

General Information

Background

The Texas Education Code (TEC) Sec. 38.101 requires that all students in grades 3-12 be assessed once annually using the fitness assessment instrument identified by the commissioner of education. The tool selected, FITNESSGRAM®, was provided to all school districts in Texas during the 2007-2009 school year, with training facilitated statewide to support proper implementation. Additionally, the TEC Sec. 38.103 requires schools to report their results to the Texas Education Agency. The agency, per TEC Sec. 38.104, must analyze the results to identify any correlation between academic achievement levels, attendance rates, school meal program participation (eligibility based on socioeconomic status), and disciplinary problems. The system that collects this data from school districts, the Public Education Information Management System (PEIMS), will provide this data.

Objectives

The FITNESSGRAM® software enables schools to access and monitor fitness levels of the student body. Six fitness tests from the FITNESSGRAM® battery were selected to assess three areas of physical fitness: body composition, aerobic capacity, muscular strength, endurance, and flexibility. The results of these tests are correlated with students academic achievement levels: grade appropriate TAKS scores, average daily attendance, school meal program participation, student disciplinary programs to include, but not limited to, expellable offenses, mandatory DAEP placement, in school suspension, acts of violence, use of weapons, truancy, and substance abuse on campus. The agency seeks to identify any initial correlations between healthy fitness zones and these subtopics.

Methods of Gathering and Correlating Data

The school district uploads data to the agency via the Texas Education Agency's Secured Environment (TEASE). The utility system developed specifically for this project allows districts to upload the results directly from their FITNESSGRAM® software. The system aggregates the data so that student-level information would not be maintained at the agency. The aggregated information is collected in the following categories: gender, grade-level, district, region, state. The compiled data is then correlated with PEIMS and TAKS data submitted by the districts in the same time period, in these same categories. Several statistical models, including t-tests and direct correlation, may be used to formulate the initial comparisons.

The data from the fitness assessment correlation study will be used to drive curriculum and health-related program improvements, including healthy nutrition, self esteem, appropriate professional development opportunities for school health professionals, and parental involvement in their child's healthy lifestyle (both at school and home).

Selection, Funding and Implementation of the Physical Fitness Assessment Initiative (PFAI)

Senate Bill 530 added Section 38.102 of the Texas Education Code to require that the commissioner adopt an instrument to be used by each school district in assessing student fitness that measures aerobic capacity, body composition and muscular strength, endurance and flexibility, and include criterion-reference standards specific to a student's age and gender.

The Texas Education Agency conducted a thorough Request for Offer (RFO) process in August 2007. Over 650 vendors were notified regarding this RFO. Only one vendor responded.

A task force, consisting of members/staff from TAHPERD, TASB, TASA, TMEA, TMA, YMCA, DSHS, Senator Nelson's Office, Representative Eissler's Office, and the Governor's office, unanimously agreed that FITNESSGRAM® was the best tool to meet the expectations of the state in implementing the requirements of this initiative.

Donated funds from PepsiCo, the Michael and Susan Dell Foundation, and Our Kid's Health Foundation contributed to the purchase of the FITNESSGRAM® materials for statewide distribution.

Training was provided to every school district related to the fitness assessment test protocols, software use.

A system to collect fitness assessment data from every school district was developed that has the capacity to collect data on every student in Texas in aggregate form.

The Cooper Institute received a grant from the Robert Wood Johnson Foundation to conduct the research outlined in TEC 38.104. This research has been done in-kind. Complete results will be released in the Journal of the American Medical Association in the summer of 2009.

The State of Texas invested \$0 in public spending for the purchase of the FITNESSGRAM® assessment tool and materials, the training provided relating to the fitness assessment protocols and software use, the development of the system used to collect the data, and fitness assessment-related research.

Other Points of Interest

Prior to SB530, over 1000 campuses in Texas were already utilizing FITNESSGRAM®.

FITNESSGRAM® is the youth-focused fitness assessment recommended by all reputable organizations and associations in the school health field, including the National Association for Sports and Physical Education and the American Association of Health, Physical Education, Recreation and Dance.

The Centers for Disease Control is in the midst of recommending FITNESSGRAM® as the National Youth Fitness Surveillance System and are utilizing information from Texas to serve as the National model.

Alaska, Colorado, Illinois, Georgia, North Carolina, and Oklahoma have either filed legislation similar to SB530, or are piloting the Texas Model for statewide student fitness assessment.

The City of New York and Maryland assess all students in grades 3-12 using FITNESSGRAM®.

There is no other fitness assessment test being utilized anywhere in the United States as a data collection mechanism.

Similar research with Texas data is currently being conducted by the University of Texas Health Science Center and the Michael and Susan Dell Center. Initial results reflect similar trends and will be available for public review in fall 2009.

FITNESSGRAM/ ACTIVITYGRAM Overview



FITNESSGRAM/ACTIVITYGRAM

Version 8.0

A comprehensive, educational and promotional tool for fitness and activity assessment for children.



Philosophy

Health is available to
Everyone for a
Lifetime and it is
Personal.

Philosophy

H HEALTH comes from regular physical activity and the development of health related fitness.

E Physical activity and fitness are for EVERYONE regardless of age, gender, or ability.

L Physical activity and physical fitness are for the LIFETIME.

P Physical activity programs should be designed to meet PERSONAL needs and interests.

Fitness is for Health

Regular physical activity will improve a child's level of health- and skill-related fitness.



Health-Related Physical Fitness

- ◆ **Aerobic Capacity**
- ◆ **Body composition**
- ◆ **Muscular strength**
- ◆ **Muscular endurance**
- ◆ **Flexibility**

Skill-Related Physical Fitness

- ◆ Agility
- ◆ Speed
- ◆ Coordination
- ◆ Balance
- ◆ Power
- ◆ Reaction time

FITNESSGRAM Approach

Aerobic Capacity

FITNESSGRAM assessments focus on health-related fitness

Body Composition

**Muscular Strength,
Muscular Endurance,
and Flexibility**

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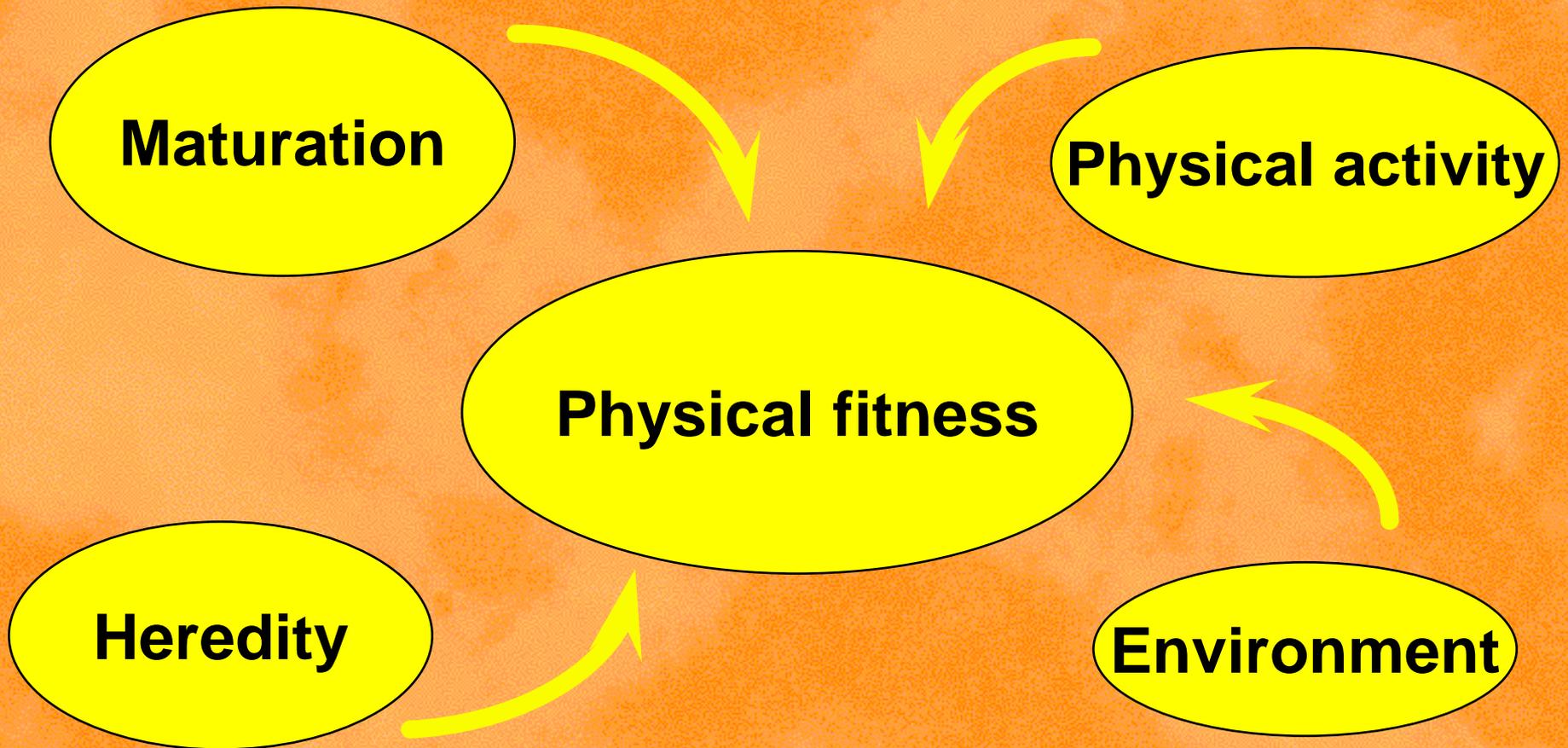
P Physical activity programs should be designed to meet PERSONAL needs and interests.

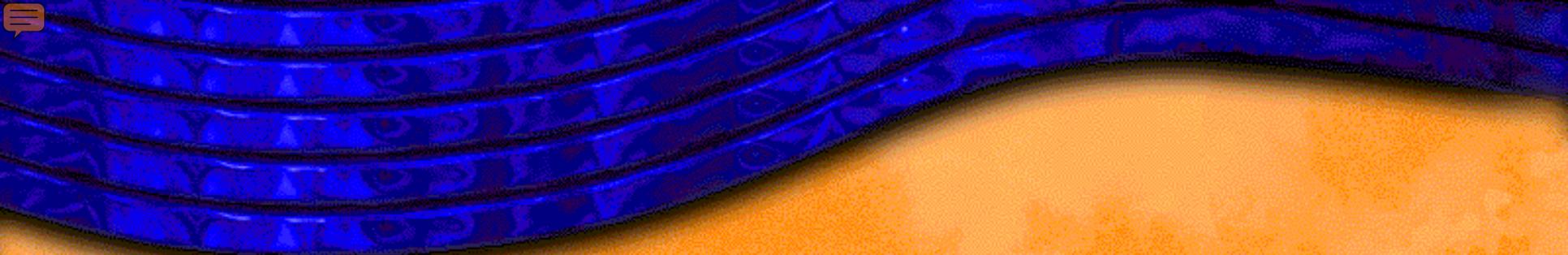
Fitness is for Everyone

Not all children can become elite athletes but ALL children can enjoy the benefits of a physically active lifestyle



Influences on Physical Fitness





*If you do the process
the product will follow!*

- ◆ ***Physical activity is the process***
- ◆ ***Physical fitness is the product***

Philosophy

H HEALTH comes from regular physical activity and the development of health related fitness.

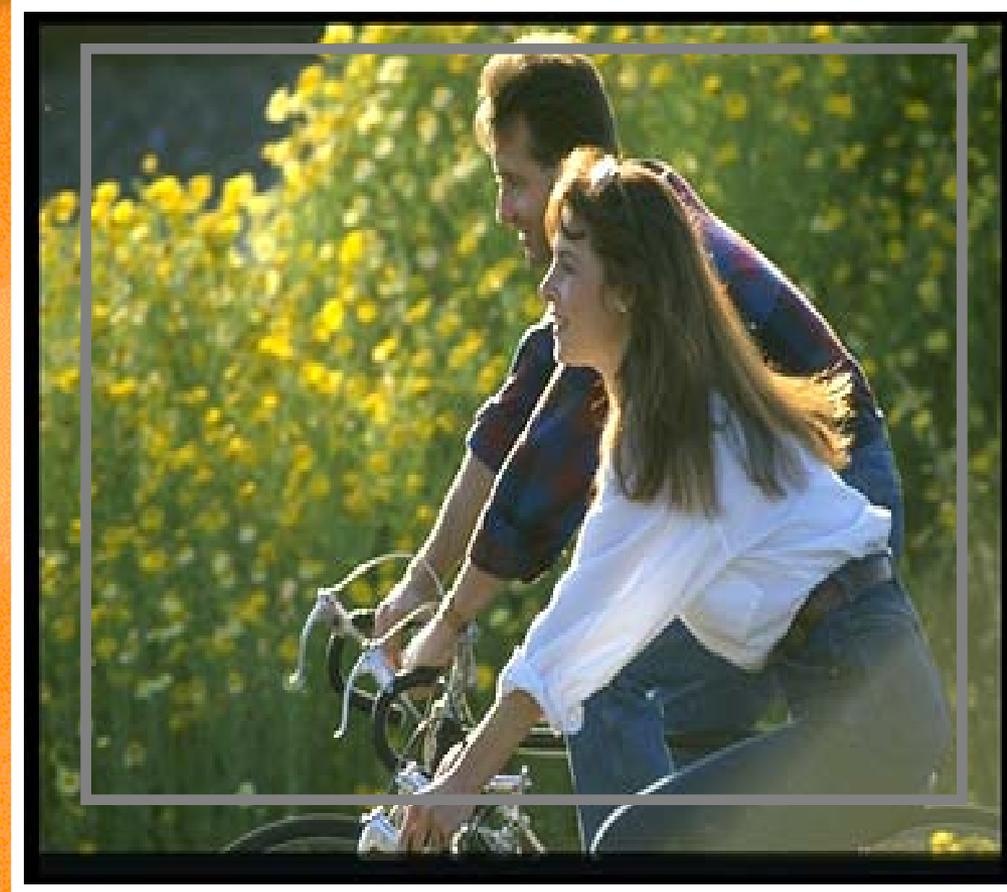
E Physical activity and fitness are for EVERYONE regardless of age, gender, or ability.

L Physical activity and physical fitness are for the LIFETIME.

P Physical activity programs should be designed to meet PERSONAL needs and interests.

Fitness & Activity is for a Lifetime

- ◆ The long-term goal is for children to become active and fit adults.
- ◆ Fostering positive attitudes to activity is more important than short term improvements in fitness.



Physical Activity and Health

**Childhood
Health**

**Adult
Health**

*Physical activity will improve health
in both children and adults!*

**Childhood
Physical
Activity**

**Adult
Physical
Activity**

Physical Activity and Health

**Childhood
Health**

**Adult
Health**

The best way to promote adult health
is to promote adult activity!

**Childhood
Physical
Activity**



**Adult
Physical
Activity**



Philosophy

H HEALTH comes from regular physical activity and the development of health related fitness.

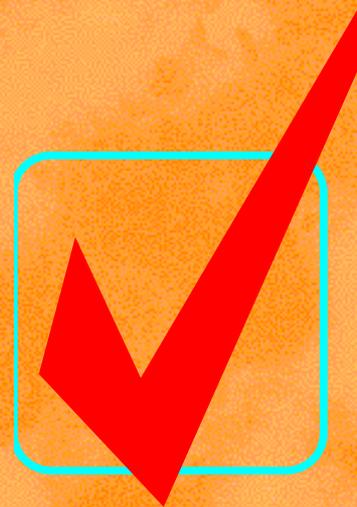
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Fitness is Personal

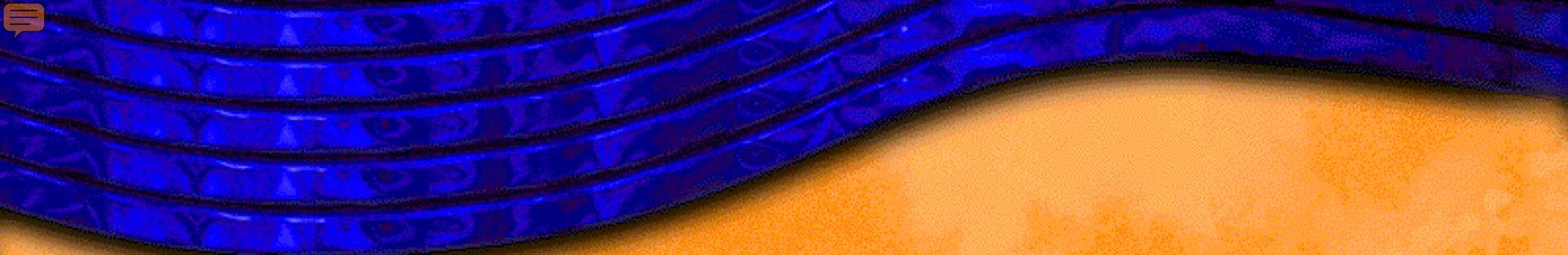
Fitness results provide personal information. Children do not have to share their results with other children.



FITNESSGRAM Approach

The ***FITNESSGRAM*** report prints out an individualized report that evaluates a child's personal level of fitness compared against the established health standard, the Healthy Fitness Zone. Children can take these home to parents.





Goal of Youth Fitness and Activity Promotion

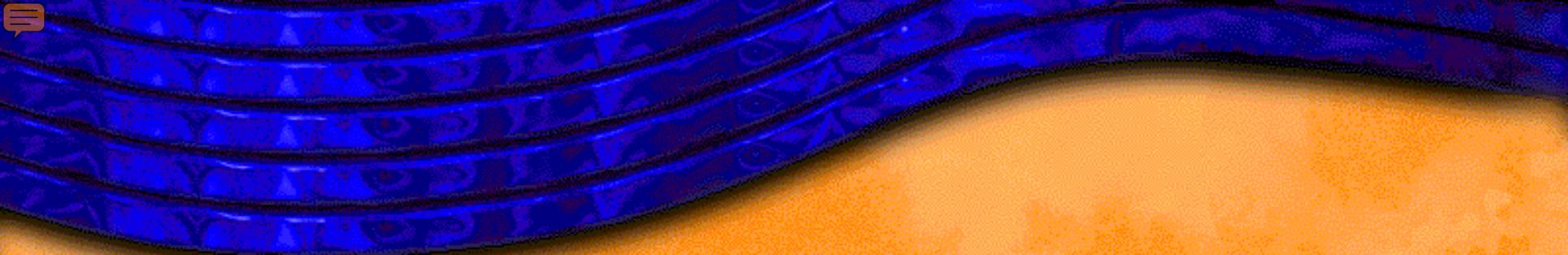
To increase the probability that youth will adopt regular physical activity habits and maintain adequate levels of physical fitness to contribute to optimal health and function throughout life.

Appropriate Uses of FITNESSGRAM

- ▶ **Facilitating fitness education: the primary use**
- ▶ **Providing feedback**
- ▶ **Teaching students about criterion-referenced health standards and what types of activity are needed to reach them**
- ▶ **Helping students track fitness results over time**
- ▶ **Documenting that assessments are being administered in the school and that student results are being tracked over time**
- ▶ **Institutional testing to allow teachers to view group data (for curriculum development)**

Inappropriate Uses of FITNESSGRAM

- ▶ **Student scores should not be used to evaluate individual students in physical education (grading)**
- ▶ **Student scores on fitness assessments should not be used to evaluate teacher effectiveness**
- ▶ **Students scores should not be used as a sole measure to evaluate overall physical education quality**



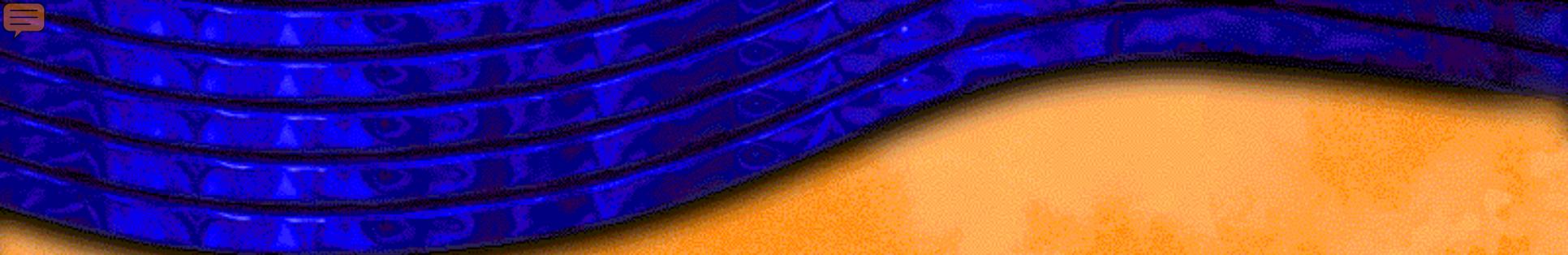
The FITNESSGRAM Assessment

Aerobic Capacity

PACER

One Mile Run-Walk

Walk Test (age 13+)



The FITNESSGRAM Assessment

▶ **Body Composition**

**Percent Body Fat from Skinfold
Measurements**

**Percent Body Fat from Bioelectric Impedance
Analysis (BIA) Device**

Body Mass Index from Height and Weight

The FITNESSGRAM Assessment

▶ Muscle Strength, Endurance & Flexibility

Abdominal – Curl-up

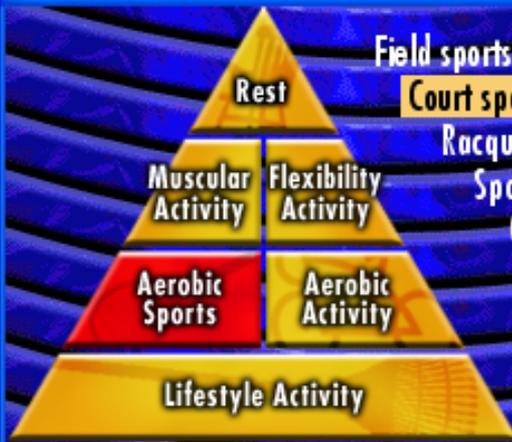
Trunk Extensor – Trunk Lift

Flexibility – Back saver Sit and Reach or Shoulder Stretch

Upper Body – 90° Push-up, Modified Pull-up, Flexed Arm Hang

The ACTIVITYGRAM Assessment

- ▶ A three-day physical activity recall evaluating activity based on each 30-minute period between 7:00 a.m. and 10:30 p.m.
- ▶ For each activity looks at activity type, intensity and length of time
- ▶ Evaluates total minutes of activity, periods of time in activity and types of activity.
- ▶ Produces the ACTIVITYGRAM report



Field sports (baseball, softball, football)
 Court sports (basketball, volleyball, soccer, hockey)
 Racquet sports
 Sports during Physical Education
 Other

REST
 LIGHT
 MODERATE
 VIGOROUS
SOME **MOST** **ALL**

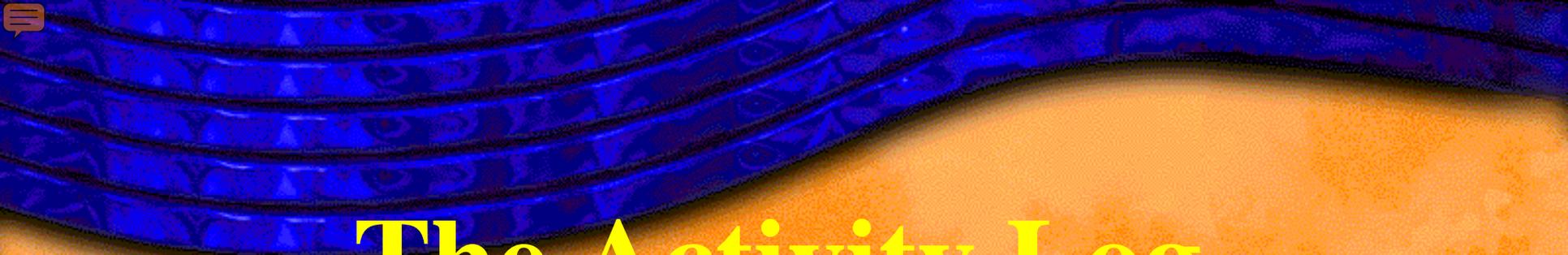
I'm Done!

Click I'm Done if this information is correct.

JOHNSON - 8/16/2007

Activity	Intensity
7:00 Schoolwork/homework/reading	
7:30 Schoolwork/homework/reading	
8:00 Schoolwork/homework/reading	
8:30 Schoolwork/homework/reading	
9:00 Schoolwork/homework/reading	
9:30 Sports during Physical Education	
10:00 Sports during Physical Education	
10:30 Schoolwork/homework/reading	
11:00 Schoolwork/homework/reading	
11:30 Schoolwork/homework/reading	
12:00 Schoolwork/homework/reading	
12:30 Schoolwork/homework/reading	
1:00 Schoolwork/homework/reading	
1:30 Schoolwork/homework/reading	
2:00 Schoolwork/homework/reading	
2:30 Schoolwork/homework/reading	

Activity	Intensity
3:00 Walk/bicycle/skateboard	
3:30 Playing active games or dancing	
4:00 Eating or resting	
4:30 Computer games or TV/videos	
5:00 Computer games or TV/videos	
5:30 Field sports	
6:00 Field sports	
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8:00	
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9:00	
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10:00	
10:30	



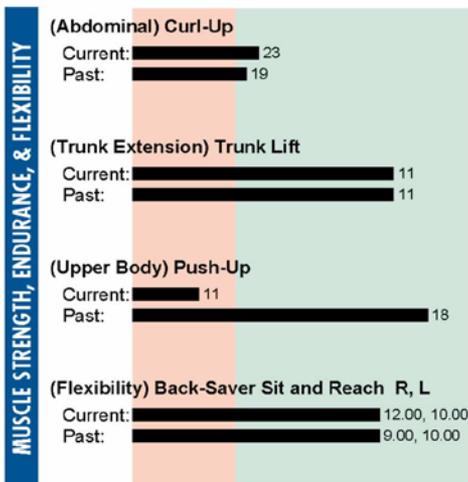
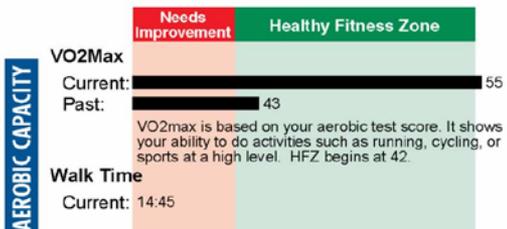
The Activity Log

- ▶ **Students can log steps per day**
- ▶ **Students can log minutes per day**
- ▶ **Teachers or districts can establish custom incentive challenges**

The FITNESSGRAM Reports

FITNESSGRAM®

Your scores on 5 of 6 tests were in or above the Healthy Fitness Zone. In addition to doing strength and flexibility exercises, you should play active games, sports, or other activities most every day.



ACTIVITY

On how many of the past 7 days did you participate in physical activity for a total of 30-60 minutes, or more, over the course of the day?

On how many of the past 7 days did you do exercises to strengthen or tone your muscles?

On how many of the past 7 days did you do exercises to loosen up or relax your muscles?

Joe Jogger
Grade: 6 Age: 13
Cooper Institute Elementary School

Instructor: Karla Tripp

Date	Height	Weight
Current: 05/22/2006	5' 5"	140 lbs
Past: 08/18/2005	5' 6"	135 lbs

MESSAGES

Although your aerobic capacity score is very good now, you are not doing enough physical activity. You should try to play very actively at least 60 minutes at least 5 days each week to look and feel good.

To improve your upper-body strength, be sure that your strength activities include modified push-ups, push-ups, and climbing activities. You may need to do more arm exercises.

Your abdominal and trunk strength are both in the Healthy Fitness Zone. To maintain your fitness, be sure that your strength-training activities include exercises for each of these areas. Abdominal and trunk exercises should be done at least 3 to 5 days each week.

Your flexibility is in the Healthy Fitness Zone. To maintain your fitness, stretch slowly 3 or 4 days each week, holding the stretch 20-30 seconds. Don't forget that you need to stretch all areas of the body.

Joe, your body composition is in the Healthy Fitness Zone. If you will be active most days each week, it may help to maintain your level of body composition. You should also eat a healthy diet including more fruits and vegetables and fewer fats and sugars.

Healthy Fitness Zone for 13 year-old boys
 Walk Test = 42 - 52 ml/kg/min
 Curl-Up = 21 - 40 repetitions
 Trunk Lift = 9 - 12 inches
 Push-Up = 12 - 25 repetitions
 Back-Saver Sit and Reach =
 At least 8 inches on R & L
 Percent Body Fat = 7.00 - 25.00 %

Number of Days

4

To be healthy and fit it is important to do some physical activity almost every day. Aerobic exercise is good for your heart and body composition. Strength and flexibility exercises are good for your muscles and joints.

2

Good job! You are doing some aerobic activity and strength and flexibility exercises. Additional vigorous aerobic activity would help to promote higher levels of fitness.

3

The FITNESSGRAM Reports

FITNESSGRAM®

Report for Parents

People come in all shapes and sizes, but everyone can benefit from regular physical activity and a healthy level of physical fitness. The FITNESSGRAM fitness test battery evaluates five different parts of health-related fitness, including aerobic capacity, muscular strength, muscular endurance, flexibility, and body composition. Parents play an important role in shaping children's physical activity and dietary habits. This report will help you evaluate your child's current level of health-related fitness and help you identify ways to promote healthy lifestyles in your family.

AEROBIC CAPACITY

Aerobic capacity is a measure of the ability of the heart, lungs, and muscles to perform sustained physical activity. In general, the more your child exercises, the higher his or her aerobic capacity level will be. Aerobic capacity is measured with the PACER test, the one-mile run, or the walk test.

Importance: Good aerobic capacity can reduce risks of heart disease, stroke, and diabetes. Although generally not present in children, these diseases can begin during childhood and adolescence.

Healthy Fitness Zone for 13 year-old boys = 42 - 52 ml/kg/min

MUSCLE STRENGTH, ENDURANCE, & FLEXIBILITY

These components of health-related fitness measure the overall fitness of the musculoskeletal system. A variety of tests are used to assess these different components.

Importance: The fitness level of muscles is important for injury prevention and overall body function. Strength, endurance, and flexibility are important for maintaining good posture, low back health, and total body function.

Healthy Fitness Zone for 13 year-old boys

- Curl-Up = 21 - 40 repetitions
- Trunk Lift = 9 - 12 inches
- Push-Up = 12 - 25 repetitions
- Back-Saver Sit and Reach =
At least 8 inches on R & L

BODY COMPOSITION

The body composition measure refers to the relative proportion of fat and lean tissue in the body. Body fat percentage can be estimated by skinfold callipers or other measuring devices. The Body mass index (BMI) is another indicator that determines if a person is at a healthy weight for his or her height.

Importance: Overweight youth are at high risk for being overweight adults. Adult obesity is associated with a number of chronic health problems. Many of these health problems can begin early in life. It is important to begin healthy eating and regular activity early.

Healthy Fitness Zone for 13 year-old boys = 7.00 - 25.00 %

INTERPRETING THE FITNESSGRAM REPORT

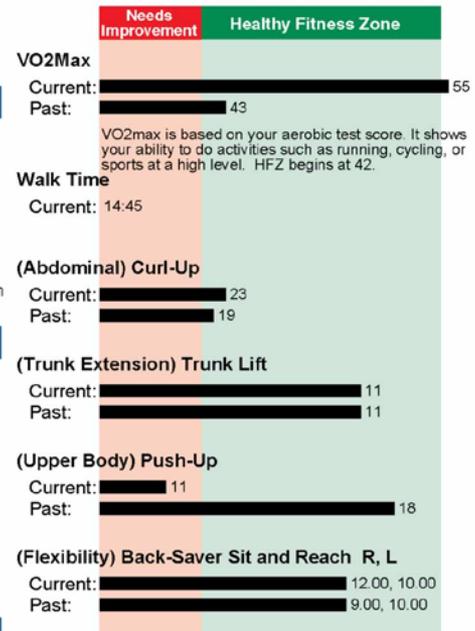
Health-related fitness includes a variety of factors. With regular physical activity most children will be able to score in the Healthy Fitness Zone for most of the tests. It is important for all children to be physically active every day (a total of 60 minutes is recommended) even if they are already fit. If your child is in the Needs Improvement area on a particular test, it is important to provide additional opportunities to be active so they can improve their levels of fitness.

Please refer to the back page of the parent report for a description of the Healthy Fitness Zone and for tips on promoting physical activity in your family.

Joe Jogger
Grade: 6 Age: 13
Cooper Institute Elementary School

Instructor: Karla Tripp

Date	Height	Weight
Current: 05/22/2006	5' 5"	140 lbs
Past: 08/18/2005	5' 6"	135 lbs



Percent Body Fat



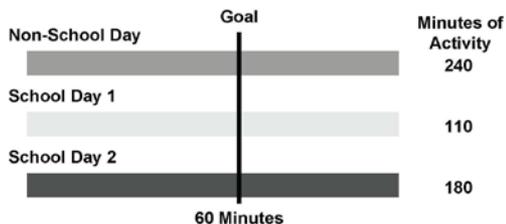
Being too lean or too heavy may be a sign of (or lead to) health problems. However, not all people who are outside the Healthy Fitness Zone are at risk for health problems. For example, a person with a lot of muscle may have a high BMI without excess fat.

The ACTIVITYGRAM Report

ACTIVITYGRAM®

Bertrand, John
 spring event: 04/09/2005
 Cooper Institute Elementary School
 Cooper Institute District

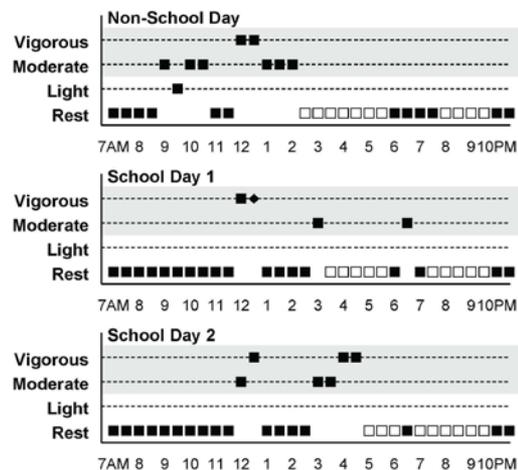
MINUTES OF ACTIVITY



MESSAGES • MESSAGES • MESSAGES

The chart shows the number of minutes that you reported doing moderate (medium) or vigorous (hard) activity on each day. Congratulations, your log indicates that you are doing at least 60 minutes of activity on most every day. This will help to promote good fitness and wellness. For fun and variety, try some new activities that you have never done before.

TIME PROFILE



LEGEND:
 ◆ Most of the time (20 minutes) ■ All of the time (30 minutes)
 ▲ Some of the time (10 minutes) □ TV/Computer Time

The time profile shows the activity level you reported for each 30 minute period of the day. Your results show that you were active both during and after school and that you were also active on the weekend. Keep up the good work.

ACTIVITY PROFILE



The activity pyramid reveals the different types of activity that you reported doing over a few days. Your results indicate that you participated in regular lifestyle activity as well as some activity from the other levels. This is great! Try to add some muscular activity on a regular basis and maintain your other activities.

Your results indicate that you spend an average of 5 hours per day watching TV or working on the computer. While some time on these activities is okay, you should try to limit the total time to less than 2 hours.

ACTIVITYGRAM provides information about your normal levels of physical activity. The ACTIVITYGRAM report shows what types of activity you do and how often you do them. It includes the information that you previously entered for two or three days during one week.

To Order Contact:

Human Kinetics

(1-800-747- 4457)

or

www.fitnessgram.net



The FITNESSGRAM

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Abdominal Strength

► Curl-up



Trunk Extensor Strength

▶ Trunk Lift



Upper Body Strength

▶ 90° Push-up



Flexibility

▶ Back Saver Sit-and-Reach

