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PHASE MODULE

PHYSICAL ACTIVITY AND FITNESS EDUCATION

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PHYSICAL ACTIVITY AND FITNESS EDUCATION

At the completion of this module participants will:

- Understand the benefits of regular physical activity for children;
- Know how much physical activity is recommended for children and youth;
- Explore ways of increasing physical activity opportunities throughout the school day;
- Understand where physical activity fits into the Health and Physical Education domain;
- Know how to increase opportunities for physical activity within physical education lessons;
- Explore a range of strategies for assessing student physical activity participation and knowledge;
- Understand the context for health and performance related fitness testing within the primary school;
- Understand the type of warm up activity most appropriate for primary age students;
- Have participated in a variety of appropriate practical activities and be familiar with resources to support curriculum development.

SUGGESTED PROGRAM

This module is designed to be conducted over two hours according to the following program:

THEORY	TIME
National Physical Activity Guidelines Physical Activity Opportunities at School Physical Activity and Physical Education Physical Activity and Fitness Education within the curriculum Assessment strategies and fitness testing Resources	45 minutes
PRACTICAL ACTIVITIES	
Warming up and cooling down Strategies to increase student activity levels during physical education classes Individual activities Partner activities Group activities and games	1 hour 15 minutes

PROMOTING PHYSICAL ACTIVITY IN SCHOOLS

Why is physical activity important?

Regular physical activity provides young people with important physical, mental and social health benefits

These include:

- healthy growth and development;
- strong bones and muscles;
- control of weight and body composition;
- improved posture;
- improved cardiovascular health;
- reduced blood cholesterol;
- opportunities to make friends and enhance self esteem;
- reduced stress, depression and anxiety.

Regular participation in physical activity has other benefits such as:

- an increase in the likelihood that physical activity will be maintained into adulthood;
- it creates a more positive school climate;
- students are less aggressive and experience fewer discipline problems (CAPHERD);
- it is positively associated with increased educational aspirations. This is even stronger with students from disadvantaged backgrounds (Kerr 1996);
- it is correlated with improvements in subjects such as mathematics (Sallis et al 1999);
- leading to students being more productive, more motivated, better organised and more effective in learning and performing tasks (Kidd 1999);
- the reduction of the likelihood of students being involved in anti-social behaviours (Kerr 1999);
- a decrease in the amount of vandalism, mischief, petty crime and other negative behaviours in the community (Norrie and Mustard, 1999);
- enhancement of social and moral development.

Overweight and Obesity Among Children and Young People

The prevalence of overweight and obesity among Australian children has risen dramatically in recent years. Approximately 20 to 25 % of children aged 5-17 are now classified as overweight or obese. Children and adolescents who are overweight are more likely to be overweight and obese as adults. They have an increased risk of heart disease, high blood pressure, stroke, diabetes, some types of cancer and gallbladder disease.

Physical Inactivity

Physical activity levels among Australian children are decreasing as they are exposed to an ever growing range of sedentary alternatives to physical activities. These include television, chat rooms, mobile phones, computer games, the internet and homework.

Physical inactivity increases the risk of dying prematurely, dying of heart disease and developing colon cancer and high blood pressure (Centre for Disease and Prevention).

Children who are encouraged to be physically active and develop a love of participation are more likely to maintain participation into adulthood.

How Much Physical Activity?

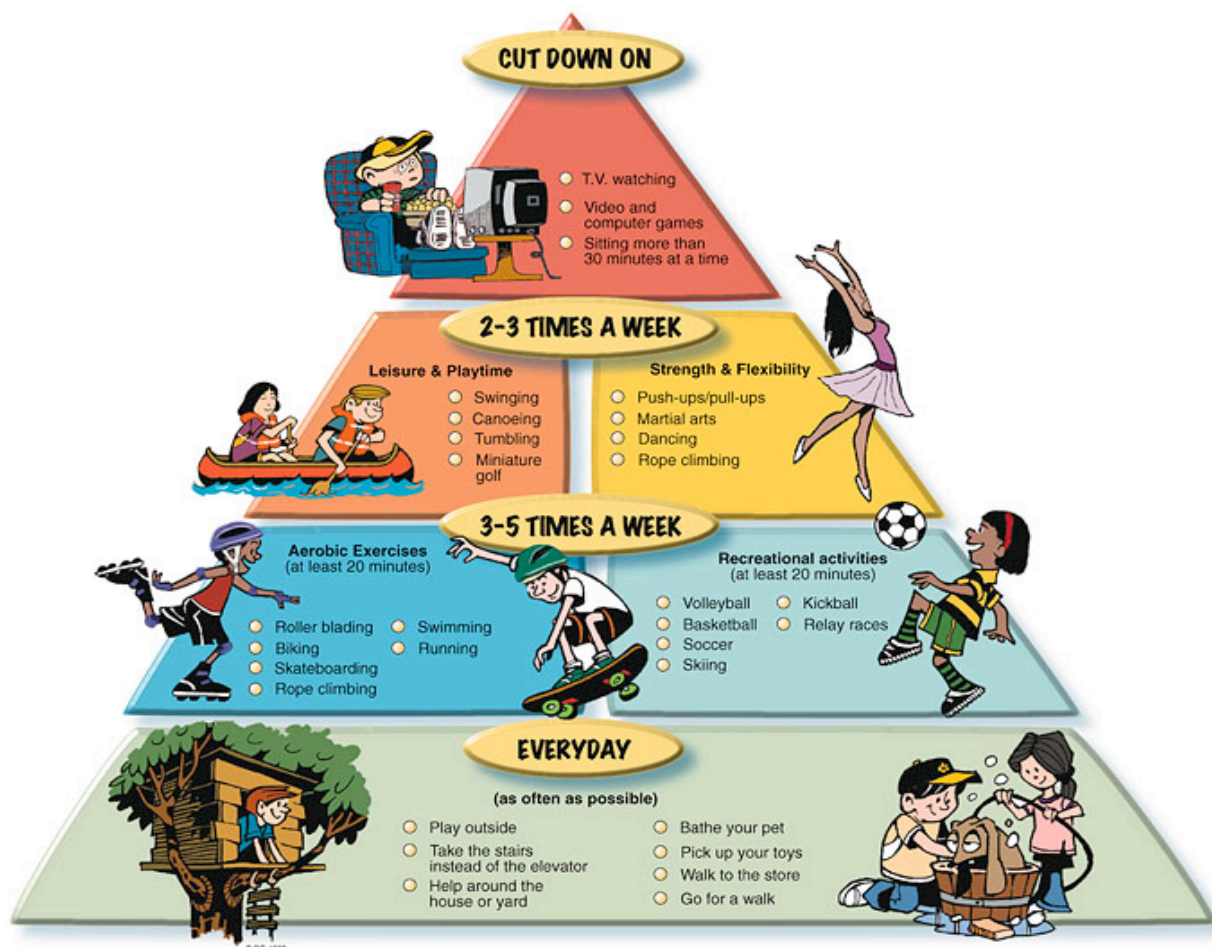
The Australian Government has published physical activity recommendations for young people. They are available at www.healthyactive.gov.au from the Department of Health and Aging. Multiple copies of brochures are also available free of charge.

National Physical Activity Guidelines for Children and Youth

- Children between 5-12 years of age need at least 60 minutes (and up to several hours) of moderate to vigorous physical activity every day.
- Children should not spend more than two hours a day using electronic media for entertainment (eg computer games, TV, internet) particularly during daylight hours.

A combination of moderate and vigorous activities is recommended. The natural movement pattern of children is an intermittent or sporadic style of activity that alternates with rest and recovery. Continuous moderate to vigorous physical activity periods lasting more than 5 -10 minutes are rare among children prior to 12 years of age. Physical activities can be collected in long or short-term bouts. Different types of activities including weight bearing activity which is important for bone health should be included. Primary school age students should be involved in several periods of moderate to vigorous physical activity throughout the school day including physical education classes.

The diagram below provides a visual example of the types and recommended frequency and intensity of physical activity for children. (see appendix 3 for a blank student physical activity pyramid)



Source: http://www.classbrain.com/artread/publish/article_31.shtml

Physical Activity at School

All children should have the opportunity to **learn how to live an active lifestyle at school**. *Schools provide unique opportunities to provide time, facilities and guidance for physical activity for young people. Schools have the mandate and responsibility for enhancing all aspects of growth and development for children and young people. Schools offer the only systematic opportunity for young people to take part in and learn about physical activity.* (World Health Organisation - Physical Activity and Youth)

If the importance of regular physical activity is taught at school, students learn that such activity is a valued part of the education process. Activity programs are an absolute requisite for healthy youth. The physical education program has a clear mandate in Victoria to contribute to the total school curriculum.

Teachers can play an important role in helping students:

- accumulate as much physical activity throughout the day as possible;
- accumulate knowledge about the benefits of regular participation in physical activity;
- learn strategies for participating in physical activity outside of school time.

School leaders should develop and implement a comprehensive plan to encourage physical activity which includes:

- A sequential program of physical education that:
 - is timetabled and meets the mandated time for physical education for Victorian schools (See appendix 1);
 - provides all students with the opportunity to participate;
 - provides opportunity for moderate to vigorous physical activity on a regular basis;
 - teaches mastery of motor skills;
 - teaches knowledge about physical activity;
 - teaches self-management skills;
 - develops positive attitudes towards physical activity;
 - provides activities and sports that students enjoy and can pursue throughout their lives;
 - ensures enjoyment, self satisfaction and personal success are achieved;
 - features cooperative and competitive games and activities;
 - actively teaches cooperation, leadership skills, strategic thinking, fair play and responsible participation in physical activity.
- Programs that provide opportunities for students to be active before and after school and during recess and lunch (eg Active After School Communities; Before and After School Care programs; lunch time games/sport programs facilitated by local secondary school students; activity equipment available for students to use; lunchtime walk and talk club for students and staff; line markings in the playground; motivating playground equipment).
- Programs that encourage active transport to and from school (eg Walking Bus; Stride and Ride; Ride 2 School; Walktober).
- Links to local community sports and activity organisations (eg visits by State Sporting Associations and local sporting clubs to schools to assist with physical activity programs; Athletes in Schools program).
- Membership of the Schools Network - Connecting Schools and Sport
- Becoming a Kids - Go-For-Your-Life primary school
- The creation of a 'Classroom That Moves' by providing physical activity opportunities within the classroom program (For example: practice measurement skills in the playground; Add a Move memory game; students act out movement verbs; take a two minute activity break between classes (www.cdc.gov/HealthyYouth/physicalactivity/brochures/)).
- Opportunities for staff to be physically active and a role models for students and programs that address staff wellbeing.

- Strategies to involve family members in school physical activity programs (eg news letters; family physical activity challenges; parents undertaking coaching accreditation courses to assist with coaching teams).
- Linking knowledge and understanding about physical activity to the Health Education curriculum particularly in relation to nutrition and the dimensions of health.

Physical Activity and Physical Education - What's the Difference?

Physical education programs are not the same as physical activity opportunities and initiatives. Many schools have introduced physical activity options in their Out of School Hours Care services, before and after school and lunchtime activities, walk/ride to school. These programs may aim to address issues such as obesity, school ground conflict, traffic congestion and increasing physical activity opportunities.

Physical Activity initiatives cannot be included as part of the mandated time allocation for physical education and sport.

Physical education differs from physical activity initiatives because it:

- is a planned instructional program with educational objectives that link to curriculum documents;
- is conducted by teachers;
- aims to increase physical development and competence;
- integrates intellectual, social and emotional learning through movement;
- takes place during timetabled school time;
- all students participate.

Participation in physical activity is an outcome of a physical education program as well as a goal. Teachers should provide considerable opportunity for physical activity in their lessons. A successful Physical Education curriculum will result in children choosing to pursue physical activity outside of timetabled physical education.

Where Does Physical Activity and Fitness Education Fit into the Health and Physical Education Curriculum?

The Health and Physical Education domain within the Victorian Essential Learning Standards requires students to develop knowledge, skills and behaviours that enable them to:

- maintain good health and live a healthy lifestyle;
- understand the role of physical activity in ensuring good health ;
- engage in physical activity.

The HPE Learning Focus statement has a strong focus on student participation in and knowledge about, physical activity.

The table below documents **Learning Focus** statements directly related to physical activity participation and knowledge.

**Health and Physical Education
Domain
Physical Activity and Fitness Education – Learning Focus statements**

Level 1	<p>They regularly engage in activities described as moderate to vigorous, such as brisk walking or running, active play, swimming, dance, sports and games, which increase student breathing and sweating.</p> <p>Students begin to develop a movement vocabulary, including movement words, ways of describing the physical responses of their bodies to movement and the feelings associated with participation in physical activity; they explore basic health needs that must be met to maintain or promote their health and to help them grow and develop.</p> <p>Students are introduced to the basic principles of living an active and healthy life and begin to learn about the importance of eating a variety of foods. They learn about how foods differ in look, taste, feel and smell and begin to understand how good food choices contribute to an active and healthy life.</p>
Level 2	<p>Students begin to understand the link between physical activity and health and learn that they need energy to participate in physical activity. They learn to describe their physiological responses to participation in both moderate and vigorous activity using vocabulary such as <i>out of breath</i> and <i>heart beating faster</i>. They discuss how activities that make them huff and puff improve heart and lung function.</p> <p>They explore people's needs at various stages of development and recognise that some needs apply to all stages of life.</p>
Level 3	<p>Students participate in a range of activities that promote health related fitness components of cardio-respiratory fitness, flexibility and strength and explore the link between health-related fitness and lifestyle activities. Students examine their physical development in detail; they develop an understanding of human development across the lifespan as a continuous process involving changes and predictable stages such as conception, prenatal, infancy, childhood, adolescence, adulthood and aging. Students explore how the school and community contribute to the health of its members, both through the impact of its physical and social environments and through the services and facilities it provides. Students develop their understanding of the need for variety and frequency of food intake in active and healthy lives, and begin to relate the foods they eat with the energy they need for everyday and physical activities. Students reflect on the importance of healthy eating and participation in physical activity for their physical, social and emotional health.</p>
Level 4	<p>As students continue to participate in regular periods of moderate to vigorous physical activity, they explore the training principles for improving components of health related fitness and ways to monitor exercise intensity. Students discuss significant transitions between life stages, particularly the changes associated with puberty and the changing roles and responsibilities during these stages. Students consider what it means to be physically, socially and emotionally healthy. They explore their own and others' views about health and suggest what it might mean for certain groups of people. They investigate different food-selection models such as the Healthy Eating Pyramid and the Australian Guide to Healthy Eating and their characteristics and reflect on how they can be used to assist in decisions about food choices.</p>

Standards in the Health and Physical Education domain are organised in two dimensions: Movement and Physical Activity; and Health Knowledge and Promotion.

Students are required to achieve standards related to, participation in and knowledge about physical activity from levels 1-6.

The table below includes the Health and Physical Education Standards. The sections **directly** related to physical activity participation are in italics.

Health and Physical Education domain - Learning Standards

Level	Movement and physical activity	Health knowledge and promotion
1	At Level 1 students perform basic motor skills and movement patterns, with or without equipment, in a range of environments. <i>They regularly engage in periods of moderate to vigorous physical activity. They use simple vocabulary to describe movement, the physical responses of their bodies to activity and their feelings about participation in physical activity. When participating in movement and physical activities, they follow rules and procedures and use equipment and space safely.</i>	In this domain, standards for the <i>Health knowledge and promotion</i> dimension are introduced at Level 3.
2	At Level 2, students demonstrate basic motor skills and some more complex skills. They combine motor skills and movement patterns during individual and group activities. They demonstrate control when participating in locomotor activities requiring change of speed, direction and level. They create and perform simple rhythmic movement sequences in response to stimuli. <i>They regularly engage in sessions of moderate to vigorous physical activity and describe the link between physical activity and health. They explain the contribution rules and procedures make to safe conduct of games and activities.</i> They use equipment and space safely.	
3	At Level 3, students perform a broad range of complex motor skills. They demonstrate a wide variety of motor skills and apply them to basic, sport-specific situations. They create and perform co-ordinated movement sequences that contain a variety of motor skills and movement patterns. <i>They participate regularly in physical activities for the purpose of improving skills and health and describe the components of health-related fitness.</i> They begin to use basic games' tactics. They work with others to achieve goals in both co-operative and competitive sporting and games' situations, explain the concepts of fair play and respect the roles of officials. Students follow safety principles in games and activities.	At Level 3 students describe the stages of human development across the human lifespan. Students explain basic concepts of identity and use simple strategies to maintain and support their self-worth. They identify basic safety skills and strategies at home, school and in the community and describe methods for recognising and avoiding harmful situations. They describe how physical and social components in the local environment contribute to wellbeing and identify how health services and products address the health needs and concerns of the local community. They identify healthy eating practices and explain some physiological and economic reasons for people's food choices.
4	At Level 4 students perform confidently and efficiently in a range of movement environments (indoor, outdoor and aquatic). They refine basic and complex motor skills and apply these skills in increasingly complex games and activities. <i>They maintain regular participation in moderate to vigorous physical activity and monitor exercise intensity. They explain the process for improving health-related fitness.</i> Students effectively use strategic thinking and work with both more- and less-skilled peers to improve game performance. Students work independently to improve performance. They evaluate the performance of a partner and provide constructive feedback base on performance criteria to assist skill development. Students describe and analyse the various roles required in competitive sports. They work in a group to create a game and establish rules and procedures for its safe conduct.	At Level 4 students identify the likely physical, emotional and social changes that will occur during puberty. They identify and discuss the validity of the ways in which people define their own and other people's identity. They describe the actions they can take if they feel unsafe at home, school and in the community. <i>They describe the physical, social and emotional dimensions of health and establish health goals and plan strategies for improving their personal health.</i> They describe a range of health services, products and information that can be accessed to help meet health needs and concerns. They analyse and explain physiological, social, cultural and economic reasons for food choices and analyse and describe food selection models. They describe how to prepare and store food hygienically.

Components of Physical Education



● "Physical Education is the process through which sport, outdoor education, dance, gymnastics, aquatics and games are used by physical educators to teach students motor skills and fitness skills as well as assisting with the school's responsibility to develop personal and social skills in students." (Moneghetti Report, 1993)

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Note: This model was developed by ACHPER Victorian Branch for professional development purposes. Members may wish to refer to it in their own professional settings.

● "Sport can be defined as vigorous physical activity that, for the purposes of discovering limits of one's capabilities, or for fun, amusement and diversion involves competition against oneself or another, or a confrontation with natural elements." (Moneghetti Report, 1993)

● A Physically Educated Person:

- has competence in basic skills for participation in physical activity;
- participates regularly in physical activity;
- maintains a health-enhancing level of physical fitness;
- knows the implications of, and benefits from, involvement in physical activity;
- values physical activity and its contribution to a healthy lifestyle;
- understands that physical activity provides opportunities for enjoyment, challenge and social interaction.

Opportunity for participation in physical activity occurs throughout all components of the physical education curriculum. Participation in physical activity is an outcome of a comprehensive physical education curriculum.

Knowledge **about** physical activity and fitness can be taught in a variety of ways:

- Through a practical unit where the theoretical knowledge about physical activity is a teaching and learning focus, for example:
 - in a gymnastics unit for Year 4 students knowledge about health related fitness is a focus of the unit;
 - during a minor games unit for Year 2, students knowledge about the benefits of regular physical activity can be a teaching focus.
- As part of the classroom health education curriculum;
- Through a practical unit with a clear participation focus (eg Healthy Bodies, Fit Movers).

Practical Strategies to Increase Student Activity Levels Within Physical Education Lessons

Research tells us that within many physical education classes, students are active for as little as 25% of the lesson. The target activity level is 50% of actual lesson time. In doing so school physical and sport education lessons can make a significant contribution to students maintaining health enhancing levels of daily physical activity. Greater levels of student activity can foster increased enjoyment leading to regular participation in physical activity into adulthood.

Try some of these strategies to increase activity time.

1. Instant Activity

Students come to physical education classes ready to move. Providing opportunities to move at the beginning of the lesson sets a positive environment for the rest of the lesson. Some examples are:

- Music: the music is on as the students arrive and they start moving as instructed by the teacher;
- Bulletin boards: these tell the students what activity to begin with as they enter the gymnasium or playing area;
- Collecting a numbered ball and moving to the same number activity station quickly puts the students into groups for activity rotation;
- A well known chasing and fleeing game that requires minimal organisation and equipment.

The actual content of the introductory activity may be related to the lesson or a review of previous lessons. It may also serve as a warm up activity.

2. Distribution of Equipment

Much time is wasted in giving out equipment in physical education classes. The teacher who plans to accomplish this organisational task efficiently gains valuable activity and learning time.

Efficient techniques include:

- Several distribution points;
- Playing a game that includes collection of equipment;
- Providing a task for the students to begin working on as soon as they have their equipment;
- Ensuring there is sufficient equipment for the number of students in the class will increase practise time;
- Having equipment spaced around the area in the formation that the students will be working (to reduce the chance of students rushing for equipment and getting injured).

3. Transitions

It is important to minimise transition/waiting/management times in physical education classes. Practising all protocols and transitions with the students will create more time for activity and learning.

Some examples are:

- Whilst the class is practising one activity the teacher chooses students who are already competent at the activity, takes them aside and demonstrates the next activity to them. When the class is ready to progress to the next activity the student helpers demonstrate the new activity. This reduces the time that the students spend watching and waiting for instructions;

- Being short and precise with instructions and demonstrations, do not overload students with information they are unlikely to remember. Aim to complete instructions/demonstrations/checking for understanding in 60 seconds or less;
- Having equipment ready for the next activity in another area;
- Using equipment in the warm up that is to be used in the next part of the lesson;
- Choosing teams before the start of the lesson.

4. Play – Teach – Play Approach

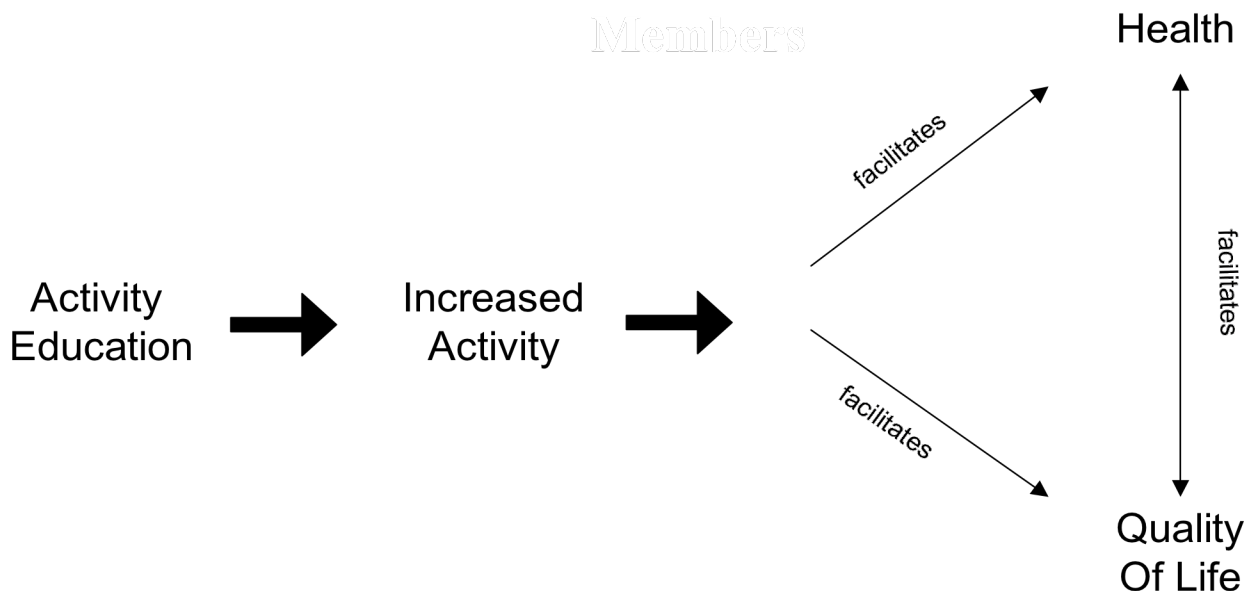
This is one of the components of the '*Teaching Games For Understanding*' model. Students may not see the long-term benefits of practising a skill through drills– they want to be active and they want to play. The play-teach-play approach provides the opportunity to practise the skills in the context they will be used. In play-teach-play the connections between practice and play can be made clearer. By initially playing the game this helps both the teacher and students understand and decide on the skills or combinations of skills to practise.

5. Modified Games

The rules of major games and sports may be changed so that increased student activity is an outcome (eg reducing the number of players in each team or changing the rules to allow more than one student per team to be running at the same).

Lessons that make the best use of allotted time are those that provide for a maximum of active involvement by all the students without compromising other goals of the physical education curriculum.

ACTIVITY EDUCATION



ASSESSMENT

The Department of Education has published the following assessment principles to guide teachers when developing assessment tasks:

- The primary purpose of assessment is to improve student learning;
- Assessment practices are integral to the teaching and learning process and are matched to teaching and learning goals;
- Assessment practices use a range of measures allowing students to demonstrate what they know and can do;
- Assessment processes are valid, reliable and fair and cater for the range of students' learning styles;
- Assessment practices promote deeper understanding of learning processes by developing students capacity for self-assessment;
- Assessment is authentic – based on an understanding of how students learn and requiring them to apply their skills to real world challenges;
- Students are involved in negotiating assessment to ensure a shared understanding of purpose, criteria and standards;
- Assessment works best when it is ongoing rather than episodic;
- Students have access to ongoing constructive feedback that supports their learning;
- Good assessment provides useful information to report credibly to parents on student achievement.

A selection of assessment strategies and examples of how they may be used are:

- Rubric– provides an opportunity for students to reflect on their attitude/motivation towards physical activity;
- Mind Maps– to determine student's knowledge about an aspect of physical activity;
- Diaries– to encourage students to keep a record of physical activity over a period of time;
- Pedometers– students monitor and record the number of steps they take in a day/week and identify whether they need to increase or maintain physical activity levels;
- Heart Rate monitors– students can monitor the intensity of their physical activity as moderate or vigorous by observing their heart rates;
- Journals– students reflect on their attitude/participation/enjoyment/skill related to physical activity;
- Questionnaires– students design a questionnaire on motivation to participate in physical activity and distribute to friends/parents/ teachers;
- Self-assessment– students compare personal activity participation with the National Physical Activity;
- Guidelines/students record participation in activities that promote aspects of health related fitness;
- Goal setting– students identify a goal for improving an aspect of physical activity participation, develop a strategy to achieve the goal and monitor progress;
- Posters– students create a poster about the benefits of physical activity participation/the possible consequences of inactivity/the health related fitness components requirements of a particular of sports/how to improve a component of health related fitness/ community facilities that promote participation in physical activity/training principles;
- Structured Observation– used to assess enthusiasm and attitude to physical education lessons;
- ActivityGram– a software program that helps students monitor their personal activity patterns;
- Physical Activity Pyramid– a blank activity pyramid that allows students to record personal physical activity participation;
- Webquests and online quizzes;
- Fitness tests.

Fitness Testing, Fitness Education and Children

Children need a healthy level of cardiorespiratory endurance, muscular strength, muscular endurance and flexibility in order to participate fully in activities which will enhance their overall development. Children who engage in a minimum of 60 minutes and up to several hours of moderate to vigorous physical activity a day will receive health benefits. Fitness Education needs to include appropriate movement experiences coupled with an understanding of issues related to fitness but it is not necessary to design specific fitness exercises to achieve this. Teachers need to create a learning environment in which students develop positive attitudes towards fitness and health and gradually accept responsibility for self-assessing their physical activity levels and fitness performance.

The place of fitness testing in primary schools has caused considerable controversy in recent years. Within levels 1 – 4 Victorian Essential Learning Standards there is no standard that requires teachers to regularly test student fitness levels. Schools are required to assess student participation in physical activity and knowledge about aspects of physical activity and fitness. However many schools decide to use fitness tests as an assessment strategy for a number of reasons. Schools are advised to consider the following information about fitness testing before reaching a decision about whether to conduct fitness tests with primary age school children:

Fitness tests are valid in the primary school setting if their objective is related to the educational development of the student. That is they:

- Teach students about the health implications of regular physical activity;
- Motivate students to be more physically active;
- Provide students with the knowledge to monitor their own fitness levels;
- Facilitate goal setting to increase physical activity levels.

Research about fitness testing and primary aged students in schools indicates:

- Health outcomes are influenced more by daily energy expenditure than by fitness performance;
- Student's cardiorespiratory endurance, strength and muscular endurance increases with growth irrespective of activity levels;
- Fitness tests results are strongly linked to student's genetic make and maturational status therefore activity levels are not always reflected in fitness test results;
- Participation in physical education classes provides insufficient activity to improve aerobic capacity;
- Fitness test results may discourage some children from participation;
- Students do not respond to aerobic training the same way as adults;
- Weighing and measuring students to determine body composition can cause embarrassment for some students;
- Overweight and obese students are likely to perform poorly on most test items;
- Validity and reliability of test items is not strong, particularly when conducted by teachers who have insufficient knowledge;
- Factors influencing test results are numerous.

Fitness tests should **not** be used to:

- Report to parents;
- Assess the effectiveness of the school's physical education program;
- Examine the progress of the student's fitness regime.

If a school makes the decision to incorporate fitness testing as part of the Health and Physical Education curriculum consider the following options:

- A **demonstration** of a test using student volunteers may be preferable to all students undergoing all tests;
- Offering students a choice about which fitness test they would like to participate in;

What fitness tests should be used?

There are two main types of fitness tests. They are:

- Health Related Fitness testing;
- Performance Related Fitness testing.

Health Related Physical Fitness is characterised by:

- an ability to perform activities with vigour;
- demonstration of behaviours and capacities that are associated with low risk of premature development of the diseases associated with physical inactivity (Sports Medicine Australia).

The components of health related fitness are:

- Cardiorespiratory endurance– the capacity of the heart, blood vessels and lungs to supply oxygen and nutrients to the working muscles (running, cycling, swimming, skipping and dancing are all examples of activities that can develop cardiovascular endurance);
- Muscular strength– the ability to exert a force against a resistance. Children engaged in daily active play enhance leg strength by running, cycling, dancing etc. Arm strength is developed by lifting and carrying, swinging on playground equipment and handling tools;
- Muscular endurance– the ability to contract a muscle repeatedly over a period of time. Swimming, skipping, repeated situps or pull ups are examples of activities that enhance a child's muscular endurance.
- Muscular and joint flexibility– the ability to move a part or parts of the body through the full range of motion without undue stress. Twisting, turning, bending and stretching are examples of activities that can develop muscular and joint flexibility.

All children need a level of cardiorespiratory endurance, muscular strength, muscular endurance and flexibility in order to be able to participate fully in activities which will enhance their overall development. The concept of health related fitness for primary school age students centres on the provision of developmentally appropriate movement experiences rather than specific exercises to develop health related fitness components. Maintaining recommended activity levels is vital for all children.

Performance Related Fitness is an aspect of physical fitness related to the quality of movement skill.

The performance related components of physical fitness are:

- Balance– the ability to maintain equilibrium in relation to the force of gravity and to make minute alterations in one's body position when it is placed in various positions;
- Coordination– the skilful movement of different parts of the body at the same time;
- Speed– the ability to move from one point to another in the shortest time possible;
- Agility– the ability to change direction of the body quickly while moving from one point to another;
- Power– the ability to perform one maximum effort in a short a period as possible (strength + speed)
- Reaction Time– the length of time it takes to react to a stimulus.

There are two ways of administering and interpreting the results of fitness tests.

Criterion-based standards

The objective of criterion-based standards is to detect whether the individual is able to meet a pre-determined standard of performance. Criterion based standards for health-related fitness represent the minimal level thought to provide protection against the health problems related to a sedentary lifestyle. Those who exceed the set standards may be at a lower risk of ill health than those below the desirable criterion (ACHPER Australian Fitness Education Award [AFEA], 2004).

Norms-referenced standards

The objective of norms-referenced standards is to detect and compare individual differences among students. Students can compare how they compare with students of their age and gender. Norms-referenced standards have little relation to health status.

Health related fitness tests are the appropriate tests within curriculum related to physical activity participation. If schools decide to administer health-fitness tests it is recommended that criterion-based standards such as those contained in the AFEA be used.

What to do with fitness test results?

- Encourage personal goal setting particularly in relation to increasing amount of physical activity;
- Develop personal health related fitness activity plan for a specific health related fitness component eg strength, aerobic capacity, flexibility;
- Teach students about which test is appropriate for each component of fitness;
- Teach students to self monitor fitness levels;
- Link results to stages of growth and development, identify changes related to growth.

WARMING UP

What is the purpose of the warm-up in physical education lessons?

The warm-up is the introduction to the lesson and sets the scene and tone of the lesson. The warm-up has physiological and psychological purposes. Physiological reasons for a warm-up in primary physical education lessons are:

- to increase core temperature;
- to increase heart rate and blood flow to skeletal tissues;
- to increase the activation of the Central Nervous System (therefore increasing coordination, skill accuracy and reaction time);
- to increase the suppleness of connective tissue (resulting in less incidence of musculotendinous injuries).

Psychological reasons include:

- to tune the students in to the lesson content/theme;
- to revise previous lesson content;
- to mentally prepare students for physical activity.

A frequent criticism of physical education warm-up format is that often physiological and psychological outcomes are not met. Often the warm-up in physical education includes jogging or a minor game (often unrelated to the content of the lesson) and perhaps static stretching.

The major concern about this type of warm-up is that it does not adequately prepare students for the lesson content. Generally the initial jog is at a pace that has a minimal effect upon body temperature, and usually consists of jogging forwards, in a straight line or around the oval.

The stretching performed is usually static, with most stretches performed slowly and with students either standing still or sitting on the ground. While stretching is occurring the body is very efficient in removing excess body heat, so the small increase in body temperature from the initial jog is quickly lost. Static stretching does not prepare the muscle and connective tissue for the active contraction-relaxation process that will occur with many running, jumping or kicking movements as required in a dynamic sports or game situations. Dynamic flexibility activities better prepare the muscles and tendons for physical activity. Static stretching is beneficial for increasing range of motion around the joints and ideally takes place as part of the cool down activities.

Often teachers use legal liability and reducing the risk of injury as the reason for using static stretching at the beginning of a lesson. This is an invalid argument if the student does nothing but statically stretch for this time.

Whilst warm-ups should be planned for the specific lesson content two generic examples of a warm-up for students in Physical Education lessons are:

Generic Warm-up 1

- Jog in a variety of directions, gradually increasing speed, or perform a variety of locomotor movements such as galloping, skipping, hopping, jumping varying direction and speed;
- Play a minor game or lead-up game that revises previously taught skills;
- Dynamic flexibility activities such as Hip Circles, Trunk Twist, Alternate Toe Touches, Forward Leg Swings etc;
- Revision activities.

Generic Warm-up 2

If the lesson content requires static movements (as appears in aerobics, gymnastics, dance) or if you still want to include static stretching as part of the warm-up, then incorporating it between more vigorous activity is recommended. This will reduce the loss of body heat. An example of this warm-up is:

- Locomotor movements - skipping, jogging, galloping - varying pathways;
- Static stretching of upper body;
- Locomotor movements – sidesteps, grapevine, chassé steps, butt kicks;
- Static stretching of torso;
- Minor game;
- Static stretching of lower body;
- Revise dance/aerobics routine.

For more detailed information refer to <http://www.faccioni.com/Reviews/Warmup.PDF>

Educating Students for Tomorrow.....

Primary aged children generally have excellent levels of flexibility. It begins to decline in both boys and girls with the onset of puberty and the rapid increase in growth during this time. It is important that teachers educate students about the need for flexibility activities and the different types of flexibility in preparation for the time when flexibility begins to decline.

PRACTICAL ACTIVITIES

Indicated below are some exciting activities which students will enjoy and which can be incorporated into a multitude of skill practices. With some imagination and forward planning, teachers can create a plethora of fun activities to ensure students are physically active.

A Word About Safety

Teachers are responsible for ensuring the safety of their students. When planning a lesson, the teacher should consider whether the planned activities will be safe. To assist teachers, safety tips have been included in the descriptions of some activities. Other safety advice to consider includes:

- Discuss and emphasise safety practices and precautions with students when introducing a new activity;
- Provide proper supervision of activities at all times;
- Ensure an adequate warm-up to prepare students for physical activity;
- When dividing the class into groups, aim to create groups of equal ability;
- Watch for students becoming tired and adjust or change activities as appropriate;
- Organise activity areas so there is ample space between students, groups and obstacles (fences, poles, nets, bins, walls etc);
- Pay careful attention to the suitability of the activity surface. Wet grass, wet concrete, sandy surfaces, cracked pavement and polished floors can be very dangerous to use for activities which involve students moving and changing direction quickly;
- Encourage students to wear appropriate clothing for the activity. Appropriate footwear also helps prevent accidents;
- Hoops, carpet squares and mats sometimes slip when jumped on by students;
- Be careful to select equipment that is appropriate for students' ability;
- Encourage students to drink regularly to prevent dehydration;
- Encourage students to follow sun protection practices.

INDIVIDUAL ACTIVITIES

Jumping

- Jump on the spot
- Try various heights and speeds
- Try rhythmic jumping – with feet moving apart – together – to the side – forwards – backwards
- Jump making various shapes in the air
- Jump touching various parts of the body with the hands
- Jump and travel – vary take-offs, landings, direction, shapes, speeds, levels
- Try a standing broad jump - with a partner
- Count the number of jumps taken to reach a nominated spot

Hopping

- Hop on the spot, hop on one foot, change to the other – move around the area
- Hop to spell out names in giant letters
- Hop on one foot and place the other leg in various positions eg out in front, tucked up behind, free leg swinging in various directions
- Hop with a partner, in unison, joining up in various ways, breaking off and re-joining

Running

- Free running in all directions, dodging in and out and around markers placed on the ground
- Running jumping in and out of shapes drawn on the ground
- Run varying speed and direction – be a paper blowing in the wind – run forward and back to place – run in a big circle, change and run the other way
- Run making floor patterns such as circles, squares, zigzags
- Jog on the spot, run to a new spot and jog on the spot
- Run with a partner or in groups
- Run and vary arm actions– above head, behind back, out to side
- Jog on the spot holding hands out at waist height– bring knees up to touch hands
- Run with exaggerated long strides
- Straddle run– run forward leaping to the right as right foot advances, leaping to the left as left foot advances
- Try shadowing a partner
- Run taking a hurdle stride every fourth step

GROUP ACTIVITIES

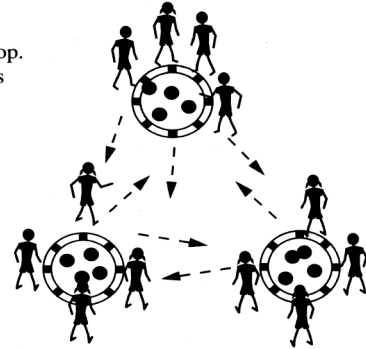
The following activities can be found in *Fundamental Motor Skills: An Activities Resource For Classroom Teachers* (Department of Education, 1998).

BEAN BAG SCRAMBLE

Students Whole class.
Equipment 1 hoop and 4 bean bags per 4 students.
Area Grassed surface open space.
Activity The hoops are randomly scattered with 4 bean bags placed in each hoop. A maximum of 4 students stand near each hoop. On a signal, students collect bean bags from other hoops and place them in their own hoop. Students cannot collect more than 1 bean bag at a time nor protect the bean bags in their hoop. Allow the activity to run for a set time, then reposition the bean bags and repeat.

Variations

- Vary the distance between hoops.
- Skip between hoops.



MOTHER WITCH

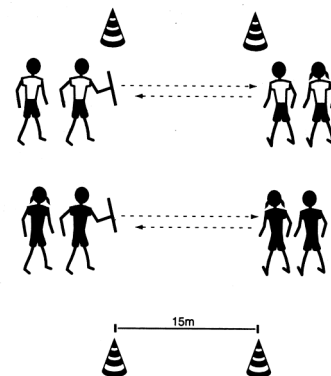
Students Whole class.
Equipment Nil.
Area Large open space.
Activity 1 student, the 'witch', walks in front of the rest of the group who tease the witch by singing:
*Slow, slow mother witch, fell in a ditch,
 picked up a dollar and thought she was rich.*
 The witch turns and asks
 "Whose children are you?"
 They may give any name and the witch walks on. If they say
 "Yours" the witch chases them. The first student caught becomes the witch.

SHORT SHARP SHUTTLE

Students Groups of 4.
Equipment 1 relay baton per group and 4 marker cones.
Area Large open space.
Activity Set out 4 marker cones to create 2 lines, 15-20 metres apart. Groups divide into 2 with each half at opposite ends, in lines, facing each other. A student sprints to the opposite end with the relay baton and passes it to the next runner.

Variations

- The runner rounds the back of their group and then reaches forwards to pass the baton to the next runner.
- Use various relay formations (eg square, spoke and circular relay).

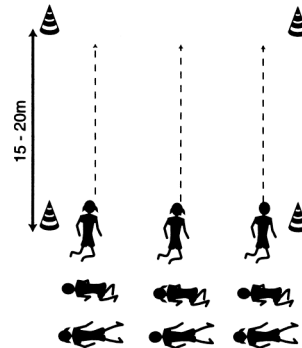


FIGHTERS AND BOMBERS

Students	Whole class.
Equipment	4 colour bands.
Area	Netball court.
Activity	4 students are designated the taggers and are the 'fighters'. The other students form pairs and are the 'bombers'. The fighters chase the bombers who link by holding hands. When tagged, the bombers stand still and make an arch. The bombers can be released when another bomber goes under the arch.

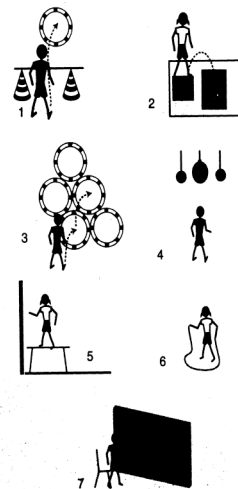
NOVELTY STARTS

Students	Groups of 5-6.
Equipment	4 marker cones.
Area	Large open space.
Activity	Discuss different starting positions with students. Groups form lines with the first student in each line taking up a different starting position (eg lying face down, head first; lying face down, feet first; on a side in a reclining position; sitting cross-legged, facing or not facing the direction of travel). The teacher calls "Set" and then claps to signal for the students to scramble and sprint to the finish line. Repeat the activity until each line of students has run to the other side of the activity area.



JUMPING CIRCUIT

Students	Whole class.
Equipment	See diagram and activity description.
Area	Grassed surface open space.
Activity	Set up 7 activity stations. Groups of students spend 3 minutes at each station and rotate on a signal. Warm up: 'Jack in the Box', 'Pop Goes the Weasel', or teach 'motorbike landings' (see Teaching Hints, page 38). Station 1. Students vertical jump over a cane placed on small marker cones, a wooden block or a soft cushion and land in a hoop or chalk circle. Station 2. Students climb on to a box or foam shape and vertical jump on to a mark (eg a cross) on a mat. The landing should be in a 'motorbike' position. Station 3. Students devise a jumping pattern of vertical jumps and hops in hoops, or vertical jumps into blue hoops and hops in other colours using a different foot (eg red = right foot, green = left foot). Station 4. Students vertical jump to touch a suspended ball, soft toy or balloon. Station 5. Students vertical jump 10 times on a trampette (their hands touch the wall for support), then vertical jump off to motorbike land on a mat. Station 6. Students skip with a rope and jump as high as possible. They push off the balls of their feet and extend their toes. Encourage students to try to keep a rhythm. Station 7. Students crouch to touch the seat of a chair behind them then vertical jump up to touch a wall in front.

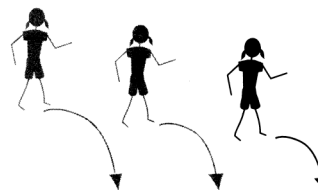


LEAP THE BROOK

Students	Whole class.
Equipment	Ropes, chalk or tape.
Area	Large open space.
Activity	Students divide into 3 groups and leap over parallel ropes or lines marked on the floor/ground. Gradually widen the ropes after each leap.

Variations

- Mark lines in a V shape to allow each student to leap across the most comfortable width for them (see diagram).
- Place a series of coloured lines on the floor/ground so that students can attempt different distance leaps.



RUN TO TOUCH

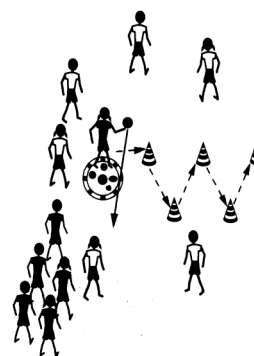
Students	Whole class.
Equipment	Nil.
Area	Large open space.
Activity	Students run to various objects nominated by the teacher (eg bench, a student, line marking, colour band).

BALL SCATTER

Students	2 groups of 6.
Equipment	6 balls of various sizes, 1 hoop and 5 marker cones per 2 groups.
Area	Large open space.
Activity	Set out the marker cones in a zig-zag formation and place the balls in the hoop at the beginning of the zig-zag. A student from group 1 throws all the balls out of the hoop and runs a zig-zag course touching the top of each marker cone. They continue up and down as many times as possible in the time that it takes for group 2, the fielding side, to return the balls to the hoop. Group 1 scores 1 point for each marker cone touched. Groups change.

Variation

- Fielders may be asked to sit or take a different position (eg sitting, crouching etc) on the ground before the balls are thrown.



JOCKEYS AND HORSES

Students	2 groups.
Equipment	Colour bands.
Area	Large open space.
Activity	Set boundaries to designate the activity area. Groups divide into horses and jockeys. The horses wear colour bands and run free in the paddock. Jockeys run and catch their own horse and run back to the stable with it. Horses try to avoid being captured by dodging the jockeys. The last free horse wins for the horses. The first jockey home wins for the jockeys.

Safety Tip

Ensure the area is large enough to allow students to move safely.

HERE AND THERE

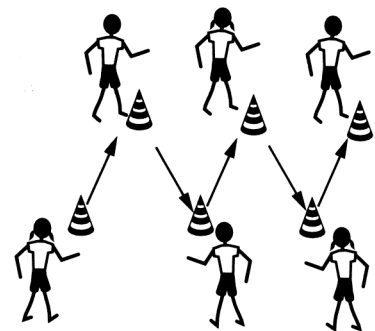
Students	Whole class.
Equipment	Nil.
Area	Large open space.
Activity	A leader calls "Here" and points in a direction. Students respond by running in that direction. The leader then calls "There" and points in another direction and so on. On the call of "Everywhere", the leader chases and tags someone who becomes the leader.

ZIG-ZAG TAG

Students	Groups of 6.
Equipment	6 marker cones per group.
Area	Large open space.
Activity	Students and cones are set up in a zig-zag pattern. On a command, student 1 runs to and tags student 2 who in turn runs to and tags student 3 and so on. The last student (6) then zig-zag runs back to the first cone and then tags student 2. Students continue until all have returned to their original position.

Variation

- Add extra cones with students standing on odd number cones only.

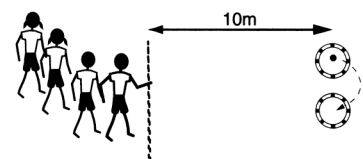


BEAN BAG RELAY

Students	Groups of 4.
Equipment	2 hoops and 1 bean bag per group.
Area	Large open space.
Activity	Set up hoops, 10 metres away from each group. Place a bean bag in 1 hoop. The first student races out and moves the bean bag from 1 hoop to the next, returns to the group and tags the next student who moves the bean bag back. Continue until all students have had a turn.

Variation

- Place the hoops wider apart and on a diagonal.



RESOURCES

Fitness Lower Primary and **Fitness Upper Primary**, the Australian Council for Health, Physical Education and Recreation Inc (ACHPER), 1994

Fundamental Motor Skills An Activities Resource Department of Education, Victoria, 1998

Peter Meaney, (Ed) **Don't Forget Your Whistle** Robert Anderson and Associates, Victoria 2003

Australian Fitness Education Award ACHPER South Australia 2004

APPENDICES

APPENDIX 1: DEFINITIONS

How is physical activity defined?

It is an all encompassing term that includes exercise, dance, sports and leisure activities.

It is generally defined as:

bodily movement that is produced by the contraction of skeletal muscle and substantially increases energy expenditure.

What is Exercise?

Exercise is planned, structured and repetitive bodily movement for recreation, leisure or fitness usually performed to improve one or more components of physical fitness, health or social interaction.

Moderate Physical Activity:

Activity that is energetic but at a level at which conversation can be maintained.

Vigorous Physical Activity:

Activity at a higher intensity, which may, cause sweating and puffing.

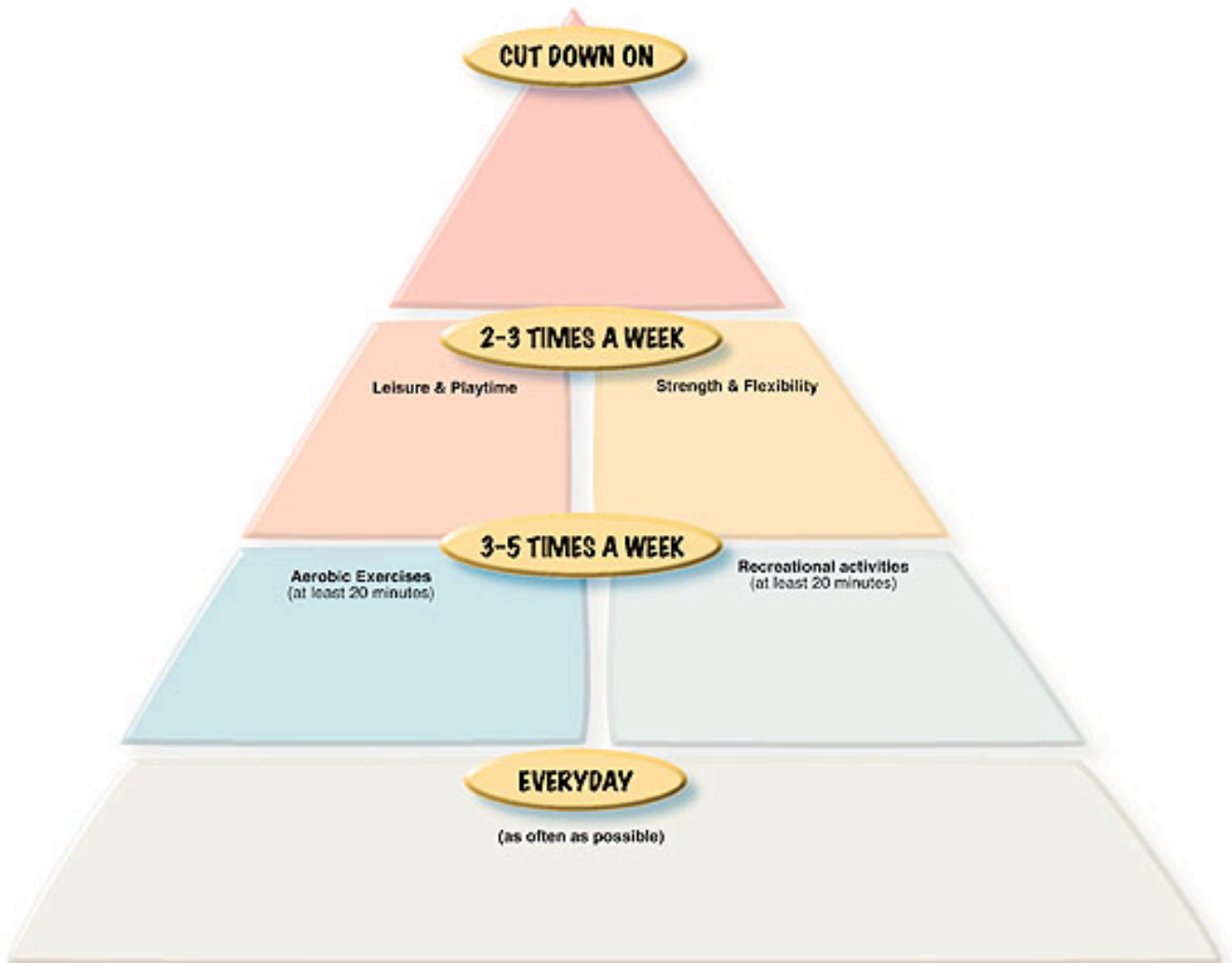
APPENDIX 2: DEPARTMENT OF EDUCATION: PHYSICAL AND SPORT EDUCATION POLICY

Government Schools must meet compulsory time requirements for physical education and sport for students from Prep to Year 10. This means that schools will need to take account of requirements for the provision of physical and sport education:

- 20-30 minutes per day of physical education for students in Prep–Year 3;
- three hours per week of physical education and sport, with a minimum provision of 50 percent of physical education for students in Years 4–6;
- a minimum of 100 minutes each week of physical education and a minimum of 100 minutes each week of timetabled sport for students in Years 7–10.

APPENDIX 3: ACTIVITY PYRAMID

This activity pyramid can be used by students to record their physical activity participation.



Source: http://www.classbrain.com/artread/publish/article_31.shtml