Physical Education

Junior High

Grades 9 and 10

Syllabus

Standards-Based

Department of Education

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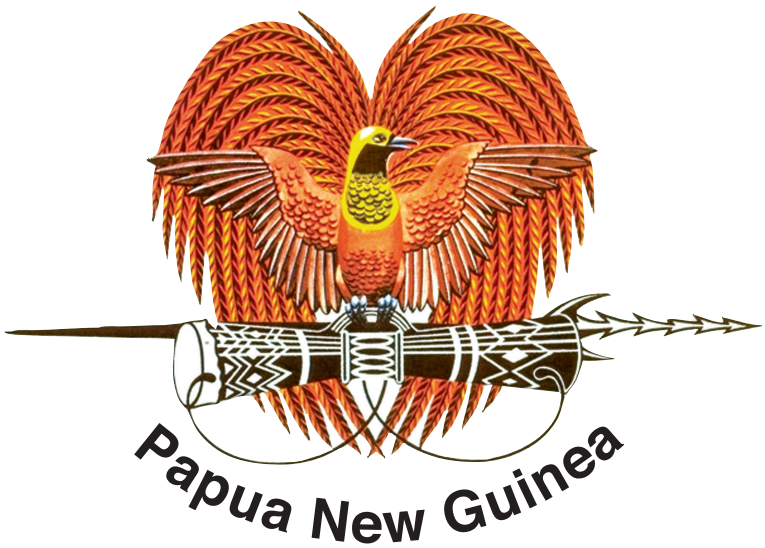

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Acronyms

AAL	Assessment As Learning
AfL	Assessment For Learning
AOL	Assessment Of Learning
SBoS	Secondary Board of Studies
CDD	Curriculum Development Division
CP	Curriculum Panel
CPM	Curriculum Panel Members
CPR	Cardiopulmonary Resuscitation
DRABC	Danger Response Airways Breathing Cardiopulmonary
DRABCD	Danger Response Airways Breathing Cardiopulmonary Defibrillation
ESD	Education for Sustainable Development
F.I.T.T	Frequency, Intensity, Time, Type
PE	Physical Education
IHD	Integral Human Development
NDoE	National Department of Education
PNG	Papua New Guinea
OBC	Outcomes-Base Curriculum
OBE	Outcomes-Base Education
RICE	Rest, Ice, Compression Elevation
UNCRC	United Nations Convention on the Rights of the Child
RICER	Rest, Ice, Compression Elevation Referral
SAC	Syllabus Advisory Committee
SBC	Standards-Based Curriculum
SBE	Standards-Based Education
SBoS	Secondary Board of Studies
SCG	Subject Curriculum Group
SDGs	Sustainable Development Goals
STEAM	Science, Technology, Engineering, Arts and Mathematics
STEM	Science, Technology, Engineering and Mathematics
BM I	Body Mass Index
PACER	Progressive Aerobic Cardiovascular Endurance Run
THE	The Heart Rate
SMART	Specific Measurable Attainable Realistic Time bound
SADO	Sports Anti-Doping Organisation

Secretary's Message

The ultimate aim of Standards-Based Education in Papua New Guinea (PNG) is to prepare students for careers, higher education, and citizenship. This means that education should focus on developing and equipping students with essential knowledge, skills, values, and attitudes that they can use in all spheres of their lives. Education must therefore aim to provide all students with an equal opportunity to achieve high academic standards that are internationally comparable.

Physical Education embraces STEAM and provides the students the opportunity to use Science Technology Engineering and Mathematics in analyzing and evaluating circumstances in health decision making, conflict resolution and management, sport designing and engineering game plans for tournaments, competitive and high performance sports.

Physical education is an integral component of a student's education. Research around the world have shown that students who participate in regular fitness-based physical education (PE) will enjoy enhanced memory and learning, better concentration, and increased problem-solving abilities. Movement is critical to all aspects of a student's growth and development. Regular Physical Education lessons encourages a positive attitude towards self and others, which is an important factor in creating a safe and healthy learning environment and fits perfectly with Papua New Guinea vision 2050.

In Physical Education, students will be able to demonstrate mastery in performance of movement skills, concepts and strategies in physical activity and fitness. PE supports a holistic approach to the development of students by addressing all domains; psychomotor (motor skills), cognitive (facts and concepts), and affective (social and emotional learning). Physical Education is now a compulsory subject for all students in grade 9 and 10 and therefore time allocated for physical Education should not be used for teaching other subjects .

Teachers are encouraged to use this syllabus in conjunction with the teacher guide to develop teaching and learning activities in order to deliver the Physical Education content.

I approve and recommend this Grades 9 and 10 Physical Education syllabus to be used by teachers in all Junior High Schools throughout Papua New Guinea.

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UKE W. KOMBRA, PhD
Secretary for Education

Introduction

The Physical Education (PE) content in Grades 9 and 10 has been reviewed and aligned from the Outcomes Based Curriculum to Standards Based Curriculum Under the Standards Based Curriculum Physical Education is now a core and compulsory subject and time is allocated for teaching learning.

This syllabus is designed using content standards that identify the essential knowledge, skills, attitudes and values that all students achieve or demonstrate by the end of Grade 10.

The Physical Education subject is also aimed at preparing students for Higher Education, Career and Citizenship. The Syllabus is developed to equip students with the essential values, attitudes, skills and knowledge that are fundamental for their physical, mental and social health and wellbeing. This Physical Education syllabus offers a number of pathways to postsecondary study and the workforce.

The Physical Education curriculum aims to equip children to be competent in the sporting fraternities and also demonstrate proficiency and competency in decision making, conflict management and resolution, physical activity for fitness, sports and long life. It also aims to provide opportunities for students to learn in-depth the required values, attitudes, skills and knowledge relating to health behaviors, health influencing and promotion factors, health information, and personal and interpersonal skills.

The values, attitudes, skills and knowledge are also STEAM related which will enable them to critically analyze issues and challenges they face in their physical, emotional, mental and social growth to be able to redirect their own development in all aspects of life.

Physical Education time allocation for teaching and learning is 120 minutes per week for grades 9 and 10.

Aims and Goals

The ultimate aim of education in PNG is to prepare students for careers, higher education, and citizenship. To achieve this aim, a number of enabling aims and goals were 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 below.

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) obtain prerequisite knowledge and skills and cultivate and foster important values and attitudes required to effectively function in a higher education and training environment.
(b) achieve high language, mathematics, science, social science, moral, values, and ethical, creative and vocational skills, and citizenship standards that will ensure a smooth transition from secondary school to higher education and training institutions.

Aim 2: Students will achieve high standards in Language, Mathematics, Science and Technology, Social Science, Civic and Citizenship Education, Character and Social Development, and Skills Education (Creative, Physical, and Vocational skills).

Goals

Students will be able to;

(a) acquire and use intellectual, emotional, cultural, physical, creative, vocational, recreational, and spiritual knowledge, skills, values, and attitudes as a basis for living a fulfilling and a productive life in the communities in which they choose to live.
(b) understand and apply mathematical reasoning, processes, formulas, and concepts to solve mathematical problems.
(c) examine and apply scientific reasoning, processes, and concepts to improve real life situations.
(d) aware of scientific standards and methods and their application across all branches of science.
(e) aware of logical and abstract thinking in the formulation of problems, the importance of mathematics in science reasoning, and recognize the role of science in every aspect of life.
(f) explain the connection between science and technology and recognize the importance of technology in the development of communities, the improvement of peoples' lives, in communication, and industry.
(g) acquire fundamental knowledge and skills to build and market different types of technology.
(h) 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.
(i) aware of their civic and citizenship responsibilities, the importance of these responsibilities to harmonious living and maintaining social cohesion, and to community and national development and well-being.
(j) acquire knowledge, skills, values and attitudes required for learning and practice of creative arts, and the application of knowledge and skills to express themselves, promote PNG's cultures, and make a living.
(k) recongnise the importance of healthy mind, body, and spirit, the importance of physical exercise and sport, balanced diet, and regular exercise in living a healthy life style.
(l) recognise the importance of healthy mind, body, and spirit, the importance of physical exercise and sport, balanced diet, and regular exercise in living a healthy life style.
(m) attain essential agriculture knowledge, skills, values, and attitudes required for making a living in agriculture related contexts, starting and managing agriculture businesses for personal and family sustainability, and pursing agriculture-oriented livelihoods.

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

Goals

Students will be able to;

(a) acquire essential reading skills to enable them to learn to read and read to learn throughout their lives.
(b) learn basic skills of writing, comprehending and evaluating information, following instructions, analysing others writing, and communicating with others.
(c) learn and apply basic mathematic skills in real life situations to improve their own personal growth and the advancement of their communities and the nation.

Aim 4: Students will 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.
(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.

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 students 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 cultural, social and educational values and beliefs.

Relevance

The national curriculum should target the national, community, and personal; social, economical, political, cultural, environmental, and spiritual, development needs and aspirations. Curriculum should aim to prepare students for careers, higher education and citizenship. Students' 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

Papua New Guinea 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

Papua New Guinea 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, villages, and other economic groups 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 students 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 these 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 Papua New Guinea is very low. All citizens have a right to a healthy life such as clean water, nutritious diet, improved sanitation, 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.

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 PNG and that PNG has a place in the world as a whole.

They will be able to help PNG 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,
- recognise their capabilities and develop their own talents,
- participate in the development of the national community, and
- protect and safeguard the national wealth and resources.

Sustainability

The natural environment of Papua New Guinea is as diverse as its cultures. It is often a violent natural and physical environment, which is under threat from rapid population and misuse of resources such as over logging, abuses associated with mining, over fishing, dynamiting reefs and dumping 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. It 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 girls and boys.

Females are generally a disadvantaged group in PNG. Papua New Guinea 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, cultural and language backgrounds, or their socio-economic 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 a teacher's 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-Centred Learning

Student-centred learning recognises the fact that no two classes are alike and no two students 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 students 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 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 provide equal opportunity to be engaged 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. 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 to pursue undergraduate and postgraduate programs in institutions of higher education.

Standards-Based Curriculum Principles

The principles of the Standards-Based Curriculum (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 students are capable of learning and achieving high academic standards, regardless of their backgrounds.
- Students can learn in their own ways and at their own pace.

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, and
- 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.

Physical Education Rationale, Aim and Goal, and Guiding Principles

Rationale

The health status of Papua New Guinea citizens has not improved much over the last few decades. A lot of lifestyle diseases are a result of bad health behaviors and practices, poor health decision making skills and lack of physical activity for both health and fitness and long life. There is a major need for the citizens to change their attitudes and ascribe to a common set of values in order to restore good health and raise national health standards of all citizens.

Physical activity and sport are good way of life for Papua New Guineans. Involvement in these activities promotes good health, improved fitness, and contributes to improved healthy lifestyles and longevity of life. Sport in turn is a growing industry and the 21st Century citizen is open to careers and other opportunities that come with it. Physical activity for health and fitness, sports and longevity of life are critical as PNG joins the global community in through the sports industry in encouraging global citizenship through its participation in sport at all levels of competition.

The demand in sports and health related career pathways necessitates the Physical Education to be taught to students in all levels of learning. Students in turn will appreciate and embrace the benefits of learning in physical education and make informed decisions about the human movement in relevant contexts accordingly. Physical activity, sport, recreation and leisure are products of quality learning in health and physical education. Learning in this area is both process oriented and evidence based to promote competent and confident learners.

In the process of learning, the integration of values, attitudes, skills and knowledge become inherent in self-awareness and fostering healthy relationships, making informed decisions on health and wellness, appreciating the human body through movement and performance, and creating a healthy culture in fitness and longevity of life. All these lead students to aspiring to build careers, prompt interest for learning in higher education, and demonstrate good citizenship

Ultimate Aims of Physical Education

The ultimate aim of Physical Education is to develop mentally and physically fit students to develop students' capacity to enhance personal health and wellbeing, acquire health-enhancing lifetime behaviors and to enjoy an active lifestyle, maximize movement potential and advocate lifelong physical activity. The Physical Education also embraces the ultimate aim of Standards Based Curriculum and aims to prepare students for higher education, career and citizenship.

The aims and goals of Physical Education are integrated to articulate the evidence outcomes that will be achieved by the students in the medium and long term. While studying the subject, the Physical education aims to increase the full potential of their ability to deal with their mental, emotional and physical well-being for healthy living, an enjoyable life and for longevity.

Aim:

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:

1. Have Regular Fitness Activity

Physical fitness is an important component to leading a healthy lifestyle. The inclusion of regular fitness activity helps students maintain fitness, develop muscular strength and improve cardiovascular health. A regular fitness activity improves the absorption of nutrients by the body, improves digestive processes and increases physiological processes.

2. Builds Self-Confidence

The participation in physical education in high school provides a positive influence on a student's personality, character and self-esteem. In addition, the team-building process enhances communication skills, and the skills required to get along and cooperate with students of varying ethnic backgrounds and personalities.

3. Develops Motor Skills

Physical education in high school is essential to the development of motor skills and the enhancement of reflexes. Hand-eye coordination is improved, as well as good body movements, which helps in the development of a healthy body posture.

4. Health and Nutrition

Physical education teaches students the importance of physical health. High school is an age where students misinterpret the meaning of "overweight" and eating disorders prevail. Physical health and education informs students on sound eating practices and the essential guidelines for nutrition.

5. Relieves Stress

High school students have substantial amounts of stress due to curriculum, homework, families and peer pressures. Involvement in sports, recreational activities or other forms of physical fitness offer a method of stress relief.

6. Considerations

Special considerations may be necessary regarding physical activities for some students with health issues, and those students should proceed under the direction of a medical personal.

a) obtain prerequisite knowledge and skills to cultivate and foster important values and attitudes that will enable them for careers in the health and sporting sectors and to create opportunities for career pathways for themselves and others.

b) Effectively and competitively function in a higher sporting and health educational institutions and training environment.

(c) acquire high and commendable citizenship standards in higher health and physical education learning and training institutions and in their local environment

(d) appreciate the importance of regular physical exercise, self-discipline and a healthy balanced diet as way towards maintaining a healthy lifestyle actively lifestyle.

Source:http://www.ehow.com/

STEAM Rationale, Aims 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 provide equal opportunity to be engaged 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. 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 to pursue undergraduate and postgraduate programs in institutions of higher education.

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 students 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 students 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 content standards will depend on their mastery and application of essential knowledge, skills, values and attitudes in real life or related situations.

These 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 and teach these essential knowledge, skills, values and attitudes in their lessons, and assess students' performance, proficiency and progression towards the attainment of content standards.

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:	
• 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	• 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:	
• Problem-solving • Logical reasoning • Decision-making • Reflection	• 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

A person who thinks critically always evaluates an idea in a systematic manner before accepting or rejecting it. Critical thinking skills include:	
Analysis Skills – 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.	Evaluation Skills – 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.
Key words	**Key words**
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,	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,

ii. Creative Thinking Skills

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;
Synthesis/Creative Skills – 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.
Key words
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,

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 (importance, worth, usefulness, etc)

Core values	Sustaining values
• Sanctity of life • Truth • Aesthetics • Honesty • Human • Dignity • Rationality • Creativity • Courage • Liberty • Affectivity • Individuality	• 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
• Equality • Kindness • Benevolence • Love • Freedom • Common good • Mutuality • Justice • Trust • Interdependence • Sustainability • Betterment of human kind • Empowerment	• 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

3. Types of Attitudes

Attitudes - Ways of thinking and behaving, points of view	
• Optimistic • Participatory • Critical • Creative • Appreciative • Empathetic • Caring and concern • Positive • Confident • Cooperative	• 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 particular subjects, grade, or school level.

They embed essential knowledge, skills, values, and attitudes that all students are expected to acquire and master in each strand or unit to prepare them for next grade and 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 competency.

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.

Evidence outcomes 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 mathematics.

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 and content standard.

Grade	: Grade is indicated by the first number (*for example,* **9.**1.1.1)
Strand	: Strand is indicated by the second number (*for example,* 9.**1.**1.1)
Content Standard	: Content Standard is indicated by the third number (*for example*, 9.1.**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** as **9.1.1.1**

Content Overview

Grades 9 and 10 Physical Education syllabus is organized by strands. Strands are broad content areas that define and describe the subject matter to be taught and learned. They in cooperate cross curriculum as well. Each strand has a rationale that justifies its inclusion in the Physical educational curriculum.

Each strand embeds a particular aspect of physical activity and articulates the subject matter to be learned. What students are expected to learn and demonstrate proficiency on is described in the content standards. Each unit has a or a number of content standards (knowledge, skills, values and attitudes) are benchmarked at the grade level.

The essential knowledge, skills, values and attitudes expressed in a or in a number of content standards for each of the units and further elaborated into benchmarks in which lesson topics are derived from to be expanded into lessons.

Grade 9 and 10 Strands	Grade 9 and 10 Units
1. Movement	1. Fitness and Safety 2. Movement Concepts, skills 3. Competency in Sports 4. Human Body and Movement Development 5. Game plans and strategies
2. Physical Activity	1. Physical Activity 2. Sports 3. Sports organization 4. Leisure and Recreation

Grades 9 and 10 Strands

Strand 1: Movement

Rationale

Movement development is concerned with the change and interactions connected to the physical, social and emotional domains. Changes in motor behaviour, movement competencies and developments of movement skills which affect individuals through age related processes and progressions. Movement comprises of simple unstructured, unorganised movements to structured and highly organised complex motor skills and application according to the sub areas of motor behaviour (ie. motor, control and learning) development with biomechanics and physiology exercises.

Movements are developed over the lifespan of an individual and that certain movements are applied for different purposes within the four areas; affective, motor, cognitive and physical developments respectively.
Movement development is a process and participating in the development has positive influence on the maintenance of one's physical health. Participating in a wide range of movements in various sports, games and other lifestyle activities contributes to the health of an individual.

Movement development and sport performance knowledge, use declarative knowledge – key points for movement, factual information (what) and procedural knowledge (how to do something- perform a skill)

Evidence Outcomes

Grade 9	Grade 10
At the end of the grade, all students can; • Analyse the aspects of fitness needed in preparation for physical activities. • Apply basic management strategies for injury prevention and treatment • Demonstrate the importance of fitness to health and physical activity • Apply aerobic and anaerobic exercises to enhance health • Apply movement skills, concepts elements, compositions and patterns in games and play • Examine movement concepts in modified movement activities and compare levels of performances. • Examine the benefits associated in applying the codes of ethics in sports. • Demonstrate manipulative skills for track and field events • Apply key concepts for complex floor routines and movement sequence and components of skill-related fitness • Demonstrate loco motor skills in water sports and apply aqua codes for water sports • Appreciate and care the human body and its functions in relation to movement. • Administer the FITT principle for physical fitness • Create movement combinations for track and field events.	At the end of the grade, all students can; • Apply DRSABCD to treat serious injuries and emergencies. • Advocate heath habits and recommend ways to reduce injuries. • Use fitness and safety component in relevant physical activities and apply FITT • Categorize the movement elements and compositions applied in a variety of performances. • Appreciate the SADO code of ethics in sports • Apply rescue techniques for speed and endurance in water sports • Apply survival skills on open water swimming to adjust changes at intervals. • Explain physiology in relation to movement skills • Explain how biomechanics and motor behaviour is applied in physical activity • Use the technology to calculate heart rate for intensity, recovery and cardiorespiratory endurance • Design movement compositions and apply the change of skills at intervals • Apply fitness principles into the fitness training program.

Unit 1: Fitness and Safety

In this unit, students acquire knowledge of the importance of fitness and the benefits to be gained in relation to their personal health. Students are given opportunities to explore various fitness activities and to develop routines that encourage them to maintain their personal fitness levels.

Fitness is central to health and effective participation in physical activity. Fitness may be developed for specific movement, but needs to be maintained for efficiency. Safety in fitness is concerned with the prevention of injuries in fitness and physical activity and describes behaviour that promotes safety at school and in the community.
Application of First aid aims to give emergency care to causality until medical assistance is sought. Injuries do occur, but prevention strategies may be implemented. Knowledge of immediate assistance and recovery needs that contributes to satisfactory overall participation and performance.

It also gives students opportunities to gain basic safety procedures to promote safe play and to deal with emergency situations during games and sports. Students are encouraged to understand the rules of safe play positive attitudes, acceptable behaviour and their roles and responsibilities associated with different fitness and physical activities that promote safe practices in physical activities in the school and the community

Content Standard 1.1: Analyse and discuss the safety principles and strategies used in maintaining health and safety in various physical activities

Grade 9 Benchmarks	Grade 10 Benchmarks
9.1.1.1 Explain and demonstrate the importance of warm up principles underpinning physical activities	**10.1.1.1** Analyze and demonstrate how to care and treat serious injuries and emergencies, applying action plan
9.1.1.2 Analyze the potential impacts of injuries on individuals engaged in various physical activities and apply the use of first aid procedures when responding to injuries	**10.1.1.2** Evaluate the effectiveness of the development of personal health habits and strategies in reducing injuries.
9.1.1.3 Identify and apply the appropriate components of fitness in a variety of physical activities	**10.1.1.3** Apply the FITT principle to develop components of fitness with appropriate and relevant activities
9.1.1.4 Differentiate between aerobic and anaerobic exercises that enhance health and well being	**10.1.1.4** Participate in a variety of cardiorespiratory endurance muscular strength and muscular endurance fitness activities to achieve and maintain a health enhancing level of fitness

Unit 2: Movement Skills and Concepts

Movement is fundamentally important to all physical activities participated in life. Regardless of the contexts, situations and purposes, development of movement skills can create health benefits in the life span of individuals. Movement knowledge, sport performance, functions of the body systems, and maintaining physical health (strength, mobility, endurance and agility) can through participation in organised movement activities, strategies, procedures and processes and principles of game skills and play

Content Standard 1.2

Examine and plan a wide range of motor skills movements concepts, elements and compositions used in a variety of performances

Grade 9 Benchmarks	Grade 10 Benchmarks
9.1.2.1 Use different movements skills to create a complex movement sequence	**10.1.2.1** Select and adapt manipulative skills and use them in a created game situation.
9.1.2.2 Identify and explain the differences between movement concepts, patterns combinations and equences	**10.1.2.3** Assess various effects of drugs on individuals involved in physical activities
9.1.2.3 Identify and discuss the ethics of using drugs in physical activity such as sports.	

Unit 3: Competency in Sports

This unit encourages students to be competent in a given sport that is essential if they are to succeed. With competence brings confidence, and with both of these factors on your side, you will be ready to achieve your goals.

“Competence is the belief in ourselves that we are capable of taking on any challenge, any task, confident in our ability to succeed and willing to learn what is needed to achieve”.

Competence isn’t just having the skill, or natural ability, behind your chosen sport, but it is also the mindset behind being an athlete. It is about being confident in your own abilities, and if you are not, it is about learning what is needed to achieve your goal of confidence.

Therefore, developing competence is essential if you want to succeed in every aspect of your life, as well as sport.

Content Standard 1.3

Evaluate and discuss performance levels of competency and proficiency in a variety of movements and sports

Grade 9 Benchmarks	Grade 10 Benchmarks
9.1.3.1 Apply the key concepts in performing manipulative skills for track and field events	**10.1.3.2** Practice open water swimming and survival skills making changes at intervals within a given distance
9.1.3.2 Perform complex floor routines and movement sequences	**10.1.3.2** Practice open water swimming and survival skills making changes at intervals within a given distance

Unit 4: Human Body and Movement Development

Every individual must have good knowledge of what the body can do and how it works. The body is fragile and must be cared for in order to maintain its composition and functions. The body moves in several different directions and with the help of certain elements that make up the body composition. The body systems play an important role in keeping the body functioning smoothly through the life span of a person.

Individuals must have in depth knowledge of anatomy, physiology and biomechanics of the human body. These key areas are very crucial to and in the developments of different types of movements for different purposes. Movement is very important in developing sporting and game skills. They are the building blocks of an athlete's path way to pursuing sports both for pleasure and as a career. There are five broad categories of movement skills that students will experience during the activity classes;

1. Fundamental - movement skills in games; jumping, hopping, throwing, catching
2. Specialized - are particular to certain activities or sports; pitching in softball, Fosbury flop in high jump
4. Loco motor – the movement of the body from point A to point B

5. Non loco motor – Movement while you are stationary

6. Manipulative – skills involve the use of an implement or piece of equipment *e.g.* a ball, a racket, a javelin

Content Standard 1.4

Analyse and justify the relationship between anatomy,physiology, biomechanics and how they contribute to developing body movements at various levels and for a variety of purposes

Grade 9 Benchmarks	Grade 10 Benchmarks
9.1.4.1 Examine the human body systems and its functions in relations to sports	**10.1.4.1** Explain the relationship of physiology in relation to the application of movement skills
9.1.4.2 Describe the FITT principle for muscular strength, local muscular endurance, muscular power and flexibility	**10.1.4.2** Demonstrate knowledge of biomechanics in real sports oriented activities
	10.1.4.3 Demonstrate how to monitor and record cardiorespiratory endurance during physical activities

Unit 5: Game plans and strategies

This unit encourages the preparation and students participation in different sports. To be successful; coaches, parents, and athletes have to learn the value of proper preparation and its relationship to achieving success in sports competition.

There are three key areas to prepare for sports success:

1. Physical,
2. Mental, and
3. Tactical and Technical

Tactical and technical preparation is the practice of training specific plays, techniques (specific to each sport and/or position, such as hitting a baseball, serving in tennis, shooting in basketball, skating in hockey, etc.), and strategies (game plans, etc.) for each sport. The particular skills used in the sport, then s/he must learn to use them in sport competition. An example of tactical or technical preparation would be practicing shooting a foul shot in basketball, under the guidance of a coach, using correct technique, or learning strategic game plans for your sport.

Another example would be studying the playbook or attending team meetings and practices to learn specific ice hockey strategies, and then practicing your specific role in the system and working to perfect it. Learning the game plan is only effective if you execute it, beginning with your role. ***"Failing to prepare is preparing to fail."***
--John Wooden, Legendary Basketball Coach

Content Standard 1.5

Examine and redesign game plans and strategies applicable in various sport

Grade 9 Benchmarks	Grade 10 Benchmarks
9.2.1.1 Design self-inspired movement game plans with delivery strategies that respect the principles and rules of a sport	**10.1.5.1** Create movement compositions and apply direction change at intervals to change from one movement skill to another within a given space of time **10.1.5.2** Identify and distinguish roles and responsibilities for active and non-active athletes and how their experiences can be utilised

Strand 2: Physical Activity

Rationale

Physical activity can be performed by a person as an individual in fitness and specific skills movement, in smaller peer group as in circuit training or in a larger group such as a team sport. Physical activity can in cooperate regular routines such as skills and exercise. Examples of exercise includes warm up , cool down ,circuit training or skill drills in particular team sport.

Fitness is central to health and effective participation in physical activity. Fitness may be developed for specific movement, but needs to be maintained for efficiency. This strand will allow students to examine the human anatomy, its functions and balanced in the physical body in relation to physical movement such as strength, power, flexibility, muscular endurance, aerobic capacity, agility , speed or anaerobic capacity, body composition, balanced and coordination. Students acquire this knowledge of the importance of fitness and the benefits to be gained in relation to their personal health.

Students are given opportunities to explore various fitness activities or components and to develop routines that encourage them to maintain their personal fitness levels. This Strand also encourages students to recognize the value of self-selected activities for the maintenance and improvement of fitness and health.

Evidence Outcomes

Grade 9	Grade 10
At the end of the grade, all students can; • Set goals to maintain healthy lifestyles at acceptable levels of physical fitness. • Demonstrate the principles that guide jumping , throwing and track events • Research and present a case study on national and international sports representatives in the country. • Administer and organize school sports. • Demonstrate the techniques in the different strokes of swimming • Appreciate benefits related to leisure and recreational activities.	At the end of the grade, all students can; • Apply FITT principles for relevant activities and health related benefits • Apply the rules and skills for selective games and sports bat , ball ,court and field games • Organize sports for grassroots or representatives to participate • Apply the different in the 4 strokes of swimming • Define how recreational activity promotes longevity • Analyse risks and factors which influence leisure and recreational opportunities.

Unit 1: Physical Activity

In this unit students develop an understanding of the components of balanced Lifestyle and factors that can influence their participation in physical activity.

Physical activity comes in many forms that can be built into our lifestyles, provided they become conscious of when they can make an effort and become more active. Examples of physical activity could include:

- Walking part of the way rather than taking the bus
- Team training
- Working in the garden
- Playing back yard cricket
- Strolling along the beach
- Going for walks
- Joining activity groups

They identify a range of lifelong physical activity options available to them through active participation that enhances their awareness of the benefits they provide. The physiological benefits includes;

- Normal BMI
- Normal heart rate
- Balanced body
- Longevity of life
- Healthy diet and nutrition

Students are more likely to participate in physical activity if they find it enjoyable, are socially supported and develop willingness and capacity to engage in lifelong physical activity perceived themselves as competent.

Content Standard 2.1

Examine a variety of physical activities and assess the impact they have on personal and physiological benefits

Grade 9 Benchmarks	Grade 10 Benchmarks
9.2.1.1 Apply physical activity and concepts to maintain a physically healthy and active lifestyle	**10.2.1.1** Examine physical activities which can be undertaken individually, with a partner, or as part of a group
9.2.1.2. Explore the benefits of a balanced lifestyle when participating in physical activities	**10.2.1.2** Analyse health related benefits in preferred physical activities
9.2.1.3. Participate regularly in a variety of self-selected fitness activities in and outside of school	**10.2.1.3** Evaluate and classify types of age - related competitive and non-competitive physical activities

Unit 2: Sport

Physical education learning is applied in sport. Sport is a growing industry and the need to prepare young sportsmen or women adequately to be astute and competitive is imminent. The knowledge of anatomy, physiology, biomechanics, nutrition and psychology is applied in sporting contexts. Learners will then confidently transfer the values, attitudes, skills and knowledge from grassroots to elite sport.

The development of sport is embedded across grades from Grade 9 to Grade 10 in varying contexts of learning and levels of competition. As sport grows the Specialists needed to service elite athletes at national and international level will be in high demand. It is envisaged that this unit will stimulate students' interests as this content canvases significant areas in sport. The learning will ultimately provide career pathways for and further their learning at higher education.

Content Standard 2.2

Examine and distinguish different category of sports, and practice necessary skills required to develop competency in each category

Grade 9 Benchmarks	Grade 10 Benchmarks
9.2.2.1 Explore and classify the different track and field events	**10.2.2.1** Practise and apply the main rules and skills in the different bat and ball games
9.2.2.2 Identify and demonstrate the principles that guide jumping and throwing events	**10.2.2.2** Practice and apply the main rules and skills in the different court and field games
9.2.2.3 Explore the four main strokes in swimming	**10.2.2.3** Apply swimming skills to enhance performance in the four swimming strokes

Unit 3: Sports Organisation

In this unit it is recommended that students are continued to be highlighted of the developments in sports. Students will be given insight to the fundamental knowledge of sports organsation and development at school and in the community. Sports events have recently been increasingly popular. It is proven not only by the growing number of visitors of sports events but also many are attracted by sport indirectly (tv broad-cast). By now event management, planning and organizing has developed in a multi-million-dollar industry. It has been developing fast, the demand for it has been growing, mega shows and events are organized.

In the area of sport for example the Olympic Games, World- and Continental championships of different branches of sport, which result in considerable revenue from the sale of tickets, broadcast royalties, merchandising products, hospitality or tourism revenue. Entertaining function of sports events has been increasing.

Changes in the rules of sports (time-limit of defence-attack, or in volleyball each play-time Is penalized) all reflect a tendency that sports and sports events be more dynamic, enjoyable, better sold through sports broadcasts. The opening and closing ceremonies if the Olympics, the shows of cheer-girls in the breaks of the sports broadcasts are all demonstrating the spectacular and entertaining functions of the events.

(Dr. Anetta Müller and Dr. Melinda Bíró)

Content Standard 2.3

Analyze sport education concepts and evaluate the roles they play at varying levels of sport

Grade 9 Benchmarks	Grade 10 Benchmarks
9.2.3.1 Examine the National and International sport competitions that exists in and outside the country	**10.2.3.1** Explain how sport is organised using a sport pyramid for grass root and representative sport for the country
9.2.3.2 Compare the differences and similarities between tournaments and events	**10.2.3.2** Design an event (e.g. a fair) for the members of the community to participate in a national sport
9.2.3.3 Demonstrate the knowledge in administrating and organizing school sport	**10.2.3.3** Perform officiating roles in a selective sport and apply rules that govern that sport

Unit 4: Leisure and Recreation

Leisure and recreation in our lifestyle is important as it provides a break from work and chores. Leisure time can be active or passive. During active leisure time, we engage in physical activity such as walking or gardening . These contrasts with passive leisure time, where there is little or no mobility. Recreation on the other hand, usually applies to more organized activities such as camping, backyard gardening and bushwalking.

Recreational activity is a popular form of lifelong physical activity and normally applies to something we do in our spare time. It is an activity that we choose for enjoyment, self-satisfaction and personal experience. Active recreation involves vigorous activity and considerable energy. Example of active recreation includes walking or running . Passive recreation involves less exertion, but is usually more sustained.

Recreational activities can be communal or solitary active or passive, outdoors or indoors which may be healthy or harmful and useful for society or detrimental. There are many benefits that arise from participating in recreational activities. Some benefits include reduction of obesity and reducing risk of *osteoporosis.

Content Standard 2.4

Examine and distinguish different category of sports, and practice necessary skills required to develop competency in each category

Grade 9 Benchmarks	Grade 10 Benchmarks
9.2.4.1 Explore the types of leisure and recreational activities for different age groups	**10.2.4.1** Review and identify popular recreational activities that promote longevity
9.2.4.2 Examine benefits of leisure and recreational activities and how it promotes fitness.	**10.2.4.2** Explore the factors that influence recreation and leisure opportunities

Assessment, Monitoring, and Reporting

The relationship between content standards, benchmarks and performance standards is that they all define students' expected level of proficiency or education quality but at different levels of schooling. Content standards describe the national expectations that all Papua New Guinean students 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 students' level of proficiency in a specific knowledge, skill, value or attitude taught in a lesson and measure students' progress towards meeting grade-level expectations and the content standards. Effective instruction and assessment are aligned to performance standards, 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 and national-level 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 (grade-level expectation) and each content standard (national-level 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 other 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 students's achievements and status of progress towards meeting national standards; and what needs to be done to close the gaps and enable students 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
- Assessment Of Learning
- Assessment As Learning

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 quality of education,
- 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 three 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 curriculum and lesson planning.

Assessment Methods

These are some methods that teachers can use to assess students' performance.

- Observing students during the lesson
- Conferencing with students
- Student's Portfolio
- Tests
- 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 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
Aerobic activity	Any sustained exercise that stimulates and strengthens the heart and lungs, thereby improving the body's use of oxygen. Examples of aerobic exercise include jogging, rowing, swimming, or cycling
Aerobic capacity	The maximum rate at which the body or an individual muscle can take up and use oxygen from the air; also known as maximal oxygen consumption (uptake) or VO2
Agility	The ability to change body position quickly and to control one's physical movements. An object designed to be moved by hand as a means of developing motor skills
Anaerobic activity	Any short-duration exercise that is powered primarily by metabolic pathways that do not use oxygen. Examples of anaerobic exercise include sprinting and weight lifting and the other team tries to score by batting or striking an object into open space, with enough time for the hitter to run between bases (or wickets).
Artistic gymnastics	A discipline in which gymnasts perform short routines on different apparatus, which may include the balance beam, vault, bars, and floor.
Balance and control skills	The ability to control the movement of the body while stationary or moving.
Balance	The ability to keep an upright posture while stationary or moving.
Base of support	An area defined by the parts of the body and any assistive devices, such as canes or crutches, that are in contact with the support surface.
Biomechanical principles	Principles related to the study of physical forces. An understanding of biomechanical principles can help one move efficiently and avoid injury.
Body composition:	All of the tissues that together make up the body: bone, muscle, skin, fat, and body organs.
Body systems	Groups of organs that work together to accomplish a specific physical or biological task.
Bones	Major bones of the body include the cranium, clavicle, sternum, vertebra, ribs, pelvis, ulna, radius, femur, tibia, fibula, patella, tarsals, metatarsals, carpals, metacarpals, and phalanges.
Borg rating	The measurement of intensity of physical activity based on exertion.
Cardiorespiratory endurance:	The ability of the heart, lungs, and blood vessels to use and send fuel and oxygen to the body's tissues during long periods of moderate-to-vigorous activity.
Cardiovascular	The heart, blood vessels, and blood, which provide oxygen and nutrients to the body.
Competency Complex motor activities	One's ability, skill, and knowledge to perform a task. Activities that involve more than one skill.
Complex motor skills	Skills that are made up of two or more skills. Examples include hopping and skipping, throwing and catching.
Complex movement sequences	Movements that require a combination of motor skills.
Components of skill-related fitness	Aspects of physical fitness that help one perform well in sports and other activities that require certain physical skills
Concepts of direction	Forward, backward, left, right, clockwise, counter-clockwise, up, down, over, under, and through.
Concepts of effort	Exertion of physical or mental power in activities. Concepts of levels: Low, medium, and high.
Concepts of pathways	Movements that require a combination of motor skills.

Concepts of relationships	The position of the performer of an activity related to a piece of equipment or to other performers.
Concepts of spatial awareness	The location of objects in relation to one's own body
Cool-down	5 –10 minutes of reduced exercise to help heart rate, breathing rate, body temperature, and circulation return to the resting state.
Coordination:	The ability to use one's senses together with one's body parts, or to use two or more body parts together.
Defense	A means or method of defending or protecting.
Digestive	The organs and glands that are responsible for ingestion, digestion, and absorption of food
Diminishing return	In physical activity, the point at which one's body is taking on more harm than benefit.
Dynamic and cooperative situations	Situations where individuals use tamwork to overcome challenges.
Dynamic balance	Balance while moving. Or, the ability to balance under changing conditions of body movement. See also Static balance.
Dynamic environment	In physical activity, the point at which one's body is taking on more harm than benefit.
Dynamic stretch	Situations where individuals use tamwork to overcome challenges.
Dynamic stretching	A form of stretching beneficial in sports using momentum from form, and the momentum from static-active stretching strength, in an effort to propel the muscle into an extended range of motion not exceeding one's static-passive stretching ability.
Eccentric action	An action that causes a muscle to elongate in response to a greater opposing force.
Educational gymnastics	A discipline that emphasizes body management and problem solving skills through movements such as stunts, balances, and poses.
Endocrine.	The glands that produce hormones that regulate various body systems, including but not limited to metabolism, growth and development, tissue function, reproduction, sleep, and mood.
Etiquette	Rules governing socially acceptable behavior.
Frequency	How often one does the activity each week.
Field or Striking games	Games in which one team occupies positions throughout the space or field
Fine motor skills:	Small, fine-tuned movements, such as grasping an object between the thumb and a finger or using the lips and tongue to taste objects.
First law	When viewed in an inertial reference frame, an object either remains at rest or continues to move at a constant velocity, unless acted upon by an external force.
Fitness Assessment	A set of directions that accompanies a fitness
Fitness log	A notebook used to record one's fitness activities. s assessment program.
FITT principle	A mnemonic formula of factors important to determining the correct amount of physical activity:
Fleeing	Traveling quickly away from a pursuing person or object.
Fleer	Someone who travels quickly away from a pursuer.
Flexibility	The ability to move the joints through the full range of motion.
Food label	A label found on the outside packages of food that states the number of servings in the container, the number of calories in each serving, and the amount of nutrients in each serving.

Force	The effort or tension generated in movement.
Fundamental motor skills	Foundation movements that are precursor patterns to the more specialized, complex skills (body management skills, loco motor skills, and manipulative skills) that are used in play, games, sports, dance, gymnastics, outdoor education, and physical recreation.
General space	All the area outside of someone's personal space, for instance in a classroom, field, or gym
Gross motor skills:	Large movements of arms, legs, feet, or the entire body, such as crawling, running, and jumping.
Health and fitness plan	A plan for maintenance or improvement that includes an evaluation of current health and fitness levels for cardiorespiratory endurance, muscular strength, muscular endurance, and flexibility and an analysis of individual health behaviors such as diet, sleep, activity, fitness, and hydration
Intensity	How hard one works at the activity each session.
Immune	The system that protects against infections and other foreign substances, cells, and tissues.
Implement	Device used in the performance of a task.
Increasingly complex activities	Activities that involve progressively more difficulty.
Indicators of health	Physical, mental, emotional, and social.
Individual performance activities	Activities that do not involve teamwork. Examples include gymnastics, figure skating, track and field, multisport events, in-line skating, wrestling, self-defense, and skateboarding.
Intrinsic motivation	A desire to seek out new things and new challenges that is driven by one's interest or enjoyment in the task itself and does not rely on external pressures or a desire for reward.
Invasion games	Games in which teams score by moving an object into another team's territory and either shooting into a fixed target
inverted balance	(a goal or basket) or moving the object across an open-ended target (a line).
Isokinetic	Of or relating to muscular action with a constant rate of movement.
Isometric exercise	An action in which a muscle generates tension without changing length.
Isotonic contraction	An action in which tension remains constant, despite a change in muscle
Leading pass	A throw in which a manipulative is thrown ahead of the intended receiver
Lead-up activity	An activity developed to limit the number of skills needed for successful participation.
Lead-up game	A game developed to limit the number of skills needed for successful length.
Level	A measure of the relationship of one's body to the floor or an apparatus, or of an object to one's body. Examples of levels include high, low, and in between.
Lifetime activity	An activity that is suitable for participation at any time across the lifespan.
Loco-motor	Movement that moves the body from one place to another. Examples include walk, jog, run, jump, hop, leap, gallop, slide, and skip.
Manipulative skills	Skills for controlling or manipulating objects. Examples include kicking, striking, punting, rolling, tossing, throwing, catching, and dribbling.
Mature form	Performance of critical elements of a skill in a smooth and continuous motion
Mature pattern	Execution of the critical elements a skill with efficiency in authentic environments.
Modified games	Small-sided games in which the rules have been modified to emphasize use of specific skills. An example of modification is creating a penalty for dribbling to emphasize passing .

Motor skill combinations	Actions involving two or more different motor skills, including gross motor skills and fine motor skills.
Motor skills	Motor skills are actions that involve the movement of muscles in the body.
Movement concepts	Space, pathways, levels, relationships, speed, direction, force.
Muscles	Major muscles of the body include the abdominals, biceps, triceps, pectorals, hamstrings, quadriceps, gluteal, gastrocnemius, and trapezius.
Muscular endurance	The ability of the muscles to perform physical tasks over a period of time without becoming fatigued
Muscular strength	The amount of force a muscle can exert.
Muscular	The skeletal, smooth, and cardiac muscles that support movement and help maintain posture and circulate blood, among other functions.
Nervous.	A complex communication system that transmits nerve impulses between parts of the body.
Newton's Laws	Three physical laws of motion that, together, laid the foundation for classical mechanics. The laws describe the relationship between a body, the forces acting upon the body, and the body's motion in response to those forces. These laws have been expressed in different ways, and can be summarized as follows:
Non-locomotors	Movement in which a body does not move from one place to another. Examples include bend, twist, stretch, push, pull, turn, swing, sway, and rock.
Offense	A means or methods of attacking or attempting to score.
Open space	A space where there are no defenders/opponents.
Overload	Idea that to improve physical fitness, one needs to do more physical activity than one normally does.
PACER	Abbreviation for Progressive Aerobic Cardiovascular Endurance Run, which is a test for cardiorespiratory fitness.
Pacing	An established rate of locomotion.
Palpate	Examine organs immediately by touching
Pathway	The path a movement takes through space. For example, zigzag, curved, or straight.
Performance	Demonstration of a learned skill.
Personal space	The area immediately surrounding a person.
Physical activity	Bodily activity that enhances or maintains physical fitness and overall health and wellness. Physical activity may be performed for various reasons, including strengthening muscles and the cardiovascular system, honing athletic skills, weight loss or maintenance, and merely enjoyment; it is of a well-rounded physical education program, but not a content area in itself.
Physical activity pyramid	A guide designed for adults to use to plan an active lifestyle. The physical activity pyramid recommends that adults participate in moderate-intensity cardio physical activity on three to five days for a minimum of 150 minutes each week, or in vigorous-intensity cardio physical activity on three to five days for a minimum of 75 minutes each week, as well as perform 8–10 strength-training exercises for 8–12 repetitions each twice each week.
Power	The ability to use strength quickly.
Principle	A basic truth, law, or assumption.
Proficiency	Advanced competency in any subject or skill.
Progression	Idea that the amount and intensity of physical activity needs to be increased gradually.
Progressive	Movement combinations: Sequence of actions.

Protocol	A system of rules or directions that explain the correct conduct and the procedures to be followed in formal situations.
Reaction time	The ability to react or respond quickly to what one hears, sees, or feels.
Repeatable sequences	0..3.Specific movements combined to create a desired outcome. An example might include traveling, rolling, balancing, and transferring weight in a smooth, flowing sequence with intentional changes in direction, speed, and flow.
Reproductive.	The organs and glands in the body that aid in procreation.
Respiratory	The airways and passages that bring air, including oxygen, from outside the body into the lungs.
Reversibility	Idea that fitness benefits are lost when training stops.
Rhythmic skills	Movement that aligns to a steady pulse or musical beat. Examples include creative movement to music, multicultural dance, and jump rope
Safety principles	Ways to maintain personal safety when involved in activities.
Safety rules	Defined rules intended to keep participants safe.
Second law	The vector sum of the external forces F on an object is equal to the mass mof that object multiplied by the acceleration vector a of the object
Self-space	The space that one's body or body parts can reach without traveling away from a starting location.
Situational context clues	Awareness of surroundings. For example, awareness of being followed by someone.
Skeletal	The framework of the body, consisting of bones and connective tissues that protect and support the body tissues and internal organs.
Skill-related fitness assessments	Agility, balance, coordination, power, reaction time and speed.
Skills performance	Demonstrating ability to do a specific task well; improves with practice.
Small-sided game play	An organized game in which the number of players is reduced from the conventional competitive version of the sport. Examples include 2^2 basketball, 3^3 volleyball, and 6^6 lacrosse.
Small-sided practice tasks	Tasks designed to practice particular skills.
Specific skills	Skills that are particular to certain activities or sports, e.g. pitching in softball.

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