

Parental Overview of FITNESSGRAM Assessment

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The FITNESSGRAM Reference Guide is intended to provide answers to some common questions associated with the use and interpretation of the FITNESSGRAM and ACTIVITYGRAM assessments. The purpose of this chapter is to provide a general overview of the test administration and interpretation of the scores for parents and other interested parties. The chapter is organized into some of the common questions associated with this topic. The specific questions addressed are listed below:

[What is FITNESSGRAM / ACTIVITYGRAM?](#)

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How do I interpret the FITNESSGRAM report for each assessment?

Click on the name of the assessment for information.

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ACTIVITYGRAM Basics

[What is the ACTIVITYGRAM assessment?](#)

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What is FITNESSGRAM / ACTIVITYGRAM?

What is FITNESSGRAM?

FITNESSGRAM is the national fitness assessment and reporting program for youth. The assessment was developed by The Cooper Institute in response to the needs in physical education programs for a comprehensive assessment protocol. The assessment includes a variety of health-related physical fitness tests designed to assess cardiovascular fitness, muscle strength, muscular endurance, flexibility, and body composition. Criterion-referenced standards associated with good health have been established for children and youth for each of the health-related fitness components. The software for the program produces an [individualized report card](#) that summarizes the child's performance on each component of health-related fitness and provides suggestions for how to promote and maintain good fitness. The sophisticated database structure within the program produces compiled class reports and allows for long term tracking of the student's fitness over time. FITNESSGRAM can be used by students to help them in personal fitness program planning, by teachers to determine student needs and to help guide students in program planning, and by parents to understand their child's needs and to help the child plan a program of physical activity. Additional information on the assessments of [aerobic capacity](#), [musculoskeletal fitness](#) and [body composition](#) and the reports are available by following the link for each assessment.

What is the ACTIVITYGRAM?

The ACTIVITYGRAM is a behaviorally based activity assessment that can help children and adolescents learn more about their physical activity habits. The assessment is a three-day recall of the various activities performed. The ACTIVITYGRAM is designed to help students monitor their activity patterns and to plan personal activity programs for a lifetime. Specific information on the ACTIVITYGRAM [assessment](#) and [reports](#) is provided in the section on ACTIVITYGRAM Basics.

What is the philosophy of FITNESSGRAM / ACTIVITYGRAM?

The acronym HELP is used to describe the philosophy of FITNESSGRAM and ACTIVITYGRAM.

H = Health and health related-fitness.

The primary goal of both programs is to promote regular physical activity among all youth. Of particular importance is promoting activity patterns that lead to reduced health risk and improved health-related physical fitness.

E = Everyone.

FITNESSGRAM and ACTIVITYGRAM are designed for all people regardless of physical ability. They are intended to help ALL youth find some form of activity that they can do for a lifetime. Too often activity programs are perceived to be only for those who are “good” rather than for all people.

L = Lifetime.

FITNESSGRAM and ACTIVITYGRAM have as a goal helping young people to be active now, but a long term goal is to help them learn to do activities that they will continue to perform through out their lives.

P = Personal.

No two people are exactly the same. No two people enjoy the exact same activities. FITNESSGRAM and ACTIVITYGRAM are designed to personalize physical activity to meet personal or indi-

What are the goals of FITNESSGRAM / ACTIVITYGRAM?

The specific program goals of *FITNESSGRAM / ACTIVITYGRAM* are to promote enjoyable regular physical activity and to provide comprehensive physical fitness and activity assessments and reporting programs for children and youth. The program seeks to develop affective, cognitive, and behavioral components related to participation in regular physical activity in all children and youth, regardless of gender, age, disability, or any other factor. We believe that regular physical activity contributes to good health, function, and well-being and is important throughout a person's lifetime. The use of both *ACTIVITYGRAM* and *FITNESSGRAM* as part of a quality physical education program can help in accomplishing these goals. The descriptions that follow provide additional information on these components of the *FITNESSGRAM* program.

FITNESSGRAM Basics

What is the Healthy Fitness Zone?

FITNESSGRAM uses criterion-referenced standards to evaluate fitness performance. These standards have been established to represent a level of fitness that offers some degree of protection against diseases that result from sedentary living. Performance is classified in two general areas: “*Healthy Fitness Zone*” (HFZ) and “*Needs Improvement*”.



As stated above, a score in the HFZ represents the level of fitness thought to provide some protection from the potential health risks that result from a lack of fitness in this measure. The beginning of the HFZ represents a minimum level of fitness necessary to have acceptable health. These standards reflect reasonable levels of fitness that can be attained by most children that participate regularly in various types of physical activity. Because of this, we recommend that all students should strive to achieve a score that places them inside the HFZ. It is not uncommon for children to achieve the HFZ for some dimensions of fitness but not for others. Most children usually have areas that they excel in more than others.

The category below the HFZ is referred to as “*Needs Improvement*” to indicate dimensions of fitness that may require special attention. While the effect of low fitness may not influence health until later in adulthood it is important to identify potential risks early on so that adjustments can be made to improve those levels. Therefore, the *Needs Improvement* message should be used prescriptively to help children set goals or targets to improve their fitness. The wording used for this category does not imply “bad fitness” or “poor fitness” but rather areas in which the child should seek improvement.

It should be noted that it is also possible for some students to score above the HFZ. *FITNESSGRAM* acknowledges performances above the HFZ but does not recommend this level of performance as an appropriate goal level for all students. However, students who desire to achieve a high level of athletic performance may need to consider setting goals beyond the HFZ.

From a similar perspective, aerobic capacity standards are not presented for students in grades K-3. This is partly because of the challenges associated with determining standards but also a philosophical decision by the Scientific Advisory Board. Performance levels are not the most important objective for young children in this age range. Instead, the emphasis for young children should be on enjoying activity and on learning to perform the test items successfully.

FITNESSGRAM Basics

What are the assessments?

The information in this section will answer the following questions about each assessment:

How is the assessment administered?

How do I interpret the FITNESSGRAM report for each assessment?

Click on the name of the assessment for information.

Aerobic Capacity

[The PACER](#)

[One Mile Run/Walk](#)

[TheWalk Test](#)

Body Composition

[Percent Body Fat](#)

[Body Mass Index](#)

Muscle Strength, Endurance and Flexibility

[Curl-up](#)

[Trunk Lift](#)

[Push-up](#)

[Flexed Arm Hang](#)

[Modified Pull-up](#)

[Back Saver Sit-and-Reach](#)

[Shoulder Stretch](#)

Physical Activity Questions

FITNESSGRAM Basics

Aerobic Capacity

Aerobic capacity is perhaps the most important area of any fitness program. Research clearly indicates that acceptable levels of aerobic capacity are associated with a reduced risk of high blood pressure, coronary heart disease, obesity, diabetes, some forms of cancer, and other health problems in adults. The evidence documenting the health benefits of physical activity has been summarized most concisely in *Physical Activity and Health: A Report of the Surgeon General* (U.S. Department of Health and Human Services, 1996), available online at www.cdc.gov/nccdphp/sgr/sgr.htm.

Many terms have been used to describe this dimension of physical fitness, including cardiovascular fitness, cardiorespiratory fitness, cardiorespiratory endurance, aerobic fitness, aerobic work capacity, and physical working capacity. Although defined somewhat differently, these terms can generally be considered synonymous with aerobic capacity.

Aerobic capacity indicates how well your body uses oxygen. It tells you how well you would do running, cycling or playing sports at a high level.

Aerobic capacity relative to body weight (maximal oxygen uptake, VO₂max) is considered to be the best indicator of a person's overall cardiorespiratory capacity. VO₂max is mathematically estimated from the student's performance on a field test of aerobic capacity, either the [PACER](#), [the one-mile run](#), or [the walk test](#). All three tests have demonstrated strong reliability and validity against measured V O₂max, but they vary in how and where they are administered.

FITNESSGRAM Basics

The PACER

How is this assessment administered?

The PACER uses a recorded pace and the student runs back and forth between two points that are 20 meters apart (a 15 meter version is available for elementary schools with smaller gymnasiums). The objective is to get from one point to the other before the recorded “beep” sounds. The recording of beeps also has music in the back ground. The PACER is progressive in intensity – it starts easy and gradually gets harder. When the student can no longer complete the distance in the time allowed, the test ends. The score is the number of completed laps.

How do I interpret the FITNESSGRAM report for each assessment?

The PACER score is converted to an estimated VO₂max (indicates how efficiently your body uses oxygen). The score will be charted in the Needs Improvement area or within the Healthy Fitness Zone area of the graph.

A low score on the field test estimates of aerobic capacity may be influenced by many factors.

These include:

- ▶ actual aerobic capacity level,
- ▶ body composition,
- ▶ running/walking efficiency and economy,
- ▶ motivation level during the actual testing experience,
- ▶ extreme environmental conditions,
- ▶ ability to pace on the one mile run/walk, and
- ▶ innate ability.

Improvement in any of these factors may improve the test score. Aerobic capacity can be improved substantially in an unconditioned person who participates regularly in sustained activities involving large muscle groups. The amount of improvement is related to the beginning level of fitness and to the intensity, duration, and frequency of the training.

FITNESSGRAM Basics

The One Mile Run/Walk

How is this assessment administered?

The One Mile Run/Walk has been used for many years as a field test of aerobic capacity. For students who enjoy running and are highly motivated, it is a very good assessment. The objective of the test is to run one mile as fast as possible. Walking is permitted if necessary. The score on the test is the length of time in minutes and seconds.

How do I interpret the FITNESSGRAM report for each assessment?

The One Mile Run/Walk score is converted to an estimated VO₂max (indicates how efficiently your body uses oxygen). The score will be charted in the Needs Improvement area or within the Healthy Fitness Zone area of the graph.

A low score on the field test estimates of aerobic capacity may be influenced by many factors. These include:

- ▶ actual aerobic capacity level,
- ▶ body composition,
- ▶ running/walking efficiency and economy,
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- ▶ innate ability.

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FITNESSGRAM Basics

The Walk Test

How is this assessment administered?

The Walk Test is an excellent field test of aerobic capacity. It is an assessment that can be used for a lifetime. The test has only been validated for students 13 years and older. The objective of the test is to walk one mile at fast as possible. The length of time to walk the mile is recorded in minutes and seconds. After completing the one mile distance, the student takes a 15 second count heart rate. The score on the test is the VO₂max calculated from the time and the heart rate.

How do I interpret the FITNESSGRAM report for this assessment?

The Walk Test time and heart rate are used to calculate an estimated VO₂max (indicates how efficiently your body uses oxygen). The score will be charted in the Needs Improvement area or within the Healthy Fitness Zone area of the graph.

A low score on the field test estimates of aerobic capacity may be influenced by many factors. These include:

- ▶ actual aerobic capacity level,
- ▶ body composition,
- ▶ running/walking efficiency and economy,
- ▶ motivation level during the actual testing experience,
- ▶ extreme environmental conditions,
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FITNESSGRAM Basics

Body Composition

The prevalence of overweight and obesity has increased sharply in recent years, and the trends are evident for children as well as adults. These trends have been associated with the low cost and availability of high-fat foods, as well as with declining levels of physical activity in the population. High levels of body fatness are associated with increased risk of coronary heart disease, stroke, and diabetes. While children are not generally at risk for heart disease or stroke, increases in blood pressure and cholesterol occur in overweight and obese children. In addition diabetes (type 2) has increasingly been diagnosed among children, even though this condition has generally been viewed as “adult-onset” diabetes. Obesity and heart disease risk factors are known to track through the life span, so it is important to document body composition as part of a comprehensive health-related fitness profile. Like other dimensions of health-related fitness, body composition does affect health status (even in childhood) and does improve with regular participation in physical activity.

A number of methods are available in FITNESSGRAM for estimating body composition, including [skinfold measures](#), [bioelectrical impedance devices](#), and other anthropometry measures such as [body mass index \(BMI\)](#) that are based on height and weight. Each approach has some limitations leading to overall measurement errors of 3% to 4% for estimates of percent body fat. Estimates based on height and weight such as BMI result in 5% to 6% error. Skinfold measures or bioelectrical impedance devices provide a more direct estimate of body fatness, and are the recommended approach in *FITNESSGRAM*.

FITNESSGRAM Basics

Percent Body Fat

How is this assessment administered?

In FITNESSGRAM, percent body fat is estimated by calculating from [skinfold measures](#) or by measuring with a [bioelectric impedance analyzer \(BIA\)](#). If the school is measuring skinfold, the sites used are the triceps (back of the arm) and the calf (inside of the lower leg). The measurements are taken with a skinfold caliper and entered into the FITNESSGRAM software. The percent body fat is calculated by the software program. If the school is using a BIA device, the result of the measure with the device is the actual percent body fat. Depending on the device, the student either holds the BIA in both hands or stands on it like a scale.

Interpreting Body Composition Results

Scores that fall either below or above this zone should receive attention, for these students have greater potential than others to develop health problems related to their level of fatness or leanness.

Click here to view a [body composition classification chart](#) (for boys, for girls). Please notice that there is an **optimal range** within the Healthy Fitness Zone. Ideally, students should strive to be within this optimal range, which is 10% to 20% fat for boys and 15% to 25% fat for girls. Using this chart may simplify the explanation of the body composition assessment item.

A BMI in the Needs Improvement range indicates that the student's weight is too heavy for his or her height. However, students who are extremely muscular may have a BMI in the Needs Improvement area but may not have excess fat.

When interpreting body composition scores, it is important to remember the following:

- ▶ Skinfold measurements provide an estimate of body fatness.
- ▶ A 3% to 4% body fat measurement error is associated with the skinfold method.
- ▶ Body mass index provides an estimate of the appropriateness of the weight for the height.
- ▶ Body mass index may falsely identify a very muscular lean person as overfat (too heavy for height) or a lightweight person with little muscular development and a large percent of fat as being in the HFZ when the person is actually overfat.

In general, students who score in the Needs Improvement area should be encouraged to work toward the HFZ by slowly changing their body weight through increased physical activity and decreased consumption of high-fat, high-calorie, low-nutrition foods. Changing dietary habits and exercise habits

More

can be very difficult. Students with severe obesity or eating disorders may need professional assistance in their attempts to modify their behaviors. Evidence in adults clearly indicates that participation in regular physical activity moderates the health risks associated with obesity. Because this relationship likely holds for children as well, emphasis for overweight children should be on being physically active and not on absoluteweight or fat loss.

It is important to remember when interpreting body composition results that most students who are overfat may also have performances in other test areas that are outside the Healthy Fitness Zone. An improvement in body composition will generally result in an improvement in other fitness areas as well.

There is also an area in the body composition graph identified as Very Low. Parents of children who are categorized as very lean should consider factors that may be responsible for the low level of body fat. Many students may naturally be very lean while others may have inappropriate nutritional patterns. Creating awareness of a child's current status is the primary purpose in identifying lean students. Changes in status should be monitored.

FITNESSGRAM Basics

Skinfold Measurements

Triceps Skinfold Measure

The triceps skinfold is measured on the back of the right arm over the triceps muscle.



Measuring triceps skinfold with caliper.



Location of triceps skinfold measurement.

More

FITNESSGRAM Basics

Skinfold Measurements

Calf Skinfold Measure

The calf skinfold is measured on the inside of the right leg at the level of the largest girth of the calf



Measuring calf skinfold with caliper.



Location of calf skinfold measurement.

FITNESSGRAM Basics

Measuring with a Bioelectric Impedance Device: how accurate is it?

In the past, the use of bioelectric impedance analyzer (BIA) devices for body composition assessment has been limited because they are expensive and require the use of small electrodes on the skin. Recently, a number of new devices have been released to the market that are less expensive and easy to use.

One device resembles a bathroom scale that estimates body composition when the participant stands on the device (in bare feet). Another handheld device from Omron estimates body composition when the participant grasps the two handles. Recent studies reported that the Omron device yields similar estimates of body composition as the FITNESSGRAM skinfold approach in boys and girls. A portable BIA-scale from Tanita yielded comparable data for girls but tended to underestimate the body composition levels of boys. Correlations between skinfolds and the BIA instruments were high for all comparisons (exceeding .80 for both boys and girls) indicating that there is good overall agreement between the two measurement approaches. The results support the use of portable BIA devices for conducting body composition measurements.

It is important to note that hydration status and prior exercise can influence accuracy of individual estimates from BIA devices so follow manufacturer guidelines for these measurements.

FITNESSGRAM Basics

Body Mass Index

Test Administration

Body Mass Index (BMI) is calculated from a measurement of the height and weight. These numbers are entered into the software and the BMI is calculated. Body Mass Index provides an indication of the appropriateness of the weight for the height.

Interpreting Body Composition Results

Scores that fall either below or above this zone should receive attention, for these students have greater potential than others to develop health problems related to their level of fatness or leanness.

Click here to view a [body composition classification chart](#) (for boys, for girls). Please notice that there is an optimal range within the Healthy Fitness Zone. Ideally, students should strive to be within this optimal range, which is 10% to 20% fat for boys and 15% to 25% fat for girls. Using this chart may simplify the explanation of the body composition assessment item.

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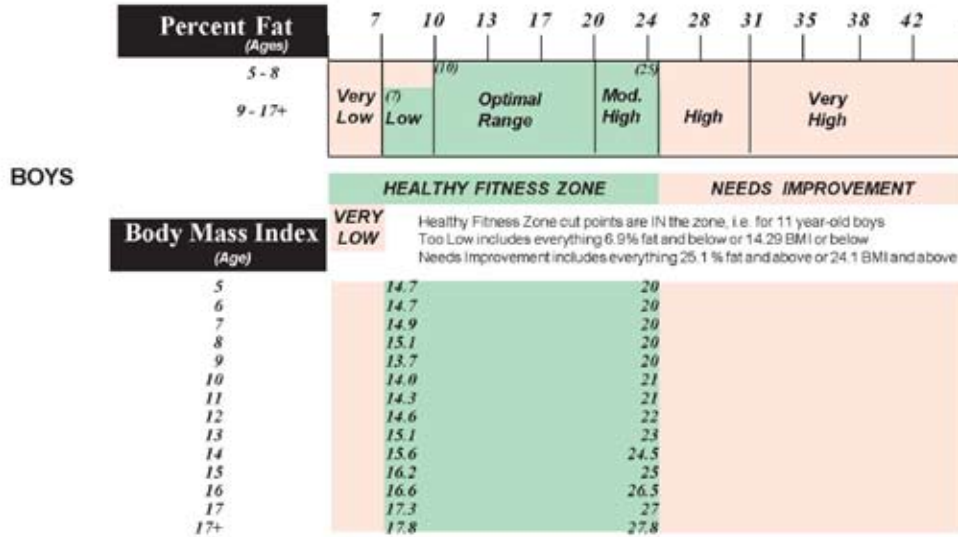
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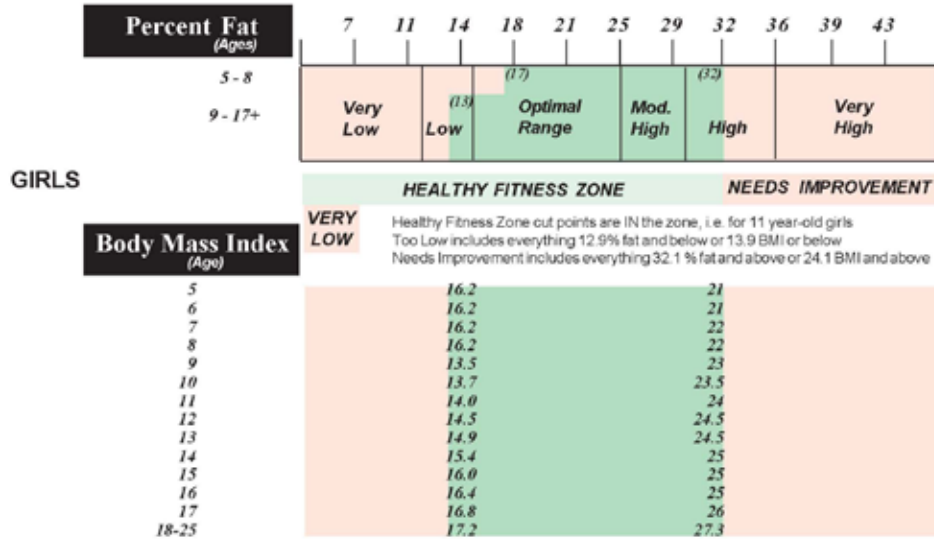
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FITNESSGRAM Basics

Body Composition Classification Charts



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FITNESSGRAM Basics

Muscle Strength, Endurance, and Flexibility

Tests of muscular strength, muscular endurance, and flexibility have been combined into one broad fitness category because the primary consideration is determining the health status of the musculoskeletal system (muscles and bones). It is equally important to have strong muscles that can work forcefully and/or over a period of time and also be adequately flexible to allow full range of motion at the joint.

Injuries to bones and joints are many times the result of muscle imbalance at a specific joint; the muscles on one side may be much stronger than the muscles on the other side or may not have adequate flexibility to allow complete motion or sudden motion to occur.

It is important to remember that training to develop muscle strength, endurance, and flexibility is very specific. The movements included in these test items are only a sampling of the many ways that the body is required to move and adjust during physical activity.

The upper body and the abdominal/trunk region have been selected as areas for testing because of their perceived relationship to maintaining functional health and correct posture, thereby reducing possibilities of future low back pain and restrictions in independent living. Although most students will not have weaknesses sufficient to cause current problems, it is important to educate them regarding the importance of muscle strength, endurance, and flexibility in preventing problems as adults. It is especially important to make students aware of correct postural alignment and body mechanics in the event that they are developing scoliosis, which is a problem for teenage youth. The school nurse, a local physician, or a physical therapist are good sources of information related to scoliosis.

The areas being tested are as follows:

Abdominal Strength – [the Curl-up](#)

Trunk Extensor Strength and Flexibility – [Trunk Lift](#)

Upper Body Strength – [90° Push-up](#), [Flexed Arm Hang](#), [Modified Pull-up](#)

Flexibility – [Back saver Sit and Reach](#), [Shoulder Stretch](#)

FITNESSGRAM Basics

The Curl-up

Test Administration

The objective is to do up to 75 curl-ups to a specified cadence (three seconds per repetition). Student lies on the mat on his/her back, knees bent at an angle of approximately 140°, feet flat on the floor, legs slightly apart, arms straight and parallel to the trunk with palms of hands resting on the mat. The fingers are stretched out and the head is in contact with the mat. Student curls up and moves the fingertips from one side of the measuring strip to the other (3.0 inches or 4.5 inches). Head must touch the mat at the end of each curl-up.

Interpreting Curl-up Scores

Students who score poorly in abdominal strength, should be encouraged to participate in calisthenics and other strengthening and stretching activities that will develop the abdominal muscles. However, it is essential to remember that physical fitness training is very specific and that the areas of the body being tested represent only a fraction of the total body.

To focus on activities that develop the abdominal muscles without equal attention to the trunk extensor muscles will not accomplish the important objective, which is to develop an overall healthy musculoskeletal system. Remember, you must have strength and flexibility (muscle balance) in the muscles on both sides of every joint.

Poor performance on the measures of abdominal strength and trunk extensor strength and flexibility may merit special attention. Gaining strength and flexibility in these areas may help prevent low back pain, which affects millions of people, young and old.



Curl-up beginning position.



Curling-up.

FITNESSGRAM Basics

The Trunk Lift

Test Administration

The strength of the muscles in the back and the flexibility of the back are tested with the trunk lift. Keeping head in a neutral position, the student lies on the stomach and lifts the head and shoulders off the floor. The distance from the floor to the chin is measured. 12 inches is the highest score allowed.

Interpreting Trunk Lift Scores

Students who score poorly in trunk extensor strength, should be encouraged to participate in calisthenics and other strengthening and stretching activities that will develop the muscles of the back. However, it is essential to remember that physical fitness training is very specific and that the areas of the body being tested represent only a fraction of the total body.

To focus on activities that develop the trunk extensor muscles without equal attention to the abdominal muscles will not accomplish the important objective, which is to develop an overall healthy musculoskeletal system. Remember, you must have strength and flexibility (muscle balance) in the muscles on both sides of every joint.

Poor performance on the measures of abdominal strength and trunk extensor strength and flexibility may merit special attention. Gaining strength and flexibility in these areas may help prevent low back pain, which affects millions of people, young and old.



Trunk lift beginning position.



Trunk lift - up position.

FITNESSGRAM Basics

The 90° Push-up

Test Administration

The objective is to do as many push-ups as possible to a specified cadence (three seconds per repetition). The student being tested assumes a prone position on the mat with hands placed under or slightly wider than the shoulders, fingers stretched out, legs straight and slightly apart, and toes tucked under. The student pushes up off the mat with the arms until arms are straight, keeping the legs and back straight. The back should be kept in a straight line from head to toes throughout the test (photo 7.7). The student then lowers the body using the arms until the elbows bend at a 90° angle and the upper arms are parallel to the floor (photo 7.8). This movement is repeated as many times as possible. The student should push up and continue the movement until the arms are straight on each repetition. The rhythm should be approximately 20 90° push-ups per minute or 1 90° push-up every 3 seconds.

Interpreting Push-up Scores

Students who score poorly in upper body strength, should be encouraged to participate in calisthenics and other strengthening and stretching activities that will develop the muscles in the upper body. However, it is essential to remember that physical fitness training is very specific and that the areas of the body being tested represent only a fraction of the total body. To focus on activities that develop the muscles that extend the arms without equal attention to the muscles that flex the arms will not accomplish the important objective, which is to develop an overall healthy musculoskeletal system. Remember, you must have strength and flexibility (muscle balance) in the muscles on both sides of every joint. Upper body strength is important for functional health.



Push-up beginning position.



Push-up down position.

FITNESSGRAM Basics

Flexed Arm Hang

Test Administration

The objective is to hang with the chin above the bar for as many seconds as possible. The student grasps the bar with an overhand grip (palms facing away). With the assistance of one or more spotters, the student raises the body off the floor to a position in which the chin is above the bar, elbows are extended, and the chest is close to the bar (photos 7.13 and 7.14). A stopwatch is started as soon as the student takes this position. The position is held as long as possible.

Interpreting Flexed Arm Hang Scores

Students who score poorly in upper body strength, should be encouraged to participate in calisthenics and other strengthening and stretching activities that will develop the muscles in the upper body. However, it is essential to remember that physical fitness training is very specific and that the areas of the body being tested represent only a fraction of the total body.

To focus on activities that develop the muscles that extend the arms without equal attention to the muscles that flex the arms will not accomplish the important objective, which is to develop an overall healthy musculoskeletal system. Remember, you must have strength and flexibility (muscle balance) in the muscles on both sides of every joint. Upper body strength is important for functional health.



Flexed Arm Hang beginning position.



Flexed Arm Hang up position.

FITNESSGRAM Basics

The Modified Pull-up

Test Administration

The objective is to do as many pull-ups as possible. The student grasps the bar with an overhand grip. The arms, legs, and body are straight with only the heels touching the floor. The student pulls up until the chin is above the elastic band and then returns to the starting position.

Interpreting Modified Pull-up Scores

Students who score poorly in upper body strength, should be encouraged to participate in calisthenics and other strengthening and stretching activities that will develop the muscles in the upper body. However, it is essential to remember that physical fitness training is very specific and that the areas of the body being tested represent only a fraction of the total body.

To focus on activities that develop the muscles that extend the arms without equal attention to the muscles that flex the arms will not accomplish the important objective, which is to develop an overall healthy musculoskeletal system. Remember, you must have strength and flexibility (muscle balance) in the muscles on both sides of every joint. Upper body strength is important for functional health.



Modified Pullup beginning position.



Modified Pullup up position.

FITNESSGRAM Basics

The Back Saver Sit-and-Reach

Test Administration

This test mainly measures the flexibility of the muscles in the back of the legs. With the one leg straightened, the student reaches as far as possible toward the toes. Student must achieve standard on both right and left to be in the Healthy Fitness Zone.

Interpreting Back Saver Sit-and-Reach Scores

Students who score poorly in flexibility, should be encouraged to participate in stretching activities that will develop the flexibility in the back of the legs. However, it is essential to remember that physical fitness training is very specific and that the areas of the body being tested represent only a fraction of the total body.

To focus on activities that develop flexibility without equal attention to the muscles that maintain strength will not accomplish the important objective, which is to develop an overall healthy musculoskeletal system. Remember, you must have strength and flexibility (muscle balance) in the muscles on both sides of every joint. Most children will have adequate flexibility, a major reason for assessing this area of physical fitness it to educate children about the importance of flexibility as they age.



Back Saver Sit-and-Reach beginning position, right side.



Back Saver Sit-and-Reach stretch, right side.

FITNESSGRAM Basics

The Shoulder Stretch

Test Administration

The Shoulder Stretch is a simple test of upper arm and shoulder girdle flexibility intended to parallel the strength/endurance assessment of that part of the body. The objective is to touch the fingertips together behind the back by reaching over the shoulder and under the elbow. To be in the Healthy Fitness Zone, a student should be able to touch the fingertips on both the right and left sides.

Interpreting Shoulder Stretch Scores

Students who score poorly in flexibility, should be encouraged to participate in stretching activities that will develop the flexibility in the back of the legs. However, it is essential to remember that physical fitness training is very specific and that the areas of the body being tested represent only a fraction of the total body.

To focus on activities that develop flexibility without equal attention to the muscles that maintain strength will not accomplish the important objective, which is to develop an overall healthy musculoskeletal system. Remember, you must have strength and flexibility (muscle balance) in the muscles on both sides of every joint. Most children will have adequate flexibility, a major reason for assessing this area of physical fitness it to educate children about the importance of flexibility as they age.



Shoulder Stretch, right side.



Shoulder Stretch, left side.

FITNESSGRAM Basics

Physical Activity Questions

Three physical activity questions were added to the *FITNESSGRAM* software to improve the prescriptive information that is given to your child. The questions are based on items from the Youth Risk Behavior Survey – a national surveillance instrument used to track nationwide trends in physical activity. Each question asks the child to report the number of days in the past week that he/she performed different forms of physical activity (aerobic, strength and flexibility).

The wording is provided below.

Aerobic Activity Question:

“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 a day? This includes moderate activities (walking, slow bicycling, or outdoor play) as well as vigorous activities (jogging, active games or active sports such as basketball, tennis or soccer).” (0,1,2,3,4,5,6,7 days)

Strength Activity Question

“On how many of the past 7 days did you do exercises to strengthen or tone your muscles? This includes exercises such as push-ups, sit-ups or weight lifting.” (0,1,2,3,4,5,6,7 days)

Flexibility Activity Question:

“On how many of the past 7 days did you do stretching exercises to loosen up or relax your muscles? This includes exercises such as toe touches, knee bending, or leg stretching.” (0,1,2,3,4,5,6,7 days)

Interpreting the results of the Physical Activity Questions

Research has suggested that physical activity and physical fitness may exert independent effects on health. Because there are many factors influencing physical fitness that are beyond our control, it is important to focus attention on the more modifiable component, physical activity. To acknowledge the importance of physical activity in a child's overall health profile, the individualized feedback on the *FITNESSGRAM* reports has been designed to integrate information about both physical activity and physical fitness. Three supplemental activity questions are included on the student version of the *FITNESSGRAM* software to assess a child's level of involvement in aerobic, strength/endurance and flexibility activity [See chapter on physical activity assessments]. If your child completed the physical activity questions, the *FITNESSGRAM* software incorporates the responses in the personalized feedback that is provided on the *FITNESSGRAM* report. For example, if a child scores high on fitness but does not appear to be active he/she receives encouraging information about the need to stay active to maintain their fitness.

Alternately, if a child scores low on fitness but appears to be active, he/she receives messages encouraging them to keep up their efforts to be physically active. This information is intended to reinforce to children the importance of being physically active regardless of fitness level.

FITNESSGRAM Basics

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.

Jane Jogger
 Grade: 5 Age: 10
 Cooper Institute Elementary School

Instructor: Linda Deetz

Date	Height	Weight
Current: 04/21/2007	5' 1"	104 lbs
Past: 04/12/2006	5' 0"	100 lbs

AEROBIC CAPACITY	The PACER	Current: 20	Past: 12	VO2max is based on your aerobic test score. It shows your ability to do activities such as running, cycling, or sports at a high level. HFZ begins at 39.					
	VO2Max	Current: 44	Past: 43						
MUSCLE STRENGTH, ENDURANCE, & FLEXIBILITY	(Abdominal) Curl-Up	Current: 8	Past: 7	Although your aerobic capacity score is in the Healthy Fitness Zone 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 abdominal strength, be sure that your strength activities include curl-ups. You may need to do more curl-ups each day or do them more days of the week. Your trunk and upper-body 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. Trunk exercises should be done 3 to 5 days each week. Strength activities for other parts of your body should be done 2 to 3 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. Jane, 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.					
	(Trunk Extension) Trunk Lift	Current: 10	Past: 9						
	(Upper Body) Push-Up	Current: 12	Past: 10						
	(Flexibility) Back-Saver Sit and Reach R, L	Current: 10.00, 10.00	Past: 9.00, 9.00						
	Percent Body Fat	Current: 19.64	Past: 22.08				Healthy Fitness Zone for 10 year-old girls The PACER = 7 - 41 laps Curl-Up = 12 - 26 repetitions Trunk Lift = 9 - 12 inches Push-Up = 7 - 15 repetitions Back-Saver Sit and Reach = At least 9 inches on R & L Percent Body Fat = 13.00 - 32.00 %		
	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?	2						

Personalized Current and Most Recent Past Information

Messages factor in Fitness and Activity Levels

Individualized Messages Based on Test Results

Compared to standards that are based on gender and age

Addresses physical activity levels as well as physical fitness levels

ACTIVITYGRAM Basics

What is the ACTIVITYGRAM?

The ACTIVITYGRAM is a behaviorally based activity assessment that can help children and adolescents learn more about their physical activity habits. The assessment is a three-day recall of the various activities performed. The ACTIVITYGRAM is designed to help students monitor their activity patterns and to plan personal activity programs for a lifetime. The predominant activity in each 30-minute block of time is recorded along with the intensity of the activity and how long it was done.

Interpreting the ACTIVITYGRAM report

The ACTIVITYGRAM report gives information on the time spent in activity, the time of day when your child is active and the types of activity performed.

Minutes of Activity

The goal is for every child to do 60 minutes of moderate or vigorous activity almost every day.

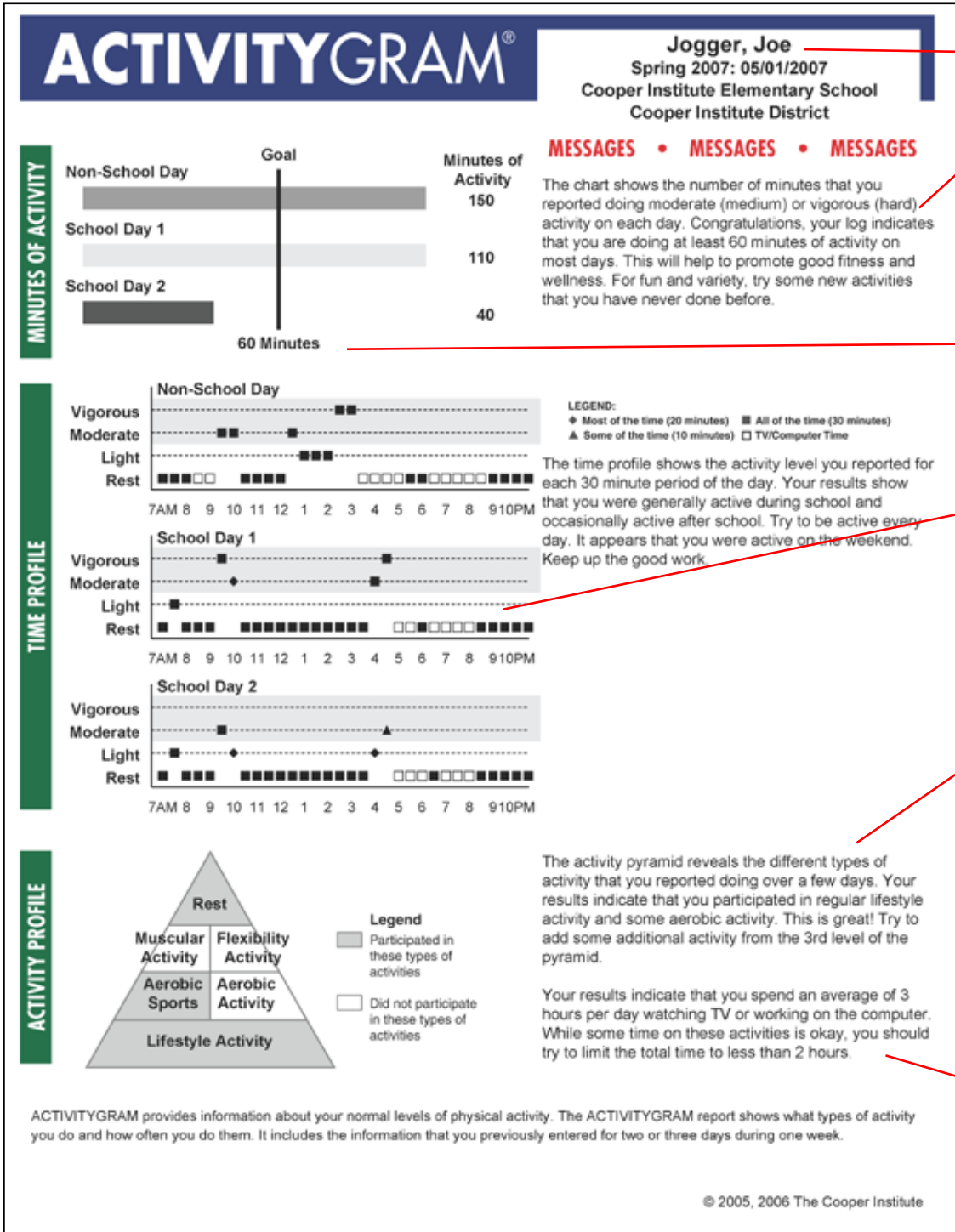
Time Profile

In the time profile section, children should be getting some moderate or vigorous activity during school but also after school. There should also be times of moderate or vigorous activity during the weekend days.

Activity Profile

Ideally, your child would have some activity from every level of the activity pyramid (lifestyle, aerobic activities, strength activities, flexibility activities, rest). If your child is not very active, you might begin by trying to promote more lifestyle activity. The activity profile section also provides information about the length of time that your child watches TV or works on the computer. The recommended aver-

ACTIVITYGRAM Basics



Personalized Feedback related to total minutes of moderate or vigorous activity.

Daily activity goal of 60 minutes

Time Profile identifies times of the day student can be more active.

Activity Profile identifies types of activity needing more attention.

Provides feedback on level of TV / Computer time.

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.

How can I help my child be more fit and active?

The philosophy of FITNESSGRAM / ACTIVITYGRAM spells HELP. We need your help to promote physical activity and fitness for your child. If parents value physical activity and encourage their children to be active regularly, children are more likely to view physical activity as an important part of their daily lives. The following tips may help you encourage your child to be active:

- ▶ Provide a safe play area for your child to play and opportunities to be active.
- ▶ Provide equipment and supplies that allow your child to be active.
- ▶ Put limits on television time and video game usage (especially right after school). participate in physical activity with your child.
- ▶ Help your child develop good physical skills so that he or she can feel competent.