List prominent leaders (Prime Ministers) of the Pacific Region.• Explain how they have greatly contributed to their country and how their reign as Prime Minister of their country has one way or the other greatly influenced and shaped the history of the Pacific to what it is today in terms of politics.	<p>Use the handouts to answer the set questions on the topic for this lesson.</p> <p>Draw up a table like the one shown below to answer the questions.</p> <table><tr><td>Name of Political Leader</td><td>Country</td><td>Contributions to their country</td><td>How have their influences shaped the history of the Pacific Region</td></tr><tr><td>Sir Micheal Somare</td><td>PNG</td><td>Gained independence for his country</td><td>Small countries are capable of governing their own nations</td></tr></table>	Name of Political Leader	Country	Contributions to their country	How have their influences shaped the history of the Pacific Region	Sir Micheal Somare	PNG	Gained independence for his country	Small countries are capable of governing their own nations
Name of Political Leader	Country	Contributions to their country	How have their influences shaped the history of the Pacific Region						
Sir Micheal Somare	PNG	Gained independence for his country	Small countries are capable of governing their own nations						
Conclusion (time in minutes)									
Name one Prime Minister of a country in the Pacific and explain how his governance has shaped the history of the Pacific	Listen carefully and answer								

Sample 4

Strand 3: Political Science

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 10.3.1.1: Examine the legal bases (for example the National Constitution) for the democratic government in Papua New Guinea and other countries, including their functions and decision and law making functions

Topic 1: Legal basis for democratic government

Lesson Topic: The National Constitution of Papua New Guinea

Length of Lesson: 40 minutes

Essential knowledge, skills, values and attitude

Knowledge:

The importance of the Constitution as the basis for the democratic government in Papua New Guinea

Skill(s): Analysis (explain), Evaluate (justify and make judgments on the importance of having the constitution as the basis for democracy)

Values: Instill in their minds and hearts the notion of democracy, peace and harmony, common good, freedom and liberty for all mankind.

Attitudes: Appreciate the importance of the National Constitution as the basis for democracy.

Performance indicator: Justify the importance of the National Constitution as the basis for the democratic government of Papua New Guinea.

Materials:

Instructional Objective(s): By the end of the lesson, students will be able to:

- Explain the importance of the Constitution as the basis for democratic government in Papua New Guinea

Essential Questions:

- What is the importance of the Constitution as the basis for the democratic government in Papua New Guinea

Lesson Procedure

Teacher Activities	Student Activities
Introduction (time in minutes)	
<p>Act out 2 minutes drama on breaking common laws and its consequences</p> <p>Example:</p> <ul style="list-style-type: none"> • White collar crime (Bureaucrats stealing money) • Robbery • Arson • What is this drama depicting? • How have you been affected by this issues acted out? • Who punishes people who break laws? <p>Build on the answers given by students to ask more relating questions about the National Constitution</p> <p>Tell the students the importance of studying this topic</p>	<p>Observe, listen and answer (possible answers)</p> <ul style="list-style-type: none"> • White collar crime (Bureaucrat stealing money): Missing out on services because monies allocated for those services have been squandered on something else • Murder: Losing loved ones, bread winner is now dead, people are scared to move around because there is a murderer on the run. • Arson: Properties for shelter and investment could be now lost, people fear for their lives be burnt alive as the arsonist is still on the run • The court systems through policing.
Body (time in minutes)	
<i>Modeling</i>	
Show pictures, cartoons, or newspaper articles with reference to the topic for the lesson	Listen and observe
<i>Guided Practice</i>	
Ask students how the government helps to solve the problems they have acted out in the introductory part of this lesson	Listen and answer questions
<i>Independent Practice</i>	
<p>Give students handout on the National Constitution</p> <p>Ask students to use the handout to do the following;</p> <ul style="list-style-type: none"> • What is the National Constitution? • Explain the importance of the National Constitution • Use newspapers and cut out articles on issues dealing with the National constitution 	<p>Use handouts to answer the set questions on the topic for this lesson.</p> <p>List down importance of the National Constitution</p> <p>Explain importance of the National Constitution</p> <p>Cut out newspaper articles on issues dealing with the National Constitution</p>
Conclusion (time in minutes)	
Name one importance of the National Constitution	Listen carefully and answer

Sample 5

Strand 4: Economics

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 10.4.1.1: Identify and analyse the role of labour unions in the processes of production and the distribution of resources.

Topic 1: Role of the Labour Unions (Trade Unions)

Lesson Topic: Importance of Labour Unions (Trade Unions)

Length of Lesson: 40 minutes

Essential knowledge, skills, values and attitude

Knowledge: The importance of labour Unions (trade union)

Skill(s): Analysis (explain), Evaluate (justify and make judgments on the importance of having labour unions (trade unions))

Values: Compensate humans efforts accordingly for work done

Attitudes: Appreciate the importance of the labour union (trade union)

Performance indicator: Identify and discuss the importance of labour unions.

Materials:

Instructional Objective(s): By the end of the lesson, students will be able to:

- Identify and discuss the importance of labour unions (trade unions).

Essential Questions:

- What is a labour union (trade union)?
- What is the importance of a labour union (trade union)?

Lesson Procedure

Teacher Activities	Student Activities
Introduction (time in minutes)	
<p>Ask students to act out a drama for 2 minutes on the topic</p> <p>Example:</p> <ul style="list-style-type: none"> • Sit in strike by workers for wage raise • Rally for company to meet demands of workers for lack of incentives for the demanding work pressure by the company • What is this drama depicting? • Have you come across such situations? • Build on the answers given by students to ask more relating questions on Labour Union • Tell the students the importance of studying this topic 	<p>Observe, listen and answer (possible answers)</p> <ul style="list-style-type: none"> • Sit in strike by workers for wage raise • Rally for company to meet demands of workers for lack of incentives for the demanding work pressure by the company • Yes/No
Body (time in minutes)	
<i>Modeling</i>	
Show pictures, cartoons, or newspaper articles with reference to the topic for the lesson	Listen and observe
<i>Guided Practice</i>	
Ask students how the companies of those workers going on strike reacted.	Listen and answer questions
<i>Independent Practice</i>	
<p>Give students handout on the labour union (trade union)</p> <p>Ask students to use the handout to do the following;</p> <ul style="list-style-type: none"> • What is labour union (trade union)? • Explain the importance of the labour union (trade union)? • Use newspapers and cut out articles on issues dealing with labour union (trade union)? 	<p>Use handouts to answer the set questions on the topic for this lesson.</p> <ul style="list-style-type: none"> • Write down role or function of labour union (trade union) • Explain importance of the labour union (trade union) • Cut out newspaper articles on issues dealing with the labour union (trade union)
Conclusion (time in minutes)	
Name one importance of the labour union (trade union)	Listen carefully and answer

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.

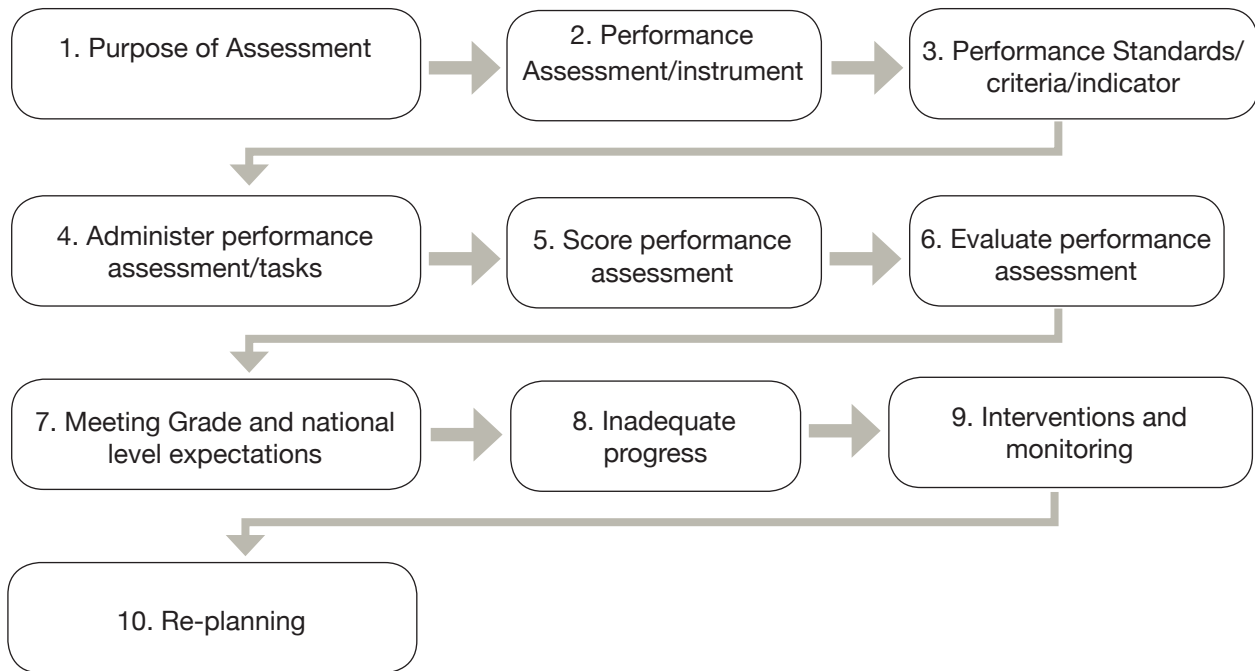
Assessment Strategies

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.

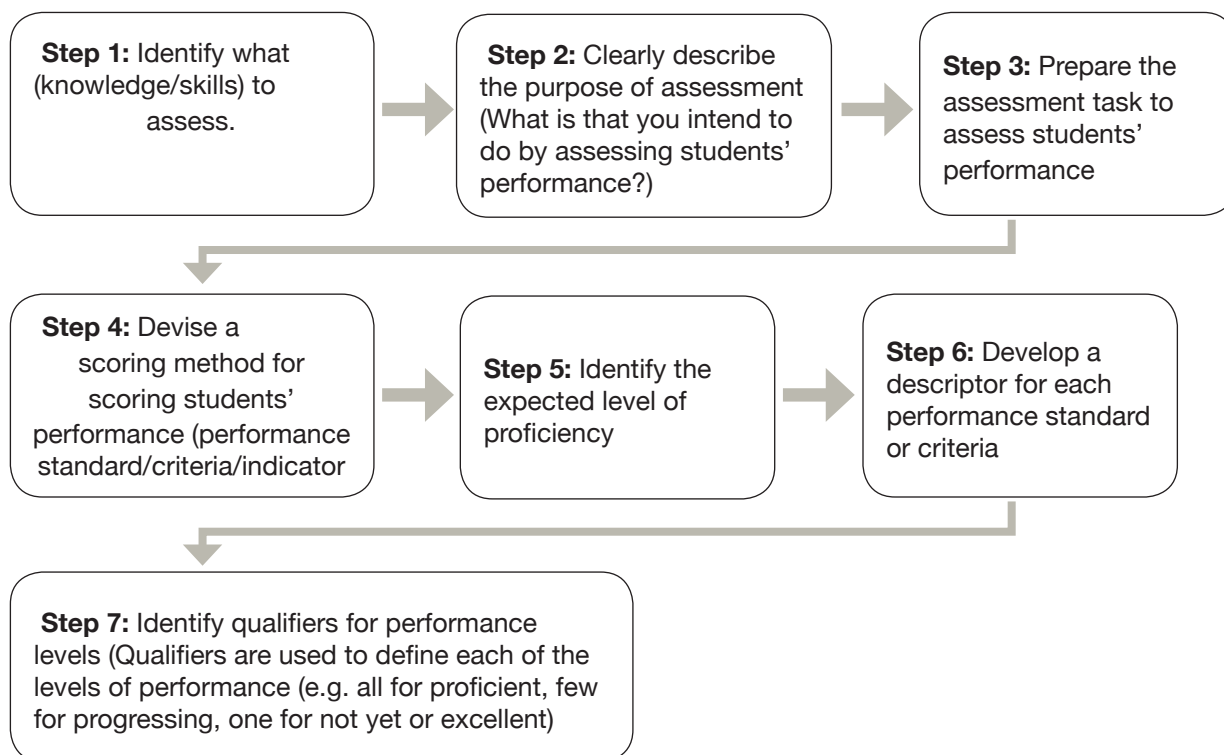
Rubrics use a set of specific criteria to evaluate student performance. They may be used to assess individuals or groups and, as with rating scales, may be compared over time.

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

Strand 1: Geography

Unit 1: Skills in Geography

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

Benchmark 10.1.1.1: Identify and explain the different types of population pyramids.

Topic 1: Types of population pyramids

Lesson Topic: Expansive population pyramid

What is to be assessed? - (KSAVs)

Expansive population pyramid and label its features.

Performance Task

Draw a sketch of the expansive population pyramid and label its features.

Purpose of the assessment

To measure students' proficiency on the achievement of the benchmark and learning objectives

Expected level of proficiency

Identify main features of expansive population pyramid.

Assessment Strategy

This assessment can be conducted in one lesson as an assessed lesson exercise.

Assessment Scoring

Performance Standard/ criteria	A	B	C	D	Score
	Advance 10	Proficient 9-5	Progressing 3-4	Not Yet 2	_/10 Marks
Draw a sketch of the expansive population pyramid and describe its features 10 marks	Correct sketch drawing of the expansive population pyramid and describes and explain all its features	Good sketch drawing of the expansive population pyramid and describes some of its features	Satisfactory sketch drawing of the expansive population pyramid and describes 2 of its features	Poor sketch drawing of the an expansive population pyramid and describes only 1 featureC	

Summative Assessment

Strand 2: History

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 10.2.1.1-10.2.1.5: *(refer to the benchmarks in unit1)*

Topic 1-5: *(refer to the benchmarks in unit1)*

What is to be assessed? - (KSAVs)

Historical events that occurred in the Pacific Region

Performance Task

Students will do an assignment out of 30marks. You can use other assessment tools (assignment, projects, etc.) to assess student's proficiency on these benchmarks.

Task: Students will be given two week to complete this assignment. They are to;

1. Choose one of the following countries; PNG, Fiji, Solomon Islands, Tahiti and New Caledonia
2. Research on a major event that occurred in one of these countries, which shaped the history of the Pacific Region. Use criteria (performance standard) given in the assessment scoring.

Purpose of the assessment

To measure students' proficiency on the achievement of the benchmarks and learning objectives in this unit. (This assessment is to be conducted after teaching the unit)

Expected level of proficiency

All students are expected to;

- Identify and interpret major social, political, economic, religious and cultural events that have shaped the history of the Pacific Region
- Define and investigate a social, political, economic, religious and cultural events that occurred in the Pacific Region.
- Use available information to document and compare the social, political, economic, religious and cultural history of the people of the Pacific region
- Examine how knowledge of history is constructed, stored, managed and disseminated in different countries of the Pacific Region
- Analyse the colonial history of the countries of the Pacific Region in terms of the reasons for colonisation, and social, economic, political and cultural impact.

Assessment Strategy

An assignment will be used to measure students' proficiency.

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 an assignment.

Performance Standard/ criteria	A	B	C	D	Score
	Advance 30	Proficient 29-25	Progressing 15-24	Not Yet 2-10	___/30 Marks
State and explain the major event, the date it occurred and the Pacific Island country that it happened in. (2 marks)	Exceptional title, detailed, clear and succinct explanation of the event	Good title and clear explanation of the event	Fair title and satisfactory explanation of the event	Title has no connection to the assigned tasks and the explanation of the event is poor	
Draw a map of the Pacific Island country it happened in and plot the location the major event occurred at. (10 marks)	Correct map drawn and precise location of the place where the event occurred	Good map and place of event marked almost near to the exact location	Satisfactory drawing but the location is far from the exact location	Poor drawing of the map and no attempt to mark the location	
Name the key person or persons who were involved in this major event Attach their profile (pictures, photographs, memoirs). (10 marks)	Detailed profile of the person or persons involved in these events	Shows good knowledge of person or persons involved in these events	Shows fair knowledge of the person or persons involved in these major events	Shows poor knowledge of the person or persons involved in these major events	
Name other foreign countries that took part in this event and what was their reason for taking part. (3 marks)	Correct names of foreign countries who took part and the correct reasons for them taking part in this major event(s)	Shows good knowledge of why foreign countries got involved in this major event(s)	Shows fair knowledge of why foreign got involved in this major event(s)	Shows no idea of foreign countries involvement in this event(s)	
How has this event shaped the history of the Pacific. (5 marks)	Correct explanation of the impact of this event on the Pacific	Good explanation of the impact of this event on the Pacific	Fair explanation of the impact of this event on the Pacific	Unsatisfactory explanation of the impact of these event on the Pacific	

Authentic Assessment

Strand 3: Geography

Unit 4: Geography Skills

Content Standard 3.4: Students will be able to evaluate and elaborate on the roles and responsibilities, and the rights of citizens in different government systems.

Benchmark 10.3.4.1-10.3.4.5: *(refer to the benchmarks in unit 4)*

Topic 1-5: *(refer to the benchmarks in unit 4)*

What is to be assessed? - (KSAVs)

Human Rights in Papua New Guinea

Performance Task

Students will do a project worth 20 marks. You can use other assessment tools (assignment, simulation, interview etc) to assess students' proficiency on these benchmarks.

Task: Students will be given two weeks to complete this project then carry out awareness.

1. They will collect information on Human Rights for example; Children's Rights, Women Rights etc.
2. They will make presentation on these rights during assembly, recess and lunch time. (Students will be grouped into 5-6 students per group)
3. The best presentation will be given a chance to make a presentation in public in their local community.

The aim of this project is to develop in students the art of oration or public speaking and at the same time gear them towards careers in this field and promoting good citizenship for all.

Purpose of this assessment

To measure students proficiency on the achievement of the benchmarks and learning objectives in this unit. This assessment is to be conducted after teaching this unit.

Expected level of proficiency

All students are expected to;

- examine policies and laws on human rights in Papua New Guinea and create context to appropriately implement or apply each law.
- identify and evaluate the types of human rights spelt out in the Papua New Guinea constitution.
- probe the difference between inalienable rights and other rights and how each is promoted and protected using the legal system.
- investigate and report on how the rights of women and girls, people with disability, and other marginalised and vulnerable groups are enforced in Papua New Guinea.
- examine the rights of children and evaluate the policy and legal frame works as well as the processes for enforcing and protecting these rights.

Assessment Strategy

A project will be used to measure students' proficiency.

Assessment Scoring

Rubrics will be developed to find out the real proficiency of the child. This is an analytical rubrics used to assess the child's learning through the assessment tool of a project.

Performance standard/ criteria	A	B	C	D	Score
	Advance 25	Proficient 20-24	Progressing 10-19	Not Yet 2-9	/_ Marks
Define Human Rights, identify and explain one Human Rights and explain this right (5 marks)	Exceptional title, keywords clearly defined and very clear, logical explanation of the issues on Human Rights	Very good title, key words defined and good explanation covering issues on Human Rights being researched on.	Good title, satisfactory explanation of the key words and fair explanation covering issues on Human Rights being researched on	Poor title, key words not defined well as well as poor explanation covering issues on Human Rights being researched on	
Findings must be substantiated with facts and figures (Newspapers, photographs and articles must be quoted or cited) (10 marks)	Correct information supporting the findings	Some correct information used to substantiate research	Few information used to substantiate findings	No information used to substitute findings	
Presentation of finding as an awareness in the school (10 marks)	Work presented is clear on the chart, oral presentation is loud and clear and confidence is clearly portrayed	Good presentation of the awareness, that is poster was logical but oral presentation and confidence were moderate	Fair presentation of the awareness, that is poster had few inconsistency on the findings and oral presentation and confidence was fair	Poor presentation of the awareness, poster work was poor and oral presentation was and inaudible and in general lack of confidence during presentation	

STEAM Assessment

Strand 5: Environment

Unit 4: Environmental Change

Content Standard 5.4: Students will be able to critique and make sense of the impact of human activities on the environment.

Benchmark 10.5.2.4: Investigate and explain the notion of “ecological foot print”

Topic: Ecological Footprint

Lesson Topic: Notion of ‘ecological footprint’

What is to be assessed? (KSAVs)

The concept of ‘ecological foot print’

Purpose of this assessment

To measure students’ proficiency on the achievement of the benchmarks and learning objectives in this topic. This assessment is to be conducted after teaching this topic.

Expected level of proficiency

All students are expected to;

- investigate and explain the notion of “ecological foot print”

Assessment Strategy

An assignment will be used to measure students proficiency.

Performance Task

Student will carry out a project worth 30 marks that should contribute to the School Learning Improvement Program (SLIP). This project will assess students proficiency on the mentioned benchmarks. In order for this assessment type to attain its intended purpose the following must be done carefully;

Task: Students will be given a month to complete this project.

1. all grade 10 Social Science teachers discuss the STEAM project with their HOD
2. the Social Science HOD brings this project to the attention of the Head Teacher integrate the learning of all grade 10 classes in the school.
3. once approved by the Head Teacher, the Social Science HOD now convenes a meeting with all other subject HOD to integrate this project into their learning. HOD for Social Science will have developed a criteria already and will discuss around that.
4. the HOD for other subjects meet with their respective subject teachers to gauge their views and write up their criterias with reference to the theme of the project, “Ecological Footprints” bringing out the essence of their subjects in this project.

5. the Head Teacher then convenes a meeting with all teachers as they are now aware of the project. HOD for respective subjects give feedback from their meetings. Issues concerning this project must be ironed out and all subjects now carry out this assessment, starting with Social Science.

The grade 10 Social Science teacher will now do the following;

- i. Group the students into groups of 6 to design (drawing and manual) a tangible technology that will enhance the notion of “ Ecological Footprints”
- ii. The teacher then assess their designs and the best designs now competes with the other best designs from other grade 10 classes.
- iii. All the best designers now create models of their designs (e.g., greenhouse) with assistance from their class members. At this stage the other subjects now carry forward this assessed projects theme, ‘ Ecological Footprint’ however in the context of their subjects. STEAM is an integrated approach of teaching. All subjects must incorporate the theme put forward by Social Science. They develop criteria that should address this theme. For instance; Business Studies teacher can already think of income earning opportunities for the school by developing a criteria for students to develop business plan from this project. Technology and Industrial Arts (TIA) will develop criteria that will engage the students to construct the models. Science teachers will develop criteria to test students’ knowledge of the Science process of Engineering or Design thinking when they create the models around the theme of ‘Ecological Footprint’. The English subject teachers will set criteria and guidelines for students on how to write manuals so they write about this technology. They must also be given guidelines on writing a report. Students will get to write a report of how they designed this technology. The Mathematics teacher will provide criteria for the students in terms of the measurements, angles and operations used to work out the size and shape of the technology (e.g., Greenhouse).

Assessment Scoring

Rubrics must be developed to find out the real proficiency of the child. This is an analytical rubrics used to assess the child's learning through this steam project.

Performance standard/ criteria	A	B	C	D	Score
	Advance 30	Proficient 29-25	Progressing 15-24	Not Yet 2-14	__/_ Marks
Design (drawing) a simple technology which should portray the theme (10 marks)	Exceptional title, drawing is clear, detailed and precise	Very good title, drawing is clear though some details missing	Good title, drawing is clear but a lot of details missing	Poor title, drawing does not capture the essence of the theme	
Write a simple manual on the steps on how to create this technology (5 marks)	All steps to create the model clearly explained and in logical order	Steps are in order but not explained clearly	Some steps to creating this technology are missing and explanation of these steps are not clear	Steps not in order and explanation is poor	
Construct a simple model (prototype) of the technology (15 marks)	Construction of the model captures all aspects of the theme	Some aspects of the theme are captured in the model	Few aspects of the theme are captured in the mode	No aspects of the theme evident in the model	

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.

Terms	Definitions
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> <ul style="list-style-type: none"> i. Think creatively ii. Work creatively with others iii. Implement innovations <p>Critical thinking, problem solving and decision making</p> <ul 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

Strategy	Teacher	Students
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 & 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 <i>(dramatization, song/lyrics, wall magazines)</i> 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 <i>(individual/group)</i> 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 & 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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