

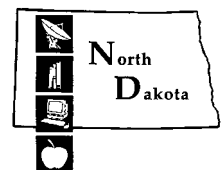
North Dakota Standards and Benchmarks

Content Standards

Physical Education

2000

**North Dakota Department of Public Instruction
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Table Of Contents

Components of the Document	1
Introduction	2
Content Standards	4
Summary of Grades K – 4 Benchmarks	5
Grades K – 4 Benchmarks, Specific Knowledge, Sample Activities	
Standard 1: Movement Forms.....	6
Standard 2: Movement Concepts	7
Standard 3: Benefits of Physical Activity.....	8
Standard 4: Maintaining Physical Fitness	8
Standard 5: Behavior and Physical Activity.....	9
Summary of Grades 5 – 8 Benchmarks	10
Grades 5 – 8 Benchmarks, Specific Knowledge, Sample Activities	
Standard 1: Movement Forms.....	11
Standard 2: Movement Concepts	12
Standard 3: Benefits of Physical Activity.....	12
Standard 4: Maintaining Physical Fitness	13
Standard 5: Behavior and Physical Activity.....	14
Summary of Grades 9 – 12 Benchmarks	16
Grades 9 – 12 Benchmarks, Specific Knowledge, Sample Activities	
Standard 1: Movement Forms.....	17
Standard 2: Movement Concepts.....	17
Standard 3: Benefits of Physical Activity.....	18
Standard 4: Maintaining Physical Fitness	19
Standard 5: Behavior and Physical Activity.....	19
Summary of Benchmarks by Standard	
Standard 1: Movement Forms.....	21
Standard 2: Movement Concepts.....	21
Standard 3: Benefits of Physical Activity.....	22
Standard 4: Maintaining Physical Fitness	22
Standard 5: Behavior and Physical Activity.....	23
References.....	24
Resources	25
Glossary	27

Components Of The Document

Content Standards – general statements that describe what students should know and the skills they should have in a specific content area.

Benchmarks – statements of knowledge and skill that define a standard at a given developmental level (e.g., 4th grade, 8th grade, 12th grade).

Examples of Specific Knowledge – facts, vocabulary, principles, generalizations, relationships, concepts, step-by-step procedures, strategies, or processes that describe the specific information or skills that students should acquire to meet a standard.

Examples of Activities – instructional activities that students could do to acquire the knowledge and skills described in the standard and benchmarks.

** Indicates the word or phrase is defined in the Glossary*

Introduction

“Change is the law of life...those who look only to the past or the present are certain to miss the future.” J. F. Kennedy

The North Dakota Physical Education Standards were written to provide physical education teachers and school districts with a guide for re-thinking and re-defining physical education for the future. This new view of physical education places a greater emphasis on encouraging students to regularly engage in physical activity. Quality physical education programs consistent with this view are evolving to provide a more comprehensive lifestyle management approach, encouraging improved physical fitness and dietary habits, and providing assessment through the use of the latest technology*.

The Writing Team

The physical education standards writing team began work in the fall of 1998. The writing team consisted of physical educators from across the state and represented all levels, elementary through university. This brought a completeness and diversity of expertise to the development of the North Dakota physical education standards. The writing team’s work was guided by the physical education standards developed by the National Association for Sport and Physical Education (NASPE). The North Dakota Physical Education Standards document consists of a core of fundamental physical education standards that reflect the professional philosophy of the NASPE.

Assumptions

The following assumptions underlie the vision of physical education described in this document:

- All physical education teachers are licensed in physical education.
- Equipment (e.g., balls, ropes, bean bags, etc.) is provided for each student.
- Class sizes match the North Central Accreditation requirements of no more than 30 students per class.
- Title IX is followed and a balance of gender is enforced.
- All activities are developmentally appropriate* and provide a positive learning experience.
- All students are assessed.
- If community facilities are not available, equipment is provided to adapt to students’ needs (e.g., if no public bowling alley is available, plastic pins and balls are provided for use in the gym).
- Individual Disability Education Act (IDEA) guidelines are followed (i.e., inclusion, least restrictive environment, etc.)

Organization of the Document

Benchmarks, with examples of specific knowledge and examples of activities that support the standards and benchmarks, were written for three levels, reflecting desired achievement in physical education during elementary (grades K-4), middle (grades 5-8), and high school (grades 9-12). All activities are provided as suggestions and should serve as a springboard or guide for curricular planning at the local district level. The document is also a compact reference for teachers to use in designing and critiquing their physical education programs.

** Indicates the word or phrase is defined in the Glossary*

The activities within each grade range were designed to be developmentally appropriate* for that range. Teachers, however, should be aware that students are likely to display some characteristics and skills outside their age group.

The use of a variety of technologies (e.g., heart-rate monitors, pulse sticks, camcorders, pedometers, software, World Wide Web) is an exciting new enhancement to the activities section of this document. Technology* helps to make assessments more reliable and improves teacher and student accountability.

The standards, benchmarks, and activities reflect an increased emphasis on the cognitive domain in physical education. This knowledge includes, but is not limited to, the “whys” of fitness assessment, the development of personal fitness plans/portfolios/profiles, physiological principles of fitness maintenance, and how to make appropriate choices for a lifetime of physical activity.

Physical Education for All Students

The problems and challenges facing the youth of North Dakota today demand that all students experience a meaningful physical education curriculum. [“All students” means all types of students that a teacher might encounter in a classroom (e.g., students with disabilities, students with diverse backgrounds, students with limited English proficiency, etc.)] The standards and benchmarks in this document should provide a background for creating a curriculum that will help all North Dakota students develop a healthy, active lifestyle throughout their lives.

** Indicates the word or phrase is defined in the Glossary*

North Dakota Physical Education Standards

Standard 1: MOVEMENT FORMS

Students use a variety of movement forms.

Standard 2: MOVEMENT CONCEPTS

Students use movement concepts and principles in the development of motor skills.

Standard 3: BENEFITS OF PHYSICAL ACTIVITY

Students understand the benefits of regular physical activity.

Standard 4: MAINTAINING PHYSICAL FITNESS*

Students understand how to maintain a health-enhancing level of physical fitness.*

Standard 5: BEHAVIOR AND PHYSICAL ACTIVITY

Students use responsible personal and social behavior in physical activity settings.

** Indicates the word or phrase is defined in the Glossary*

Summary Of Grades K – 4 Benchmarks

Standard 1: MOVEMENT FORMS

Students use a variety of movement forms.

- 4.1.1 Use control in static* and dynamic* balance activities.
- 4.1.2 Know how to combine shapes, levels, directions, and pathways into simple sequences.
- 4.1.3 Know how to use space to move safely in different directions at varying speeds.
- 4.1.4 Use control in locomotor activities.
- 4.1.5 Know how to demonstrate object control skills.

Standard 2: MOVEMENT CONCEPTS

Students use movement concepts and principles in the development of motor skills.

- 4.2.1 Know the vocabulary of basic movement concepts.
- 4.2.2 Understand the critical elements of a variety of basic movement patterns.
- 4.2.3 Understand the importance of practice in learning motor skills.
- 4.2.4 Use teacher, peer, and self assessment to improve motor performance.

Standard 3: BENEFITS OF PHYSICAL ACTIVITY

Students understand the benefits of regular physical activity.

- 4.3.1 Understand the personal health benefits of physical activity.
- 4.3.2 Use the terms associated with the benefits of physical activities.

Standard 4: MAINTAINING PHYSICAL FITNESS*

Students understand how to maintain a health-enhancing level of physical fitness.*

- 4.4.1 Understand the relationship between regular participation in physical activity and physical fitness*.
- 4.4.2 Understand how to apply fitness assessment to set personal fitness goals.
- 4.4.3 Understand the relationship between physical activity and physiological changes.

Standard 5: BEHAVIOR AND PHYSICAL ACTIVITY

Students use responsible personal and social behavior in physical activity settings.

- 4.5.1 Use positive social interaction during physical activities.
- 4.5.2 Understand how culture influences physical activity.
- 4.5.3 Know how to seek out, participate with, and show respect for people of like and different physical abilities.

** Indicates the word or phrase is defined in the Glossary*

Standard 1: MOVEMENT FORMS

Students use a variety of movement forms.

Benchmarks

- 4.1.1 Use control in static* and dynamic* balance activities.
- 4.1.2 Know how to combine shapes, levels, directions, and pathways into simple sequences.
- 4.1.3 Know how to use space to move safely in different directions at varying speeds.
- 4.1.4 Use control in locomotor activities.
- 4.1.5 Know how to demonstrate object control skills.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 4.1.1 bodily awareness, right/left discrimination, laterality, maintaining equilibrium, effects of bases of support
- 4.1.2 types of shapes (e.g., long body position, short body position, tuck, pike, straddle), levels (i.e., high, medium, low), directions (i.e., right, left, up, down, over, under, around, through), pathways (e.g., zigzag, circle, curves), sequencing, transferring weight from one body part to another efficiently
- 4.1.3 spatial awareness, speeds (i.e., fast, medium, slow), agility, change directions safely (e.g., stop on two feet), demonstrate control in all locomotor movements (e.g., walking, running, skipping, hopping)
- 4.1.4 chasing, fleeing, dodging, avoiding individuals or objects
- 4.1.5 kicking, striking with a variety of implements (short/long), throwing (underhand/overhand), catching, trapping, rolling

Examples of Activities that Support the Standard and Benchmarks

- 4.1.1 Students perform rhythmic activities such as the Hokey Pokey, line dances, and Bunny Hop.
- 4.1.1 Students perform balance activities with the following pieces of apparatus: balance board, balance beam.
- 4.1.1 Students mirror balance cards (e.g., cards illustrated with a variety of body images and positions).
- 4.1.2 Students perform a variety of animal movements and simple stunts.
- 4.1.2 Students perform basic tumbling stunts (i.e., side roll, shoulder roll, forward roll, backward roll).
- 4.1.2 Students participate in a variety of square, folk, and cultural dances (e.g., tinikling).
- 4.1.2 Students do a variety of agility activities (e.g., Dot Drill, jump bands, skiing movements side to side over a rope).
- 4.1.2 Students perform a variety of jump rope skills, both short/long (see “Jump Rope for Heart” materials from the American Heart Association). Students read and act out the book *Hop Jump* (Walsh, 1996).
- 4.1.3 Students use a variety of musical instruments to dictate pace during movement activities (e.g., high pitch – move quickly, low pitch – move slowly).
- 4.1.3 Students interpret a variety of music through different locomotor patterns (i.e., given a selection of music with different beats, pitches, and volumes, students move throughout the space creating their own interpretation).
- 4.1.4 Students perform a variety of movements in self-space and in a large space with others, stressing correct use of space.
- 4.1.4 Students perform Mirror, Follow the Leader, Shadowing and other games of this type.

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Examples of Activities that Support the Standard and Benchmarks

- 4.1.4 Students play a variety of tag games that are not eliminating in nature. (See National Association for Sport and Physical Education [NASPE] position statement on Developmentally Appropriate* Physical Education.)
- 4.1.5 Students participate in a variety of activities such as Braun Ball, Capture the Flag and bowling. (*Note: These activities ensure that each child is actively involved. Each child or pair of children has a piece of equipment.*)
- 4.1.5 Students participate in games with developmentally appropriate* modifications such as smaller/larger ball, smaller/larger court size, different sized implements, reduced emphasis on score, larger targets, etc. (See NASPE's Developmentally Appropriate* Physical Education statement.)

Standard 2: MOVEMENT CONCEPTS

Students use movement concepts and principles in the development of motor skills.

Benchmarks

- 4.2.1 Know the vocabulary of basic movement concepts.
- 4.2.2 Understand the critical elements of a variety of basic movement patterns.
- 4.2.3 Understand the importance of practice in learning motor skills.
- 4.2.4 Use teacher, peer, and self assessment to improve motor performance.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 4.2.1 how to perform when given verbal cues; high, medium, low (levels of space); fast, medium, slow (speed); curve, straight, zigzag (patterns); walk, run, skip, jump, hop, gallop (locomotor patterns)
- 4.2.2 how to step in opposition when throwing, arm position when throwing, step-hop for skipping, slide pattern, grapevine step
- 4.2.3 repetition of skills using proper technique results in better performance
- 4.2.4 how to observe and analyze motor performance, how to give verbal and visual cues, how to break skills down into components

Examples of Activities that Support the Standard and Benchmarks

- 4.2.1 Students move to the beat of a variety of musical instruments, displaying the use of various movement vocabularies (i.e., space, speed) and locomotor patterns
- 4.2.1 Students demonstrate movement concepts by interpreting action words from a story [e.g., *The Little Engine that Could* (Piper, 1978)].
- 4.2.2 Students dance or jump rope, either individually or in small groups.
- 4.2.2 Students practice stepping in opposition. For example, they remove the shoe from their throwing side and follow the teacher's cue of "shoe/throw" to learn the skill. Another cue for this activity is "T, elbow, step, turn, throw."
- 4.2.3 Students participate in activities that allow for repetition of a skill (e.g., throw bean bags to a target, catch and throw with a partner, jump rope, move to music).
- 4.2.4 Students act as peer observer and provide feedback in a variety of skills.

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Standard 3: BENEFITS OF PHYSICAL ACTIVITY

Students understand the benefits of regular physical activity.

Benchmarks

- 4.3.1 Understand the personal health benefits of physical activity.
- 4.3.2 Use the terms associated with the benefits of physical activities.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 4.3.1 regular physical activity improves overall health (e.g., stress, weight management, proper nutrition, heart, lungs), forms of physical activity that are specifically heart healthy, regular exercise helps improve mental health, how a healthy body contributes to a positive self image
- 4.3.2 cardiovascular endurance*, heart rate/pulse, flexibility*, muscular strength*, muscular endurance*, aerobic*/anaerobic*

Examples of Activities that Support the Standard and Benchmarks

- 4.3.1 Students perform a series of aerobic* activities, check their pulse, and discuss their feelings before and after exercise.
- 4.3.1 Students set personal fitness goals and self-monitor the goals.
- 4.3.1 Students brainstorm various ways to improve overall fitness. [Note: *Physical Activity and Health: A Report of the Surgeon General* (U.S. Department of Health, 1996) is a good resource for this activity.]
- 4.3.2 Students identify the component of fitness they are working on while doing various activities (e.g., tag games – cardiovascular; sit and reach – flexibility).
- 4.3.2 Students create a set of visual props (e.g., banners, bulletin boards) to illustrate the terms associated with physical activities.

Standard 4: MAINTAINING PHYSICAL FITNESS*

Students understand how to maintain a health-enhancing level of physical fitness.*

Benchmarks

- 4.4.1 Understand the relationship between regular participation in physical activity and physical fitness.
- 4.4.2 Understand how to apply fitness assessment to set personal fitness goals.
- 4.4.3 Understand the relationship between physical activity and physiological changes.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 4.4.1 how different levels of activity can affect physical fitness*; basic ideas about the principle of overload*; frequency – intensity – time – type (FITT)* principle, how to use the concept of the Fitness Education Pyramid*
- 4.4.2 basic ideas about the assessment process, how to set personal fitness goals from assessment results, how personal fitness goals improve health
- 4.4.3 definition of the components of physical fitness* (i.e., cardiovascular endurance*, flexibility*, muscular strength* and muscular endurance*); stress reduction; how to apply the sequence of warm-up, vigorous activity, and cool down

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Examples of Activities that Support the Standard and Benchmarks

- 4.4.1 Students monitor their personal growth through physical fitness* assessment, keeping a portfolio, fitness log, or journal.
- 4.4.1 Students perform an activity, measure their pulse, and use the Fitness Education Pyramid* to identify the zone in which they are performing.
- 4.4.1 Students perform exercises, comparing and contrasting the amount of work the muscle has done.
- 4.4.2 Students predict performance before taking part in fitness assessment. Students communicate with teachers to set realistic and meaningful fitness goals.
- 4.4.3 Students engage in activities that improve cardiovascular endurance* (e.g., tag games, aerobic* movements, stations, jump rope), muscular strength* (e.g., circuits, dyna-bands, light weights, bars, climbing poles/ropes, cargo nets, climbing wall), flexibility* (e.g., circuits, stretching routines, stretch bands, yoga), and muscular endurance* (e.g., simple plyometrics*).
- 4.4.3 Students use pulse sticks or heart rate monitors to measure heart rate at various intensities of exercise.

Standard 5: BEHAVIOR AND PHYSICAL ACTIVITY

Students use responsible personal and social behavior in physical activity settings.

Benchmarks

- 4.5.1 Use positive social interaction during physical activities.
- 4.5.2 Understand how culture influences physical activity.
- 4.5.3 Know how to seek out, participate with, and show respect for people of like and different physical abilities.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 4.5.1 how to use space safely; respect for self, others and equipment; how to use appropriate tone in voice; taking turns; using good listening skills; how to follow rules and regulations; how to use appropriate conflict resolution skills
- 4.5.2 physical activities play a part in learning about others of like and different backgrounds
- 4.5.3 how to ask a partner to work together, how to communicate with others effectively, how to honor individual similarities and differences

Examples of Activities that Support the Standard and Benchmarks

- 4.5.1 Students create rules and consequences for the class and post in the gym.
- 4.5.1 Students role-play various conflict resolution situations using conflict resolution skills (i.e., the De-Bugging system that includes the following steps: ignore, walk away, talk nicely, talk firmly, ask an adult to help).
- 4.5.2 Students participate in games/dances from various cultures.
- 4.5.2 Students research and teach an unfamiliar game or dance from another country.
- 4.5.2 Students read *Rhinos Who Snowboard* (Mammano, 1997) and then act out the actions in the story.
- 4.5.3 Students participate in games/activities in which handicapping conditions are simulated [e.g., Goal Ball (for visually impaired), Wheelchair Basketball].
- 4.5.3 Students act as peer facilitators.
- 4.5.3 Students participate in age appropriate team building activities [e.g., "Crossing the Amazon", "Stepping Stones" (Glover & Midura, 1992; Midura & Glover, 1995)]

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SUMMARY OF GRADES 5 – 8 BENCHMARKS

Standard 1: MOVEMENT FORMS

Students use a variety of movement forms.

- 8.1.1 Understand how to combine skills to participate in a modified version of team and/or individual sports.
- 8.1.2 Know and perform a variety of dance and rhythmic movements.
- 8.1.3 Know intermediate skills to participate in outdoor adventure activities.

Standard 2: MOVEMENT CONCEPTS

Students use movement concepts and principles in the development of motor skills.

- 8.2.1 Understand biomechanical* concepts that govern different types of movement.
- 8.2.2 Understand the relationship between cue words and movement skills.
- 8.2.3 Understand the principles of training* for specific physical activities.
- 8.2.4 Use movement concepts and game strategies to play in a variety of individual and team physical activities.
- 8.2.5 Understand how to use movement concepts and principles to design movement activities.

Standard 3: BENEFITS OF PHYSICAL ACTIVITY

Students understand the benefits of regular physical activity.

- 8.3.1 Understand long-term physiological benefits of regular participation in physical activity.
- 8.3.2 Understand long-term psychological benefits of regular participation in physical activity.
- 8.3.3 Know the community resources available that allow participation in physical activity.

Standard 4: MAINTAINING PHYSICAL FITNESS*

Students understand how to maintain a health-enhancing level of physical fitness.*

- 8.4.1 Understand the body's response to physical activities of various intensities.
- 8.4.2 Know activities that develop and maintain cardiovascular fitness.
- 8.4.3 Know activities that develop and maintain muscular strength* and endurance*.
- 8.4.4 Know activities that develop and maintain flexibility*.
- 8.4.5 Understand how exercise and other factors influence weight and body composition*.
- 8.4.6 Understand how to interpret the results of physical fitness* assessments.
- 8.4.7 Understand how to maintain a healthy lifestyle.

** Indicates the word or phrase is defined in the Glossary*

Standard 5: BEHAVIOR AND PHYSICAL ACTIVITY

Students use responsible personal and social behavior in physical activity settings.

- 8.5.1 Understand the need for including all students in physical activities.
- 8.5.2 Understand appropriate safety precautions and responses to emergency situations in a physical activity setting.
- 8.5.3 Use self-control when engaging in physical activity.
- 8.5.4 Understand and comply with rules in physical activity settings.
- 8.5.5 Understand how the use of harmful practices/substances affects personal health and performance in physical activity.
- 8.5.6 Understand the potentially dangerous consequences of participation in physical activity.

Standard 1: MOVEMENT FORMS

Students use a variety of movement forms.

Benchmarks

- 8.1.1 Understand how to combine skills to participate in a modified version of team and/or individual sports.
- 8.1.2 Know and perform a variety of dance and rhythmic movements.
- 8.1.3 Know intermediate skills to participate in outdoor adventure activities.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 8.1.1 combine fundamental skills such as dribbling while running, passing and catching while guarded, and striking a thrown object
- 8.1.2 movement to music such as star right, star left, grapevine, two-step, do-si-do, allemande left, line dance and rhythmic activities such as lummi sticks, tinikling, jump bands, and jump rope
- 8.1.3 intermediate skills for participating in outdoor adventures such as accuracy in archery, casting and reeling in fishing, and gliding and pulling in cross country skiing, compass and map reading in orienteering*, or activities appropriate for particular community and budget

Examples of Activities that Support the Standard and Benchmarks

- 8.1.1 Students play a modified version of football where they are allowed to pass the ball numerous times during a down. [*Note: American Alliance for Health, Physical Education, Recreation and Dance (AHPERD) test for basketball skills can be used to assess speed shooting, passing control dribble, and defensive movement*].
- 8.1.2 Students perform intermediate square dance, line dance, and contemporary dances and rhythmic activities such as jump rope routines.
- 8.1.3 Students hike, cast a fishing line, ski, or complete an orienteering* course.

* Indicates the word or phrase is defined in the Glossary

Standard 2: MOVEMENT CONCEPTS

Students use movement concepts and principles in the development of motor skills.

Benchmarks

- 8.2.1 Understand biomechanical* concepts that govern different types of movement.
- 8.2.2 Understand the relationship between cue words and movement skills.
- 8.2.3 Understand principles of training* for specific physical activities.
- 8.2.4 Use movement concepts and game strategies to participate in a variety of individual and team physical activities.
- 8.2.5 Understand how to use movement concepts and principles to design movement activities.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 8.2.1 range of motion, angle of contact, leverage, force, speed, center of gravity
- 8.2.2 cue words in specific skills (e.g., basketball - goose neck on the follow through; front rawl - spear the fish; dance – step together step; golf – head down, BEEF – balance, eyes, elbow, follow through)
- 8.2.3 frequency – intensity – type – time (FITT)* principle, target heart rate* zone, overload progression
- 8.2.4 intermediate offensive and defensive strategies for individual, team and lifetime activities (e.g., leverage, fronting, spacing, filling the lanes, and cushioning in soccer)
- 8.2.5 concepts and principles used in design of movement activities (e.g., safety, rules, scoring, boundaries)

Examples of Activities that Support the Standard and Benchmarks

- 8.2.1 Students observe a demonstration of proper lifting techniques and describe the biomechanical* principles involved.
- 8.2.2 Students participate in aerobic* activity by following the cues of a leader (e.g., step aerobics*: step-kick-right, front kick, step down-touch).
- 8.2.3 Students determine individual target heart rate* training* zone for an aerobic* activity. Students monitor the activity with a heart rate manually or with a monitor or pulse stick.
- 8.2.4 Students participate in a modified soccer game, demonstrating movement concepts and principles.
- 8.2.5 Students create and demonstrate exercises, obstacle courses, or warm-up activities and engage in a follow-the-leader warm up.

Standard 3: BENEFITS OF PHYSICAL ACTIVITY

Students understand the benefits of regular physical activity.

Benchmarks

- 8.3.1 Understand long-term physiological benefits of regular participation in physical activity.
- 8.3.2 Understand long-term psychological benefits of regular participation in physical activity.
- 8.3.3 Know the community resources available that allow participation in physical activities.

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Examples of Specific Knowledge that Support the Standard and Benchmarks

- 8.3.1 specific physiological benefits of physical activity (e.g., improved cardiovascular health, body composition*, flexibility*, muscular strength* and muscular endurance*)
- 8.3.2 specific psychological benefits of physical activity (e.g., healthy self-image; stress reduction; strong mental, social, and emotional health)
- 8.3.3 examples of school and community resources related to fitness for youth and adults (e.g., health clubs, intramurals, interscholastic, bowling alleys, park district), types of resources (e.g., youth vs. adult, indoor vs. outdoor, free vs. fee)

Examples of Activities that Support the Standard and Benchmarks

- 8.3.1 Students write essays about their current physical activity and the long-term physiological benefits of that activity.
- 8.3.2 Students access the benefits of regular physical activity with diversified ages and abilities by interactive participation, interviews, reports, or surveys.
- 8.3.3 Students develop a matrix of available school and community resources.

Standard 4: MAINTAINING PHYSICAL FITNESS*

Students understand how to maintain a health-enhancing level of physical fitness.*

Benchmarks

- 8.4.1 Understand the body's response to physical activities of various intensities.
- 8.4.2 Know activities that develop and maintain cardiovascular fitness.
- 8.4.3 Know activities that develop and maintain muscular strength* and endurance*.
- 8.4.4 Know activities that develop and maintain flexibility*.
- 8.4.5 Understand how exercise and other factors influence weight and body composition*.
- 8.4.6 Understand how to interpret the results of physical fitness* assessments.
- 8.4.7 Understand how to maintain a healthy lifestyle.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 8.4.1 the physiological responses of the body to exercise (e.g., cardiovascular – aerobic* vs. anaerobic* activities; muscular strength* and endurance* – principle of overload*; body composition* – low to high intensity activities)
- 8.4.2 how to calculate heart rate (resting and target), characteristics of aerobic* activity (e.g., relation to level of activity), examples of aerobic* activities (e.g., swimming, jogging, biking, cross country skiing)
- 8.4.3 the difference between muscular strength* and muscular endurance*, activities that contribute to the improvement of strength and endurance (e.g., standing long jump, pushups, pull-ups, plyometrics*, step test), various types of muscular strength* and endurance* required to perform different activities with and without weights
- 8.4.4 various ways to promote mobility in each joint (e.g., ballistic stretching*, dynamic flexibility*, static stretching*)
- 8.4.5 effects of caloric intake, energy expenditure, stress, and substance use on weight and body composition*
- 8.4.6 differentiate between criterion and norm-referenced standards
- 8.4.7 the role of regular activity, avoidance of harmful substances, proper nutrition and sleep, stress management

* Indicates the word or phrase is defined in the Glossary

Examples of Activities that Support the Standard and Benchmarks

- 8.4.1 Students take part in a stride-matching activity (i.e., counting the number of strides per minute in relation to lower and higher heart rates manually or using heart rate monitors or pulse sticks).
- 8.4.2 Students demonstrate various aerobic* activities.
- 8.4.3 Students participate in circuit training with developmentally appropriate* activities and determine whether the activities require strength, endurance, or both.
- 8.4.4 Students demonstrate safe stretching and/or movement activities such as sit and reach and shoulder flexibility*.
- 8.4.5 Students maintain a log of food intake and caloric expenditure through activity. Students explain what they learned from the log. *(Note: Nutritional analysis software may be used to enhance this activity.)*
- 8.4.6 Students design an individual fitness plan, applying the results of assessments and choosing activities to improve their personal physical fitness*. *(Note: Fitness programming software may be used to enhance this activity.)*
- 8.4.7 Students list ten characteristics of a healthy lifestyle. *(Note: Health risk appraisal \ texts, software, or web sites may be used to enhance this activity.)*

Standard 5: BEHAVIOR AND PHYSICAL ACTIVITY

Students use responsible personal and social behavior in physical activity settings.

Benchmarks

- 8.5.1 Understand the need for including all students in physical activities.
- 8.5.2 Understand appropriate safety precautions and responses to emergency situations in a physical activity setting.
- 8.5.3 Use self-control when engaged in physical activity.
- 8.5.4 Understand and comply with rules in physical activity settings.
- 8.5.5 Understand how the use of harmful practices/substances affects personal health and performance in physical activity.
- 8.5.6 Understand the potentially dangerous consequences of participation in physical activity.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 8.5.1 team building; harassment; how to work with all types of people - regardless of gender, ability level, physical and mental challenges, ethnic background, socioeconomic status
- 8.5.2 safety precautions (e.g., use correct spotting techniques, use equipment only when the teacher is present, wear appropriate safety gear), basics of dealing with emergency situations (e.g., remain calm, keep injured person still, practice universal precautions, call for help)
- 8.5.3 conflict resolution skills; importance of positive attitude, sportsmanship, etiquette, fair play, and support to teammates and opponents whether you win or lose
- 8.5.4 age-appropriate rules; importance of following the rules; reasons why one should respect the referee's decision (i.e., safety, fairness and organization)
- 8.5.5 effects of harmful substances (e.g., ergogenic aids*, steroids, alcohol, caffeine, tobacco, marijuana, commercial carcinogens/pesticides), effects of harmful practices (e.g., laxative abuse, sleep deprivation, rubberized sweat suit).
- 8.5.6 examples of dangerous consequences (e.g., contraindicated stretches, improper exercises, inherent risks, dehydration, overheating)

** Indicates the word or phrase is defined in the Glossary*

Examples of Activities that Support the Standard and Benchmarks

- 8.5.1 Students observe interactions between others in a cooperative activity and describe the social dynamics that occur.
- 8.5.2 Students demonstrate how to approach an injured victim.
- 8.5.2 Students demonstrate proper use of safety gear/equipment by producing a collage, a video, or a live demonstration.
- 8.5.3 Students create a poster on fair play that lists ways to be a supportive team player.
- 8.5.4 Students work in groups to develop a video or role-play to show a rule, the official's signal for violation of the rule, and the result of the violation.
- 8.5.5 Students write essays about the negative effects of performance-enhancing drugs or practices.
- 8.5.6 Students identify unsafe stretches and then demonstrate a safe and effective stretching program.

** Indicates the word or phrase is defined in the Glossary*

SUMMARY OF GRADES 9 – 12 BENCHMARKS

Standard 1: MOVEMENT FORMS

Students use a variety of movement forms.

- 12.1.1 Use advanced sport-specific skills in selected physical activities.
- 12.1.2 Use advanced skills in complex physical activities.

Standard 2: MOVEMENT CONCEPTS

Students use movement concepts and principles in the development of motor skills.

- 12.2.1 Understand biomechanical* concepts that govern different types of movement.
- 12.2.2 Understand how sport psychology* affects the performance of physical activities.
- 12.2.3 Understand the physiological principles governing fitness maintenance and improvement.

Standard 3: BENEFITS OF PHYSICAL ACTIVITY

Students understand the benefits of regular physical activity.

- 12.3.1 Understand factors that impact participation in physical activity.
- 12.3.2 Understand how various factors affect physical activity preferences.
- 12.3.3 Understand long-term physiological benefits of regular participation in physical activity.

Standard 4: MAINTAINING PHYSICAL FITNESS*

Students understand how to maintain a health-enhancing level of physical fitness.*

- 12.4.1 Understand components of health-related fitness* and their relationship to gender and age.
- 12.4.2 Know how to monitor and adjust activity levels to meet personal fitness needs.
- 12.4.3 Understand how to maintain a healthy, active lifestyle.

Standard 5: BEHAVIOR AND PHYSICAL ACTIVITY

Students use responsible personal and social behavior in physical activity settings.

- 12.5.1 Use leadership and follower roles, when appropriate, in accomplishing group goals in physical activities.
- 12.5.2 Use principles of teamwork to achieve a common goal.
- 12.5.3 Understand the potentially dangerous consequences of participation in physical activity.
- 12.5.4 Understand the role of sport and physical activities in a diverse world.
- 12.5.4 Understand the concept of sportsmanship and the importance of responsible behavior.

** Indicates the word or phrase is defined in the Glossary*

Standard 1: MOVEMENT FORMS

Students use a variety of movement forms.

Benchmarks

- 12.1.1 Use advanced sport-specific skills in selected physical activities.
- 12.1.2 Use advanced skills in complex physical activities.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 12.1.1 the movement process involved in a sport-specific activity; aquatics (e.g., leg and arm skills/strokes, exercise activity skills), dance (e.g., foot patterns/balance), outdoor pursuits (e.g., climbing, casting); individual, dual, team sports, and activities (e.g., throwing, kicking, jumping, striking)
- 12.1.2 rules and strategies, effect of changing the number of participants, combining dance steps into a complete dance

Examples of Activities that Support the Standard and Benchmarks

- 12.1.1 Students foot dribble a ball through a series of cones. Students consecutively bump a volleyball higher than the net to themselves. Students serve overhand within the proper service court.
- 12.1.2 Students use the sport-specific skills of passing, shooting, dribbling, and guarding in a regulation game of basketball. As a team, students use legal hits before passing a volleyball over a net.
- 12.1.2 Students use a variety of golf clubs and stroke techniques.

Standard 2: MOVEMENT CONCEPTS

Students use movement concepts and principles in the development of motor skills.

Benchmarks

- 12.2.1 Understand biomechanical* concepts that govern different types of movement.
- 12.2.2 Understand how sport psychology* affects the performance of physical activities.
- 12.2.3 Understand the physiological principles governing fitness maintenance and improvement.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 12.2.1 biomechanical* concepts (e.g., force, torque, equilibrium, friction), the principles of movement (e.g., dance, golf, running, striking/stroking)
- 12.2.2 the effect of anxiety on performance, the influence of self-concept/attitude on performance
- 12.2.3 principle of overload*, principle of specificity*

* Indicates the word or phrase is defined in the Glossary

Examples of Activities that Support the Standard and Benchmarks

- 12.2.1 Students create a poster or other visual representation that explains how friction relates to athletic footwear. The presentation includes sports or activities where friction is desirable (e.g., basketball, football, track) and how it is increased by the footwear and sports or activities where friction needs to be reduced (e.g., skiing, skating).
- 12.2.1 Students use proper running form to jog in single file around a large rectangular area. On cue, the last participant sprints, using the most direct cut (e.g., Angle of Pursuit) to become the first in line. This sequence is repeated for all students.
- 12.2.2 Students assess the effects of anxiety on their shooting performance by completing a timed, required shot course (i.e., placing shooting markers on the floor around the basketball key) as compared to a shot course individually selected.
- 12.2.3 Students design a strength-training routine for general health and fitness that incorporates the principle of overload*, includes all body areas in the proper sequence, and meets accepted guidelines for sets and repetitions.

Standard 3: BENEFITS OF PHYSICAL ACTIVITY

Students understand the benefits of regular physical activity.

Benchmarks

- 12.3.1 Understand factors that impact participation in physical activity.
- 12.3.2 Understand how various factors affect physical activity preferences.
- 12.3.3 Understand long-term physiological benefits of regular participation in physical activity.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 12.3.1 type of activity, cost, available facilities, equipment required, personnel involved, physical limitations, time
- 12.3.2 age (appropriateness), gender (individual comfort and safety in participation), culture (exposure to various activities), time (availability)
- 12.3.3 reduces stress, helps with weight management, regulates blood pressure, helps prevent osteoporosis

Examples of Activities that Support the Standard and Benchmarks

- 12.3.1 Students prepare a budget for participating in a downhill skiing trip. The budget includes travel, lodging, equipment purchase and/or rental, as well as all other related costs.
- 12.3.2 Students prepare a report discussing how such factors as age, gender, and cultural background affect the choices one makes with regard to sports and physical activities.
- 12.3.3 Students prepare questions to ask during a presentation given by a local medical professional on the importance of weight bearing exercise for prevention of osteoporosis. They summarize what they learned from the presentation by creating a poster that could be displayed in a doctor's office or other public place.

* Indicates the word or phrase is defined in the Glossary

Standard 4: MAINTAINING PHYSICAL FITNESS*

Students understand how to maintain a health-enhancing level of physical fitness.*

Benchmarks

- 12.4.1 Understand components of health-related fitness* and their relationship to age and gender.
- 12.4.2 Know how to monitor and adjust activity levels to meet personal fitness needs.
- 12.4.3 Understand how to maintain a healthy, active lifestyle.

Examples of Specific Knowledge that Support the Standard and Benchmarks

- 12.4.1 components of health-related fitness*: cardiovascular endurance*, muscular strength* and muscular endurance*, flexibility*, and body composition*
- 12.4.2 target heart rate* calculation, rate of perceived exertion* chart, principle of overload*, frequency-intensity-time-type (FITT)*
- 12.4.3 opportunities and services for physical activity (e.g., fitness centers, golf courses, ski resorts, outdoor pursuits); community resources; guidelines for nutrition, disease control and substance abuse (e.g., Surgeon General's report)

Examples of Activities that Support the Standard and Benchmarks

- 12.4.1 Students participate in an appropriate physical fitness* test and interpret the results for their age and gender.
- 12.4.2 In a personal fitness program, students progressively adjust their level of intensity as their fitness level improves. They use heart rate monitors and/or fitness software to determine appropriate levels of intensity.
- 12.4.3 Students design personal fitness programs for individuals of various ages and genders based on the principles of training* that encompass all components of fitness. They use fitness software and/or heart rate monitors to help them design the programs.

Standard 5: BEHAVIOR AND PHYSICAL ACTIVITY

Students use responsible personal and social behavior in physical activity settings.

Benchmarks

- 12.5.1 Use leadership and follower roles, when appropriate, in accomplishing group goals in physical activities.
- 12.5.2 Use principles of teamwork to achieve a common goal.
- 12.5.3 Understand the potentially dangerous consequences of participation in physical activity.
- 12.5.4 Understand the role of sport and physical activities in a diverse world.
- 12.5.5 Understand the concept of sportsmanship and the importance of responsible behavior.

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Examples of Specific Knowledge that Support the Standard and Benchmarks

- 12.5.1 student responsibility in classroom organization (e.g., activity and equipment management)
- 12.5.2 cooperation, personal sacrifice, adhere to the strategies, include all participants
- 12.5.3 physical injury, property/equipment damage, personal responsibility in preventing injury
- 12.5.4 diversity (e.g., physical abilities, cultural, ethnic, gender), international competition (e.g., Olympics, Special Olympics, Pan American Games, World Cup Soccer), the influence of professional sports in society, the usefulness of dance as an expression of multiculturalism, the effect of age and gender on sport participation patterns
- 12.5.5 respect for self and others, knowledge of rules, inappropriate language, anger management, etiquette

Examples of Activities that Support the Standard and Benchmarks

- 12.5.1 Students assume the role of leader and/or follower in management of equipment and activities.
- 12.5.2 Students exhibit the principles of teamwork in applying game strategies to accomplish a common goal (e.g., scoring and/or winning the game). Students explain how an activity/rules could be adjusted so that all participants could be included (e.g., multiple passes before scoring, alternate boy/girl).
- 12.5.3 Students prepare a list of questions about potential injuries from participation in a variety of sports and physical activities to ask an athletic trainer or other sports medicine professional. They summarize what they have learned by making a visual display or other presentation. For example, they might explain the potential dangers of actions like high sticking, slap shots, and checking in activities such as floor hockey, broomball, and lacrosse.
- 12.5.4 Students prepare a report on the historical roles of games, sports, and dance in the cultural life of a population.
- 12.5.4 Students view a videotape of a group interacting on a playing field. They look for evidence of inclusive and discriminatory behavior and suggest ways that the discriminatory behavior could have been handled differently.
- 12.5.5 Students demonstrate courtesy in the actual playing of a game (e.g., the student slides into a base in a manner that avoids injuring the defensive player; the student identifies and uses established procedures for safe participation in a selected activity; the student listens to all sides before taking action in a conflict situation in a game setting; the student volunteers to replay a contested shot in tennis and acknowledges a good play from an opponent during the match).
- 12.5.5 Students select a sport from a set of cards the teacher has prepared. They role play appropriate etiquette for that sport (e.g., bowling: allow the person on the right to bowl first; basketball: remain quiet during a free throw shot).

** Indicates the word or phrase is defined in the Glossary*

Summary of Benchmarks by Standard

Standard 1: MOVEMENT FORMS

Students use a variety of movement forms.

Grades K – 4 Benchmarks

- 4.1.1 Use control in static* and dynamic* balance activities.
- 4.1.2 Know how to combine shapes, levels, directions, and pathways into simple sequences.
- 4.1.3 Know how to use space to move safely in different directions at varying speeds.
- 4.1.4 Use control in locomotor activities.
- 4.1.5 Know how to demonstrate object control skills.

Grades 5 – 8 Benchmarks

- 8.1.1 Understand how to combine skills to participate in a modified version of team and/or individual sports.
- 8.1.2 Know and perform a variety of dance and rhythmic activities.
- 8.1.3 Know intermediate skills to participate in outdoor adventure activities.

Grades 9 – 12 Benchmarks

- 12.1.1 Use advanced sport-specific skills in selected physical activities.
- 12.1.2 Use advanced skills in complex physical activities.

Standard 2: MOVEMENT CONCEPTS

Students use movement concepts and principles in the development of motor skills.

Grades K – 4 Benchmarks

- 4.2.1 Know the vocabulary of basic movement concepts.
- 4.2.2 Understand the critical elements of a variety of basic movement patterns.
- 4.2.3 Understand the importance of practice in learning motor skills.
- 4.2.4 Use teacher, peer, and self assessment to improve motor performance.

Grades 5 – 8 Benchmarks

- 8.2.1 Understand biomechanical* concepts that govern different types of movement.
- 8.2.2 Understand the relationship between cue words and movement skills.
- 8.2.3 Understand principles of training* for specific physical activities.
- 8.2.4 Use movement concepts and game strategies to play in a variety of individual and team physical activities.
- 8.2.5 Understand how to use movement concepts and principles to design movement activities.

Grades 9 – 12 Benchmarks

- 12.2.1 Understand biomechanical* concepts that govern different types of movement.
- 12.2.2 Understand how sport psychology* affects the performance of physical activities.
- 12.2.3 Understand the physiological principles governing fitness maintenance and improvement.

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Standard 3: BENEFITS OF PHYSICAL ACTIVITY

Students understand the benefits of regular physical activity.

Grades K – 4 Benchmarks

- 4.3.1 Understand the personal health benefits of physical activity.
- 4.3.2 Use the terms associated with the benefits of physical activities.

Grades 5 – 8

- 8.3.1 Understand long-term physiological benefits of regular participation in physical activity.
- 8.3.2 Understand long-term psychological benefits of regular participation in physical activity.
- 8.3.3 Know the community resources available to allow participation in physical activity.

Grades 9 – 12 Benchmarks

- 12.3.1 Understand factors that impact participation in physical activity.
- 12.3.2 Understand how various factors affect physical activity preferences.
- 12.3.3 Understand long-term physiological benefits of regular participation in physical activity.

Standard 4: MAINTAINING PHYSICAL FITNESS*

Students understand how to maintain a health-enhancing level of physical fitness.*

Grades K – 4 Benchmarks

- 4.4.1 Understand the relationship between regular participation in physical activity and physical fitness*.
- 4.4.2 Understand how to apply fitness assessment to set personal fitness goals.
- 4.4.3 Understand the relationship between physical activity and physiological changes.

Grades 5 – 8 Benchmarks

- 8.4.1 Understand the body's response to physical activities of various intensities.
- 8.4.2 Know activities that develop and maintain cardiovascular fitness.
- 8.4.3 Know activities that develop and maintain muscular strength* and endurance*.
- 8.4.4 Know activities that develop and maintain flexibility*.
- 8.4.5 Understand that exercise and other factors influence weight and body composition*.
- 8.4.6 Understand how to interpret the results of physical fitness* assessments.
- 8.4.7 Understand how to maintain a healthy lifestyle.

Grades 9 – 12 Benchmarks

- 12.4.1 Understand components of health-related fitness* and their relationship to age and gender.
- 12.4.2 Know how to monitor and adjust activity levels to meet personal fitness needs.
- 12.4.3 Understand how to maintain a healthy, active lifestyle.

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Standard 5: BEHAVIOR AND PHYSICAL ACTIVITY

Students use responsible personal and social behavior in physical activity settings.

Grades K –4 Benchmarks

- 4.5.1 Use positive social interaction during physical activities.
- 4.5.2 Understand how culture influences physical activity.
- 4.5.3 Know how to seek out, participate with, and show respect for people of like and different physical abilities.

Grades 5 – 8 Benchmarks

- 8.5.1 Understand the need for including all students in physical activities.
- 8.5.2 Understand appropriate safety precautions and responses to emergency situations in a physical activity setting.
- 8.5.3 Use self-control when engaged in physical activity.
- 8.5.4 Understand and comply with rules in physical activity settings.
- 8.5.5 Understand how the use of harmful practices/substances affects personal health and performance in physical activity.
- 8.5.6 Understand the potentially dangerous consequences of participation in physical activity.

Grades 9 – 12 Benchmarks

- 12.5.1 Use leadership and follower roles, when appropriate, in accomplishing group goals in physical activities.
- 12.5.2 Use principles of teamwork to achieve a common goal.
- 12.5.3 Understand the potentially dangerous consequences of participation in physical activity.
- 12.5.4 Understand the role of sport and physical activities in a diverse world.
- 12.5.5 Understand the concept of sportsmanship and the importance of responsible behavior.

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Resources

Books

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- Burton, B., & Kirkpatrick, B. (1997). *Lessons from the heart*. Champaign, IL: Human Kinetics Books.
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Other Print Resources

The Great Activities Newspaper, P.O. Box 51158, Durham, NC 27717-1158.

Web Sites

Adapted Physical Education

www.hhs.csus.edu/modells/TheClass/APE

Aerobics Links

www.turnstep.com/links.html

American Master Teacher Program

<http://pe.central.ct.edu/amp.html>

Bicycle Helmet Safety Institute

<http://www.bhsi.org>

Center for Disease Control

www.cdc.gov

Country Barn Line Dances

www.countrybarn.com/08dil.htm

Dole Company Web Sites

<http://dole5aday.com/>

Fast Food Facts

<http://www.olen.com/food/book.html>

The Fitness Education Pyramid

<http://www.corpcomm.net/~rmauch>

Grants Web Site

<http://www.nih.gov/grants/oer.htm>

HealthFIRST – Electronic Portfolios and Student Web site

www.healthyschools.net

HealthFIRST- TriFIT Electronic Fitness System, Wellness Center and Handheld Exer Trac

www.healthfirstusa.com

Kids Food Cyber Club Home Page

www.kidsfood.org

National Association for Sport and Physical Education

<http://www.aahperd.org>

NASPE Listserv

NASPE-L@LISTSERV.VT.EDU

North Dakota Association of Health, Physical Education, Recreation, and Dance

<http://205.198.55.6/ndhper/peindex.htm>

North Dakota AHPERD Listserv

ndahperd@egroups.com

North Dakota Curriculum Web Site

www.dpi.state.nd.us

PE Central

<http://pecentral.vt.edu>

PE Sample Assessments

<http://infoserver.etl.vt.edu/~rkimball/sampass.html>

PE Talk Digest

<http://www.sportime.com>

Physical Education Lesson Plans

www.ping.be/sportsmedia

Pedometer

www.walk4life.com

Polar-Heart Rate Monitors, Class Management System, and Handheld Exer Trac

www.polarusa.com

President's Council on Physical Fitness and Sport

<http://www.indiana.edu/~preschal/>

Rollerblading Lessons

<http://www.howtobefit.com/coahccor>

Seat Aerobics

www.seat-a-robics.com

US Olympic Committee

www.olympic-usa/fitkids/

We Need PE

<http://www.weneedpe.com/>

Young Peoples Healthy Hearts Grades K-6

www.healthyheartprogram.com

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Glossary

Aerobic – Exercises in which oxygen is supplied to muscles for an extended period of time.

Anaerobic – Exercises in which there is oxygen deficit because the exercise requires more oxygen than is supplied to the body.

Ballistic stretching – Repetitive contractions of the agonist muscle used to produce quick bouncing stretches of the antagonist muscles.

Biomechanics – The study of forces and their effects on living systems. Exercise and sport biomechanics is the study of forces and their effects on humans in exercise and sport. Application of biomechanics may lead to performance improvement or the reduction and rehabilitation of injury through improved techniques, equipment, or training.

Body composition - A comparison of the relative amounts of lean body weight and fat tissue in the body.

Cardiovascular endurance – The ability of the heart, lungs, and blood vessels to deliver oxygenated blood to the muscles of the body to be used as fuel for sustained physical work.

Conditioning – Improving the physical capability of a person by an exercise program.

Contraindicated exercise – An exercise that is undesirable because it might present a danger if performed.

Developmentally appropriate – In physical education, practices which recognize children's changing capacities to move and which promote such change.

Dynamic balance – Being on-balance when moving, using various locomotor skills, starting and stopping. It also includes maintaining a balanced state while performing activities such as throwing or jumping.

Dynamic flexibility – The degree to which a joint can be moved as a result of a muscle contraction.

Ergogenic aids - Any substance or technique apart from actual physical or mental training that improves athletic performance by either delaying fatigue or increasing work capacity. Examples include carbohydrate loading, steroids, and blood doping. Many such techniques are banned in competitive events.

Flexibility – The range of motion that is possible around a joint or joints.

FITT – An acronym consisting of the first letter of the words frequency, intensity, time and type (of activity). These four variables are considered to be the formula for achieving health, wellness, and fitness benefits. The acronym FITT can help one remember the four important variables for applying the overload principle and its corollaries.

Fitness Education Pyramid – a representation of five heart rate zones for achieving or maintaining physical fitness. The description for each zone includes the percentage of heart rate maximum, the actual beats per minute for a training workout at that level, the equivalent rate of perceived exertion, the length of time needed to get the most benefit, the number of activity bouts needed per week, and the activities that one can perform to get his or her heart rate to that level.

** Indicates the word or phrase is defined in the Glossary*

Health-related fitness - Consists of four components (cardiovascular endurance, body composition, muscular strength and endurance, and muscular flexibility) that contribute to one's physiological well-being.

Muscular endurance – The ability of a muscle to exert submaximal force repeatedly over time; usually refers to a specific muscle group.

Muscular strength - Maximum force that can be applied by a muscle during a single maximum contraction.

Orienteering – Finding one's way with a map and compass.

Physical fitness – Ability to perform daily tasks with strength and vigor and without experiencing undue fatigue, and with enough strength, energy, and stamina left over to enjoy recreational pursuits and to meet unforeseen emergencies.

Plyometrics – A type of dynamic-action resistance training based on the theory that use of the stretch reflex during jumping will recruit additional motor units.

Principle of progression – Fitness program in which the intensity and duration of exercise is gradually increased.

Principle of overload – Increasing activity levels to develop an increased fitness level.

Principle of specificity – The theory that a training program must stress the physiological systems critical for optimal performance in a given sport in order to achieve desired training adaptations in that sport.

Rate of perceived exertion (RPE) - A person's subjective assessment of how hard he/she is working.

Sport psychology – Scientific study of behavior that attempts to apply psychological facts and principles of learning, performance, and associated human behavior in sport or sport-related contexts.

Static balance – Maintaining a desired shape while stationary, such as holding a pose in gymnastics.

Static stretching – Movement of a joint that occurs slowly and gradually through the maximal range of motion.

Target heart rate – Heart rate that must be achieved during exercise to obtain a cardiovascular training effect; for practical purposes, a range is generally used; American College of Sports Medicine Guidelines recommend 65% to 85% of maximum heart rate; can also be calculated using the Karvonen formula.

Technology – electronic media such as video equipment, heart monitors, motion sensors, computers or lasers used as tools to create, learn, explain, document, assess, or present activities.

Training – An organized system of instruction. In athletics, training refers to the physical and mental conditioning program used by athletes to increase their proficiency in sports endeavors.

** Indicates the word or phrase is defined in the Glossary*