



Children's Fitness

Using Self-Assessment for Personal Fitness Evaluation

by Charles F. Morgan, Aaron Beighle, Robert P. Pangrazi, and Debra Pangrazi

Assessment and evaluation of children's physical fitness should be an educational process (Cooper Institute, 1999). Pangrazi (2001) describes this process as the *personalized self-testing approach*. This approach is a form of self-assessment that teaches children to assess their personal level of health-related physical fitness (HRPF), interpret the results, and use the information (with the teachers help) to develop personal fitness goals. Fitness self-assessment attempts to minimize or eliminate experiences that are negative and comparative, while making fitness assessment student centered, personalized, and educational. In this article, we discuss the benefits of the *personalized self-testing approach* and strategies to put it into action.

Benefits of Personalized Self-Testing

As a result of numerous factors, including the need to demonstrate accountability, physical educators often focus on the administration of fitness tests and the attainment of high scores. As Welk and Wood (2000) aptly state, "rather than worrying about the precision of the evaluation, it is more important to ensure that children learn something in the process" (p. 37). Similarly, the Fitnessgram position statement suggests that a primary use of fitness assessment is to teach students to self-assess and self-monitor personal fitness levels (Cooper Institute, 1999). The *personalized self-testing approach* parallels these notions. Its primary focus is not the accuracy of the test or the achievement of high scores, but rather creating a positive learning environment based on the needs of the children. Self-assessment allows *all* students to benefit from the educational process. The following is a brief summary of the benefits of self-assessment and how self-assessment helps achieve these benefits.

1. Student centered

- Students work independently or with partners
- Provides opportunity for peer teaching
- Allows student choice
- Ownership of testing increases motivation
- Minimizes competition
- Minimizes the concern for strict adherence to test protocol
- Teacher is "facilitator" not controller
- Focuses on the "process" of fitness assessment rather than fitness scores "product"

2. Personalized

- Students perform activities at their own pace
- Students annotate their own scores
- Students evaluate their own level of personal fitness
- Opportunities exist for self-exploration
- Eliminates or minimizes comparisons to other students
- Eliminates or minimizes potentially embarrassing situations

3. Educational

- Teaches a child to know and understand the importance of the five components of HRPF (cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition)
- Teaches a child how to assess their HRPF independently
- Teaches a child to understand the meaning and importance of the Healthy Fitness Zone (HFZ)
- Teaches a child to evaluate their fitness scores (compared to HFZ)
- Teaches a child to develop personal fitness goals
- Teaches a child to perform all the test items correctly
- Teaches a child to integrate knowledge from other subjects
- Using a PE portfolio teaches a child to track HRPF across grade levels.

Personalized Self-Testing in Action

Mesa Public Schools (MPS) is a large urban school district in the southwestern United States. This district uses the *personalized self-testing approach* to assess HRPF components for children in grades 3-6. The fitness self-testing unit is part of the mandated physical education curriculum, and teachers receive in-service training in the delivery of this approach. The self-test unit is completed during a one-week period, generally during two 30-minute physical education classes.

The Fitnessgram fitness testing battery is used during the self-testing unit. This battery of tests was chosen because it is a comprehensive fitness battery (cardiovascular endurance, body composition, abdominal strength, upper body strength, back strength, and upper and lower body flexibility) and is consistent with the philosophy of the elementary physical

education program. Some of the items on the Fitnessgram use criterion referenced health standards that are based on a level of fitness that is deemed protective from diseases resulting from a sedentary lifestyle. Fitness scores are classified into two areas: the Healthy Fitness Zone (HFZ; meets or exceeds criterion standard) and needs improvement (does not meet criterion standard).

Organization of a Self-Testing Lesson

The *personalized self-testing approach* is administered in a circuit type format. Each item is self-assessed at a specific station. Students are generally grouped with a partner and move from one station to another. Students may move from station to station in a designated order or in random order.

Equipment for Each Station

- PACER – PACER cassette tape, stereo, cones to mark 20-meter distance, lap recording sheet
- Trunk strength and flexibility—mat and rulers
- Sit and reach—sit and reach box
- Abdominal strength—mat, cadence cassette tape, stereo, measuring strip
- Upper body strength—cadence cassette tape, stereo
- Shoulder flexibility—no equipment
- Body composition—plastic skinfold calipers

Forms

All students receive a “Personal Fitness Record” (Figure 1) to record their results. The Personal Fitness Record is folded in half (like a book) to provide privacy of results. This allows the students to have personal control of their results and reduces potentially embarrassing situations (i.e., results publicly announced). The record sheet should also have an explanation of the fitness testing philosophy and procedures on the back. This allows students, parents, and administrators to easily understand the rationale for your fitness program. The Personal Fitness Record can be placed in physical education portfolios and sent home to parents.

Instructional Aids

Laminated signs provide excellent instructional aids. They offer written instructions and visual aids to assist different types of learners. Laminated signs also withstand wear and tear in the physical education environment. During a self-assessment lesson, two signs are provided at each station to help the students complete the test items. One sign consists of standards for the HFZ for boys and girls at specific ages. This sign also has a “Personal Fitness Record” with an arrow indicating the exact location to annotate their score to the corresponding test item (Figure 2). The other sign provides specific instructions for the administration of the item. The instructional aids are designed in a manner that emphasizes the process of performing the activity rather than the outcome (i.e., highest number of curl-ups in class).

Figure 1—Personal fitness record.


My Personal Fitness Record FITNESSGRAM Items

Name _____ Age _____ Grade _____ Room _____

	Score	HFZ*
Body Composition		
Calf (leg) Skinfold		
Triceps (arm) Skinfold	+	
Total (leg + arm)	III	
Cardiovascular Endurance		
PACER		
Abdominal Strength		
Curl-ups		
Upper Body Strength		
Push-ups		
Back Strength		
Trunk Lift		
Lower Back Flexibility		
Sit & Reach	L R	
Upper Body Flexibility		
Shoulder Stretch	L R	

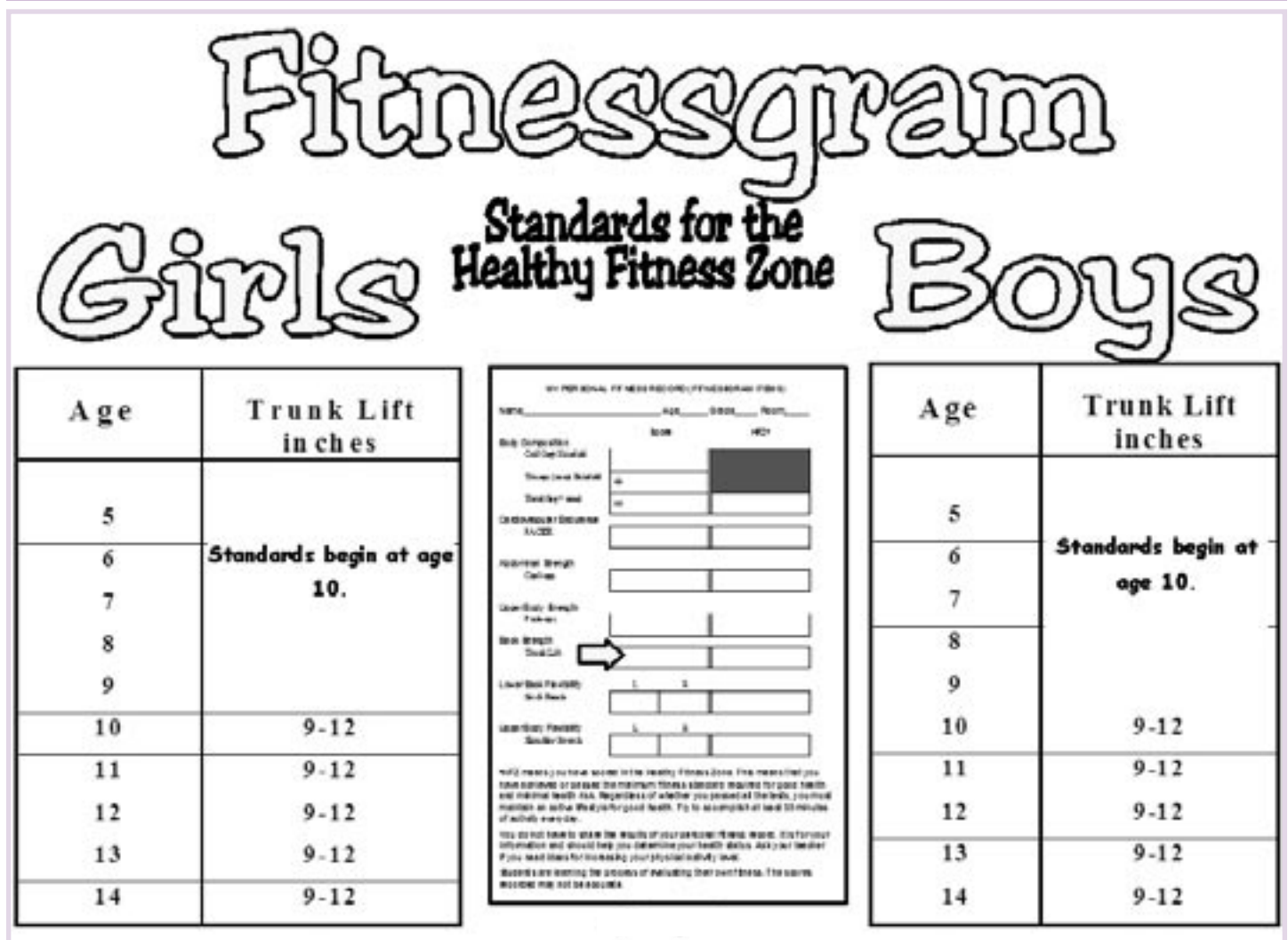
List the activities that you can do to maintain or improve your personal level of fitness.

1. Cardiovascular Endurance- _____
2. Abdominal Strength- _____
3. Upper Body Strength- _____
4. Back Strength- _____
5. Flexibility- _____



D. Pangrazi
for Mesa Public Schools

Figure 2—Standards poster.



Teaching Tips

Allocating time for students to experience the testing items prior to administering a fitness self-testing unit will allow students to feel more comfortable with the items and more efficient at performing the test. This can be accomplished by introducing students to the items in the weeks leading up to the self-testing unit. For example, two-weeks prior to the unit, briefly explain what the PACER is and allow students to participate in the activity for several minutes. Similarly, the flexibility, abdominal strength, and upper body strength items can be taught in one two-minute segments leading up to the unit by demonstrating the activities and allowing students to briefly practice. For example, body composition could be explained and procedures demonstrated using calipers to measure the calf and triceps. This short demonstration could be followed by a short practice time. Again, incorporating individual test items into lessons prior to the testing battery allows students to become proficient and comfortable with the testing protocol. As students advance through elementary school and gain experience with the self-testing process, the time necessary to teach these skills will be minimized.

There are several ways to organize a unit and two options will be discussed. The first step is to decide whether you want

students to move freely through the stations or rotate in a specific pattern on teacher signal. If the students are moving freely, all of the stations should be available for students to maximize choice and participation. When setting up stations, there are some considerations. The PACER test requires a 20-meter distance and cassette tape/CD. Due to facility spacing, set up this station first to ensure that you have required distance. The PACER test will require groups to begin and end together because the cadence increases in speed. Instruct students to reset the cadence cassette/CD when their group is finished. The curl-up and push-up tests use the same cadence. Therefore, placing them next to each other will minimize the need for an additional stereo. Furthermore, because these two stations use a cadence, they should be placed opposite of the PACER so the cadences do not interfere with each other. The push-up and curl-up cadence can be played continuously. The sit and reach boxes should be placed against a wall so they do not slide as students perform the test. The trunk lift, shoulder stretch, and body composition require limited needs and can be set up in remaining space.

If students are rotating stations on teacher signal, only some of the stations should be set up each day. On day 1, the testing stations could include the PACER, shoulder stretch,

and trunk lift; day 2, push-ups, curl-ups and sit-n-reach could be provided. The PACER is a time-consuming station, while the shoulder stretch and trunk lift are less time consuming. Dividing the class into two equal groups will allow one group to participate in the PACER, while the other group completes shoulder stretch and trunk lift (possible to add sit and reach on this day). Rotate groups when all students have completed the PACER. On day 2, simply divide the class into equal groups for the remaining stations. Each group begins at a separate station. Rotate stations when students complete the activities at their stations. The push-up and curl-up stations can be set up next to each other because they use the same cadence. When designing your lessons, there are various ways to organize your testing stations. We have provided only some of the possible strategies.

To begin your self-testing lessons (see Figure 3), choose one fitness test item to review “how to” perform the activity. During this demonstration, model how to find your Healthy Fitness Zone (HFZ) by age and gender on the laminated instructional sign. Model how to perform the test by reading the instructions thoroughly on the signs provided. Lastly, model how to record your score in the corresponding box found on the Personal Fitness Record.

During the unit, teachers become facilitators, while the students perform activities at the stations. This involves simply circulating around the teaching area, checking to see if students comprehend the protocol and offering help when necessary. If students are having difficulty with a test item, the class can quickly be stopped and key, helpful points provided. If students finish quickly, they simply choose their favorite tests and practice again.

Final Thoughts

A primary role of physical fitness testing is to educate students about physical fitness and a healthy lifestyle. This approach allows students to make choices and feel successful while performing fitness related activities. This approach also allows students to learn the process of self-assessing and self-monitoring personal fitness levels. The knowledge and skills acquired during a self-testing unit enable students to make important decisions about physical activity and health, both now and in the future.

References

- Cooper Institute. (1999). *Fitnessgram test administration manual* (electronic version). Champaign, IL: Human Kinetics.
- Pangrazi, R.P. (2001). *Dynamic physical education for elementary school children* (14th ed.). Boston: Allyn and Bacon.
- Welk, G.F., & Wood, K. (2000). Physical activity assessments in physical education: A practical review of instruments and their use in the curriculum. *Journal of Physical Education, Recreation, and Dance*, 71(1), 30-40.

© 2004 Human Kinetics

Figure 3—Self testing poster: Push ups.

Push-Ups
upper body strength
Partner or Individually
Use a mat!

1. Partner #1 begins lying on the mat with hands under the shoulders. Keep your back straight. Then, push up until your arms are straight.
2. Lower your body until your elbows make a 90° angle and upper arms are parallel to the floor.
The push-ups must be performed to the rhythm on the CD.
3. You may count your own push-ups, or you may have a partner count them. Count each time your elbows bend to a 90° angle.
4. Stop after 2 consecutive misses such as:
You are unable to stay with the rhythm on the CD.
You do not bend your arms to a 90° angle.
Your back is not straight.
Your knees touch the floor.

Cup Stacking with Speed Stacks

The #1 Choice of PE Teachers
Across the Country



1-877-GOT-CUPS
303-663-8083
www.speedstacks.com

