

Pennsylvania Department of Education

## **XXVIII. TABLE OF CONTENTS**

Introduction	XXIX.		
THE ACADEMIC STANDARDS			
Concepts of Health	10.1.	Physical Activity  A. Physical Activities That Promote Health and  Pitness of Regular Participation Responses of the Body Systems to Physical  C. D. Physical Activity Preferences Activity Activity and Motor Skill Improvement F. Physical Activity and Group Interaction	10.4
Healthful Living	10.2.	Concepts, Principles and Strategies of Movement  Movement Skills and Concepts  B. Motor Skill Development  Practice Strategies  Principles of Exercise/Training  C. E. Scientific Principles That Affect Movement Game Strategies  F.	10.5
Safety and Injury Prevention	10.3.	Glossary	XXX.

#### XXIX. INTRODUCTION

This document includes Academic Standards for Health, Safety and Physical Education in these categories:

- ♦ 10.1 Concepts of Health
- $\Diamond \quad 10.2 \;\; Healthful \; Living$
- ♦ 10.3 Safety and Injury Prevention

- ♦ 10.4 Physical Activity
- ♦ 10.5 Concepts, Principles and Strategies of Movement

The Academic Standards for Health, Safety and Physical Education describe what students should know and be able to do by the end of third, sixth, ninth and twelfth grade. The standards are sequential across the grade levels and reflect the increasing complexity and rigor that students are expected to achieve. The Standards define the content for planned instruction that will result in measurable gains for all students in knowledge and skill. School entities will use these standards to develop local school curriculum and assessments that will meet the needs of the students.

The Academic Standards for Health, Safety and Physical Education provide students with the knowledge and skills that will enable them to achieve and maintain a physically active and healthful life. The attainment of these standards will favorably impact their lives and the lives of those around them. By becoming and remaining physically, mentally, socially and emotionally healthy, students will increase their chances of achieving to their highest academic potential.

The Academic Standards for Health, Safety and Physical Education provide parents with specific information about the knowledge and skills students should be developing as they progress through their educational programs. With the standards serving as clearly defined targets, parents, students, teachers and community members will be able to become partners in helping children achieve educational success.

A glossary is included to assist the reader in understanding terminology contained in the standards.

10. 1. Concepts of Health				
10.1.3. <b>GRADE 3</b>	10.1.6. <b>GRADE 6</b>	10.1.9. <b>GRADE 9</b>	10.1.12. <b>GRADE 12</b>	
Pennsylvania's public schools shall knowledge and skills needed to:	teach, challenge and support every st	tudent to realize his or her maximun	n potential and to acquire the	
<ul> <li>A. Identify and describe the stages of growth and development.</li> <li>infancy</li> <li>childhood</li> <li>adolescence</li> <li>adulthood</li> <li>late adulthood</li> </ul>	A. Describe growth and development  changes that can development identify factors that can influence  these changes in   • socioeconomic	A. Analyze factors that impact growth and development between adolescence and adulthood.  • relationships (e.g., dating, friendships, peer pressure)  • interpersonal communication  • risk factors (e.g., physical inactivity, substance abuse, intentional/unintentional injuries, dietary patterns)  • abstinence  • STD and HIV prevention  • community	<ul> <li>A. Evaluate factors that impact growth and development during adulthood and late adulthood.</li> <li>acute and chronic illness</li> <li>communicable and noncommunicable disease</li> <li>health status</li> <li>relationships (e.g., marriage, divorce, loss)</li> <li>career choice</li> <li>aging process</li> <li>retirement</li> </ul>	
<ul> <li>B. Identify and know the location and function of the major body organs and systems.</li> <li>circulatory</li> <li>respiratory</li> <li>muscular</li> <li>skeletal</li> <li>digestive</li> </ul>	<ul> <li>B. Identify and describe the structure and function of the major body systems.</li> <li>nervous</li> <li>muscular</li> <li>integumentary</li> <li>urinary</li> <li>endocrine</li> <li>reproductive</li> <li>immune</li> </ul>	B. Analyze the interdependence existing among the body systems.	<ul> <li>B. Evaluate factors that impact the body systems and apply protective/ preventive strategies.</li> <li>fitness level</li> <li>environment (e.g., pollutants, available health care)</li> <li>health status (e.g., physical, mental, social)</li> <li>nutrition</li> </ul>	

C. Explain the role of the food guide pyramid in helping people eat a

#### healthy dieed groups

- number of servings
- variety of food
- nutrients

- D. Know age appropriate drug information.
  - definition of drugs
  - effects of drugs
  - proper use of medicine
  - healthy/unhealthy risk-taking (e.g. inhalant use, smoking)
  - skills to avoid drugs
- E. Identify types and causes of common health problems of children.
  - infectious diseases (e.g., colds, flu, chickenpox)
  - noninfectious diseases (e.g., asthma, hay fever, allergies, lyme

#### diseasems

- pathogens
- heredity

- C. Analyze nutritional concepts that impact health.
  - caloric content of foods
  - relationship of food intake and physical activity (energy output)
  - nutrient requirements
  - label reading
  - healthful food selection
- D. Explain factors that influence childhood and adolescent drug use.
  - peer influence
  - body image (e.g., steroids, enhancers)
  - social acceptance
  - stress
  - media influence
  - decision-making/refusal skills
  - rules, regulations and laws
  - consequences
- E. Identify health problems that can occur throughout life and describe ways to prevent them.
  - diseases (e.g., cancer, diabetes, STD/HIV/AIDS, cardiovascular disease)
  - preventions (i.e. do not smoke, maintain proper weight, eat a balanced diet, practice sexual abstinence, be physically active)

- C. Analyze factors that impact nutritional choices of adolescents.
  - body image
  - advertising
  - dietary guidelines
  - eating disorders
  - peer influence
  - athletic goals
- D. Analyze prevention and intervention strategies in relation to adolescent and adult drug use.
  - decision-making/refusal skills
  - situation avoidance
  - goal setting
  - professional assistance (e.g., medical, counseling. support groups)
  - parent involvement
- E. Analyze how personal choice, disease and genetics can impact health maintenance and disease prevention.

- C. Analyze factors that impact nutritional choices of adults.
  - cost
  - food preparation (e.g., time, skills)
  - consumer skills (e.g., understanding food labels, evaluating fads)
  - nutritional knowledge
  - changes in nutritional requirements (e.g., age, physical activity level)
- D. Evaluate issues relating to the use/non-use of drugs.
  - psychology of addiction
  - social impact (e.g., cost, relationships)
  - chemical use and fetal development
  - laws relating to alcohol, tobacco and chemical substances
  - impact on the individual
  - impact on the community
- E. Identify and analyze factors that influence the prevention and control of health problems.
  - research
  - medical advances
  - technology
  - government policies/regulations

10.2.3. <b>GRADE 3</b>	10.2.6. <b>GRADE 6</b>	10.2.9. <b>GRADE 9</b>	10.2.12. <b>GRADE 12</b>
Pennsylvania's public schools shall t knowledge and skills needed to:	each, challenge and support every st	udent to realize his or her maximum	potential and to acquire the
A. Identify personal hygiene practices and community helpers that promote health and prevent the spread of disease.	<ul> <li>A. Explain the relationship between personal health practices and individual well-being.</li> <li>immunizations</li> <li>health examinations</li> </ul>	A. Identify and describe health care products and services that impact adolescent health practices.	A. Evaluate health care products and services that impact adult health practices.
<ul> <li>B. Identify health-related information.</li> <li>signs and symbols</li> <li>terminology</li> <li>products and services</li> </ul>	<ul> <li>B. Explain the relationship between health-related information and consumer choices.</li> <li>dietary guidelines/food selection</li> <li>sun exposure guidelines/sunscreen selection</li> </ul>	<ul> <li>B. Analyze the relationship between health-related information and adolescent consumer choices.</li> <li>tobacco products</li> <li>weight control products</li> </ul>	<ul> <li>B. Assess factors that impact adult health consumer choices.</li> <li>access to health information</li> <li>access to health care</li> <li>cost</li> <li>safety</li> </ul>
C. Identify media sources that influence health and safety.	C. Explain the media's effect on health and safety issues.	C. Analyze media health and safety messages and describe their impact on personal health and safety.	C. Compare and contrast the positive an negative effects of the media on adul personal health and safety.
D. Identify the steps in a decision-making process.	D. Describe and apply the steps of a decision-making process to health and safety issues.	D. Analyze and apply a decision-making processed actives cent health and	D. Examine and apply a decision-making process to the development of short and long-term health goals.
<ul> <li>E. Identify environmental factors that affect health.</li> <li>pollution (e.g., air, water, noise, soil)</li> <li>waste disposal</li> <li>temperature extremes</li> <li>insects/animals</li> </ul>	<ul> <li>E. Analyze environmental factors that impact health.</li> <li>indoor air quality (e.g., second-hand smoke, allergens)</li> <li>chemicals, metals, gases (e.g., lead, radon, carbon monoxide)</li> <li>radiation</li> <li>natural disasters</li> </ul>	<ul> <li>E. Explain the interrelationship between the environment and personal health.</li> <li>ozone layer/skin cancer</li> <li>availability of health care/individual health</li> <li>air pollution/respiratory disease</li> <li>breeding environments/lyme disease/west nile virus</li> </ul>	<ul> <li>E. Analyze the interrelationship between environmental factors and community health.</li> <li>public health policies and laws/health promotion and disease prevention</li> <li>individual choices/maintenance of environment</li> <li>recreational opportunities/ health status</li> </ul>

10.3.3. <b>GRADE 3</b>	10.3.6 <b>GRADE 6</b>	10.3.9. <b>GRADE 9</b>	10.3.12. <b>GRADE 12</b>		
Pennsylvania's public schools shall teach, challenge and support every student to realize his or her maximum potential and to acquire the knowledge and skills needed to:					
<ul> <li>A. Recognize safe/unsafe practices in the home, school and community.</li> <li>general (e.g., fire, electrical, animals)</li> <li>modes of transportation (e.g., pedestrian, bicycle, vehicular)</li> <li>outdoor (e.g., play, weather, water)</li> <li>safe around people (e.g., safe/unsafe touch, abuse, stranger, bully)</li> </ul>	<ul> <li>A. Explain and apply safe practices in the home, school and community.</li> <li>emergencies (e.g., fire, natural disasters)</li> <li>personal safety (e.g., home alone, latch key, harassment)</li> <li>communication (e.g., telephone, Internet)</li> <li>violence prevention (e.g., gangs, weapons)</li> </ul>	A. Analyze the role of individual  responsible prevention in the home school and community.  • modes of transportation (e.g., pedestrian, bicycle, vehicular, passenger, farm vehicle, all-terrain vehicle)  • violence prevention in school  • self-protection in the home  • self-protection in public places	A. Assess the personal and legal  consequence for an experience in the  loss of personal freedom  personal injury  loss of income  impact on others  loss of motor vehicle operator's license		
<ul> <li>B. Recognize emergency situations and explain appropriate responses.</li> <li>importance of remaining calm</li> <li>how to call for help</li> <li>simple assistance procedures</li> <li>how to protect self</li> </ul>	<ul> <li>B. Know and apply appropriate emergency responses.</li> <li>basic first aid</li> <li>Heimlich maneuver</li> <li>universal precautions</li> </ul>	B. Describe and apply strategies for emergency and long-term management of injuries.  • rescue breathing  • water rescue  • self-care  • sport injuries	<ul> <li>B. Analyze and apply strategies for the management of injuries.</li> <li>CPR</li> <li>advanced first aid</li> </ul>		
C. Recognize conflict situations and identify strategies to avoid or  resolve. walk away  I-statements  refusal skills  adult intervention	C. Describe strategies to avoid or manage conflict and violence.  • anger management  • peer mediation  • reflective listening  • negotiation	<ul> <li>C. Analyze and apply strategies to avoid or manage conflict and violence during adolescence.</li> <li>effective negotiation</li> <li>assertive behavior</li> </ul>	C. Analyze the impact of violence on the victim and surrounding community.		

D. Identify and use safe practices in physical activity settings (e.g., safe of rules, same safe), puriod lines of safe	D. Analyze the role of individual responsibility for safety during physical activity.	D. Analyze the role of individual responsibility for safety during organized group activities.	D. Evaluate the benefits, risks and safety factors associated with self-selected life-long physical activities.

10.4.3. <b>GRADE 3</b>	10.4.6. <b>GRADE 6</b>	10.4.9. <b>GRADE 9</b>	10.4.12. <b>GRADE 12</b>
Pennsylvania's public schools shall t knowledge and skills needed to:	each, challenge and support every si	tudent to realize his or her maximum	potential and to acquire the
A. Identify and engage in physical activities that promote physical fitness and health.	A. Identify and engage in moderate to vigorous physical activities that contribute to physical fitness and health.	A. Analyze and engage in physical activities that are developmentally/individually appropriate and support achievement of personal fitness and activity goals.	A. Evaluate and engage in an individualized physical activity plar that supports achievement of personal fitness and activity goals and promotes life-long participation
B. Know the positive and negative effects of regular participation in moderate to vigorous physical activities.	B. Explain the effects of regular participation in moderate to vigorous physical activities on the body	<ul> <li>B. Analyze the effects of regular participation in moderate to vigorous physical activities in relation to adolescent health improvement.</li> <li>stress management</li> <li>disease prevention</li> <li>weight management</li> </ul>	<ul> <li>B. Analyze the effects of regular participation in a self-selected program of moderate to vigorous physical activities.</li> <li>social</li> <li>physiological</li> <li>psychological</li> </ul>
<ul> <li>C. Know and recognize changes in body responses during moderate to vigorous physical activity.</li> <li>heart rate</li> <li>breathing rate</li> </ul>	C. Identify and apply ways to monitor and assess the body's response to moderate to vigorous physical activity.  • heart rate monitoring • checking blood pressure • fitness assessment	C. Analyze factors that affect the responses of body systems during moderate to vigorous physical activities.  • exercise (e.g., climate, altitude, location, temperature)  • healthy fitness zone  • individual fitness status (e.g., cardiorespiratory fitness, muscular endurance, muscular strength, flexibility)  • drug/substance use/abuse	C. Evaluate how changes in adult health status may affect the responses of the body systems during moderate to vigorous physical activity.  • aging • injury • disease

D. Identify likes and dislikes related to D. Describe factors that affect childhood participation in physical activities. D. Analyze factors that affect physical D. Evaluate factors that affect physical activity and exercise preferences of physicalemitivintentreferences. personal interest adults. activity preferences of a Golescents. social benefits personal challenge social experience physical benefits opportunities to learn new previous experience activities activity confidence finances motivation parental preference access to activity environment self-improvement E. Identify factors that have an impact E. Identify reasons why regular E. Analyze factors that impact on the participation in physical activities on the relationship between regular E. Analyze the interrelationships relationship between regular participation in physical activity among regular participation in improves motor skills. participation in physical activity and and the degree of motor skill physical activity, motor skill motor skill improvement. improvement. improvement and the selection and success-oriented activities personal choice engagement in lifetime physical developmental differences activities school-community resources amount of physical activity variety of activities authentic practice time on task F. Recognize positive and negative F. Identify and describe positive interactions of small group activities. F. Analyze the effects of positive and and negative interactions of group F. Assess and use strategies for roles (e.g., leader, follower) negative interactions of adolescent members in physical activities. enhancing adult group interaction in group members in physical activities. cooperation/sharing leading physical activities. group dynamics on task participation following shared responsibility social pressure teamwork open communication etiquette goal setting adherence to rules

10.5.3. <b>GRADE 3</b>	10.5.6. <b>GRADE 6</b>	10.5.9. <b>GRADE 9</b>	10.5.12. <b>GRADE 12</b>
Pennsylvania's public schools shall t knowledge and skills needed to:	each, challenge and support every st	tudent to realize his or her maximum	potential and to acquire the
A. Recognize and use basic movement skills and concepts.  • locomotor movements (e.g., run, leap, hop)  • non-locomotor movements (e.g.,  • manipulative movements (e.g., bend, stretch, twist)  • relationships (e.g., over, under, throw, catch, kick)  • combination movements (e.g., locomotor, non-locomotor, beside) manipulative)  • space awareness (e.g., self-space,	A. Explain and apply the basic movement skills and concepts to create and perform movement sequences and advanced skills.	<ul> <li>A. Describe and apply the components of skill-related fitness to movement performance.</li> <li>agility</li> <li>balance</li> <li>coordination</li> <li>power</li> <li>reaction time</li> <li>speed</li> </ul>	A. Apply knowledge of movement skills, skill-related fitness and movement concepts to identify and evaluate physical activities that promote personal lifelong participation.
Recognitive vs. didestribes the concepts of motor skill development using appropriate vocabulary.  • form • developmental differences • critical elements • feedback	<ul> <li>B. Identify and apply the concepts of motor skill development to a variety of basic skills.</li> <li>transfer between skills</li> <li>selecting relevant cues</li> <li>types of feedback</li> <li>movement efficiency</li> <li>product (outcome/result)</li> </ul>	<ul> <li>B. Describe and apply concepts of motor skill development that impact the quality of increasingly complex movement.</li> <li>response selection</li> <li>stages of learning a motor skill (i.e. verbal cognitive, motor, automatic)</li> <li>types of skill (i.e. discrete, serial, continuous)</li> </ul>	<ul> <li>B. Incorporate and synthesize knowledge of motor skill development concepts to improve the quality of motor skills.</li> <li>open and closed skills</li> <li>short-term and long-term memory</li> <li>aspects of good performance</li> </ul>

- C. Know the function of practice.
- D. Identify and use principles of exercise to improve movement and fitness activities.
  - frequency/how often to exercise
  - intensity/how hard to exercise
  - time/how long to exercise
  - type/what kind of exercise
- E. Know and describe scientific principles that affect movement and skills using appropriate vocabulary.
  - gravity
  - force production/absorption
  - balance
  - rotation
- F. Recognize and describe game strategies using appropriate vocabulary.
  - faking/dodging
  - passing/receiving
  - move MOVING to be open
  - defending space
  - following rules of play

- C. Describe the relationship between practice and skill development.
- D. Describe and apply the principles of exercise to the components of health-related and skill-related fitness.
  - cardiorespiratory endurance
  - muscular strength
  - muscular endurance
  - flexibility
  - body composition
- E. Identify and use scientific principles that affect basic movement and skills using appropriate vocabulary.
  - Newton's Laws of Motion
  - application of force
  - static/dynamic balance
  - levers
  - flight
- F. Identify and apply game strategies to basic games and physical activities.
  - give and go
  - one on one
  - peer communication

- C. Identify and apply practice strategies for skill improvement.
- D. Identify and describe the principles of training using appropriate vocabulary.
  - specificity
  - overload
  - progression
  - aerobic/anaerobic
  - circuit/interval
  - repetition/set
- E. Analyze and apply scientific and biomechanical principles to complex movements.
  - centripetal/centrifugal force
  - linear motion
  - rotary motion
  - friction/resistance
  - equilibrium
  - number of moving segments
- F. Describe and apply game strategies to complex games and physical activities.
  - offensive strategies
  - defensive strategies
  - time management

- C. Evaluate the impact of practice strategies on skill development and improvement.
- D. Incorporate and synthesize knowledge of exercise principles, training principles and health and skill-related fitness components to create a fitness program for personal use.
- E. Evaluate movement forms for appropriate application of scientific and biomechanical principles.
  - efficiency of movement
  - mechanical advantage
  - kinetic energy
  - potential energy
  - inertia
  - safety
- F. Analyze the application of game strategies for different categories of physical activities.
  - individual
  - team
  - lifetime
  - outdoor

#### XXX. GLOSSARY

**Abstinence:** Choosing not to do something or completely giving something up in order to gain something.

**Acute illness:** A health condition of sudden onset, sharp rises and short course.

**Adolescence:** The period of life beginning with puberty and ending with completed growth.

**Aerobic:** Physical activity or exercise done at a steady pace for an extended period of time so that the heart can

supply as much oxygen as the body needs (e.g., walking, running, swimming, cycling).

**Agility**: A component of physical fitness that relates to the ability to rapidly change the position of the entire

body in space with speed and accuracy.

AIDS Acquired Immune Deficiency Syndrome: a condition that results when infection with HIV causes a

breakdown of the body's ability to fight other infections.

**Allergen:** A substance that stimulates the production of antibodies and subsequently results in allergic reactions

(e.g., mold spores, cat/dog dander, dust).

**Anaerobic:** Physical activity or exercise done in short, fast bursts so that the heart cannot supply oxygen as fast as

the body needs (e.g., sprinting, weightlifting, football).

**Assertive:** The expression of thoughts and feelings without experiencing anxiety or threatening others.

Automatic Stage of Learning: Movement responses flow and the individual can focus on what to do without thinking about it.

**Balance**: A skill-related component of physical fitness that relates to the maintenance of equilibrium while

stationary or moving.

**Biomechanical principles**: The science concerned with the action of forces, internal or external, on the living body.

**Body composition**: A health-related component of physical fitness that relates to the percentage of fat tissue and lean tissue

in the body.

**Body systems**: Anatomically or functionally related parts of the body (e.g., skeletal, nervous, immune, circulatory

systems).

**Caloric content**: The amount of energy supplied by food. The more calories in the food, the more fattening.

**Cardiorespiratory fitness:** A health related component of physical fitness relating to the ability of the circulatory and respiratory systems to

supply oxygen during sustained physical activity.

**Centrifugal:** The force that seems to pull an object away from the center as it moves in a circle.

**Centripetal:** The force that is required to keep an object moving around a circular path.

**Chronic illness:** A health condition of long duration or frequent recurrence.

**Circuit training:** Exercise program, similar to an obstacle course, in which the person goes from one place to another

doing a different exercise at each place.

Closed: Skills that are performed in an environment that does not change or that changes very little, such as

archery or the foul shot in basketball.

Communicable: Illness caused by pathogens that enter the body through direct or indirect contact and can be transmitted

from one host to another.

**Community helpers:** Any group or individual who plays a role in health promotion or disease prevention such as doctors,

nurses, dentists, teachers, parents, firemen, policemen, trash collectors, animal control officers.

**Continuous:** Two or more repetitions of the same skill such as dribbling in basketball or soccer.

**Cool-down:** Brief, mild exercise done after vigorous exercise to help the body safely return to a resting state.

**Coordination:** A skill-related component of physical fitness that relates to the ability to use the senses together with

body parts in performing motor tasks smoothly and accurately.

**CPR:** A first aid technique, which involves rescue breathing and chest (heart) compressions, that is used to

revive a person whose heart has stopped beating.

**Critical elements:** The important parts of a skill.

**Decision-making process:** An organized approach to making choices.

**Developmental differences:** Learners are at different levels in their motor, cognitive, emotional, social and physical development.

The learners' developmental status will affect their ability to learn or improve.

**Developmentally appropriate:** Motor skill development and change THAT occur in an orderly, sequential fashion and is ARE age and

experience related.

**Directions:** Forward, backward, left, right, up, down.

**Discrete:** Single skill performed in isolation from other motor skills such as the soccer penalty kick and golf

stroke.

**Dynamic balance:** Equilibrium used when in motion, starting and stopping.

**Eating disorders:** Food-related dysfunction in which a person changes eating habits in a way that is harmful to the mind

or body (e.g., bulimia, anorexia nervosa).

**Efficiency of movement:** The state or quality of competence in performance with minimum expenditure of time and effort.

**Equilibrium:** State in which there is no change in the motion of a body.

**Feedback:** Information given to the learner about how to improve or correct a movement.

**Flexibility:** A health-related component of physical fitness that relates to the range of motion available at a joint.

**Food guide pyramid:** A visual tool used to help people plan healthy diets according to the Dietary Guidelines for

America.

**Force:** Any external agent that causes a change in the motion of a body.

**Form:** Manner or style of performing a movement according to recognized standards of technique.

**Good performance:** The ability to correctly select what to do and the ability to execute the selection appropriately.

**Health:** A state of complete physical, mental and social well-being; not merely the absence of disease and

infirmity.

**Health education:** Planned, sequential K-12 program of curricula and instruction that helps students develop knowledge,

attitudes and skills related to the physical, mental, emotional and social dimensions of health.

**Health-related fitness:** Components of physical fitness that have a relationship with good health. Components are

cardiorespiratory endurance, muscular strength and endurance, flexibility and body composition.

**Heimlich maneuver:** A first aid technique that is used to relieve complete airway obstruction.

HIV: Human immunodeficiency virus that infects cells of the immune system and other tissues and causes

acquired immunodeficiency syndrome (AIDS).

**I-statement** A statement describing a specific behavior or event and the effect that behavior or event has on a person

and the feelings that result.

**Inertia:** A body at rest will remain at rest and a body in motion will remain in motion unless acted upon by a

force.

**Inhalant:** Chemicals that produce vapors that act on the central nervous system and alter a user's moods,

perceptions, feelings, personality and behavior such as airplane glue and aerosols.

**Integumentary system:** Body system composed of the skin, hair, nails and glands.

**Intensity:** How hard a person should exercise to improve fitness.

**Interval training:** An anaerobic exercise program that consists of runs of short distance followed by rest.

**Kinetic:** Energy that an object possesses because it is moving, such as a pitched baseball or a person running.

**Levels:** Positions of the body (e.g., high, medium, low).

**Linear motion:** Movement which occurs in a straight path.

**Locomotor movement:** Movements producing physical displacement of the body, usually identified by weight transference via

the feet. Basic locomotor steps are the walk, run, hop and jump as well as the irregular rhythmic

combinations of the skip, slide and gallop.

**Long-term memory:** Ability to recall information that was learned days or even years ago.

**Manipulative movements:** Control of objects with body parts and implements. Action causes an object to move from one place to

another.

**Mechanical advantage:** The ratio between the force put into a machine and the force that comes out of the same machine.

Media sources: Various forms of mass communication such as television, radio, magazines, newspapers and internet.

Moderate physical activity: Sustained, repetitive, large muscle movements (e.g., walking, running, cycling) done at less than 60%

of maximum heart rate for age. Maximum heart rate is 220 beats per minute minus participant's age.

**Motor skills:** Non-fitness abilities that improve with practice and relate to one's ability to perform specific sports

and other motor tasks (e.g., tennis serve, shooting a basketball).

**Motor stage of learning:** Individual is working to perfect the motor skill and makes conscious adjustments to the environment.

**Movement skills:** Proficiency in performing nonlocomotor, locomotor and manipulative movements that are the

foundation for participation in physical activities.

**Muscular endurance:** A health-related component of physical fitness that relates to the ability of a muscle to continue to

perform without fatigue.

**Muscular strength:** A health-related component of physical fitness that relates to the ability of the muscle to exert force.

**Newton's Laws of Motion:** Three laws by Sir Isaac Newton that explain the relations between force and the motions produced by

them: The Law of Inertia, Force and Acceleration, Reacting Forces.

**Noncommunicable:** Illness that is not caused by a pathogen that is not transmitted from one host to another.

**Nonlocomotor movement:** Movements that do not produce physical displacement of the body.

**Nutrient:** A basic component of food that nourishes the body.

**Open:** Skill is performed in an environment that varies or is unpredictable such as the tennis forehand or the

soccer pass.

**Overload:** A principle of exercise that states that the only way to improve fitness is to exercise more than the

normal.

**Pathways:** Patterns of travel while performing locomotor movements (e.g., straight, curved, zigzag).

**Physical activity:** Bodily movement that is produced by the contraction of skeletal muscle and which substantially

increases energy expenditure.

**Physical education**: Planned, sequential, movement-based program of curricula and instruction that helps students develop

knowledge, attitudes, motor skills, self-management skills and confidence needed to adapt and maintain

a physically active life.

**Physical fitness:** A set of attributes that people have or achieve and that relate to their ability to perform physical

activity. Generally accepted to consist of health-related fitness and skill-related fitness.

**Potential:** Energy stored in a body because of its position such as the crouch position prior to a jump.

**Power:** A skill-related component of physical fitness that relates to the rate at which one can perform work.

**Principles of exercise:** Guidelines to follow to obtain the maximum benefits from physical activity and exercise.

**Principles of training:** Guidelines to follow to obtain the maximum benefits from an exercise plan.

**Progression:** A principle of exercise that states that a person should start slowly and increase exercise gradually.

**Reaction time:** A skill-related component of physical fitness that relates to the time elapsed between stimulation and

the beginning of the response to it.

**Reflective listening:** An active listening skill in which the individual lets others know he/she has heard and understands what

has been said.

**Refusal skills:** Systematic ways to handle situations in which a person wants to say no to an action and/or leave an

environment that threatens health or safety, breaks laws, results in lack of respect for self and others or

disobeys guidelines set by responsible adults.

**Repetitions:** Number of times an exercise is repeated.

**Rescue breathing:** Technique used to supply air to an individual who is not breathing.

**Rotary motion:** Force that produces movement that occurs around an axis or center point such as a somersault.

**Safety education:** Planned, sequential program of curricula and instruction that helps students develop the knowledge,

attitudes and confidence needed to protect them from injury.

**Self-space:** All the space that the body or its parts can reach without traveling from a starting location.

**Serial:** Two or more different skills performed with each other such as fielding a ball and throwing it or

dribbling a basketball and shooting it.

**Set:** A group of several repetitions.

**Short-term memory:** Ability to recall recently learned information, such as within the past few seconds or minutes.

**Skill-related fitness:** Consists of components of physical fitness that have a relationship with enhanced performance in sports

and motor skills. The components are agility, balance, coordination, power, reaction time and speed.

**Specificity:** A principle of exercise that states that specific kinds of exercises must be done to develop specific

aspects of the body and specific aspects of fitness.

**Speed:** A skill-related component of physical fitness that relates to the ability to perform a movement or cover

a distance in a short period of time.

**Static balance:** Maintaining equilibrium while holding a pose or remaining motionless.

**STD:** Sexually transmitted disease.

**Universal precautions:** An approach to infection control. All human blood and body fluids are treated as if known to be

infectious.

**Warm-up:** Brief, mild exercise that is done to get ready for more vigorous exercise.

**Verbal cognitive stage** The individual is attempting to move from verbal instruction to trying to figure out how to actually do

the skill. The first attempts at the skill are generally mechanical and success is inconsistent. The

individual thinks through each step of the movement.

of learning:

Vigorous physical activity:

Sustained, repetitive, large muscle movements (e.g., running, swimming, soccer) done at 60% or more of maximum heart rate for age. Maximum heart rate is 220 beats per minute minus the participant's age. Activity makes person sweat and breathe hard.