

Guidelines for Facilities, Equipment and Instructional Materials in Elementary Education



*Council of Physical Education for Children
A Position Paper from
The National Association for Sport and
Physical Education*

Guidelines for Facilities, Equipment and Instructional Materials in Elementary Education

A Position Statement of the National Association for Sport and Physical Education developed by the Council of Physical Education for Children (COPEC)

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The Council on Physical Education for Children (COPEC) of the National Association for Sport and Physical Education (NASPE) recommends quality, daily physical education that is developmentally and instructionally appropriate be available to all children. Appropriate instructional practices in physical education recognize children’s development and movement abilities. Quality physical education incorporates practices, derived from current research and documented teaching experiences, into a method of instruction that maximizes opportunities for learning and success. NASPE’s publication *Appropriate Practices for Elementary School Physical Education* (2000) highlights these best known practices. National content standards, specifying what students “should know and be able to do” are featured within the NASPE publication, *Moving into the Future: National Physical Education Standards: A Guide to Content and Assessment* (1995). Together these documents provide programmatic support with the ultimate goal of ensuring that children are physically educated.

In addition to appropriate instructional practices, relevant content and ongoing assessment of student learning, there are other areas critical to the design and implementation of a quality elementary physical education program. The purpose of this document is to provide guidelines relevant to facilities, equipment and instructional materials that support and facilitate the design and implementation of quality elementary physical education programs and enhance children’s opportunities to learn (see *Opportunities to Learn Standards for Quality Elementary Physical Education Document*, NASPE/COPEC).

Guidelines for Facilities:

1. Boards of Education, through their school budget process, fund
 - a) the purchase and maintenance of appropriate and sufficient physical education supplies and equipment; and
 - b) equitable physical education facilities and maintenance of these facilities for each school.

2. Physical education teachers, physical education program administrator, and school administrators should jointly:
 - a) develop standards for appropriate supplies and equipment; and procedures for purchasing.
 - b) provide input to plans for new physical education facilities.

3. School and community facilities and programs are designed and implemented to support and complement one another in serving children’s needs.

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4. There is a dedicated facility for the physical education instructional program.
 5. Adequate space, ranging from 110 sq. ft. to 150 sq. ft. per child, for learning movement activities in which children can move freely and safely. The student/teacher ratio should be 25:1 per class. Intact classes should not interfere with one another.
 6. Adequate space, ranging from 400 to 600 sq. ft. with a height of 12' - 15', is available for safe and proper storage of physical education equipment.
 7. Physical activity space is designed to facilitate instruction free of distractions and "pass-through traffic patterns".
 8. Restrooms and drinking fountains should be located close to the instructional facilities; if drinking fountains are in the instructional area they should be recessed.
 9. Office space, ranging from 120 to 240 sq. ft. in size, for the physical education teacher is provided to allow students convenient access to their teacher for consultation and/or assistance.
 10. A learning environment with adequate acoustics ("sound baffles") permits children to safely participate in all phases of instruction.
 11. Indoor facilities, with proper flooring and lighting, are clean and sanitized on a daily basis. Floor surface should be either hardwood with cushion, or a roll out synthetic product. The minimum amount of light should be 30-foot candles.
 12. All-weather outdoor surfaces are properly marked with circles, lines, courts, etc. to permit participation in a wide variety of activities and are appropriate for students with varied ability levels.
 13. Outdoor areas are available for teaching and:
 - a) are free from safety hazards (such as glass, debris, water),
 - b) located away from occupied classrooms,
 - c) have clearly defined physical boundaries,
 - d) are far away from parking lots or streets [i.e., no closer than 100 yards], or are separated by barriers that prevent vehicles from entering the area.

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- e) are close enough to school building to permit access to equipment, and
 - f) provide shelter in case of inclement weather.

14. Natural play areas are available to facilitate and encourage creative and exploratory play.

Features of Outdoor Facilities for Physical Education

Outdoor facilities, playgrounds, and/or activity areas for an elementary physical education class should be accessible for all children. An outdoor area includes field space and surfaced areas, which allow accessibility and safe participation for all children.

A separate hard surface area, either asphalt or a synthetic product, (50 x 80 square feet; 110 square feet per child) is available only for outdoor physical education instruction. Isolation from the general playground should be facilitated to insure physical education instruction without recess interruptions.

Field space is available for physical education use and allows for instruction without recess interruption. Fields are leveled, drained, and turfed and regular maintenance is scheduled. Permanent structures such as backstops, volleyball standards, benches, and goals are inspected and serviced on a regularly schedule plan.

Outdoor Facilities for Recess and Other Activities

Outdoor areas may also include apparatus areas, play courts, covered play space, and age-specific play areas with appropriate ground cover. Standards for outdoor activity areas call for a minimum of 8 to 10 acres of available space. Student exploration, creative and imaginative play can be fostered when space for developmental playgrounds are provided and the landscape features hills or valleys.

Features of Indoor Facilities

Every elementary school should include indoor physical education facilities configured as either a gymnasium or a multi-purpose room. The gymnasium or multi-purpose room should measure approximately 70' x 100' feet with a minimum of 110 square feet allotted per child. The primary use of the indoor facility is for physical education instruction. If the indoor facility is used for other purposes (e.g., school lunches, school convocations) the instructional program in physical education should be scheduled to maximize use of the facility for instructional time.

It is of utmost importance that the gymnasium be free from potential safety hazards [such as protruding structures]. If the gymnasium also serves as a cafeteria, lunch tables should be recessed into walls. Boundaries of the gymnasium should be clearly defined to exclude the area in which tables or other equipment is stored. There should be a minimum of 7-9 foot area between stored items and the instructional area.

The flooring of the gymnasium should be kept clean. Safe flooring surfaces include hardwood or tile with adequate cushioning or a synthetic composition that has a resilient surface. Floor markings facilitate a variety of activities, but the number of different markings (e.g., lines, circles, shapes) should be limited. Temporary markings for specific purposes should be removed when no longer needed.

Wall and ceiling acoustical treatments should be included to create adequate sound quality. Children should be able to fully participate in physical education activities and simultaneously hear their peers and teacher at all times. The gymnasium should be well lighted [minimum of 30 foot candles] and free from shadows. Lights should be covered with protective grids. The ceiling should be a minimum of 20' and illumination should be sufficient to facilitate the instructional program (e.g., ball handling activities: striking with the body; striking w/paddles; volleyball). Gymnasium walls should have a smooth or flat surface from the floor up to 10 to 15 feet of height. Walls can then be used for a variety of instructional purposes (e.g., using the wall to throw toward or to strike toward). The indoor physical education facility should have easy access to outdoor instructional areas in order to facilitate quick transitions from indoor to outdoor facilities.

Equipment Storage, Marking and Inventory

Careful consideration should be given to adequate storage space [400 to 600 sq. ft.; 12'-15' height]. Storage areas are planned to allow for adequate space with reasonable ease of access to needed equipment. All physical education equipment should be marked for purposes of keeping an updated inventory and to guard against loss or theft. Equipment used by classroom teachers and/or for recess should be kept separate from the physical education inventory.



Features of Indoor Equipment

The National Standards for Physical Education Content Standard Number 1 states: “A physically educated person demonstrates competency in many movement forms and proficiency in a few movement forms” (see *Moving Into the Future - National Standards for Physical Education - A Guide to Content and Assessment*, a publication of AAHPERD/NASPE, 1995). To successfully address this standard, sufficient and developmentally appropriate equipment is essential.

The following equipment list provides a foundation for an elementary physical education curriculum based on the National Standards for Physical Education (see *Moving Into the Future - National Standards for Physical Education - A Guide to Content and Assessment*, a publication of AAHPERD/NASPE, 1995). Skill themes (i.e., throwing, catching, kicking, striking, bouncing, jumping/landing, skipping, etc.) and movement concepts (i.e., spatial, effort and relationship awareness) establish the base for educational game, dance, and gymnastic experiences. The size, texture, weight, and/or color of equipment should be varied to accommodate children’s level of motor development and physical growth. Colors can also be used for organizational and instructional purposes.

General Equipment

	Quantity
Chalk or white board	1
Bags To Carry Balls	6
Ball Inflator	1
Ball Repair Kit	1
Bulletin Board	1 - 2
Clipboards	enough for ½ of class
First Aid Kit	1
Measuring Tape 100', 50'	1
CD/Tape Player	1
Crates or Baskets for Storage	5
Field marker (for chalking lines)	1
AV Cart with electrical outlet for CD/tape player	1

Educational Games

Skill Themes: Bouncing, Striking, Kicking, Catching, Throwing

Equipment Items	Equipment Size	Quantity for Class Size of 20-25
Playground Balls	5", 6" and 8½"	17, 17, and 30
Balls for Striking w/body	8 & 9"	15-18 of each
Beach Balls	24", 45"	18, 25
Foam Balls	7 or 8 "	25
Fleece or Yarn Balls	3"(get washable)	25
Balloons	11 "	36-72
Squish Balls	3"	17-18
Foam Balls-Bounceable	4 & ¾"	30
Bean Bags	4", 5"	30
Flying Disks	11 "	30
Deck Rings	7" diameter	17-18
Rag Balls	9"	17-18
Plastic Bottle Bats	11 & ½" handles	17-18
Soft-Bat	24", 27" & 29"	5 of each
Lollipop Paddles (Styrofoam Heads)	8" & 10" diameter w/12" handles	17-18 each
Scoops		30
Youth Tennis Racquets	21" & 24"	30, 30
Foam Blade Hockey Sticks w/Styrofoam pucks	40", 45"sticks	30 of each
Portable Gym Standards	150 lb. minimum	8 (or 4 pairs)
Nets for Standards		4
Cones Or Jug Markers	12", 18", 24"	26, 14, 14
Pinnies, Sashes or Vest (3 or more colors)		30
Scooter boards w/handles		30
Spotmarkers		20
Basketballs (junior size)		30
Adjustable Basketball Goals	7' - 10'	4 - 6
Soccer Balls	Sizes 4 & 5	18 & 30
Parachute		1

Educational Dance

Skills Themes: Locomotor & Non-locomotor Skills

Equipment Items	Equipment Size	Quantity for Class Size of 20-25
Plastic Hoops	30" and 36" diameter	20, 20
Styrofoam Hoops Holders (2 per hoop)		30
Rhythmic Equipment		
-ankle wrist bells		
-rain stick		
-rap stick		
-drum w/mallet		
-Jummi sticks	12" L & $\frac{3}{4}$ " diameter	30
Stretchy Material Bands	36"L & 6"W	30
Nylon Scarves	54" x 54"	30
Tinikling Sticks/Boards and Jump Bands		15 pairs
CD/Tape Player		1
Cordless Microphone		1
Sound System		1

Educational Gymnastics

Skill Themes:

Rolling, Jumping/Landing, Balance, Transfer of Weight, Hanging/Swinging

Equipment Items	Equipment Size	Quantity for Class Size of 20-25
Foam Vaulting Trapezoid	3-4 sections	1
Styrofoam Shapes (circles, triangles, ovals, wedge, etc.)		8
Mats	4' x 6' or 5' x 10' 2" thick, 100ILD foam	3-4 students per mat; 7-8 mats
Landing Mats	4" Thick	Minimum of 1
Incline Mats	36"W x 72"L	1
Balance Beams/Benches	12' L, 12" W	1 or more
Balance Boards	9"@ x 29½" L	12-13
Jumping Boxes (Foam Shapes of Varying Heights)	12"-24"	4-6
Trestles	5', 6' & 7'	2 of each
Sliding Boards to Connect to Trestles	12" L, 10-12" W	2
Connecting Ladder		1
Hanging Ropes		1-2
Jump Ropes	7', 8', 9' & 16' length (plastic Segments for beginners; speed rope for experienced jumpers)	13, 13, 13, 13
Stretch Jump ropes "Magic Ropes"		8-12
Wands		12-13

Physical Fitness Assessment

Sit and reach box for measuring flexibility	2-4
Stopwatches	4-6
Skinfold Calipers	6
Modified Chin Up Bar & Standards	
Fitness Assessment Package	

Resources

Books:

Gallahue, D. & Cleland, F. (in press). *Developmental Physical Education for Today's Children*. Human Kinetics.

Graham, G., Holt-Hale, S. & Parker, M. (2000). *Children Moving*. 5th ed. Mayfield Publishing Co.

Nichols, B. (1994). *Moving & Learning. The Elementary School Physical Education Experience*, 3rd ed. Mosby-Year Book Inc.

Sawyer, T. (Ed.) (1999). *Facility Planning for Physical Activity & Sport. Guidelines for Development*. 9th ed. Kendall-Hunt.

Pangrazi, Robert, A. (1998). *Dynamic Physical Education for Elementary School Children*. Allyn & Bacon.



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