

Social Science

Junior High

Grades 9 and 10

Syllabus

Standards-Based



Papua New Guinea

Department of Education

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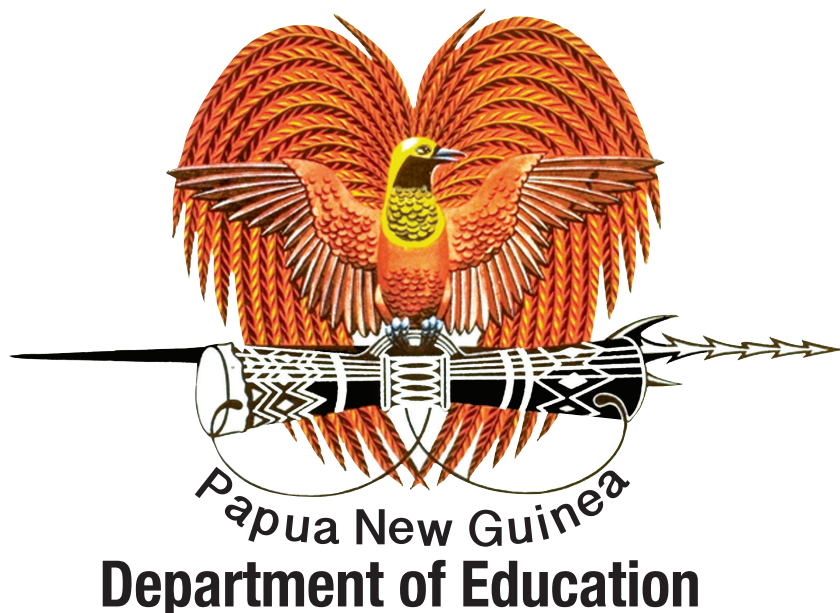
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Issued free to schools by the Department of Education

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Curriculum Panel (CP), Syllabus Advisory Committee (SAC), and Board of Studies (BOS) Committee members are also acknowledged for their consideration and endorsement of the syllabus.

Acronyms

AAL	Assessment AS Learning
AFL	Assessment FOR Learning
AOL	Assessment OF Learning
BOS	Board of Studies
CDD	Curriculum Development Division
CPM	Curriculum Panel Members
CS	Content Standards
DA	Diagnostic Assessment
EO	Evidence Outcomes
ESD	Education for Sustainable Development
GoPNG	Government of Papua New Guinea
IHD	Integral Human Development
MSD	Measurement Services Division
NCSB	National Curriculum Standards and Benchmarks
NCSF	National Curriculum Standards Framework
NDoE	National Department of Education
OBC	Outcomes Based Curriculum
OBE	Outcomes Based Education
SAC	Subject Advisory Committee
SBC	Standards Based Curriculum
SBE	Standards Based Education
SCG	Subject Curriculum Group
STEAM	Science, Technology, Engineering, Arts and Mathematics
UNCRC	United Nations Convention on the Rights of the Child

Secretary's Message

Papua New Guinea's cultural and linguistic diversity calls for a curriculum that would forge a path in building a culturally homogenous and politically and economically stable nation. The Social Science curriculum would be significant in this regard because social, economic, political, historical, and environmental phenomena affect people's lives in profound ways.

Through Social Science, students learn to recognize their own values and the values of others. They explore how values affect the ways in which people respond to issues and make use of opportunities. The study of Social Science helps students to be analytical, critical, and proactive democratic citizens in constructing, deconstructing, and reconstructing civil society organisations and political institutions to create political stability and social cohesion and extend their understanding of how societies function and how people participate in them. Students are challenged to think critically about social issues, to analyse complex situations, and find ways of explaining them, and to think critically about their own and others thinking (metacognition), beliefs, attitudes, behaviours, and characters, and analyse the factors that influence these traits. They will develop an insight and deep understanding of the social, economic, political, cultural, religious, and environmental phenomena affecting human's existence and the development and functions of societies.

Moreover, Social Science curriculum will provide an important platform for students to acquire and master significant Science, Technology, Engineering, Arts, and Mathematics (STEAM) knowledge, skills, values, and attitudes. By engaging in STEAM related activities inside and outside of the classroom and using STEAM problem-solving approach to solve real life problems, will hopefully motivate and prepare students to pursue undergraduate and postgraduate STEAM related courses in institutions of higher education and pursue STEAM related careers.

Teachers are encouraged to read and understand the Social Science core ideas, processes, skills, values, attitudes, and pedagogies outlined in this syllabus and the teacher guide. Creative teaching and learning activities should be used to teach the Social Science content.

I approve and commend this Grades 9 and 10 Social Science Syllabus to be used by teachers in all Junior High Schools throughout Papua New Guinea.



.....
UKE W. KOMBRA, PhD.
Secretary for Education

Introduction

Individuals possess unique traits that shape and are shaped by the various social groups that they belong to. These social groups and institutions can range from a family to a religious, social, economic, political, or cultural unit. These groups are made up of individuals who make up the status quo that decides on who will govern them, the type of goods and services they produce and/or consume, the type of social, political, economic, and religious ideologies they will embrace, adhere to, and practice, who their political allies will be, and, thereby, creating regions, alliances, and relationships across the globe.

The study of Social Science calls first of all for all students to examine their own personality and behaviour as well as the core values and norms of the social groups they belong to. Simultaneously, students should examine individuals and groups who have shaped the history of mankind in their communities, countries, regions, and globally. In this way, the students will be challenged to cultivate good citizenship traits while studying, develop good work values, ethics, and morals, and cultivate and possess good citizenship values and attitudes to enable them to live, work, and study anywhere in the world.

Social Science challenges students to be proactive in the democratic process by understanding their rights and responsibilities as well as respecting those who do not share their views. It will provide the pedagogical framework for empowering students and enabling them to critically construct, deconstruct, and reconstruct ideologies, policies, and institutions of society to understand in-depth their underlying principles and the values, perspectives, and practices they advocate and privilege. They will examine and become conscious of the impact of economies on individuals, societies, and countries, and importance economic literacy to living and working in the 21st century economy and society.

On the environment front, Social Science enables students to examine their symbiotic relationship with the natural environment. It provides a platform to permit them to recognize the opportunities and limitations posed by the different natural environments that contain diverse resources for human use. At the same time, it will ensure that they understand the biological and physical systems and cycles that drive the environment into forming resources needed by humans. By studying environment, students will develop an understanding that human actions can impact natural systems which will in turn affect human (social) systems. Students will be equipped and prepared with essential environment proficiencies to live in harmony with fellow humans and the natural environment by recognising and addressing human actions that threaten the survival of people and sustainability of environments.

Social Science is to be timetabled for 200 minutes for five periods per week for Grades 9 & 10 (40 minutes x 5 periods).

Aims and Goals

The ultimate aim of education in PNG is to prepare children for careers, higher education, and citizenship. To achieve this aim, a number of enabling aims and goals have been formulated based on evidence. The ultimate aim and the enabling aims and goals are closely linked. The enabling or operational aims and goals are described here.

Aims and Goals of Standards-Based Education and Curriculum

Curriculum aims and goals articulate the outcomes that will be achieved in the long-term and the medium-to-long term. They embed the development and educational aspirations of PNG and its citizens. These have been influenced by evidence from the analysis of context and research on teaching and learning, and on social, economic, political, technological, and cultural developments. There is a close link between the aims and goals of the curriculum. This is important for ensuring that the chain of learning results is clear.

Aim 1: Students will acquire essential and relevant knowledge, skills, values, and attitudes that will prepare them for careers, higher education, and citizenship.

Goals

Students will be able to:

- (a) acquire essential in-demand knowledge and employability skills, and values, and attitudes required for working, studying, and living in the 21st century.
- (b) achieve internationally comparable and high academic standards, and attain essential proficiencies that will enable them to make a smooth transition from secondary to post-secondary institutions, pursue a variety of career pathways, and live purposeful, productive, responsible, and harmonious lives.
- (c) acquire and use intellectual, emotional, cultural, physical, creative, vocational, recreational, and spiritual knowledge, skills, values, and attitudes as bases for living fulfilling, purposeful, and productive lives in communities in which they choose to live.

Aim 2: Students will achieve internationally comparable and high academic standards in English, Mathematics, Science, Technology, Engineering, Social Science, Character and Social Development, Citizenship and Christian Values Education, Business and Commerce, Agriculture, Arts, Physical Education, and Industrial Arts and Technology.

Goals

Students will be able to:

- (a) read and comprehend a variety of texts, communicate orally and in writing, use different approaches and modes of communication, identify different purposes of communication, and understand and appreciate PNG's languages and the languages of people from different cultures.
- (b) understand and apply mathematical reasoning, statistical thinking, processes, formulas, and concepts to solve different mathematical problems.
- (c) examine and apply scientific inquiry, reasoning, thinking, processes, and concepts to solve problems and improve real life situations. And understand the importance of logical and abstract thinking in the solving of problems, the importance of mathematics in science reasoning, and recognize the role of science in every aspect of life.
- (d) attain Science, Technology, Engineering, Arts, and Mathematics (STEAM) education literacy and become proficient in the use of STEAM principles and skills to solve problems posed by both the natural and physical environments by developing creative and innovative solutions.
- (e) acquire fundamental knowledge and skills in computer, communications, and construction technology and attain essential proficiencies that will prepare them for careers and higher education programs in computer, communications, and construction technology related fields.
- (f) investigate and develop an in-depth understanding of how people interact and relate to each other and their places, examine the different social, economic, political, environmental, natural, and physical systems, processes, structures, and organisations, and appreciate the cultural and language differences that exist amongst people.
- (g) analyse and critically reflect on the essential social and relationship values and skills, health and peace values and attitudes, and problem-solving and conflict management skills needed for social and character development, social cohesion, development of healthy and peaceful families and communities, and caring for the natural and physical environments.
- (h) understand the significance and purposes of Biblical values and principles in the shaping of personal character and personal conduct, developing and adhering to moral and ethical standards in one's conduct and relationships, and preparation for eternal life.
- (i) examine their civic and citizenship responsibilities, the importance of these responsibilities to harmonious living and maintaining social cohesion, and community and national development and well-being.

- (j) develop an in-depth understanding of business and commerce principles, processes, concepts, and practices, including e-business and e-commerce, and use the knowledge, skills, values, and attitudes learnt and mastered to start and manage their own businesses.
- (k) acquire knowledge, skills, values and attitudes required for learning and practice of arts, and the application of knowledge and skills to express themselves, promote PNG's cultures, and make a living.

Aim 3: Students will attain both regional and internally comparable standards in literacy and numeracy.

Goals

Students will be able to:

- (a) develop fluency in reading and comprehension to enable them to decode, critique, critically analyse, and synthesize a variety of texts.
- (b) acquire essential writing and publication proficiencies to enable them to write and publish a variety of texts.
- (c) learn and demonstrate proficiency on the essential mathematics knowledge, skills, values, and attitudes and use these to solve problems in real life situations.
- (d) attain the expected levels of literacy in Science, Social Science, Character and Social Development, Citizenship and Christian Values Education, Industrial Arts and Technology, Business and Commerce, Agriculture, Arts, Physical Education.

Aim 4: Students will continue to develop their full potential and empowered to be dynamically involved in the process of freeing themselves from oppressive situations, contribute to promoting the common good and welfare of society, and develop a sense of responsibility for oneself and others.

Goals

Students will be able to:

- (a) recognize and critically analyse the situations that oppress and marginalize them and others, and take appropriate individual and collective actions to transform these situations in order to improve their wellbeing and the well-being of others.
- (b) develop a positive attitude towards community service and responsibility for the well-being of the community while being responsible for their personal behaviour and conduct and hold others to account for their behaviour and attitudes in the interest of public good.

- (c) develop effective communication and social skills, and think critically and rationally when solving problems and making decisions at different stages of their personal development.
- (d) interpret language and cultural expressions attributed to oppressed and marginalized groups by dominant and powerful groups and challenge these in order to improve their situations.

Aim 5: Students will contribute towards the development of knowledge-based economy and society, and the transformation of Papua New Guinea from a developing to a middle income country by continuously learning and applying knowledge, skills, values, and attitudes to improve the prevailing social, economic, political, cultural, scientific, and technological conditions.

Goals

Students will be able to:

- (a) value creativity and innovation; the spirit of autonomy and independence; and foster an attitude to knowledge creation and application to improve working and development conditions.
- (b) obtain relevant knowledge, skills, values, and attitudes that will enable them to be multi-skilled, lifelong learners, and knowledge-based workers capable of functioning in a changing world and work environment.

Aim 6: Students will continue to learn throughout their lives and apply the outcomes of learning to improve their personal and collective learning, growth and development, and the quality of life for oneself and others.

Goals

Students will be able to:

- (a) think sensibly for themselves and to develop as individual members of a community.
- (b) develop and foster an attitude towards continuous learning as a basis for improving one's own knowledge, thinking, practice, value and belief system and hence improve life outcomes.
- (c) cultivate a positive attitude towards research, reflection, and critical analysis as bases for lifelong learning.

Aim 7: Students will acquire essential knowledge, skills, values, and attitudes necessary for the building of peaceful and safe communities, living together, upholding the principles of a democratic state and society, building social cohesion, promoting equity and social justice, and ensuring economic prosperity for all.

Goals

Students will be able to:

- (a) value justice, responsibility, equality between men and women, mutual respect and cooperation, and actively contribute to the building and fostering of peaceful, safe, and inclusive communities.
- (b) use effective communication skills and think creatively in a rational manner and develop better problem solving and decision making skills at appropriate levels and ages.
- (c) examine in-depth problems at hand by collecting and using evidence to make informed decisions about the best strategies to address the problems and achieve results that are satisfactory to all stakeholders.
- (d) become happy, healthy and useful members of their society.
- (e) analyse the principles of democracy, how a democratic government works, citizen's democratic rights and responsibilities, and the weaknesses and the strengths of the democratic ideology.

Aim 8: Students will foster an understanding and an appreciation of PNG's many cultures and languages, their influence on the construction and representation of Papua New Guinean's identities, and the value, knowledge, and belief systems that underlie these diverse cultures and languages; while embracing the cultural and linguistic differences, and take actions to sustain the good and eliminate the bad aspects of cultures.

Goals

Students will be able to:

- (a) have pride and responsibility towards their cultures and languages, and preserve and promote one's identity through language and culture while at the same time learning, appreciating, and tolerating other cultures and languages, both local and international.
- (b) communicate with other people through written and spoken language, through mathematics and through other ways such as art, music and movement.
- (c) investigate the underlying knowledge, value, and belief systems of different cultures and languages, and take appropriate individual and collective actions to eliminate aspects of cultures that hinder the building and fostering of healthy relationships and peaceful and safe environments, that are oppressive and detrimental to human development, and detrimental to the promotion of inclusive development and a hindrance to promoting and safeguarding fundamental human rights.

Aim 9: Students will develop their knowledge and an appreciation and respect for the natural environment and physical and human resources, and the need to develop these in ways that are sustainable for the benefit of current and future generations.

Goals

Students will be able to:

- (a) cultivate and maintain an attitude to respect life, care for nature, and contribute to the protection of the environment.
- (b) help develop and sustain Papua New Guinea's environment and its physical and human resources, for the benefit of current and future generations.
- (c) become wise guardians of Papua New Guinea's resources.
- (d) act responsibly and within the spirit of environment sustainability in the use of natural resources with the knowledge that local actions on environment have both local and global consequences.

Aim 10: Students will develop healthy self-concepts; contribute to the establishment and sustainability of healthy communities; the eradication of common diseases; and improvement in the health status of all citizens.

Goals

Students will be able to:

- (a) demonstrate an understanding of the different stages of child development from conception to childhood, adolescence to adulthood.
- (b) show awareness and understanding of the importance of building and promoting healthy life styles and healthy communities as prerequisites for healthy living and life style.
- (c) investigate common diseases in PNG and their causes and symptoms, appreciate the consequences and impact they have on the citizens, look at what is being done to eradicate these diseases, and know how they can contribute to eradicating these diseases.

Aim 11: Students will understand that parenthood is a lifelong responsibility however, in exercising this right they should be aware of the impact of uncontrolled population growth and its consequences on families, communities, the environment, available resources, and the nation.

Goals

Students will be able to:

- (a) appreciate the importance of having a family unit and show awareness of parental responsibilities, recognize the consequences of the decisions they make regarding the size of their families, recognizing the fact that the quality of life for their children depend on the decisions they make.
- (b) aware of the contributing factors to population growth and demonstrate an understanding of the consequences of uncontrolled population growth.

Aim 12: Students will acquire knowledge, skills, values, and attitudes required for social and economic development, for gainful employment and self-employment, and for transforming individual and collective livelihoods and alleviating poverty.

Goals

Students will be able to:

- (a) acquire knowledge, skills, values, and attitudes required for active participation in the formal and informal economy as means for making a sustainable living.
- (b) explain and apply the concepts and practices of self-reliance and personal viability to create own employment as an alternative to formal employment.
- (c) foster an attitude towards work by acquiring relevant values, knowledge, and skills that will prepare them to pursue vocational skills occupations.

Aim 13: Students will develop required values and respect for oneself, others, and the community, and use these as a basis for developing effective national and global citizenships traits.

Goals

Students will be able to:

- (a) learn about and show awareness about past and present outstanding and model citizens whose character, moral standing, ethical standards, and contributions have shaped PNG and the world.
- (b) demonstrate awareness and understanding of their civic and citizenship roles and responsibilities, the importance of performing these responsibilities in a transparent and accountable way for the greater good of PNG and their communities, and the consequences of neglecting these roles and responsibilities.

- (c) develop and foster values, behaviours, attitudes, and communication competencies required to live together and in harmony with peoples of other cultures and linguistic groupings.
- (d) show awareness and concern for the welfare and the rights of others, contribute to the promotion of justice for all and the empowerment of the oppressed and marginalized people, promote gender and social inclusion as the basis for protecting and promoting the rights of all.

Overarching Curriculum Principles

Curriculum principles identify, describe, and focus attention on the important concerns that must be addressed when developing the curriculum at all levels of schooling. They are based on significant social, economic, political, cultural, religious, philosophical, environmental, and educational values and beliefs. Curriculum principles are evidence-based and influenced by best practice. The following principles underpin the design, development, and implementation of SBC in PNG.

Relevance

The national curriculum should target the national, community, and personal social, economic, political, cultural, environmental, and spiritual, development needs and aspirations. Curriculum should aim to prepare children for careers, higher education and citizenship. Children should be equipped with essential, in demand knowledge, skills, values, and attitudes to meet the demands and challenges of working, studying, and living in a complex, knowledge-based, and technology driven economy and society of the 21st century. This can be achieved through the development of rigorous and comparable learning standards, design, development, implementation, and monitoring of a quality SBC, and embedding of values and critical, creative, decision-making, reasoning, problem-solving, high level, 21st century, and STEAM skills in the curriculum.

The national curriculum will enable teachers to support students' learning by encouraging teaching and learning in real-life contexts, and providing opportunities for students to address the problems posed by the natural and physical environments by developing creative and innovative solutions. This means students will relate and use the knowledge, skills, values and attitudes learnt in different subjects to real life situations.

Multiculturalism

PNG is blessed and fortunate to have so many languages and cultures. The diversity of our cultures is the source of our knowledge, skills, attitudes, and values. As a multicultural society, we must protect, promote, and respect our many cultures and languages. There are many people from our own ethnic groupings and from other countries with their own cultures living and working together in PNG. This is the most multicultural country in the world. We must ensure that we promote and share our cultures with the rest of the world. We must also critically examine and address the problematic aspects of our cultures.

Ethics, Morals, and Values

PNG is striving to create a society in line with democratic liberal traditions. The citizens of PNG should recognise appropriate social relationships based on sound human and religious ethics, morals and values. These are

required for interaction with families and people from other provinces and nations. The process of socialisation requires a belief in the ethics, morals and values of the Melanesian extended family, dialogue with and respect for others and a willingness to conserve and promote those aspects of our traditions, which are consistent with studying, working, and living in the 21st century global society. Socialisation also requires an awareness of the interdependence of individuals, societies, and nations in the postmodern world. It requires involvement with family, school, church, community, and the world beyond.

Integral Human Development

Integral human development focuses on the holistic development of every person. National curriculum should provide opportunities for all children to receive an education that will enable them to:

- be dynamically involved in the process of freeing themselves from every form of domination and oppression so that they will have the opportunity to develop as integrated persons in relationship with others. This means that the national curriculum must integrate and maximise socialisation, participation, liberation, and equality;
- be aware of human potential and the willingness to develop and maximize this potential so that each individual can solve his or her own problems, contribute to the common good of society, and maintain, promote, and improve the learning, working, and living conditions of all, and
- acquire and consistently use Biblical and spiritual values, personal, social and sustainability values, and work, relationship, health, and peace values in their lives.

Papua New Guinea is a rapidly changing society and faces many challenges. To face this effectively, an individual must strive to become an integrated person and to work with others to create a better community.

The process of integral human development calls for a National Curriculum, which helps individuals to:

- identify their basic human needs;
- analyse situations in terms of these needs;
- see these needs in the contexts of spiritual and social values of the community; and
- take responsible action in co-operation with others.

The success of a national curriculum requires the integrated involvement of all the agents of education such as the home, church, school, and community.

The Right to Healthy Living

The health status of PNG is very low. All citizens have a right to clean water, a nutritious diet, improved sanitation, and appropriate and better local health services. Students need to learn attitudes; skills, and knowledge that will help them become productive, healthy, and contented citizens of PNG. They need to be given a set of skills that will enable them to improve their own and their community's health in order to improve the health status of PNG. The national curriculum will ensure that students have the opportunity to learn about healthy living and lifestyles.

Nation Building and National Unity

Our nation is young and there is still a great deal of nation building to be done. Students need to be given the skills to undertake this task and participate in nationally organised events. The National Curriculum should enable them to understand how Papua New Guinean societies work and how they can be a useful part of these societies. Students should learn that they have a place in Papua New Guinea and that Papua New Guinea has a place in the world as a whole. They will be able to help Papua New Guinea develop a national identity as one nation if they learn to:

- work together with tolerance
- respect one another, their traditional ways and resolve problems peacefully
- respect and act in the spirit of the National Constitution
- recognize their capabilities and develop their own talents
- participate in the development of the national community and
- protect and safeguard the national wealth and resources and consider how they will contribute to national revenues

Sustainability

The natural environment of PNG is as diverse as its cultures. It is often under threat from uncontrolled exploitation, over logging, abuses associated with mining, over fishing, dynamiting of reefs, and dumping of toxic wastes. Our diverse cultures are also under threat from over exploitation and commercialisation of sacred cultural practices. Our cultural traditions are not being handed down from generation to generation. The national curriculum will guide students to further appreciate, respect, and value their natural environment, cultures, customs, and traditions. It will give them the skills and knowledge to identify problems and issues and to take action to sustain these aspects of life in PNG.

Gender Equity and Social Inclusion

Gender is what it means to be a woman or a man. Gender refers to those behaviours and attitudes that are culturally accepted as ways of being a woman (femininity) and being a man (masculinity). Addressing gender

issues goes well beyond ensuring that females have the same opportunities as males to receive an education. A person's experiences determine the way they understand and make sense of the world. Gender is also culturally determined. In PNG, there is a need for sensitivity to local cultural practices and values, with respect to traditional roles for males and females. The national curriculum will provide students with subjects, resources, activities, and experiences that value the needs of both girls and boys.

Females are generally a disadvantaged group in PNG. PNG does not have in place a good record about gender equity for females. Violence against females is widely acknowledged as a serious problem. A number of health and other indicators of human development show that females have a lower quality of life than males. Females have lower literacy rates and lower income levels than males. Males hold nearly all positions of leadership, authority, and decision making.

Men hold most senior positions in government departments and the community. It is a similar situation in the Department of Education, provincial education divisions, and schools. The national curriculum will provide students with opportunities to consider these problems and ways of addressing gender issues.

Inclusive Curriculum

The national curriculum is inclusive and designed to meet the needs of all students irrespective of their abilities, gender, geographic locations, and cultural language, or socioeconomic backgrounds. The national curriculum must be implemented by teachers in ways that are inclusive of all students at all levels of schooling. Much more can be achieved if parents, community leaders, churches, and schools co-operate and communicate with each other.

Students learn in different ways. It is best to use a variety of methods to teach them. No one method is best. It is true that students are very different and even the same students learn best from different methods at different times. By using a range of teaching methods, it is more likely that the needs of all students will be met. In order to be inclusive of all students, teachers need to cater for a range of physical, social, cultural, emotional, spiritual, and intellectual needs of their students. This can be achieved through using appropriately and carefully planned learning activities, a range of teaching methods and strategies, and thoughtful use of the language of communication.

To be inclusive, teachers will need to ensure that all girls and boys have the opportunity to participate. Teaching practices, including classroom organisation and management, should ensure that girls and boys are able to participate fully in all learning activities. Participation requires that individuals are motivated to achieve the goal of socialisation fully where they are encouraged to develop a sense of obligation for the opportunity to contribute. Through participation, individual creativity can be recognised and encouraged, without losing sight of the principle of

communal sharing. Participation is the key to social interaction and can lead to social mobility. It can also help to conserve and generate knowledge and cultural values for future generations.

Student-Centered Learning

Student-centred learning recognises the fact that no two classes are alike and no two children are the same with respect to their needs. A teacher who uses a student-centred approach will endeavour to create a classroom environment that will motivate students to discover new skills and knowledge. In such an environment, the teacher might focus on teaching students how to learn and help them discover relevant information. It is essential to teach students how to learn while at the same time teaching them important content. A student-centred classroom will usually involve students working together in small groups using activity centres set up in the classroom while the teacher works more closely with one or two students. The national curriculum describes what all students are expected to learn in all subjects. A student-centred approach allows teachers to be more flexible in determining the most effective ways to help all students achieve these learning outcomes

Lifelong Learning

School is an important part of a student's education but learning continues throughout life. The initial experience that students have with the school curriculum is critical in encouraging them to continue learning throughout their lives. Going to school should be an enjoyable and satisfying experience for the students and should prepare them for life after school. Students know many things when they come to school. They will learn many things outside of school and continue to learn after they leave school. The national curriculum should build on what students already know. Teachers should make use of this knowledge and skills. When students are learning new, unfamiliar things, teachers should relate the new things to what students already understand. This important learning will continue throughout life as students increasingly take responsibility for their own learning. Increasingly, students who leave school will look for opportunities to continue their education and to return to school or some other educational or training institutions in order to improve their qualifications.

Language Development Across the Curriculum

The national curriculum will provide opportunities for language development across the curriculum. Language development across the curriculum should be encouraged because all subject areas provide meaningful contexts for purposeful learning. Specific subjects have different language requirements such as, the vocabulary and language features of science and the written and oral genres to narrate, explain, persuade, report, and discuss the particular content of various subjects. The conventions and differences must be explicitly taught in relevant contexts across the curriculum.

Knowledge, Skills, Values, and Attitudes for Careers, Higher Education, and Citizenship in the 21st Century

PNG shapes and is being shaped by the 21st century social, economic, political, cultural, religious, and environmental discourses and practices. It is important to provide opportunities for students to learn in-depth and master the 21st century knowledge, skills, values, and attitudes to prepare them for careers, higher education, and citizenship. There is an increasing demand for knowledge-based workers and workers with qualifications in STEAM globally. This cadre of workers is not available in PNG because education is not geared towards preparing this category of workers. PNG children should be equipped with the necessary 21st century and STEAM knowledge, skills, values, and attitudes to ensure that they are marketable globally and can contribute meaningfully to the development of PNG.

Science, Technology, Engineering, Arts and Mathematics

The majority of careers in the 21st century is STEAM related. However, demand for STEAM graduates and experienced workers far exceed the supply of this cadre of workers. What is more, although a slow paradigm shift is taking place, careers in STEAM fields are dominated by males. Females are beginning to venture into these careers but at a very slow pace. There is an enormous gender parity gap in this area. Thus, it is critical for STEAM knowledge, skills, values, and attitudes to be taught from prep to post-secondary school level to provide opportunities for all students to attain STEAM related proficiencies before leaving school. The main aim of this education is to shape students' thinking, motivate, and influence them to develop an interest in careers in the STEAM field, and pursue STEAM related academic programs in institutions of higher education.

Standards-Based Curriculum Principles

The principles of SBC include the following:

- Setting of high academic standards and a careful and continuous assessment and reporting of students' performance against these standards will motivate students to perform at a much higher level.
- Standards allow every student, every parent, and every teacher to share in common expectations of what students should know, understand, and be able to do.
- Students will learn more when more is expected of them in school and at home.
- The setting of clear, measurable, and attainable standards is the key to attaining high academic standards and hence the attainment of the desired quality of education.
- All children are capable of learning and achieving high academic standards, regardless of their backgrounds.
- Students can learn in their own ways and at their own rates.

Protection of Children's Rights

It is paramount that children's rights stipulated in national legal and policy frameworks, and international conventions such as the United Nations Convention on the Rights of the Child (UNCRC) are recognised, promoted, protected, and safeguarded by everyone and every organisation working and dealing with children's welfare and well-being. A child is defined by UNCRC as a human being below the age of 18 years. However, definitions of a child may differ based on the socio-cultural contexts of different countries. Notwithstanding the differences in definitions, biologically, a child is generally anyone between birth and puberty.

The four core principles of UNCRC underpinning children's rights are:

- non-discrimination.
- devotion to the best interests of the child.
- the right to life, survival and development.
- respect for the views of the child.

Children's rights are human rights and therefore they should be promoted and safeguarded by the whole of the education system. They should permeate all education plans, policies, programs, and activities, and firmly embedded in the school curriculum, teaching and learning practices, and the overall management of the education system.

Social Science Rationale, Aim and Goals, and Guiding Principles

Rationale

Social Science integrates the fundamental ideas of sociology, anthropology, archaeology, politics, economics, geography, history, and environment. These ideas are sequenced and scoped appropriately to provide students' expanded learning opportunities to learn and develop an in-depth understanding of each concept and progressively master it from prep to grade 12.

Social Science addresses social, political, economic, geographic, historical, cultural, and environmental processes that allow students to make informed decisions for personal and public good. In a world that is highly globalised through transport, technology, and communication, Social Science equips an individual to reflect global citizenship traits through knowledge, skills, values, and attitudes acquisition.

Social Science develops the knowledge, skills, values, and attitudes, and the processes necessary to understand historical and present day connections among diverse individuals and groups. It helps students to understand the rationale and the interrelationship between individuals and groups socially, culturally, religiously, economically, and politically. Moreover, the study of the environment is aimed at highlighting the interconnectedness of human systems and physical environmental systems. It is anticipated that the Social Science curriculum of Papua New Guinea will create citizens that will ensure the sustainability of human systems by first ensuring the sustainability of natural systems since human systems thrive on these systems.

Ultimate Aim

The primary purpose of social studies is to help young people make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world.

Goals

Students will be able to;

- i. develop critical thinking abilities to participate competently and productively as concerned citizens to address societal and global concerns using literature, technology and other resources.
- ii. investigate how society has evolved to understand historical and present-day connections among diverse individuals, groups, places, and the environment.
- iii. examine the diversity and interdependence of the world and helps them to recognize the challenges and benefits of living in a world with multiple cultures, ethnicities, languages, belief and value

systems, identities, and ideologies.

- iv. explore the interdependence between human systems and physical environment systems to ensure sustainability.
- v. investigate and understand in-depth the different economic paradigms and systems, and acquire essential knowledge, skills, values and attitudes required for active participation in the national and global economic systems, and making a sustainable living.

Guiding Principles

The Social Science curriculum guiding principles can be described as an approach to teaching and learning that is based on both philosophy and practicality. It can generally be defined as a curriculum approach that purposefully draws together knowledge, skills, attitudes and values from within or across subject areas to develop a more powerful understanding of key learning concepts. The contents of the Social Science curriculum are connected and related in meaningful ways for both the students and teachers.

Furthermore, the Social Science curriculum principles identify, describe and focus attention on the concerns that must be addressed when developing and implementing the Social Science course of study. They are based on significant cultural, social, political, economic, philosophical, theoretical and educational beliefs about teaching and learning. The guiding principles influence the design and the writing of this syllabus.

Given below are the guiding principles for Social Science;

- meaningful, important, challenging, active, and issues based.
- consistent with current research relating to how children learn.
- combining multiple views of environmental issues and importance.
- reflecting a balance of local, national, and global content.
- promoting achievements in the processes of governance, communication investigation, and participation.
- promoting literacy through the social science studies.
- developing knowledge, skills, and attitudes for lifelong learning.
- promoting the development of informed and active citizens.
- supporting the realization of an effective learning environment.
- promoting time and interventions of technology in learning and teaching social science.
- promoting culture, economy and resource-based learning.
- promoting the use of diverse learning and assessment strategies.

STEAM Rationale, Aim and Goals, and Guiding Principles

Rationale

The majority of careers in the 21st century is STEAM related. However, demand for STEAM graduates and experienced workers far exceed the supply of this cadre of workers. What is more, although a slow paradigm shift is taking place, careers in STEAM fields are dominated by males. Females are beginning to venture into these careers but at a very slow pace. There is an enormous gender parity gap in this area. Thus, it is critical for STEAM education to be introduced and taught from prep to the higher education level to provide opportunities for students to study in-depth and master the STEAM related knowledge, skills, values, and attitudes, and engage in real life experiences to learn and have hands-on experience of applying STEAM concepts, processes, ideas, skills, values, and attitudes to solve real problems and come up with creative and innovative solutions.

Ultimate Aim

The ultimate aim of STEAM education is to develop a STEAM literate society in which all citizens have the expected level of STEAM literacy. STEAM literacy refers to an individual's:

- knowledge, skills, values, and attitudes to identify problems and questions in life situations, explain the natural and design world, and draw evidence-based conclusions about STEAM issues;
- understanding of characteristic features of STEAM disciplines as forms of human knowledge, inquiry, and design;
- awareness of how STEAM disciplines shape our material, intellectual, and cultural environments, and
- willingness to engage in STEAM related issues and with the ideas of STEAM as a constructive, concerned, and reflective citizen.

Goals

The following are the goals of STEAM.

- (i) Provide students with STEAM related experiences and opportunities to use STEAM concepts, ideas, and skills to solve problems relating to the natural and physical worlds, and use the evidence to make informed decisions about the interventions.
- (ii) Build positive attitudes and embed essential STEAM values in children thereby motivating them to choose STEAM related careers or undertake STEAM related academic programs or courses of study.

- (iii) Provide students opportunities to work in collaboration and partnership with people engaged in STEAM related careers or disciplines to learn about how STEAM skills, concepts, processes, and ideas are applied in real life.
- (iv) Build a pool of STEAM workers who can contribute to national and global development and progress.
- (v) Enable children to achieve high academic standards

Guiding Principles

Integration and application of knowledge and skills in real life situations

Integration of STEAM knowledge and skills and their application to real-life situations inside and outside of the classroom setting will enable students to explain how STEAM disciplines shape our material, intellectual, cultural, economic, social, and environmental contexts.

Emphasis is on the learning and the application of STEAM knowledge and skills to investigate, explain, and solve problems rather than on content

STEAM education emphasizes the learning and the application of knowledge, and skills to investigate, explain, and solving physical and natural problems rather than on in-depth teaching and learning of STEAM content.

STEAM related knowledge and skills are used to investigate, explain, and solve problems relating to the natural and physical environments

STEAM education focuses on providing the learners real life experiences of how STEAM related skills, concepts, processes, ideas, principles, values, and attitudes are applied and used to identify problems and questions in real life situations, explain the natural and physical world, and draw evidence-based conclusions.

Core Curriculum

A core set of common learning's (knowledge, skills, values, and attitudes) have been integrated into the curriculum to provide all students an opportunity to acquire and master these before they are career, higher education, and citizenship ready. The core curriculum includes:

- Cognitive skills (critical and creative thinking);
- Reasoning, problem-solving and decision-making skills;
- High level thinking skills (analysis, evaluation and synthesis);
- 21st century skills;
- STEAM principles and skills;
- Spiritual values and virtues;
- Reading, writing and communication skills, and
- Essential values and attitudes.

The above knowledge, skills, values and attitudes should be taught and assessed by all teachers from prep to grade 12. These are reinforced at each school grade and school level to enable students to become proficient in their application in different careers, higher education and citizenship contexts.

Essential Knowledge, Skills, Values, and Attitudes

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

Essential Social Science knowledge, skills, values, and attitudes have been integrated into the content standards and benchmarks. They will also be integrated into the performance standards. Teachers are expected to plan, teach, and assess these in their lessons.

Provided here are examples of different types of knowledge, processes, skills, values, and attitudes that all students are expected to learn and master as they progress through the grades. These are expanded and deepened in scope and the level of difficulty and complexity are increased to enable students to study in-depth the subject content as they progress from one grade to the next.

Types of Knowledge

There are different types of knowledge. These include;	
<ul style="list-style-type: none"> • Public and private (privileged) knowledge • Specialised knowledge • Good and bad knowledge • Concepts, processes, ideas, skills, values, attitudes • Theory and practice • Fiction and non-fiction • Traditional, modern, and postmodern knowledge 	<ul style="list-style-type: none"> • Subject and discipline-based knowledge • Lived experiences • Evidence and assumptions • Ethics and Morales • Belief systems • Facts and opinions • Wisdom • Research evidence and findings • Solutions to problems

Types of Processes

There are different types of processes. These include;	
<ul style="list-style-type: none"> • Problem-solving • Logical reasoning • Decision-making • Reflection 	<ul style="list-style-type: none"> • Cyclic processes • Mapping (e.g. concept mapping) • Modelling • Simulating

Types of Skills

There are different types of skills. These include:

1. Cognitive (Thinking) Skills

Thinking skills can be categorized into **critical thinking** and **creative thinking** skills.

i. Critical Thinking Skills

<p>A person who thinks critically always evaluates an idea in a systematic manner before accepting or rejecting it. Critical thinking skills include;</p>	
<p><i>Analysis Skills</i> – Analysis skills involve examining in detail and breaking information into parts by identifying motives or causes, underlying assumptions, hidden messages; making inferences and finding evidence to support generalisations, claims, and conclusions.</p>	<p><i>Evaluation Skills</i> – Evaluation skills involve justifying and presenting and defending opinions by making judgments about information, validity of ideas or quality of work based on set criteria.</p>
<p>Key words</p>	<p>Key words</p>
<p>Analyse, compare, contrast, classify, distinguish, infer, explain, separate, select, categorise, connect, differentiate, discriminate, divide, order, point out, prioritise, sub-divide, survey, advertise, appraise, breakdown, calculate, conclude, correlate, criticize, devise, deduce, arrange, discover, establish, examine, organize, outline, investigate, examine, simplify, see, research, recognize, highlight, in-depth, discuss, list, find, group, divide, focus, question, experiment, test, illustrate, identify, deconstruct, simplify.</p>	<p>Evaluate, criticize, order, appraise, judge, support, compare, decide, discriminate, recommend, summarise, assess, choose, convince, defend, estimate, find errors, grade, measure, predict, rank, score, select, test, argue, conclude, consider, monitor, check, debate, determine, justify, explain, give reasons, interpret, opinion, validate, value.</p>

ii. Creative Thinking Skills

<p>A person who thinks creatively has a high level of imagination, able to generate original and innovative ideas, and able to modify ideas and products. Creative thinking skills include;</p>
<p><i>Synthesis/Creative Skills</i> – Synthesis skills involve changing or creating something new, compiling information together in a different way by combining elements in a new pattern proposing alternative solutions.</p>
<p>Key words</p>
<p>Categorise, combine, compose, create, devise, design, explain, generate, modify, organize, plan, rearranges, construct, deconstruct, reconstruct, relate, reorganize, revise, rewrite, summarise, tell, write, formulate, invent, hypothesise, develop, compile, prepare, produce, arrange, rearrange, assemble, role-play, anticipate, make, predict, act-out, model, build, convert, discuss, elaborate, solve, propose, visualize, imagine, extend, tabulate, transform, integrate, innovate, maximize, minimize.</p>

2. **Reasoning Skills** - Reason is a skill used in making a logical, just, and rational judgment.
3. **Decision-Making Skills** - Decision-making involves selection of the best solution from various alternatives based on specific criteria and evidence to achieve a specific aim.
4. **Problem Solving Skills** – These skills involve finding solutions to challenges or unfamiliar situations or unanticipated difficulties in a systematic manner.

Types of Values

1. Personal Values

Core values	Sustaining values
<ul style="list-style-type: none"> • Sanctity of life • Truth • Aesthetics • Honesty • Human • Dignity • Rationality • Creativity • Courage • Liberty • Affectivity • Individuality 	<ul style="list-style-type: none"> • Self-esteem • Self-reflection • Self-discipline • Self-cultivation • Principal morality • Self-determination • Openness • Independence • Simplicity • Integrity • Enterprise • Sensitivity • Modesty • Perseverance

2. Social Values

Core Values	Sustaining Values
<ul style="list-style-type: none"> • Equality • Kindness • Benevolence • Love • Freedom • Common good • Mutuality • Justice • Trust • Interdependence • Sustainability • Betterment of human kind • Empowerment 	<ul style="list-style-type: none"> • Plurality • Due process of law • Democracy • Freedom and liberty • Common will • Patriotism • Tolerance • Gender equity and social inclusion • Equal opportunities • Culture and civilisation • Heritage • Human rights and responsibilities • Rationality • Sense of belonging • Solidarity • Peace and harmony • Safe and peaceful communities

Types of Attitudes

Attitudes - Ways of thinking and behaving, points of view	
<ul style="list-style-type: none"> • Optimistic • Participatory • Critical • Creative • Appreciative • Empathetic • Caring and concern • Positive • Confident • Cooperative 	<ul style="list-style-type: none"> • Responsible • Adaptable to change • Open-minded • Diligent • With a desire to learn • With respect for self, life, equality and excellence, evidence, fair play, rule of law, different ways of life, beliefs and opinions, and the environment.

Content Standards, Benchmarks and Evidence Outcomes

Content standards, benchmarks, and evidence outcomes are all curriculum standards. However, they have specific curriculum purposes. Despite this, these curriculum standards are interconnected and enable the intended learning outcomes to be attained.

Content Standards

Content Standards are broadly stated expectations of what students should know, understand, and be able to do in a particular subject, grade, or school level. They embed essential knowledge, skills, values, and attitudes that all students are expected to learn and master in each strand or unit to prepare them for the next grade or level of schooling.

Benchmarks

Benchmarks are specifications of content standards or more detailed descriptions of a specific level of performance expected of students at particular ages, grades, or levels of development. Benchmarks focus on the essential knowledge, skills, values and attitudes that all students are expected to learn, master and demonstrate proficiency.

Evidence Outcomes

Evidence outcomes are indicators that indicate students' progress towards meeting an expectation at the mastery level. They measure students' mastery and application of knowledge, skills, values, and attitudes at each grade, cluster or school level. They indicate that a student is meeting an expectation or achieving a benchmark at the mastery level. They enable teachers to know if a student can do what he/she was expected to know, understand, and do in real life or relevant situations. Evidence outcomes are given for each strand in each grade to describe what all students should do at the end of the different strands of Social Science.

Content Standards and Benchmarks Coding

The following is the coding system used to code the content standards and benchmarks to not only make it easier to interpret and understand the relationship between these two learning standards but also to guide lesson planning, instruction, assessment and reporting of students' performance in relation to a benchmark or content standard.

Grade	Grade is indicated by the first number (for example, 9)
Strand	Strand is indicated by the second number (for example, 9.1).
Content Standard	Content Standard is indicated by the third number (for example, 9.1.1)
Benchmark	Benchmark is indicated by the fourth number (for example, 9.1.1.1)
Thus, the code will read as; Content Standard 9.1.1 and Benchmark 9.1.1.1 .	

Content Overview

Content overview outlines what grades 9 and 10 students will learn in Social Science. Content is organized into five main strands – Geography, History, Political Science, Economics and Environment. These strands embed the content that all students are expected to learn and master at each grade level. Each strand is further organized into units.

The table below outlines the strands and units in grades 9 and 10.

Strands	Units
1. Geography	Geography Skills
	People and Places
	People and Resources
	People and Environment
2. History	Making Sense of History
	Systems of Power, Authority, and Governance
	Culture and Society
	Development and Sustainability of Societies
	Economic Needs and Wants
	Geographical Influences on Historical Events, People, Places, and Environment
	Historical Inquiry
3. Political Science	Government Systems
	Political Ideologies and Systems
	International Relations
	Civics and Citizenship
4. Economics	Factors of Production and Consumption
	Methods of Production and Distribution
	Regulation of Production, Distribution, and Consumption
	Satisfying Needs and Wants
	Economic Ideologies
5. Environment	Resources and Environment
	The Earth and Its Systems
	Biological Dynamics of the Earth
	Environmental Change and Sustainability

Strand 1: Geography

Rationale

Students gain geographical perspectives on the world by studying the earth and the interactions of people with places where they live, work, and play. Knowledge of geography helps students to address the various cultural, economic, social, and civic implications of life in earth's many environments. It also helps them to understand the different physical, social, economic, political, religious, cultural, and geographical structures and systems, and the consequences of interfering with these systems. Concepts and skills related to geography are integrated in the other Social Science strands – History, Politics, Economics, and Environment. This integration of geographical knowledge, skills, values, and attitudes provides extended opportunities for reinforcing what students learn in Geography. This will enable students to appreciate the importance and relevance of geographic knowledge, skills, values, and attitudes in the learning of other subjects.

The essential geographical knowledge, skills, values, and attitudes mastered by students at the basic education level should provide students with a good grounding and a platform to study the physical, human, and economic geography at a more advanced level. Grades 9 and 10 students are expected to master the following knowledge, skills, values and attitudes to prepare them for grades 11 and 12, and progressively, for careers, higher education, and citizenship.

Evidence Outcomes

By the end of grades 9 and 10, all students can:

- use weather instruments, population pyramids, and other geographic tools to generate and interpret geographic information about people, places, weather, population, and environments.
- analyse the contributing factors and the consequences of increasing or decreasing population growth rates.
- 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.
- analyse the contributing factors and the consequences of unpredictable weather patterns on places, people, environment, economic activities, and daily routines.
- compile geographic reports, including population and weather reports, by using available geographic information and from other sources.
- identify and group regions based on their dominant natural or human features/characteristics.
- describe and interpret the distribution of the physical, human, economic, political and religious geographic characteristics

regionally and the contributions to shaping culture and constructing identities.

- group regions based on their dominant geographic feature and explain the reasons for this geographic phenomenon.
- identify and explain the different types of migration and the different categories of migrants.
- analyse the different reasons for people migrating to other places.
- analyse the social, economic, political, cultural, and religious impact of human migration on places, resources, services, environments, cultures, etc.
- assess the impact of migration on the security of places and people, and in the management of conflict and its consequences.
- investigate and explain different physical systems (and processes) including their inputs, throughputs, and their outputs.
- explain different landforms and the forces acting on these landforms.
- ascertain how extreme physical conditions such as floods, droughts and bushfires affect human settlements and animal populations in different regions.
- elaborate on how human settlements and structures become part of the earth's surface, and evaluate the positive and negative effects of such changes.
- identify and describe the different land uses.
- analyse the different strategies, policies, and regulations for mobilizing land for development.
- explain the difference between undeveloped land (udl) and special business agriculture land (sbal), and evaluate the advantages and disadvantages of developing them.
- explain the problem of "land grabbing" and examine its consequences on people, places, and the environment.

Unit 1: Geography Skills

Geography skills are important as they enable students to observe, inquire, collect, record, construct, analyse, interpret, and communicate valuable information about people, places, resources, and the environment. This unit encompasses the skills required for obtaining, analysing, and interpreting information using geographic tools and drawing conclusions about people, places, resources, and environment.

In grade 9, students will learn about weather as it is an important concern globally. Students can easily make observations as; a hot, rainy, cold, or even a windy day. However, there is a lot more to weather observation. Weather observation involves satellites and automated weather stations, where thousands of people read weather recording instruments. Students will be using weather instruments to record weather and use the data to make weather predictions. This will help them to make sense of weather patterns, predict the type of weather, and explain its characteristics and likely impact.

In grade 10, students will build on the geography skills learnt in grade 9 by applying these skills to the study of population. Students will learn and develop an in-depth understanding of how population data is collected, analysed, and interpreted using, for example, population pyramids, census data, population graphs, and maps. Students will examine and compare population statistics of places in PNG and other countries in order to evaluate the factors influencing changes in population growth and distribution. This will help students to be able to make predictions about future population growth trends and patterns in PNG as well as the world.

Content Standard 1.1: Students will be able to use geographic tools to collect, analyse, and interpret data about people, places, and environment.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.1.1.1. Identify and explain the use of weather instruments and units of measurements used in measuring weather.</p> <p>9.1.1.2. Interpret weather information using maps, tables, graphs, texts and charts.</p> <p>9.1.1.3. Construct and present weather information using tables, graphs and charts.</p>	<p>10.1.1.1. Identify and explain the different types of population pyramids.</p> <p>10.1.1.2. Construct a population pyramid of Papua New Guinea using the 1980, 1990, 2000 & 2011 National Census Data.</p> <p>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.</p> <p>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.</p>

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.1.1.4. Record daily maximum and minimum temperatures over two weeks and construct a temperature graph and calculate the average daily temperature over two weeks as well as the average maximum and average minimum temperatures.</p> <p>9.1.1.5. Record daily rainfall over two weeks and use the information to construct a rainfall graph and calculate the average rainfall over two weeks.</p> <p>9.1.1.6. Use available information to predict the weather over a seven-day period.</p> <p>9.1.1.7. Ascertain and analyse the contributing factors and the consequences of unpredictable weather patterns.</p>	<p>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).</p> <p>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.</p>

Unit 2: People and Places

People and places emphasise the importance of places and the environment to the people. Students will examine and explain how geographic and human characteristics create cultures and define places. It is important that students examine the different climatic regions of the world to appreciate the different climates and vegetation, relationships between various geographic features, and develop an understanding of how people live in different regions of the world and their places and cultures.

In grade 9, students will recognize the relationship between climate and vegetation. It is the climate which dictates the type of vegetation found in a particular place. Agricultural activities in PNG are also influenced by the climate. Therefore, this unit will help students to propose ways to improve agricultural activities to suit PNG’s climatic conditions.

The physical geography of a place determines settlement patterns, economic activities, and population densities. Grade 10 students studying this unit will be encouraged to observe, collect, identify, map and record physical features of local environments by participating in outdoor lessons and excursions. This will enable them to make informed decisions on the establishment of settlements and the conduct of economic activities.

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

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.1.2.1. Examine the different climatic regions of the world.</p>	<p>10.1.2.1. Examine the physical geography of various regions of the world.</p>
<p>9.1.2.2. Examine the different vegetation regions of the world.</p>	<p>10.1.2.2. Probe the relationship between physical geographic features and settlement patterns.</p>
<p>9.1.2.3. Explain the relationship between climate and vegetation.</p>	<p>10.1.2.3. Examine the relationship between physical geographic features and economic activities.</p>
<p>9.1.2.4. Examine the agricultural activities in different climatic regions.</p>	<p>10.1.2.4. Investigate the relationship between physical geographic features and population density.</p>
<p>9.1.2.5. Plot P.N.G’s major agricultural crops on a Papua New Guinea Map and draw a climatic justification for the distribution pattern of these agricultural activities.</p>	<p>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.</p>
<p>9.1.2.6. Describe the climate and vegetation of PNG.</p>	

Unit 3: People and Resources

Resources are over exploited, poorly managed, unequally distributed, and concentrated in the hands of just a few people and in particular regions and countries of the world. They are becoming scarce and inadequate to meet the demands of increasing populations globally. Thus, people move from one place or country to another to access much needed resources. This trend will no doubt continue given fragmented action and procrastination in addressing factors such as climate change, unequal distribution of resources, poverty, depletion of Earth's resources, and poor sustainability of resources.

Grade 9 students will examine the common causes and impacts of migration and analyse the causal factors. Grade 10 students will learn about migration in PNG. They will analyse and evaluate the causes and impacts of migration in specific provinces in PNG. And investigate and explain rural–urban migration and its impact on places and environment. This unit will help students to recognise that the world they live in is endangered by human carelessness and greed, and recognise the need to develop strategies now to solve problems created by humans as well as technology.

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

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.1.3.1. Explain the different types of migration.</p> <p>9.1.3.2. Examine the different categories of migrants (political, economic, religious, refugees, asylum seekers, cultural).</p> <p>9.1.3.3. Evaluate the reasons for people migrating to other places.</p> <p>9.1.3.4. Investigate the social, economic, political and cultural impact of human migration on places, resources, services, environments and cultures.</p> <p>9.1.3.5. Use research skills to determine and report on the impact of migration on the security of places and people, and the management of conflict and its consequences.</p>	<p>10.1.3.1. Ascertain the different categories of migrants in PNG.</p> <p>10.1.3.2. Critically reflect on the different reasons for people migrating to other places in PNG.</p> <p>10.1.3.3. Research and highlight the social, economic, political and cultural impact of human migration in PNG.</p> <p>10.1.3.4. Appraise the impact of migration on the security of places and people, and the management of conflict and its consequences in PNG.</p> <p>10.1.3.5. Use available data to construct and interpret tables, graphs, and maps showing the migration routes, patterns and trends, and the origins of migrants in PNG.</p>

Unit 4: People and Environment

The physical features of the environment we see around us are a result of the natural processes that work both internally and externally to build and shape the surface of the earth. The environment has been modified by humans to satisfy their needs, however in the process, the physical systems and processes are being disturbed. Therefore, we experience extreme physical conditions that affect human's and animal's livelihoods.

Grade 9 students will examine the relationship between the natural and the human systems and propose ways to minimise changes to the physical environment and avoid extreme physical conditions. They will also identify and evaluate strategies humans employ to enable them to adapt to the changing environment.

Land is an economic resource and the value of land has increased in Papua New Guinea. Therefore, school children need to be educated on the importance of land. Grade 10 students will critically assess government policies involved in land use and their consequences, and to make informed decisions when faced with land issues.

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

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.1.4.1. Investigate different physical systems (and processes), including their inputs, throughputs, and the outputs.</p>	<p>10.1.4.1. Identify and explain the different land uses.</p>
<p>9.1.4.2. Examine different landforms and the forces acting on these landforms.</p>	<p>10.1.4.2. Analyse the different strategies, policies, and regulations for mobilizing land for development.</p>
<p>9.1.4.3. Explore how extreme physical conditions such as floods, droughts and bushfires affect human settlements and animal populations in different regions.</p>	<p>10.1.4.3. Explain the difference between Undeveloped Land (UDL) and Special Agricultural Business Lease (SABL).</p>
<p>9.1.4.4. Explain how human settlements and structures become part of the earth's surface and evaluate the positive and negative effects of such changes.</p>	<p>10.1.4.4. Compare and contrast the advantages and disadvantages of developing UDLs and SABL.</p>
	<p>10.1.4.5. Critique national strategies and actions for managing and preventing the abuse of UDLs and SABLs, and the consequences.</p>
	<p>10.1.4.6. Examine the problem of land grabbing and its consequences on the people, places and the environment.</p>

Strand 2: History

Rationale

Students need to understand their historical roots and how past events have shaped their world. In developing these insights, students must know what life was like in the past and how things have changed and developed over time. Reconstructing and interpreting historical events provides a needed perspective in addressing the past, the present, and planning the future.

What students learned and mastered at the preparatory and primary school levels is deepened in scope and reinforced in grades 9 and 10. The focus in these grades is on the history and the changes that have taken place in the Pacific and the Asian Regions, the colonisation of PNG, and the factors that influenced and shaped government systems and people's thinking, actions and practices, environment, and places. Grades 9 and 10 students are expected to master the following knowledge, skills, values and attitudes to prepare them for careers, higher education, and citizenship.

Evidence Outcomes

By the end of grades 9 and 10, all students can:

- investigate major social, economic, political, cultural, and religious events that have shaped the history of PNG and the Pacific and Asian Regions.
- research and report on the colonial history of PNG and other countries in the Pacific and Asian Regions.
- critically analyse the role and the systems of power and authority of Australians, Germans, British, and the United Nations in the colonization and the decolonization of PNG.
- analyse the impact of colonization on people and places, cultures, and social, economic, and political, systems.
- research the impact of World War II on the power and authority structures in the Territories of PNG.
- evaluate how individuals and groups influence government changes, decisions, policies and development strategies in different countries of the Pacific and Asian Regions.
- examine how cultures are constructed, regulated, managed, and transmitted to the younger generations over time.
- articulate the differences between people, places, and events in the past and the present.
- critique how governments have reacted to problems in the past, such as social, environmental, political, and economic issues, and how actions of governments' affected individuals.

- articulate the ways in which a society dealt with the introduction or influence of another society's culture.
- analyse the development of economic systems and institutions in the Pacific and the Asian Regions.
- analyse the role of economic, social, political, religious, and cultural factors in conflicts and decisions to use military power in the Pacific and Asian Regions.
- elaborate on how developments in the Pacific and Asian Regions influence and are influenced by regional and global development agenda, policies, geographic, social, economic, political, cultural, and religious climates.
- investigate the impact of economic decisions on the people, places, and the environment.
- critique the representation of a past event or issue in the local community, district, province, or nationally in terms of its validity and reliability.
- research and ascertain how a national event or an issue affected individuals and groups in terms of their thinking, feelings, perspectives, attitudes and behaviours, relationships, survival, and belief systems.

Unit 1: Making Sense of History

Students study this unit to see the connectivity and chronology of significant historical patterns. Grade 9 students will build on what they have learnt in the preceding grades about PNG's colonial history. Here, the students should gain a full understanding and insight of the reasons why Australia colonised PNG. Furthermore, they should gain in-depth knowledge of the colonial history of PNG by drawing information from historical sources, for instance, by analysing the narratives of German, British, and Australian colonial administration of PNG, students would gain a rich insight on how PNG was administered by each of the colonisers.

In grade 10, students' study of colonisation will be broadened in context and deepened in scope. Students will learn about the history of their neighbouring countries in the Pacific Region in terms of their social, economic, political, religious, and cultural aspects. They will investigate and compare how these aspects have shaped the lives of people. Moreover, grade 10 students should be taught the importance of managing and keeping records of significant historical events that have occurred and impacted their lives and those of their Pacific neighbours.

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

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.2.1.1. Interpret historical narratives – 'fiction and non-fiction' about the German, British, and Australian colonization of PNG.</p> <p>9.2.1.2. Use available information to interpret and document Australia's reasons and role in the colonization of PNG.</p> <p>9.2.1.3. Identify and interpret major events that occurred during Australia's administration of PNG.</p>	<p>10.2.1.1. Identify and interpret major social, political, economic, religious and cultural events that have shaped the history of the Pacific Region.</p> <p>10.2.1.2. Define and investigate a social, political, economic, religious or cultural event that occurred in the Pacific Region.</p> <p>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.</p> <p>10.2.1.4. Examine how knowledge of history is constructed, stored, managed and disseminated in different countries of the Pacific Region.</p> <p>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.</p>

Unit 2: Systems of Power, Authority and Governance

In this unit, students will study the changes and developments in the systems of power, authority, and governance in different contexts. This will enable them to understand and contribute meaningfully towards future changes and shifts in power, authority, and governance in their own and other countries. What was learnt in preceding grades will be intensified in grade 9. Students should develop an in-depth understanding of the impacts of colonial powers, administration, and governance in PNG.

As they proceed to grade 10, the context of learning broadens and the level of content deepens. Here, they study countries within the Pacific Region in terms of the changes and impacts and contributions of individuals and groups to the systems of power, authority, and governance. For instance, they make comparisons of the electoral systems of these countries and analyse how this has influenced the creation, maintenance, and changes in their governance. They further enhance their understanding of the systems of power, authority, and governance by investigating the influences and contributions by foreign governments, interested groups, multi-national corporations, and powerful individuals.

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

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.2.2.1. Evaluate the roles that European settlers, religious groups and other groups played in the creation, maintenance or change of system of power, authority and governance in the colonial era.</p> <p>9.2.2.2. Examine the system of power, authority and governance of the German, British and Australian colonial administration in PNG.</p> <p>9.2.2.3. Analyse colonial governments’ policies on the social, economic, political, cultural and religious development in the Territories of Papua and New Guinea.</p> <p>9.2.2.4. Use research skills to investigate the impact of World War II on change of the system of power in the Territories of Papua and New Guinea.</p> <p>9.2.2.5. Discuss the roles of the United Nations in the creation, maintenance or change in the system of power, authority and governance in the territories of Papua and New Guinea.</p>	<p>10.2.2.1. Investigate and explain how governments in the countries of the Pacific Region have changed overtime.</p> <p>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.</p> <p>10.2.2.3. Evaluate how individuals and groups influence government decisions, policies, and development strategies in different countries in the Pacific Region.</p> <p>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.</p>

Unit 3: Culture and Society

Culture is at the heart of society. It is the glue that binds society. Cultures of societies have changed over time. People have adopted and adapted to new cultures. Students study cultural diffusion in societies to critically think about culture and cultural transmission that has affected the maintenance and sustainability of cultures and societies. It is important that students understand that culture can be transmitted from one society to another resulting in changes in the cultures and other attributes of societies, particularly those societies in which a foreign culture has been diffused.

In grade 9, students will study how cultures of societies in PNG were transmitted over time for instance, storytelling. They also make connections to how these societies dealt with introduced cultures and influences. Furthermore, their knowledge of this unit will be enhanced by comparing the cultures of majority and minority groups within PNG. In grade 10, the content learnt in grade 9 will broaden in context and deepen in scope. Students will study how other countries within the Pacific Region had their cultures transmitted overtime and also how they dealt with influences from outsiders, like the colonisers. They will learn and appreciate the fact that other societies in the Pacific also have dominant cultural groups who have substantial influence over those considered as minority groups.

Content Standard 2.3: Students will be able to investigate and analyse the different ways of transmitting and diffusing culture, and evaluate their impact on the development and maintenance of societies.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.2.3.1. Examine the methods by which societies of PNG transmit culture across time, such as storytelling, songs, religious services, food, clothing, rituals, holidays, etc.</p> <p>9.2.3.2. Evaluate and compare the culture of the politically and economically dominant groups with the culture of minority groups in PNG.</p> <p>9.2.3.3. Discuss and reflect on cultural practices and their association with holidays celebrated by different cultures and religions in PNG.</p> <p>9.2.3.4. Survey the ways in which a society dealt with the introduction or influence of another society's culture.</p>	<p>10.2.3.1. Examine the methods by which different societies of the Pacific Region transmit culture across time.</p> <p>10.2.3.2. Evaluate and compare the culture of the politically and economically dominant groups with the culture of minority groups in different societies of the Pacific Region.</p> <p>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.</p> <p>10.2.3.4. Discuss the ways in which Pacific Region countries dealt with the introduction, influence, or imposition of colonisers' cultures.</p>

Unit 4: Development and Sustainability of Societies

In this unit, students will learn about individuals and groups in the communities having similar backgrounds and cultures. Societies are structured and bound together with related ethnicities and ideologies. Individuals and groups contribute to the development, sustainability, and welfare of societies by performing different roles and responsibilities. Governments play a pivotal role in the development and sustainability of societies.

In grades 9 and 10, students will examine how different governments contribute towards social, economic, political, cultural, and religious changes to sustain the lives of the people of the Pacific Region, including PNG. Students will examine the nature of these changes, policies, and plans in maintaining the status quo and initiating change. Students will also learn about churches as change agents and how they have brought changes and influenced the lives of the people of the Pacific Region. Furthermore, they will investigate cases where military force was used to bring changes or maintain the status quo, and justify the reasons.

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

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.2.4.1. Examine how different governments have contributed to change or sustainability in PNG.</p> <p>9.2.4.2. Analyse how the actions of different governments impacted PNG.</p> <p>9.2.4.3. Examine how governments of different countries react and contribute to social, economic, political, cultural or religious change and sustainability in PNG.</p> <p>9.2.4.4. Identify individuals and groups who have made important contributions towards promoting change or sustainability in PNG and evaluate the nature of their contributions.</p> <p>9.2.4.5. Examine the roles and responsibilities of religions in bringing about change or in maintaining the status quo in PNG.</p> <p>9.2.4.6. Analyse cases where military was used or being used to bring about change or maintain the status quo in PNG.</p> <p>9.2.4.7. Evaluate the sustainability and change policies and plans of different governments in PNG.</p> <p>9.2.4.8. Justify the intervention of outside forces or governments in promoting change or maintaining stability in PNG.</p>	<p>10.2.4.1. Examine how different governments have contributed to change or sustainability in the Pacific Region.</p> <p>10.2.4.2. Analyse how the actions of different governments have impacted the Pacific Region.</p> <p>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 region.</p> <p>10.2.4.4. Evaluate the sustainability or change policies and plans of different governments in the Pacific Region.</p> <p>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.</p> <p>10.2.4.6. Examine the roles and responsibilities of religions in bringing about change or in maintaining the status quo in the Pacific Region.</p> <p>10.2.4.7. Analyse cases where military force was used or being used to bring about change or maintaining the status quo in the Pacific Region.</p> <p>10.2.4.8. Justify the intervention of outside forces or governments in promoting change or maintaining stability in the Pacific Region.</p>

Unit 5: Economic Needs and Wants

In this unit, students will learn about how individual and group decisions are influenced by economic needs and wants. People have many needs and wants. However, it may not be possible for them to produce or procure all the goods and services they want at the same time. They will have to decide on their priorities, taking into account their constraints and what is available, and procure what is important or necessary. Making informed decisions, prioritization of needs and wants, being aware of others needs and wants, being aware of personal and others economic constraints, and the market forces, particularly supply and demand, will ensure that wise decisions are made to satisfy individual, group, family, community, and national needs and wants. These are important economic decision-making, reasoning, analytical, and evaluation skills that all students should develop and become proficient in so that they can conduct themselves in a responsible wise, considerate, and caring manner.

In grades 9 and 10, students will study how economic colonization had an impact on the lives of individuals, groups, and governments in the Pacific. They will examine how economic decisions made by certain individuals, institutions, and governments had impacted the people and environment in the Pacific Region. Students will use maps and other geographical tools to explain economic routes of explorers in the Pacific. Furthermore, they will analyse and evaluate how people developed and implemented various economic systems in the Asian Region. They will explain the factors that have influenced migration and movement of people in the Pacific and Asian Regions. They will also analyse and critique the conflicts resulting from economic factors. And use research skills to investigate why foreigners migrate to PNG and their reasons for establishing small to large scale businesses here.

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

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.2.5.1. Map the routes of early explorers and explain their economic activities in various parts of PNG and the Pacific Region.</p> <p>9.2.5.2. Assess and analyse economic reasons for the colonisation of PNG and other Pacific Regions.</p> <p>9.2.5.3. Explain the ways in which economic factors have influenced people from other countries to migrate to PNG and the Pacific Region.</p> <p>9.2.5.4. Use research skills to investigate and ascertain the economic reasons of an individual or group for migrating to PNG.</p> <p>9.2.5.5. Use research skills to investigate the reasons for a business firm or a multinational corporation company doing business in PNG.</p>	<p>10.2.5.1. Assess and analyse the development of various economic systems in the Asian Region.</p> <p>10.2.5.2. Examine the impact of economic decisions that individuals, groups, and governments make on people and the environment.</p> <p>10.2.5.3. Explain the ways in which economic factors have influenced the movement of people in the Asian Region.</p> <p>10.2.5.4. Analyse the role of economic factors in conflicts and decisions to use military force in the, Asian Region.</p>

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

In this unit, students will learn about how geographical factors influence historical events, people, places, and environment overtime. They will analyse and reflect on how these geographical factors hinder development and make informed decisions by developing strategic plans to improve and make changes in future. Students will apply their knowledge of the geographic themes (location, place, movement, region, and human and environment interactions) and skills to understand the interrelationships among people, places, and environment overtime.

In grades 9 and 10, students will study the significance and purpose of creating the Kokoda Track and other similar tracks during World War II. They will use mapping skills to interpret geographical systems of the Asian Region. Students will also identify the factors that impact geographical systems on the social, economic, political, religious and cultural development of the Pacific. They will examine the geographical challenges faced by early explores and immigrants to PNG. They compare the past and the present in terms of the rate of development in the Pacific region. Students at this level will explain how development perspectives are influenced by regional and global policies, priorities, and agendas.

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

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.2.6.1. Explain the importance of Kokoda Track and other Tracks in Papua New Guinea in the World War II battles.</p>	<p>9.2.6.1. Investigate the challenges posed by the sea and its associated elements in the migration of people in prehistoric times.</p>
<p>9.2.6.2. Examine the challenges posed by mountains, rivers, swamps, rain, and other elements in the exploration of Papua New Guinea by early explorers.</p>	<p>9.2.6.2. Examine the challenges posed by mountains, rivers, swamps, rain, and other elements in the exploration of Papua New Guinea by early explorers.</p>
<p>9.2.6.3. Investigate the challenges posed by the sea and its associated elements in the migration of people in prehistoric times.</p>	<p>9.2.6.3. Explain the importance of Kokoda Track and other Tracks in Papua New Guinea in the World War II battles.</p>
<p>9.2.6.4. Explain the causes and effects of tidal waves and tsunami on the coastal regions of Papua New Guinea.</p>	<p>9.2.6.4. Explain the causes and effects of tidal waves and tsunami on the coastal regions of Papua New Guinea.</p>

Unit 7: Historical Inquiry

In this unit, students will learn about historical inquiry and how it is carried out to investigate and understand historical phenomena. It is important that students understand the principles and processes of historical inquiry so that they can investigate, document, analyse, and interpret historical data, make appropriate inferences, and draw conclusions about people, places, and environment in the past. They will also draw useful lessons about places, people, resources, environment, and social, political, and economic systems in the past and make appropriate suggestions for development and progress in the future.

In grades 9 and 10, students will explain how major events are related to one another in time. They will collect and use a variety of data to interpret and understand different historical phenomena.

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

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.2.7.1. Collect and analyse information on an historical issue or event that occurred in PNG in the past.</p> <p>9.2.7.2. Analyse the causes and the effects of events that occurred in PNG and the likely influence on future events.</p> <p>9.2.7.3. Identify and examine the roles of individuals and groups who were involved in an event or an issue that had an important impact and influence on PNG's development and progress.</p> <p>9.2.7.4. Use symbols, photographs, narratives, recordings of events, films/ videos and other relevant information to reconstruct and interpret an important event that occurred in the history of PNG.</p>	<p>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.</p> <p>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.</p> <p>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, perspectives, behaviour, relationships, survival and belief system.</p> <p>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.</p> <p>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.</p>

Strand 3: Political Science

Rationale

Members of a society have many wants, which they hope to satisfy. Some of these wants will be satisfied through the economic, family, group, educational, and religious systems. Wants that cannot be satisfied by any of these systems are channelled to the political system. As people's wants enter the political system for satisfaction, they become demands. These demands are screened through the decision-making and other political processes, formal and informal organisations, political units, communities, and citizens. The binding decisions affect social, economic, political, cultural, and religious systems and the participants in them, generating positive and negative support for political systems, regimes, or governments. A good understanding of these key concepts and ideas of Political Science is essential for students to interpret and develop a good understanding of political ideologies and their principles, privileged practices and discourses, and their consequences on the participation of citizens in the political arena and on the satisfaction of citizens' wants and needs. Knowledge about the structures of power, authority, and governance and their evolving functions in the contemporary society is essential if young citizens are to develop civic responsibilities. Young people become more effective citizens and problem solvers when they know how wards, districts, provincial and national governments, and international organisations function and interact.

Political ideologies and bilateral and multilateral relationships are introduced at this level beginning with the study of the democratic ideology and governments. Students will examine democratic governments, their structures, functions, their protection and safeguarding of the rights of all citizens, their development and fostering of bilateral and multilateral relationships, and their support for people to people relationships. Students are expected to master the following knowledge, skills, values and attitudes to prepare them for careers, higher education, and citizenship.

Evidence Outcomes

By the end of grades 9 and 10, all students can:

- identify and examine the main principles of democracy.
- use research skills to investigate the history of democracy in Papua New Guinea.
- appraise the purpose(s) of a democratic government and illustrate and explain its structure.
- identify and examine the roles and responsibilities of democratic governments.
- analyse the processes of creating, maintaining, or changing a democratic government.
- explain the processes and the principles of decision and law making

in a democracy.

- evaluate how citizens' demands are addressed and met through the democratic government processes.
- examine the legal bases (for example the National Constitution) for the democratic government in Papua New Guinea and other countries, including their functions.
- identify the different arms of a democratic government and assess their principles and functions.
- consider historical and contemporary examples of how the branches of government have checked each other and the consequences.
- predict how a democratic nation like PNG will function without checks and balances of the powers of the three branches of government.
- recognize and interpret national symbols, patriotic activities, and other representations of different democratic nations.
- identify and examine the purposes, roles, structures, principles, and practices of different democratic alliances and groupings
- describe how ward councillors, Local Level Government (LLG) presidents and provincial members and national leaders exemplify the ideals of the democratic ideology.
- examine different civic responsibilities.
- articulate the laws on human rights in PNG and create contexts to appropriately use each.
- describe how ward councillors, Local Level Government (LLG) presidents and provincial members and national leaders exemplify the ideals of the communities they represent.
- analyse the social, economic, cultural, and religious principles and practices in a democratic nation or amongst democratic nations.
- identify and evaluate PNG's multilateral and bilateral relationships with other democratic countries.
- identify and analyse the purpose, impact, and the outcomes of these relationships in terms of addressing national development aspirations and meeting the demands of citizens.
- identify and analyse the factors that hinder or promote bilateral and multilateral relationships between different democratic countries.
- identify and appraise the different ways people from different democratic countries relate to each other.
- identify and analyse the factors that hinder and promote people to people relationships in democratic contexts.
- explain 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 a disability, and other marginalized and vulnerable groups are enforced in PNG.

Unit 1: Government Systems

A good understanding of key concepts and ideas of government systems is essential for students to interpret and develop a good understanding of political ideologies and their principles, privileged practices and discourses, and their consequences on the participation of citizens in the political arena and on the satisfaction of citizens' wants and needs. Essential political concepts and core ideas taught in grade 9 are progressively reinforced from grade 10 to grade 12. Students are provided opportunities to examine the principles and practices of democracy, communism, and socialism.

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

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.3.1.1. Identify and examine the main principles of democracy.</p> <p>9.3.1.2. Use research skills to investigate the history of democracy in Papua New Guinea.</p> <p>9.3.1.3. Explain the purpose(s) of a democratic government.</p> <p>9.3.1.4. Illustrate and explain the structure of a democratic government.</p> <p>9.3.1.5. Identify and examine the roles and responsibilities of democratic governments.</p> <p>9.3.1.6. Analyse the processes of creating, maintaining, or changing a democratic government (for example, using the election process and votes of no confidence).</p> <p>9.3.1.7. Explain the processes and the principles of decision and law making in a democracy.</p> <p>9.3.1.8. Evaluate how citizens' demands are addressed and met through the democratic government processes.</p> <p>9.3.1.9. Differentiate between a Commonwealth and a Republic democratic country.</p>	<p>10.3.1.1. Examine the legal bases (for example the National Constitution) for the democratic government in Papua New Guinea and other countries.</p> <p>10.3.1.2. Identify the different arms of a democratic government (Legislative, Executive, and Judicial) and describe their principles and functions.</p> <p>10.3.1.3. Explore historical and contemporary examples of how the branches of government have checked each other and the consequences.</p> <p>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.</p> <p>10.3.1.5. Analyse the roles and responsibilities that parliamentarians play and their impact on local and national development.</p>

Unit 2: Political Ideologies and Systems

In order for students to clearly understand the essence of studying political systems and ideology they must be able to articulate the characteristics that underpin the belief systems, behaviours, traditions, and structures of political systems and ideas of various types of government. They develop that understanding from grade 9 by examining the characteristics of political systems and ideologies.

Content Standard 3.2: Students will be able to identify and interpret the belief systems, representations, behaviours, traditions, structures, practices, and other characteristics that signify political systems and represent their ideologies.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.3.2.1. Recognize and interpret national symbols and other representations of different democratic nations (for example, national flag, national crest, national anthem, national monuments, Independence Day, infrastructure such as buildings).</p> <p>9.3.2.2. Recognise and interpret patriotic activities and other representations (for example, the National Pledge (Pledge of Allegiance), salute to the national flag, and the national anthem) of different democratic nations.</p> <p>9.3.2.3. Identify and examine the purposes, roles, structures, principles, and practices of different democratic alliances and groupings (such as the Commonwealth of Nations, NATO, ANZAC, and South Pacific Forum).</p> <p>9.3.2.4. Differentiate between a Prime Minister, Governor-General, and a President of a democratic country.</p>	<p>10.3.2.1. Describe how ward councillors, Local Level Government (LLG) presidents, provincial members, and national leaders exemplify the ideals of the democratic ideology.</p> <p>10.3.2.2. Analyse the social, economic, cultural, and religious principles and practices in a democratic nation or amongst democratic nations.</p> <p>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.</p> <p>10.3.2.4. Compare the development policies, plans, programs, and activities of developed and developing democratic countries.</p> <p>10.3.2.5. Collect, analyse, and interpret data on the social, political, and economic indicators of democratic countries.</p> <p>10.3.2.6. Develop and interpret the social, economic, and political profile of one developed and one developing commonwealth country.</p>

Unit 3: International Relations

Drawing from political systems and ideologies, bilateral and multilateral relationships are introduced at this level with an emphasis on relationships between governments and people from different countries. It is important for students to understand that people and countries depend on each other for many things, including trade. The development and prosperity of nations and people depend, to a greater extent, on the development and fostering of mutually beneficial social, economic, political, and cultural relationships amongst the nations and peoples of the world. From grade 9 to grade 12, bilateral and multilateral relationships will be a core focus of inquiry and learning by students.

Content Standard 3.3: Students will be able 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.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.3.3.1. Identify and evaluate Papua New Guinea’s multilateral and bilateral relationships with other democratic countries.</p> <p>9.3.3.2. Identify and analyse the purpose, impact, and the outcomes of these relationships in terms of addressing national development aspirations and meeting the demands of citizens.</p> <p>9.3.3.3. Provide examples of goods and services derived from these relationships and evaluate their importance, relevance, and consequences on the development of Papua New Guinea.</p> <p>9.3.3.4. Use research skills to investigate conflicts arising out of Papua New Guinea’s bilateral and multilateral relationships with other countries (for example the trade conflict between Papua New Guinea and Fiji over the export of bully beef meat, rice monopoly by Trukai Rice).</p> <p>9.3.3.5. Analyse Papua New Guinea’s trade agreements with other democratic nations.</p> <p>9.3.3.6. Identify and analyse the factors that hinder or promote bilateral and multilateral relationships between different democratic countries.</p> <p>9.3.3.7. Evaluate the role of media in promoting and protecting bilateral and multilateral relationships.</p>	<p>10.3.3.1. Identify and appraise the different ways people from different democratic countries relate to each other.</p> <p>10.3.3.2. Examine the purpose, impact, and the outcomes of these relationships.</p> <p>10.3.3.3. Evaluate cases of conflict between people of different democratic nations in terms of the purpose(s), impact, and outcomes.</p> <p>10.3.3.4. Identify and analyse the factors that hinder and promote people to people relationships in democratic contexts.</p> <p>10.3.3.5. Evaluate the role of media in promoting, protecting, or undermining people to people relationships in democratic contexts.</p>

Unit 4: Civics and Citizenship

In this unit, students will examine civics and citizenship, and other dimensions of political systems, including respect for and protection of human rights. Citizens play critical roles in the creation and sustainability of government systems, the promotion and fostering of the principles of government, and performance of important responsibilities essential for developing and sustaining cohesive societies and systems of government.

Grade 9 students will focus on citizenship values, core principles of democracy, and their influence on people's thinking, perceptions, and behaviours, and the way government operates and relates to people. They will examine the PNG Constitution as a core pillar of a democratic nation and a focal point for the conduct of government affairs and the promotion and endorsement of the fundamental democratic values and principles, and rights and obligations of citizens. Grade 10 students, on the other hand, will examine human rights and their promotion and protection using different legal and policy frameworks.

Content Standard 3.4: Students will be able to evaluate and elaborate on the roles, responsibilities, and the rights of citizens in different government systems.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.3.4.1. Describe what is meant by citizenship.</p> <p>9.3.4.2. Identify examples of honesty, courage, fairness, loyalty, patriotism and other character traits seen in PNG history or elsewhere.</p> <p>9.3.4.3. Explain and apply “good citizenship” traits within the school and community using the elements of fair play, good sportsmanship, the idea of treating others the way you want to be treated, and being trustworthy.</p> <p>9.3.4.4. Describe the origins and evaluate the continuing influence of key ideals of the democratic forms of government, such as individual human dignity, liberty, justice, equality, and the rule of law at local, provincial, national, and global levels.</p> <p>9.3.4.5. Examine the role the PNG Constitution plays in the governance of PNG and discuss about how it impacts day to day life.</p>	<p>10.3.4.1. Examine policies and laws on human rights in PNG and create contexts to appropriately implement or apply each policy or law.</p> <p>10.3.4.2. Identify and evaluate the types of human rights spelt out in the PNG Constitution.</p> <p>10.3.4.3. Probe the difference between inalienable rights and other rights, and how each is promoted and protected using the legal system.</p> <p>10.3.4.4. Investigate and report on how the rights of women and girls, people with a disability, and other marginalized and vulnerable groups are enforced in PNG.</p> <p>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.</p>

Strand 4: Economics

Rationale

Every society faces a conflict between unlimited wants and limited resources. Because of this situation, human beings have tried to develop methods to produce and distribute resources in order to meet their needs and wants. Individuals, families, businesses, and governments must make complex economic choices as they decide what goods and services to provide and how to allocate limited resources for distribution and consumption. In a global economy marked by rapid technological change, students must learn how to be better producers, consumers, and responsible economic citizens.

Taxation system and its role in meeting the demands of the citizens, the importance of labour as a means of production, its management, and regulation, importance of technology, markets, and trade in the distribution of goods and services, regulation of price of goods and services, and the influence of belief systems and economic ideologies on economic systems and on the production and distribution of resources are taught at this level of education.

Evidence Outcomes

By the end of grades 9 and 10, all students can:

- explain the Papua New Guinean tax system and regulations.
- examine the different types of taxes and their purposes.
- appraise how money collected from taxes is used to meet the demands of citizens.
- identify and analyse the role and the impact of labour unions in the processes of production and the distribution of resources.
- explain the operation of common financial institutions (such as stocks and bonds) and financial institutions such as credit companies, banks and insurance companies.
- assess the role of incentives on the economic behaviour of consumers, producers, workers, savers, investors, and citizens.
- determine how decisions about spending and production made by households, businesses and governments determine the nation's level of income, employment, and prices.
- elaborate on the changes in the division of labour from hunting and gathering societies to farming communities to urban societies.
- discuss the importance of labour in the production and distribution of resources.
- analyse labour laws in Papua New Guinea in terms their promotion of workers' interest responsibilities, and obligations.
- evaluate the different ways government institutions regulate the money.

- critically reflect on the role of the Bank of Papua New Guinea in managing money and implementing and monitoring the monetary policy.
- appraise the monetary and fiscal policies of the government.
- analyse the impact of salary and wages on the ability of governments to provide goods and services.
- investigate how the budgetary policy and the reserve system's monetary policies influence overall levels of employment, interest rates, production, and prices.
- justify the importance of trade in the exchange of goods and services.
- identify and evaluate the different ways people trade goods and services.
- examine global economic interdependence and competition.
- investigate how different types of technologies are used to satisfy needs and wants and their purposes.
- justify the importance of the internet in the trade of goods and services.
- evaluate the advantages, disadvantages, and the barriers for trading goods and services using different types of technology.
- analyse and interpret Papua New Guinea's Five National Goals and Directive Principles and their influence on thinking, economic policies and practices, on economic relationships, and on the production and distribution of resources.
- critically analysis the thinking behind the concept of 'inclusive development' and defend its social and economic principles.
- articulate the capitalist ideology and analyse its fundamental principles.
- appraise how capitalist principles influence the production, distribution, and consumption of resources.

Unit 1: Factors of Production and Consumption

This unit allows students to learn about the production and consumption of goods and services. There are many factors that influence the production and consumption of goods and services. These include scarcity, supply and demand, consumer behaviours, availability of markets, and regulation of products and services. It is important that students not only learn about the factors of production and consumption, they must also acquire proficiencies required for the production of goods and services that meet the expectations of buyers and consumers. Moreover, they need this knowledge to enable them to understand and monitor the market forces and make informed economic decisions, predictions, and judgements about the demand for goods and services.

Students in grade 9 are consumers of goods and services. When they purchase goods and services, they pay Goods and Services Tax (GST). It is vital for them to learn about the taxation system. Revenue collected from taxes and other sources enables governments to deliver goods and services to their citizens. Students will examine the processes involved and evaluate the usage of the revenue collected from taxes.

Production and consumption of goods and services in an economy are also influenced by the Labour Unions. Grade 10 students will evaluate the functions of labour unions and their impact on the production and consumption of goods and services in the economy. They will be able to recommend strategies for labour unions to improve their services to employees and contribute meaningfully to the national economy.

Content Standard 4.1: Students will be able to identify and analyse the factors that influence the production, distribution and consumption of goods and services.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.4.1.1. Examine the different types of taxes and their purposes.</p> <p>9.4.1.2. Analyse the Papua New Guinean tax system and regulations.</p> <p>9.4.1.3. Investigate how money collected from taxes is used to meet the demands of citizens.</p>	<p>10.4.1.1. Identify and analyse the role of labour unions in the processes of production and the distribution of resources.</p> <p>10.4.1.2. Examine the impact of labour unions on the production and distribution of resources.</p> <p>10.4.1.3. Explain the different ways labour unions contribute to increasing supply or vice versa in a market economy.</p> <p>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.</p> <p>10.4.1.5. Evaluate the practices of trade unions in terms of how they contribute or hinder the production and distribution of resources and affect the economic system.</p> <p>10.4.1.6. 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.</p>

Unit 2: Methods of Production and Distribution

This unit focuses on the processes and methods of production and distribution of goods and services in an economy. Grade 9 students will learn about how financial institutions aid in the production and consumption of goods and services. They will further analyse the impact of individual's, group's, and the governments' decisions on the level of employment, income, and prices.

Production and consumption are also made possible by the labour force of a country. Therefore, grade 10 students will study the role and quality of the workforce required for the production and distribution of goods and services. They will evaluate the labour laws to ensure workers are treated fairly and according to their performance and output.

Content Standard 4.2: Students will be able to analyse and discuss the methods and process of production and distribution of goods and services.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.4.2.1. Explain the operation of common financial institutions (such as stocks and bonds credit companies, banks and insurance companies).</p> <p>9.4.2.2. Explain and critically reflect on the role of incentives on the economic behaviour of consumers, producers, workers, savers, investors, and citizens.</p> <p>9.4.2.3. Examine how decisions about spending and production made by households, businesses and governments determine the nation's level of income, employment, and prices.</p> <p>9.4.2.4. Use basic concepts (such as supply and demand, production, distribution and consumption; labour, wages, and capital; inflation and deflation; market economy and command economy) to compare and contrast local, regional, national economies across time and at the present time.</p>	<p>10.4.2.1. Examine the changes in the division of labour from hunting and gathering societies to farming communities to urban societies.</p> <p>10.4.2.2. Justify the importance of labour in the production and distribution of resources.</p> <p>10.4.2.3. Evaluate labour laws in Papua New Guinea in terms of their promotion of workers' interests, responsibilities, and obligations.</p> <p>10.4.2.4. Explain how the quality of workers could be improved in order to boost production and economic outcomes.</p> <p>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.</p> <p>10.4.2.6. Analyse the cost of labour and explain its impact on the production, distribution, and consumption of goods and services.</p>

Unit 3: Regulation of Production, Distribution, and Consumption

This unit focuses on the regulation of production, distribution, and consumption of goods and services. Different regulatory mechanisms are formulated and implemented at different levels of an economic system to control and manage economic activities, money, sales and marketing, supply and demand, producer and consumer behaviours, and production, distribution, and consumption of products to ensure that there is prudence, compliance, fairness, accountability, transparency, equity, and mutual respect, cohesion, consistency, and sustainability in the economic systems.

Grade 9 students will appraise fiscal and monetary policies, analyse the impact of wages on the government’s ability to deliver goods and services, investigate how salaries and wages are regulated, controlled, and managed, and evaluate the impact of this on the costs of production and consumption. Grade 10 students will examine the effect of economic policies, allocation of goods and services, and regulation of economic activities on the economy.

Content Standard 4.3: Students will be able to analyse and elaborate on how market forces and other mechanisms are used to regulate the production, representation, distribution, and consumption of goods and services.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.4.3.1. Evaluate the different ways government institutions regulate the money.</p>	<p>10.4.3.1. Explain how budgetary and monetary policies influence overall levels of employment, interest rates, production, and prices.</p>
<p>9.4.3.2. Explain the role of the Bank of Papua New Guinea in managing money and implementing and monitoring the monetary policy.</p>	<p>10.4.3.2. Analyse different methods that can be used to allocate goods and services.</p>
<p>9.4.3.3. Appraise the monetary and fiscal policies of the government in terms of their regulation of money and its expenditure, and overall impact on production, distribution, and consumption of goods and services.</p>	<p>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.</p>
<p>9.4.3.4. Analyse the impact of salary and wages on the ability of governments to provide goods and services.</p>	<p>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.</p>
<p>9.4.3.5. Identify and analyse different ways salaries and wages are regulated and controlled to minimize the inflationary effects on the costs of production, distribution, and consumption.</p>	
<p>9.4.3.6. Analyse the impact of printing more or less money on the economy.</p>	

Unit 4: Satisfying Needs and Wants

Resources are scarce and inadequate to meet people's wants and needs. The demand for goods and services is growing at an exponential rate. Meeting this demand continues to be a challenge for all countries globally. Different mechanisms have been developed and will continue to be developed to mass produce existing and new products to meet the increasing demands of people. Mechanisms such as mass production of products, bilateral and multilateral trade, barter systems, e-business and commerce, and research and development of new products will ensure availability and effective circulation, increased coverage, and equitable access to products.

Students will build on what they had learnt about international relations and trade, and production, distribution, regulation, and consumption of goods and services. Grade 9 students will examine trade and how it is used throughout history and at present to satisfy people's wants and needs. Grade 10 students will focus on how goods and services are traded and procured using different types of technology, for example, using the internet and World Wide Web, to satisfy their needs and wants.

Content Standard 4.4: Students will be able to investigate and appraise the different mechanisms used by individuals, groups, families, institutions, communities, organisations and businesses to satisfy their needs and wants.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.4.4.1. Justify the importance of trade in the exchange of goods and services.</p> <p>9.4.4.2. Identify and evaluate the different ways people trade goods and services.</p> <p>9.4.4.3. Investigate and interpret patterns of trade from traditional societies, during the colonial era, and at present.</p> <p>9.4.4.4. Analyse the ways in which trade has contributed to change in selected societies or civilisations.</p> <p>9.4.4.5. Examine reciprocal influences of change in transportation and communication and change in trade and economic activities.</p> <p>9.4.4.6. Assess global economic interdependence and competition, using examples to illustrate their influence on national and international trade policies.</p>	<p>10.4.4.1. Examine how different types of technologies are used to satisfy needs and wants and their purposes.</p> <p>10.4.4.2. Evaluate the impact of different types of technologies on the lives of people (for example, television, poker machines, and internet).</p> <p>10.4.4.3. Examine the influence of television on the trade of goods and services by people.</p> <p>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.</p> <p>10.4.4.5. Justify the importance of the internet in the trade of goods and services.</p> <p>10.4.4.6. Identify the different goods and services that are traded on the internet and their benefits.</p> <p>10.4.4.7. Evaluate the advantages, disadvantages, and the barriers for trading goods and services using different types of technology.</p>

Unit 5: Economic Ideologies

Economic ideologies influence the economic and political systems of countries. Capitalism, socialism, liberalism, and communism are dominant political as well as economic ideologies. They provide the economic frameworks for the production, distribution, and consumption of goods and services. These economic ideologies are underpinned by essential economic principles which include individualism, competition, free trade, government vs private control of the means of production, distribution, and consumption, patriotism vs globalism, and welfare systems.

Grade 9 students will examine PNG’s economic ideology and principles manifested in national development frameworks such as the National Goals and Directive Principles, Vision 2050, Medium Term Development Strategies, and successive government’s development agenda and economic policies.

The organization of natural resources for the production and consumption of goods and services is not the same in all countries. They are influenced by various economic ideologies. Grade 10 students will study in-depth the capitalist economic ideology, its principles, and how it is practiced in different contexts.

Content Standard 4.5: Students will be able to interrogate and rationalise 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.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.4.5.1. Interpret Papua New Guinea’s Five National Goals and Directive Principles and investigate their influence on thinking, economic policies and practices, on economic relationships, and on the production and distribution of resources.</p> <p>9.4.5.2. Define the concept of ‘inclusive development’ and defend its social and economic principles.</p> <p>9.4.5.3. Appraise social and economic policies and practices in terms of the intentions and actual practice with regards to inclusive development.</p> <p>9.4.5.4. Propose ways in which production, distribution, and consumption of resources could be more inclusive.</p>	<p>10.4.5.1. Articulate the capitalist ideology and analyse its fundamental principles.</p> <p>10.4.5.2. Explain how capitalist principles influence the production, distribution, and consumption of resources.</p> <p>10.4.5.3. Analyse the management and control of the means of production in a capitalist economic system.</p> <p>10.4.5.4. Evaluate the strengths and the weaknesses of the capitalist economic system.</p> <p>10.4.5.5. Explain how financial institutions function in a capitalist economic system.</p> <p>10.4.5.6. Examine the influence of the capitalist system on the exchange of goods and services between governments and between people.</p>

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.4.5.5. Identify and critically reflect on the social and economic conditions of individuals and groups who are victims of inequality and non-inclusive development.</p> <p>9.4.5.6. Identify and interpret symbols, infrastructure, social, economic, political, and cultural perspectives and practices, attitudes and behaviours, and policies and plans that manifest Papua New Guinea's approach and commitment to its Five National Goals and Directive Principles.</p> <p>9.4.5.7. Interpret the purposes, intentions, processes, and outcomes of Papua New Guinea's development policies (for example Vision 2050, Medium Term Development Strategy, National Sustainable Strategy, Monetary and Fiscal Policies, etc.) and compare these with economic values and principles.</p> <p>9.4.5.8. Examine the effect of global social, economic, political, and cultural development principles and agenda on the implementation and the realization of Papua New Guinea's economic principles and development aspirations.</p>	<p>10.4.5.7. Evaluate producer and consumer behaviour patterns in capitalist economies.</p> <p>10.4.5.8. Illustrate how private enterprise and business organizations operate in a capitalist environment.</p>

Strand 5: Environment

Rationale

It is important that students are educated to be good stewards of the environment. People and environment need each other to thrive and survive. There is an important symbiotic relationship between people and environment. Protection of environment and wise use of its vast resources is key to human survival and the sustainability of environment for future generations. To instil good stewardship in students, learning opportunities should be provided both inside and outside of the classroom for students to study its ecosystems, living and non-living things, natural and physical structures, and processes and cycles. Moreover, by studying environment, students will appreciate the interplay of both the biotic and abiotic components in sustaining the earth. Importantly, students will value the interdependence between human and natural systems, and exercise respect towards the natural environment while being conscious of depletion and wastage of resources and environment degradation.

The exploitation of different types of fuels for use to generate energy and its impact on people, communities, and the environment is the main focus of environmental study in grades 9 and 10. Environmental sustainability and population dynamics are also covered to enable students to appreciate the relationship and the importance of these dimensions to the health of the environment.

Evidence Outcomes

At the end of grades 9 and 10, all students can:

- research and document the benefits and the drawbacks of the commonly used fuels (e.g. fossil fuels, nuclear fuels etc.) and discuss some of the alternative fuels (wind, solar, ethanol, etc.) including the required technology, viability, pollution problems, and implementation problems.
- investigate the origin of fossil fuels and highlight the problems associated with humans' dependence on this energy.
- elaborate on how different resources are produced, rates of use, renewal rates, and limitations of sources.
- examine 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.
- explain heat transfer in the atmosphere and its relationship to meteorological processes such as pressure, winds, evaporation, and precipitation.
- compare the characteristics of the ocean: composition; and lateral and vertical motion of water and their effects on temperature and nutrient distribution.
- investigate the ocean's biological zonation (distribution of organism

- in biogeographic zones).
- illustrate and interpret the processes of the rock cycle.
 - categorise the type and composition of various minerals.
 - assess the processes of degradation by weathering and erosion and their effects.
 - discuss the processes of mountain building and movements by volcanism, diastrophism (folding and faulting), and earthquakes.
 - 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, settlement patterns, etc.
 - analyse 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).
 - explain and illustrate the concept of carrying capacity in an ecosystem.
 - deconstruct the Sustainable Development Goals (SDGs) 2030 and ascertain the purposes and intentions, underlying assumptions, contradictions, relationships between different countries and people, and relationships between people and environment, etc.
 - appraise common problems related to water quality; regarding conservation, usage, supply, treatment and pollutants (point and non-point pollution).
 - investigate and explain the notion of “ecological foot print”.

Unit 1: Resources and Environments

People depend on the environment around them for resources and existence. The study of resources and environments enables students to understand that different resources are found in different environments and have a life span. Moreover, students will be aware of the critical role that environment plays in the sustenance of life. Resources must be used wisely and replenished and sustained for the benefit of all living things. Resources in PNG have been misused at an alarming rate without consideration for future generations.

Therefore, it is important for grades 9 and 10 students to learn about different resources and their uses. Resources renewal rates are not the same, some are renewable while others are non-renewable. Grade 9 and 10 students will examine the different types of resources and their uses, impact of resource exploitation, and recommend strategies that will ensure the wise use of resources.

Content Standard: 5.1 Students will be able to examine and make sense of different types of resources and environments.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.5.1.1. Examine the different types of rocks as resources.</p> <p>9.5.1.2. Investigate fertile soil as a resource and the processes of soil formation.</p> <p>9.5.1.3. Investigate the commonly used fuels such as fossil fuels and nuclear fuels.</p> <p>9.5.1.4. Explain the origin of fossil fuels and analyse the problems associated with humans' dependence on this form of energy.</p> <p>9.5.1.5. Examine alternative fuels such as wind, hydro, ethanol, and geothermal.</p>	<p>10.5.1.1. Examine how different resources are produced, rates of use, renewal rates, and their limitations.</p> <p>10.5.1.2. Investigate how energy and other resource utilization impact the environment and recognise that individuals as well as large entities (such as businesses and governments) have impact on energy efficiency.</p> <p>10.5.1.3. Reflect on the relationship between energy consumption and the living standards of societies.</p> <p>10.5.1.4. Evaluate the need for informed decision-making on resource utilization in terms of energy and water usage allocation, conservation, food and land, and long-term depletion.</p>

Unit 2: The Earth and its Systems

The Earth is known as the habitat for humanity and it is the only planet in the solar system where there is life and organisms co-exist with each other. Understanding the processes and systems that operate together to hold the earth in its position is vital for the continuous supply of finite resources.

Learning about the interaction between heat in the atmosphere and the climatological processes will help grade 9 students to make predictions about the weather. Moreover, it is important for students to investigate the characteristics and the biotic zones of the oceans so that they can assess the interconnection between different systems.

Similarly, grade 10 students will learn about the relationship between the different physical systems of the earth. They will be able to examine the processes and the physical features formed as a result of these processes. Students will analyse the effects of these processes and recommend strategies in preparation for and during natural hazards such as earthquakes, landslide, and volcanoes.

Content Standard 5.2: Students will be able to investigate and explain the physical dynamics of the earth that result in the flow of energy and cycling of matter within an ecosystem to demonstrate that earth is one interconnected system.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.5.2.1. Explain heat transfer in the atmosphere and its relationship to meteorological processes such as pressure, winds, evaporation and precipitation.</p> <p>9.5.2.2. Investigate the characteristics of the ocean; composition and lateral and vertical motion of water and their effects on temperature and nutrient distribution.</p> <p>9.5.2.3. Examine the ocean's biological zonation (distribution of organism in biogeographic zones).</p>	<p>10.5.2.1. Illustrate and interpret the processes of the rock cycle.</p> <p>10.5.2.2. Categorise the type and composition of various minerals.</p> <p>10.5.2.3. Examine the processes of degradation by weathering and erosion and their effects.</p> <p>10.5.2.4. Use research skills to investigate the processes of mountain building and earth movements by volcanism, diastrophism (folding and faulting), and earthquakes.</p>

Unit 3: Biological Dynamics of the Earth

The earth’s geo-physical systems are natural processes that are functional in bio-physical systems that operate in a harmonious cycle. These systems are interconnected and interdependent, meaning, one cannot exist without the other.

The study of these biological processes will help grade 9 students to understand the critical importance of the consequences of interrupting natural cycles. They will be able to analyse the connectivity and interdependency between the biological systems to the social and economic systems. Students will evaluate the impacts of interpreting natural cycles on plants and animals as well as humans, and plan measures to minimise human activities that cause interruptions to the natural cycles.

Skills and knowledge learnt in grade 9 will be reinforced and expanded in grade 10. It is important for grade 10 students to learn and appreciate the interconnection and interdependency between physical, social, and economical systems. They will study specific ecosystems and their natural cycles so that they will become agents of change in protecting our natural environment by making awareness on the importance of the natural environment and its cycles. And support and implement the policies, regulations and programs aimed at conserving the environment.

Content Standard 5.3: Students will be able to investigate and interpret the biological dynamics of earth.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.5.3.1. Analyse the consequences of interrupting natural cycles.</p> <p>9.5.3.2. Examine the interconnections and interdependency of ecological, social and economic systems.</p> <p>9.5.3.3. Assess how the health of these systems determines the sustainability of natural and human communities at local, provincial, national and global levels.</p> <p>9.5.3.4. Investigate how specific adaptations can help organisms survive in their environment.</p>	<p>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, settlement patterns, etc.</p> <p>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).</p> <p>10.5.3.3. Explain and illustrate the concept of carrying capacity in an ecosystem.</p> <p>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.</p>

Unit 4: Environmental Change and Sustainability

Processes of change occur both in the natural and physical environments. Some changes happen through natural processes and cycles of change while others are man-made through changes made to the environment by people. Some changes are slow while others are rapid. Some are positive and yet others are negative. Careful investigation and analysis of changes will enable students to critique and make sense of the impact of human activities on the environment. They will then make predictions of the impact and consequences of change in the future, and come up with sustainable mitigation strategies for caring for the environment and promoting the symbiotic relationship between people and environment.

In grade 9, students will specifically evaluate the causes of air pollution and loss of soil fertility, which contribute to the extinction of wildlife and, of course, impact on the human population. Students will critique environment sustainability goals in terms of the actions required for protecting and reducing problems identified, and supporting the implementation of environment protection and sustainability policies, programs, and activities.

Grade 10 students will study water and its quality in the past, present, and what it will be like in the future. Water is a renewable resource, however, if it is not used wisely and sustainably, it will eventually become a non-renewable resource. Students will carefully analyse what the government has done and its policies for protecting our fresh waters and rivers as well as the entire natural environment. They will be prepared to promote strategies and programs targeted at protecting and caring for the environment.

Content Standard 5.4: Students will be able to critique and make sense of the impact of human activities on the environment.

Grade 9 Benchmarks	Grade 10 Benchmarks
<p>9.2.4.1. Evaluate the common problems related to air quality; regarding automobiles, industry, and natural emissions.</p>	<p>10.2.4.1. Appraise common problems related to water quality; regarding conservation, usage, supply, treatment and pollutants (point and non-point pollution).</p>
<p>9.2.4.2. Analyse the common problems related to the loss of fertile soil.</p>	<p>10.2.4.2. Research how political systems influence environmental decisions.</p>
<p>9.2.4.3. Investigate the common problems related to the loss of biodiversity.</p>	<p>10.2.4.3. Examine the effect of large population and affluence on the carrying capacity of the environment.</p>
<p>9.2.4.4. Deconstruct the Sustainable Development Goals (SDGs) 2030 and ascertain their purposes and intentions, underlying assumptions, contradictions, relationships between different countries and people, relationships between people and environment.</p>	<p>10.2.4.4. Investigate and explain the notion of “ecological succession and foot print”.</p>

Assessment, Monitoring and Reporting

The relationship between content standards, benchmarks and performance standards is that they all define students' expected levels of proficiency or education quality but at different levels of schooling. Content standards describe the national expectations that all Papua New Guinean children are expected to meet while benchmarks describe the grade-level expectation that all students in a particular grade must meet before proceeding to the next grade. Conversely, performance standards describe the levels of proficiency or quality students should attain to indicate their meeting of grade-level expectations and the national content standards. Effective instruction and assessment are aligned to performance standards, lesson objectives, topic objectives, grade-level expectations, and national content standards.

What is Assessment?

The term 'assessment' is generally used to refer to all activities that teachers use to assess students' mastery of what is learned, and to measure and monitor students' progress towards meeting grade-level expectations and the content standards. Assessment is an on-going process of gathering and interpreting information about students' performance and progress towards meeting grade-level expectations as well as the achievement of the content standards described in the subject syllabuses. Data should also be used to help and guide students who are yet to meet grade-level and national expectations to make the required progress towards meeting these expectations.

What is Standards-Based Assessment?

In standards-based curriculum, 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) and measuring, monitoring, evaluating, and reporting their progress towards meeting grade-level and national expectations. Assessment is viewed not only as a measurement activity that is performed after a course or a curriculum topic has been taught (summative), but more importantly, as a continuous process (formative) that provides students' performance data to teachers and students regarding their progress towards achieving the intended standards. Timely and ongoing assessment of student's learning and mastery of what is learned are key to the learning process and the attainment of the desired learning outcomes. Throughout the year, teachers will be assessing students' performance and progress towards meeting each grade-level benchmark (expectation) and each content standard (national expectation), and using the data to identify areas where a student or a group of students need more attention, and monitor their progress towards meeting the required standards.

Purpose of Assessment

The primary purpose of assessment is to improve students' learning and teachers' teaching. The purposes of assessment are to:

- improve students' learning, levels of proficiency, and progress towards meeting the expected standards;
- provide data that teachers, schools and Department of Education can use to make informed decisions about how to improve the quality of teaching and learning in the education system;
- inform teachers about the progress of students towards meeting grade-level and national expectations (standards) and enable them to adjust their lesson planning, instruction, and assessment to improve student learning and proficiency levels;
- inform parents and guardians about their children's achievements and status of progress towards meeting national standards; and what needs to be done to close the gaps and enable the children to make the progress required to meet these standards, and
- provide information for schools and systems about teaching strategies, resource allocations and curriculum; and other educational institutions, employers and the community about the achievements of students in general or of particular students.

Whatever its purpose, assessment is seen as an integral part of the teaching and learning program rather than a separate process.

Types of Assessment

The following types of assessment have been adopted to assess and monitor students' achievement of the education standards.

- Assessment For Learning (AFL)
- Assessment Of Learning (AOL)
- Assessment As Learning (AAL)

Assessment For and Assessment Of Learning are also known as *formative and summative assessments*.

Assessment For Learning

Assessment For Learning (AFL), also known as *classroom assessment*, is different. It is an ongoing process that arises out of the interaction between teaching and learning. It is not used to evaluate learning but to help learners learn better. It does so by helping both students and teachers to understand:

- the performance standards, grade-level benchmarks and content standards that students are expected to meet to achieve the desired level of proficiency or level of education quality;
- where each learner is in relation to the national curriculum standards;

- where they need to be, and
- what they need to do to make progress towards meeting the expected standards.

Assessment Of Learning

Assessment Of Learning (AOL), is the use of a task or an activity to measure, record, and report on a student's level of achievement in regards to specific learning expectations such as unit tests and end of term or year exams. It is normally referred to as *Summative Assessment*.

Assessment As Learning

Assessment As Learning (AAL), is the use of an assessment task or an activity by the teacher in his/her everyday teaching. This strategy provides students with opportunities to understand what they have learnt or are having difficulties with. Self and peer assessments allow students to reflect on their own learning and identify areas of strengths and weaknesses. These tasks offer students the chance to set their own personal goals to improve their own learning.

Diagnostic Assessment

Apart from these two main types of assessment teachers are expected to do the diagnostic test/assessment to identify strengths and weaknesses in students. This can be done before any teaching and learning of a new content and for new entry levels for students.

Diagnostic assessment is a form of pre-assessment that allows a teacher to determine students' individual strengths, weaknesses, knowledge, and skills prior to instruction. It is primarily used to diagnose student difficulties and to guide lesson and curriculum planning.

Assessment Methods

These are some methods that teachers can use to assess students' performances, products, and processes:

- Observing students during the lesson;
- Conferencing with students;
- Students' Portfolios;
- Tests, and
- Assignments (projects/reports/quizzes/presentations/practical work samples)

Recording and Reporting

Recording

Teachers must keep accurate records of students' performance and achievements. They must report these achievements in fair and accurate ways to parents, guardians, teachers and students. Examples of recording methods include:

- anecdotal notes in a journal or diary;
- checklists;
- portfolios of students' work;
- progressive records, and
- work samples with comments written by the teacher.

Reporting

Reporting is communicating clearly to students, parents, guardians, teachers and others the information gained from assessing students' learning.

Students' reports should be based on assessment information collected from ongoing assessments. Schools will decide on how best the reports will be presented to suit the needs of their communities. Methods will include interviews and written reports. Written reports should include:

- a written record of progress made towards meeting grade-level expectations and the attainment of content standards by each student since the previous report;
- a written record of each student's learning and mastery problems and what needs to be done to make the required progress towards meeting grade-level benchmarks and national content standards, and
- information about students' attitudes, values and general behaviour.

Monitoring and Evaluation

Assessment information should be used to make judgments about students' achievements and monitor their progress towards meeting grade-level expectations and national content standards.

Monitoring

Data from performance assessment should be used to monitor and report on students' performance towards meeting grade-level and national expectations. Performance standards or indicators should be used to report and keep a tab on each students' progress towards meeting the expected level of proficiency or competency. Teachers should develop a clear and measurable set of performance standards or indicators to monitor and report on students' progress and achievements on a regular basis.

Evaluation

Teachers should use assessment data to evaluate the effectiveness of their teaching and the quality of their students' learning, and make improvements to their teaching practices in order to improve student learning outcomes. Evaluation tools such as written records, questionnaires, logs and diaries, submissions or records of meetings and discussion with general staff members, teaching staff, parents, and other community members should be used to evaluate students' and teachers' competency levels, and make informed decisions about how these could be improved.

Glossary

Terms	Definitions
Aim	<p>An aim is a general statement that provide direction or intent to educational action. It is usually written in amorphous terms using words like: learn, know, understand, appreciate, and these are not directly measurable.</p> <p>Aims may serve as organizing principles of educational direction for more than one grade. Indeed, these organizing principles may encompass the continuum of educational direction for entire programs, subject areas or the district.</p>
Attitude	<p>Attitude refers to an individual's mental state, which is based on his/her beliefs or value system, emotions, and the tendency to act in a certain way. One's attitude reflects how one thinks, feels, and behaves in a given situation.</p>
Assessment	<p>Assessment is an on-going process of identifying, gathering, and interpreting information about students' academic achievement and progress towards meeting the content standards.</p>
Assessment As Learning	<p>It is a self or peer assessment that allow students to reflect on their own learning and identify areas of strength and weakness.</p>
Assessment For Learning	<p>It is an ongoing process of assessing students that arises out of the Interaction between teaching and learning. It is not used to evaluate learning but to help teachers to improve their classroom practice and students to improve their learning. This is normally referred to as formative assessment.</p>
Assessment Of Learning	<p>Use of a task or activity to measure, record, and report on a student's level of achievement in regards to specific learning expectations such as unit tests and end of term or year exams. It is normally referred to as summative assessment.</p>
Benchmarks	<p>The specific components of the knowledge, process, skill, concept, principle, or idea identified by a content standard that students are expected to learn, master, and demonstrate proficiency.</p>
Career	<p>A career is the job or profession that someone does for a long period of their life. It includes education, training, and work experience. Career is an individual's metaphorical "journey" through learning, work, and other aspects of life.</p>
Citizenship	<p>Citizenship is the status of a person recognized under the custom or law as being a legal member of a sovereign state or belonging to a nation. Citizenship indicates the relationship between an individual and a nation state. Normally, the individual is conferred protection by the state, in return for the fulfilment of certain obligations owed by the individual to the state.</p>
Content standards	<p>Standards clearly define what all students are expected to know (content) and be able to do (process). They describe the knowledge, skills, values, and attitudes that students should attain, often called the "what" of "what students should know and be able to do."</p>

Terms	Definitions
Curriculum	A course of study that enables learners to acquire specific knowledge and skills. Curriculum is a framework that sets expectations for student learning.
Curriculum principles	Curriculum principles are the values a school believes will give both their students and community the best chance of succeeding, and what they know to be right, given its context, that are relevant, meaningful, and support students to acquire the knowledge, skills, and competencies necessary to prepare them for their futures.
Diagnostic assessment	An assessment given to identify a child's strengths and learning needs for improvement.
Evaluation	Assessment of teaching effectiveness and students' learning and mastery of subject content using evidence in order to improve teaching practices and students learning outcomes.
Evidence outcomes	Indicate students' progress towards meeting an expectation at the mastery level or attainment of the expected level of proficiency. They measure students' mastery of, and proficiency on, grade or cluster-level subject content.
Formative assessment	Formative assessment is an ongoing process of assessing and evaluating students' learning of subject content. The main purpose of formative assessment is to improve classroom practice and students' learning outcomes.
Goals	Goals are statements of educational intention which are more specific than aims. Goals encompass an entire program, subject area, or multiple grade-levels.
Higher education	Higher education is tertiary education leading to award of an academic degree. It is an optional final stage of formal learning that occurs after completion of secondary education.
Knowledge	Knowledge refers to facts, concepts, principles, processes, tenets, etc. that make up a subject.
Monitoring	General supervision over the teaching and learning of the standards.
Self-assessment	Refers to the assessment of one's own strengths and weaknesses in order to make improvements and make the required progress towards the attainment of intended outcomes.
Skills	Skill refers to the ability of using information and applying it in a context.
Standard	The expected level of quality or achievement which comprises of the knowledge, skills, values, and attitudes that are the basis for quality education.
Standards-Based Curriculum	Standards-based curriculum is underpinned by learning standards. It outlines what matters, provide clear expectations of what students should progressively learn and achieve in school, and guide instruction, assessment and evaluation, and reporting.
STEAM education	The teaching and learning in the fields of science, technology, engineering, arts, and mathematics in both formal and informal classroom settings.

Terms	Definitions
STEAM literacy	Ability to identify problems and questions in life situations, explain the natural and design world, and draw evidence-based conclusions about steam issues.
Summative assessment	Summative assessment is carried out at the end of a period of study. It is also referred to as assessment of learning.
Values	Values are individual beliefs that motivate people to act one way or another. They serve as a guide for human behaviour.
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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