



National Association for  
Sport and Physical Education

*an association of the American Alliance for Health,  
Physical Education, Recreation and Dance*

**NASPE Sets the Standard**

**POSITION STATEMENT**

## **Appropriate Uses of Fitness Measurement**

### **Introduction**

When it comes to physical education, what should students know and be able to do? The National Association for Sport and Physical Education (NASPE) has assisted in the work toward answering that question by developing National Standards for Physical Education (2004). These standards define what students will be expected to learn from a high-quality physical education program.

Under NASPE's National Standards, a physically educated person:

**Standard 1.** Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.

**Standard 2.** Demonstrates understanding of movement concepts, principles, strategies and tactics as they apply to the learning and performance of physical activities.

**Standard 3.** Participates regularly in physical activity.

**Standard 4.** Achieves and maintains a health-enhancing level of physical fitness.

**Standard 5.** Exhibits responsible personal and social behavior that respects self and others in physical activity settings.

**Standard 6.** Values physical activity for health, enjoyment, challenge, self-expression and/or social interaction.

Included with these standards is the identification of various assessments linked to them. Fitness measurement, for example, is just one of the assessments that have been used to connect to Standard 4 and help students identify their personal levels of health-related fitness and provide them with a baseline for developing personal fitness plans. Through the process of developing personal fitness plans, students connect with the knowledge and skills found in Standard 3 as they discover the importance of regular physical activity and how that activity can help improve general health and wellness.

“In light of the epidemics of obesity and diabetes and other chronic diseases among children,” NASPE Executive Director Charlene Burgeson said when announcing the standards in 2004, “there is an even stronger emphasis on the importance of physical education in contributing to good health. Physical education in all K-12 schools provides the foundation for healthy, active lifestyles that support learning and ensure future success.”

### **Health- and Skill-Related Fitness Overview**

Physical educators alone cannot be expected to solve the obesity problem, but they can be part of the solution. The unique role that quality physical education programs play is to teach the importance of health-related fitness, as well as to develop physical competence and cognitive understanding about physical activity for all students so that they can adopt healthy and physically active lifestyles.

A physical educator’s role is to teach the value of physical activity and educate students how to be lifelong movers and learners. For students to reach that goal, they need to learn about the health-related components of fitness: aerobic capacity; muscle strength, endurance and flexibility; and body composition. Assessing those components is a necessary step in the learning process. Developing fitness plans related to fitness measurement is an expected outcome of fitness education.

In its “Position Statement on Quality Physical Education Programs (2003),” NASPE says that a high-quality physical education program offers students an opportunity to learn, meaningful content and appropriate instruction, which includes:

- Fitness education and assessment to help students understand, improve and/or maintain their physical well-being.
- Development of cognitive concepts about motor skill and fitness.
- Promotion of regular amounts of appropriate physical activity now and throughout life.
- Regular assessment to monitor and reinforce student learning.

Skill-related fitness is an important component of instruction, because students who are more proficient in a specific sport’s skills will be more inclined to pursue that type of physical activity outside the school setting. Specific skill-related fitness assessments can allow students to measure these skills. Improved skill-related fitness enables students to perform at a higher level, resulting in their being more physically active and leading to a corresponding improvement in health-related fitness. The skill-related components of fitness are agility, balance, coordination, power, speed and reaction time.

### **Philosophy**

Purposeful measurement is an appropriate component of quality physical education. Combining fitness measurement and instruction is an appropriate instruction strategy and should be the main reason for measuring fitness. Measurement without a plan for using the data does little to serve students’ needs and is not an educationally sound practice.

According to Meredith and Welk (2007), “The ultimate long-term objective of a physical education program is to teach students the physical and behavioral skills they need to be active for life.” (1)

Learning physical skills is essential and provides students with the opportunity to experience and enjoy a variety of physical activities. Developing a health-enhancing level of fitness and competence in a variety of skills will make it easier for students to learn sports and activities that they can perform to be physically active throughout their lives. Students also need behavioral skills to help them understand the intrinsic rewards associated with daily physical activity. Students need to learn to self-assess their personal fitness levels, analyze the data, develop personal fitness plans and, ultimately, motivate themselves to remain physically active for a lifetime.

No matter what students aspire to become, they will live happier, more productive lives if they are healthy. Maintaining appropriate levels of physical fitness is vital to overall health, so the connection between maintaining personal fitness and overall health is a strong one.

### **Criterion-Referenced Versus Normative-Referenced Measurement**

Fitness measurement can be divided into two types: norm-referenced and criterion-referenced. Norm-referenced measurement compares a large sampling of student performances to determine fitness standards relative to each other. Criterion-referenced measurement compares student scores to a set standard of health-related fitness that will indicate the level of fitness necessary for good health regardless of other students' scores. Criterion-referenced measurements are based on a large sample of individuals' scores, which are analyzed with those individuals' risk factors for chronic diseases that affect long-term wellness. Scoring in this fashion places more focus on achieving health-related fitness.

### **Guidelines for Measurement Administration**

Physical educators are placing more emphasis on health-related fitness. Using a pretest assessment allows students to establish baseline data for fitness and the foundation for developing personal fitness plans, setting goals and evaluating progress toward those goals. Maintaining personal physical activity and nutrition logs are an integral part of the process, because they encourage students to focus on the process of improving fitness and not just an analysis of one-time scores.

Linking fitness measurement to the established curriculum and encouraging students to assume responsibility for their own health and wellness is the goal of all fitness measurement. With proper measurement administration, the following appropriate practices through proper fitness measurement administration will support this belief.

- Use valid, reliable and objective measures for all fitness measurement.
- Follow specific protocols for each measurement item. If using peer assessment, allow adequate time for instruction in the measurement administration.

## Appropriate Uses of Fitness Measurement (Cont.)

- Ensure adequate instruction and ample practice time before formal measurement. Provide two to three weeks of instruction and preparation, for example, before measuring for aerobic capacity for items such as the Progressive Aerobic Cardiovascular Endurance Run (PACER) test or mile run.
- Use a research-based set of standards or criteria for evaluating data.
- Keep student fitness scores confidential; do not post them.
- Consider administering fitness measurement in a small-group or station setting. Avoid administering the measurement items in a format that might embarrass or humiliate students.
- Allow for the monitoring of personal fitness and activity goals by ensuring that measurement administration is ongoing.
- Conduct no formal measuring for fitness in grades K-3. Instead, place emphasis on physical activity and instruction in the health-related fitness components.
- Establish a positive and motivating measurement environment for students.

### Uses for Fitness Data

It is NASPE's position that fitness measurement can enhance teaching and learning in physical education. This position statement outlines key guidelines for ensuring the proper use of fitness measurement in relation to national standards and developmentally appropriate instruction.

The *Fitnessgram® Test Administration Manual* lists a variety of ideas concerning the appropriate and inappropriate uses of fitness measurement. These ideas are listed under the following two sections, titled "Appropriate Uses of Fitnessgram®" and "Inappropriate Uses of Fitnessgram®/Activitygram®." This position statement contains additional thoughts regarding fitness measurement and their uses from the 3<sup>rd</sup> edition of the *Fitnessgram/Activitygram Reference Guide*, edited by Gregory J. Welk and Marilu D. Meredith. (2)

### Appropriate Uses

Fitness measurement facilitates the process of fitness education. Students are made aware of the components of health-related fitness and how to evaluate their personal levels of fitness through self-measurement. Teaching self-measurement is an important objective, because it provides the tools and experiences for students to learn how to measure themselves and plan personal fitness plans throughout life. Teachers should assure each student that his or her fitness information will be kept confidential, and will not be shared with peers, unless the student desires it.

The main goal for fitness measurement is making students — and their parents — aware of the benefits of fitness. Students can use the personalized reports as a means to determine their own fitness levels and to take steps toward maintaining or improving their personal fitness levels. By providing personalized reports for the parents, including information about a student's level of health-related fitness, teachers can enhance parental involvement in promoting physical activity.

Reporting can take place through parent/teacher conferences or by sending reports through via mail or e-mail. *Note:* It's important to help parents interpret the results of the fitness measurement and suggest strategies for how to maintain or improve their student's fitness levels.

Students can use fitness data to explore types of activities that will lead to improving their personal fitness. Examining fitness data and the procedure for developing fitness plans can motivate students to make changes in their personal fitness levels. The sequence of fitness plan development should include:

- Fitness data analysis.
- Goal-setting based on test results.
- Linking physical activities to personal goals.
- Developing logs and journals and other physical activity measures.

All of those strategies can be included as part of personal fitness portfolios that students create from year to year, as well as with annual student fitness results.

Schools also can use fitness measurement to examine their instructional programs. By analyzing school data, schools can determine areas of concentration and begin the discussion of how to make instruction-related changes in the physical education program to address areas of student need. Analyzing the data might show the need for more professional development, for example, to improve various aspects of health-related fitness, and it might reinforce the need for curriculum development within a school or school system.

## **Inappropriate Uses**

Inappropriate uses of fitness measurement include grading students and evaluating teacher effectiveness.

### ***Grading Students***

Because students differ in terms of interests and ability, teachers should not use student scores to evaluate individual students within K-12 physical education. Grading students on fitness might constitute holding them accountable for results that are beyond their control.

Likewise, posting fitness results can create a situation that fosters negative attitudes toward physical activity. Recognizing and posting students' fitness scores for fitness can create a feeling of frustration among students who struggle with their personal fitness levels. Instead, recognizing student success in improving fitness levels can provide a more positive way to acknowledge student achievement. Rather than posting names of students who have attained a high level of fitness, recognizing students who have improved fitness scores over time from year to year might be a better strategy.

Also, posting names of students who are participating in the appropriate activities to improve or maintain their fitness can serve as an effective way of recognizing appropriate practices for improving fitness.

Exempting students from physical education based on high fitness test scores also constitutes an inappropriate practice related to fitness scores. Attaining a high level of fitness performance doesn't mean that a student will have the knowledge, skills and motivation to be fit and active for a lifetime. Standards-based grading should reflect students' knowledge of activities and concepts related to fitness education, including their understanding of fitness concepts, their ability to plan a fitness program by using appropriate activities, their maintaining a physical activity or nutrition log, and their developing personal portfolios related to fitness.

### ***Evaluating Teacher Effectiveness***

Teachers can be effective at helping students develop and maintain fitness and still have students not perform well on fitness measurements. A better way to assess teacher effectiveness is to assess whether students understand the process for fitness improvement. Examining students' knowledge of the steps needed for developing a fitness plan provides a more accurate evaluation of teacher effectiveness. All teachers should strive to assess the "process, not the product" for fitness improvement.

### **Evaluating Physical Education Programs Overall**

Promoting physical fitness is only one part of quality physical education programs. Other aspects include: competency in motor skill and movement patterns; understanding of movement concepts, principles and tactics; cooperation and conflict resolution as part of personal and social behavior; and valuing physical activity.

### **Summary**

Current concerns about the health and wellness of our youths have generated widespread interest in fitness measurement. Many states have begun the process of instituting statewide or districtwide fitness measurement. It's important to remember that fitness measurement alone will not make students more fit. Instead, helping them value physical education and physical activity will serve as the foundation for improving personal health. Students' health-related fitness will improve only by using sound instruction practices and providing students with the knowledge and skills they need to be physically active for a lifetime.

### **References**

Welk, G. J. & Meredith, M.D. (Eds.). (2008) *Fitnessgram/Activitygram test manual*, Chapter 2 page 7, Dallas, TX: The Cooper Institute.

Welk, G. J. & Meredith, M.D. (Eds.). (2008). *Fitnessgram/Activitygram reference guide*. Dallas, TX: The Cooper Institute.

**Position Paper Revision Authors****Lead author:**

Michael Mason, Maryland State Department of Education

**Writing team:**

Sean Bulger, West Virginia University  
Marjorie Greiner, Independence (Ore.) Elementary School

Joanna Faerber, Louisiana State University  
Jennifer Reeves, University of Arizona  
Nancy Raso Eklund, Sweetwater County School District #2, Green River, Wyo.  
Sarajane Quinn, Human Kinetics

**National Association for Sport and Physical Education**

An association of the  
American Alliance for Health, Physical Education, Recreation and Dance  
1900 Association Drive  
Reston, Va. 20191  
(p) 703-476-3410  
(f) 703-476-8316  
<http://www.naspeinfo.org/>

**Suggested Citation:**

National Association for Sport and Physical Education. (2009). Appropriate Uses of Fitness Measurement [Position statement]. Reston, Va.: Author.