2005 California Physical Fitness Test

Report to the Governor and the Legislature

Prepared by the
California Department of Education

December 2005

Introduction

In spring 2005, physical fitness testing was conducted in California public schools in grades five, seven, and nine. The test used for physical fitness testing is the ***FITNESSGRAM®***, designated for this purpose by the State Board of Education. This report summarizes results of the 2005 test administration, and provides a summary comparison with the results from 2003 and 2004.

Background

Assembly Bill 265, signed into law in October 1995 (California *Education Code* Section 2, Chapter 6, Section 60800) states:

> …during the month of March, April, or May, the governing board of each school district maintaining any of grades five, seven, and nine shall administer to each pupil in those grades the physical performance test designated by the State Board of Education.

In February 1996, the State Board of Education designated the ***FITNESSGRAM®*** as the required physical performance test to be administered to California students.

Senate Bill 896, approved in 1998, further required the California Department of Education (CDE) to report results to the Governor and the Legislature. Section 60800 of the California *Education Code* was amended in January 2003, to allow the month of February to be added to the existing months of March, April, and May for the administration of the physical fitness test.

All students in the specified grades are expected to take the physical fitness test, regardless of whether or not they are in a physical education class. Students who are physically unable to take the entire physical fitness test are to be given as much of the test as conditions permit. Students with individualized education program or Section 504 plans are to be provided accommodations as outlined in their plans.

Description of Test

The ***FITNESSGRAM®*** was developed by The Cooper Institute in Dallas, Texas and endorsed by the American Alliance for Health, Physical Education, Recreation, and Dance. The primary goal of the ***FITNESSGRAM®*** is to assist students in establishing physical activity as part of their daily lives. Because of this goal, ***FITNESSGRAM®*** provides a number of options for most of the fitness areas so that all students, including those with special needs, have the maximum opportunity to participate in the tests.

Physical fitness consists of three components: 1) aerobic capacity, 2) body composition, and 3) muscular strength, endurance, and flexibility. To ensure thorough measurements of all

three components, the *FITNESSGRAM®* test is comprised of the following six major fitness areas with multiple performance task options for most areas:

Aerobic Capacity
- PACER
- One-Mile Run
- Walk Test (only for ages 13 or older)

Body Composition
- Skinfold Measurements
- Body Mass Index

Abdominal Strength and Endurance
- Curl-Up

Trunk Extensor Strength and Flexibility
- Trunk Lift

Upper Body Strength and Endurance
- Push-Up
- Pull-Up
- Modified Pull-Up
- Flexed-Arm Hang

Flexibility
- Back-Saver Sit and Reach
- Shoulder Stretch

To complete the *FITNESSGRAM®*, students are required to participate in the following:
- One of the options from aerobic capacity
- One of the options from body composition
- The curl-up test
- The trunk lift test
- One of the options from upper body strength and endurance
- One of the options from flexibility

The following is a brief description of the six fitness areas of the *FITNESSGRAM®* and the performance task options.

Aerobic Capacity

This is perhaps the most important indicator of physical fitness and assesses the capacity of the cardiorespiratory system by measuring endurance.

PACER (Progressive Aerobic Cardiovascular Endurance Run). This is a multi-stage fitness test set to a pace, which provides a valid and fun alternative to the customary distance run. The objective is to run as long as possible back and forth across a 20-meter distance at a specified pace that gets faster each minute.

One-Mile Run. The objective of this test is to walk and/or run a distance of one mile at the fastest pace possible.

Walk Test. The objective of this test is to walk a distance of one mile as quickly as possible while maintaining a constant walking pace for the entire distance. This test is for students who are 13 years and older. The score is calculated using a formula that combines the walk time (in minutes and seconds) and the heart rate taken at the end of the walk.

Body Composition

Body composition results provide an estimate of the percent of a student's weight that is fat in contrast to the "fat-free" body mass that comes from muscles, bones, and organs.

Skinfold Measurements. Measurements of the thickness of the skinfold on the back of the upper right arm and the inside of the right calf are taken using a device called a skinfold caliper. A formula is used to calculate the percentage of body fat using these measurements.

Body Mass Index. This test provides an indication of a student's weight relative to his or her height. Height and weight measures are inserted into a formula to calculate the body mass index.

Abdominal Strength and Endurance

Abdominal strength and endurance are important in promoting good posture and correct pelvic alignment. Strength and endurance of the abdominal muscles are important in maintaining lower back health.

Curl-Up. The objective of this test is to complete as many curl-ups as possible up to a maximum of 75 at a specified pace.

Trunk Extensor Strength and Flexibility

This test is related to lower back health and vertebral alignment.

Trunk Lift. The objective of this test is to lift the upper body a maximum of 12 inches off the floor using the muscles of the back and to hold the position long enough to allow for the measurement of the lift distance.

Upper Body Strength and Endurance

This test measures the strength and endurance of the upper body. This is important to maintain functional health and to promote good posture. Four options are available to test for upper body strength and endurance.[1]

Push-Up. The objective of this test is to complete as many push-ups as possible at a specified pace.

Pull-Up. The object of this test is to correctly complete as many pull-ups as possible.

Modified Pull-Up. The objective of this test is to successfully complete as many modified pull-ups as possible. The modified pull-up is different from a pull-up in that a student performs the test by lying on his or her back directly under a bar and grasping the bar to pull up until the chin reaches a specified level.

[1]Beginning with the 2006 administration of the *FITNESSGRAM®*, the Pull-Up will no longer be an option for this area of fitness.

Flexed-Arm Hang. The objective of this test is to hang by the arms with the chin above a bar as long as possible.

Flexibility

This test measures joint flexibility, which is important to functional health.

Back-Saver Sit and Reach. The objective of this task is to assess the flexibility of the lower back and posterior thigh. Using a special box with measurements indicated on top of the box and beginning in a sitting position with one leg extended and the other leg bent, the student extends forward to reach as far as possible on top of the box, to a maximum of 12 inches. After measuring one side, the student switches the position of the legs and reaches again. The distance reached is measured for both sides of the body.

Shoulder Stretch. This is a simple test of upper body flexibility. The student is instructed to touch the fingertips together behind the back by reaching over both the right and left shoulder and under the elbow.

The Standards

The *FITNESSGRAM®* uses criterion-referenced standards to evaluate fitness performance. These standards were established by The Cooper Institute to represent a level of fitness that offers some degree of protection against diseases resulting from sedentary living. Findings from current research, expert opinions, and theoretical perspectives have been used as the basis for establishing the *FITNESSGRAM®* standards. The *FITNESSGRAM®* standards have been established according to gender and age.

Performance levels for each of the *FITNESSGRAM®* tests are classified as (1) "in the Healthy Fitness Zone (HFZ)" or (2) "needs improvement." Appendix A provides the standards for the HFZ for each test.[2] All students should strive to achieve a score within the HFZ for each test. It is possible that some students score above the HFZ. These scores are included with those of students who score within the HFZ. For the purpose of this report, scores are reported as meeting the standard (% in HFZ) or not meeting the standard (% not in HFZ).

Data Collection and Reporting

Statewide data collection in 2005 was done electronically. School districts submitted their data to the CDE by June 30, 2005, through the Internet, by diskette or CD-ROM, or via e-mail.

Physical fitness test results for 2005 are reported by school, school district, county, and the state on the CDE Web site at http://www.cde.ca.gov/ta/tg/pf/. These reports are available by gender and race or ethnicity. No individual student data is reported on the CDE Web site.

[2]Appendix A contains the standards for the 2006 administration, which reflect minor revisions to the standards that were in place for the 2005 administration.

Participation in 2005 Testing

Tables 1 through 22, which begin on page 9, provide a comprehensive summary of the results from the spring 2005 physical fitness test. In 2005, the physical fitness test was taken by 96 percent of all fifth grade students, 93 percent of all seventh grade students, and 81 percent of all ninth grade students. A total of 1,374,283 California students took part in the physical fitness test. Tables 1 and 2 present the gender and racial or ethnic composition of the student population participating in physical fitness testing.

Results of 2005 Testing

Table 3 contains the summary of the test results by fitness area for all students. One column lists the percentage of students in the Healthy Fitness Zone (HFZ); another column lists the percentage not in the HFZ. Students not in the HFZ are those that did not attain the minimum level of fitness for that area. As summarized below, this table shows that a notable percentage of students did meet minimum fitness levels for each area.

- Aerobic Capacity: 51-60 percent of students were in the HFZ across all grades
- Body Composition: 66-67 percent of students were in the HFZ across all grades
- Abdominal Strength: 80-84 percent of students were in the HFZ across all grades
- Trunk Extensor Strength: 84-89 percent of students were in the HFZ across all grades
- Upper Body Strength: 67-69 percent of students were in the HFZ across all grades
- Flexibility: 66-72 percent of students were in the HFZ across all grades

Table 4 reports the results by the number of fitness standards achieved by all students. Achievement of a fitness standard is based upon a test score falling in the HFZ for that fitness area. The fitness standard (HFZ) represents minimal levels of satisfactory achievement on the task for a fitness area (e.g., aerobic capacity, flexibility, etc.). The goal is for students to achieve the HFZ, or performance standard, for all six areas of the physical fitness test.

The information in this table reveals that most of the students tested did not meet all six fitness standards. Twenty-five percent of the students in grade five, 29 percent in grade seven, and 27 percent in grade nine met all six fitness standards. These results indicate that improvements in performance are needed before the desired fitness levels are achieved.

Tables 5 and 7 display the physical fitness test results by gender and by fitness area. In grades five and seven the results indicate that higher percentages of females than males were in the HFZ for aerobic capacity, body composition, trunk extensor strength, and flexibility. Conversely, for these two grade levels higher percentages of males than females achieved the HFZ for abdominal strength and upper body strength. In grade nine, however, the data reveal a different pattern. The percentages of females in the HFZ exceeded the percentages

of males for body composition, trunk extensor strength, and flexibility. This gender pattern is reversed for aerobic capacity, abdominal strength, and upper body strength.

Although no ethnic subgroup exhibited high levels of fitness, subgroup results displayed in Tables 9 through 22 reveal some performance differences among the ethnicities. Asian/Asian American and White (not of Hispanic origin) subgroups had the highest percentages of students who achieved the HFZ for all six fitness areas. Hispanic/Latino and African/African American subgroups had the lowest percentages of students achieving this goal. The difference between the subgroups who had the highest and lowest percentage of students who met the HFZ for all fitness areas is 14.0 in grade five, 19.3 in grade seven, and 18.3 in grade nine.

Comparison of 2003-05 Participation and Physical Fitness Test Results

Tables 23 through 28 display 2005 physical fitness test results compared to those of 2004 and 2003. Results for the 2005 physical fitness tests are reported for 1,374,283 students. This is an increase of 25,863 from the number of students tested in 2004, and an increase of 51,225 from the number who participated in 2003. These increases in participation may be attributed to:

- Continued efforts and improvements in communication about the physical fitness test requirement, administration guidelines, and reporting procedures
- Increased training opportunities and consistent use of the *FITNESSGRAM®* have resulted in greater familiarity with the *FITNESSGRAM®* administration procedures
- Ease and availability of multiple options for reporting the results to the CDE
- Increased efforts to improve physical education programs and health-related physical fitness due to the growing concerns with obesity in young and adolescent children
- Increased student enrollments in grades five and nine (Source: California Basic Educational Data System)

Tables 23 and 24 show three-year trends of growth in the percentages of students, at all three grade levels, who achieved the HFZ in all six physical fitness areas, with the largest gains observed at grade nine. Across all grade levels, there was a three-year increase ranging from 1.5 to 2.6 percent, in the percentages of students who met all six fitness standards. Across all grade levels there was a three-year trend of decreases, ranging from 0.6 to 1.3 percent, in the percentages of students who achieved zero of six fitness standards. A review of three years worth of data in Tables 26 and 28 revealed that females are making stronger gains than males in the percentages achieving all six fitness standards. In summary, the physical fitness test results indicate that there are small, but continuing positive changes from 2003 to 2005. This suggests that statewide efforts to improve physical educational programs and knowledge about health-related physical fitness are making a difference.

Summary and Implications for California Students

This is the sixth time in 16 years that quality data about the fitness of California's youth has been reported. Full and complete public access to the summary data is available at *http://www.cde.ca.gov/ta/tg/pf/*. This site provides reports for the state and every county, school district, and school.

Six years of data show that the majority of California students at all three grade levels are not meeting the standards for the fitness areas of the *FITNESSGRAM*®. Although the most recent three years of data indicate that there is approximately a three percent increase in the percentage of students achieving the HFZ for all six fitness areas, there is still much work to do to ensure high levels of fitness for all students in California. Both males and females and students from all ethnic or racial backgrounds could benefit from a greater emphasis on all areas of physical fitness, especially aerobic capacity, body composition, upper body strength, and flexibility.

School and district administrators, teachers, parents, and guardians can examine the data to get a more complete picture of the yearly fitness levels of their students and children. School districts and schools are encouraged to use the data they receive from this test to examine and make important changes to their physical education programs. Schools and parents and guardians have the opportunity to work together to use this information to inform plans and strategies to improve the physical activity opportunities offered to students during and outside of the regular school day. This effort is consistent with the call by Jack O'Connell, State Superintendent for Public Instruction, to make schools healthier environments for students of all ages.[3] Collaboration among educators and families is key to effectively increasing the health-related physical fitness of all California's students.

Local educational agencies (i.e., school districts and county offices of education) committed to improving the physical fitness and nutrition of their students should consider the 2005 Superintendent's Challenge. This challenge invites all local educational agencies to support the goal of improving nutrition and fitness by implementing policies that promote proper nutrition and regular physical activities. Local agencies are also encouraged to engage students, their families, and communities in this endeavor. Additional information and application guidelines for the 2005 Superintendent's Challenge are available at http://www.cde.ca.gov/eo/in/ch/documents/yr05scappin.pdf. [Note: the preceding Web address is no longer valid.]

[3]More information on O'Connell's Healthy Children Initiative is available at *http://www.cde.ca.gov/eo/in/se/yr05healthychildrenwp.asp. [Note: the preceding Web address is no longer valid.]*

2005 California Physical Fitness Test Data Tables

Table 1: Participation by Gender

Gender	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
Females	231,132	48.9	223,461	49.0	216,609	48.7
Males	241,707	51.1	232,823	51.0	228,299	51.3
No Gender Information	70	0.0	52	0.0	130	0.0

Table 2: Participation by Race/Ethnicity

Race/Ethnicity	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
African/African American	37,947	8.0	35,472	7.8	34,429	7.7
American Indian/Alaskan Native	3,965	0.8	3,960	0.9	4,232	1.0
Asian/Asian American	37,818	8.0	37,917	8.3	37,921	8.5
Filipino/Filipino American	13,380	2.8	14,158	3.1	14,996	3.4
Hispanic/Latino	228,629	48.3	210,009	46.0	194,842	43.8
Pacific Islander	3,484	0.7	3,358	0.7	3,391	0.8
White – Not of Hispanic Origin	140,107	29.6	144,130	31.6	147,974	33.2
No Response	7,579	1.6	7,332	1.6	7,253	1.6

Table 3: Summary of Test Results by Fitness Area – All Students

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ *	% Not In HFZ	Total Tested	% In HFZ	% Not In HFZ	Total Tested	% In HFZ	% Not In HFZ
Aerobic Capacity	472,909	58.4	41.6	456,336	59.8	40.2	445,038	50.9	49.1
Body Composition	472,909	66.4	33.6	456,336	66.7	33.3	445,038	66.9	33.1
Abdominal Strength	472,909	80.2	19.8	456,336	83.7	16.3	445,038	81.3	18.7
Trunk Extensor Strength	472,909	87.4	12.6	456,336	88.5	11.5	445,038	84.3	15.7
Upper Body Strength	472,909	66.6	33.4	456,336	68.5	31.5	445,038	68.7	31.3
Flexibility	472,909	65.7	34.3	456,336	71.5	28.5	445,038	69.3	30.7

Table 4: Summary of Test Results by Number of Fitness Standards Achieved – All Students

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	115,664	24.5	131,370	28.8	118,721	26.7
5 of 6	124,294	26.3	121,532	26.6	117,109	26.3
4 of 6	97,975	20.7	87,979	19.3	85,479	19.2
3 of 6	67,986	14.4	58,018	12.7	54,035	12.1
2 of 6	39,727	8.4	32,679	7.2	29,400	6.6
1 of 6	17,995	3.8	14,282	3.1	14,412	3.2
0 of 6	9,268	2.0	10,476	2.3	25,882	5.8
Total Tested:	472,909	100.0	456,336	100.0	445,038	100.0

* HFZ = Healthy Fitness Zone
** Total Tested = Number of students tested, including partially tested students

Table 5: Summary of Test Results by Fitness Area – Females

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ *	% Not In HFZ	Total Tested	% In HFZ	% Not In HFZ	Total Tested	% In HFZ	% Not In HFZ
Aerobic Capacity	231,132	60.2	39.8	223,461	61.7	38.3	216,609	47.9	52.1
Body Composition	231,132	75.4	24.6	223,461	72.7	27.3	216,609	69.1	30.9
Abdominal Strength	231,132	79.7	20.3	223,461	83.1	16.9	216,609	81.1	18.9
Trunk Extensor Strength	231,132	88.2	11.8	223,461	89.4	10.6	216,609	85.5	14.5
Upper Body Strength	231,132	63.2	36.8	223,461	66.8	33.2	216,609	67.8	32.2
Flexibility	231,132	69.2	30.8	223,461	74.9	25.1	216,609	70.3	29.7

Table 6: Summary of Test Results by Number of Fitness Standards Achieved – Females

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	61,643	26.7	68,986	30.9	55,927	25.8
5 of 6	62,388	27.0	60,839	27.2	57,974	26.8
4 of 6	47,608	20.6	42,593	19.1	43,459	20.1
3 of 6	31,264	13.5	26,646	11.9	26,503	12.2
2 of 6	16,948	7.3	14,005	6.3	13,943	6.4
1 of 6	7,421	3.2	5,845	2.6	6,623	3.1
0 of 6	3,860	1.7	4,547	2.0	12,180	5.6
Total Tested:	231,132	100.0	223,461	100.0	216,609	100.0

* HFZ = Healthy Fitness Zone
** Total Tested = Number of students tested, including partially tested students

Table 7: Summary of Test Results by Fitness Area – Males

									In HFZ
Aerobic Capacity	241,707	56.8	43.2	232,823	57.9	42.1	228,299	53.9	46.1
Body Composition	241,707	57.8	42.2	232,823	60.9	39.1	228,299	64.8	35.2
Abdominal Strength	241,707	80.7	19.3	232,823	84.3	15.7	228,299	81.4	18.6
Trunk Extensor Strength	241,707	86.7	13.3	232,823	87.7	12.3	228,299	83.2	16.8
Upper Body Strength	241,707	69.9	30.1	232,823	70.2	29.8	228,299	69.6	30.4
Flexibility	241,707	62.3	37.7	232,823	68.2	31.8	228,299	68.4	31.6

Table 8: Summary of Test Results by Number of Fitness Standards Achieved – Males

						%
6 of 6	54,021	22.3	62,384	26.8	62,794	27.5
5 of 6	61,906	25.6	60,693	26.1	59,135	25.9
4 of 6	50,367	20.8	45,386	19.5	42,020	18.4
3 of 6	36,722	15.2	31,372	13.5	27,532	12.1
2 of 6	22,779	9.4	18,674	8.0	15,457	6.8
1 of 6	10,574	4.4	8,437	3.6	7,789	3.4
0 of 6	5,338	2.2	5,877	2.5	13,572	5.9
Total Tested:	241,707	100.0	232,823	100.0	228,299	100.0

* HFZ = Healthy Fitness Zone
** Total Tested = Number of students tested, including partially tested students

Table 9: Summary of Test Results by Fitness Area – African/African American

									In HFZ
Aerobic Capacity	37,947	51.6	48.4	35,472	50.4	49.6	34,429	41.6	58.4
Body Composition	37,947	66.8	33.2	35,472	65.4	34.6	34,429	61.7	38.3
Abdominal Strength	37,947	80.0	20.0	35,472	79.4	20.6	34,429	74.2	25.8
Trunk Extensor Strength	37,947	84.7	15.3	35,472	84.7	15.3	34,429	78.7	21.3
Upper Body Strength	37,947	70.1	29.9	35,472	67.6	32.4	34,429	64.5	35.5
Flexibility	37,947	65.6	34.4	35,472	66.9	33.1	34,429	63.9	36.1

Table 10: Summary of Test Results by Number of Fitness Standards Achieved – African/African American

						%
6 of 6	8,203	21.6	7,984	22.5	6,765	19.6
5 of 6	10,277	27.1	9,303	26.2	8,296	24.1
4 of 6	8,517	22.4	7,543	21.3	7,160	20.8
3 of 6	5,657	14.9	5,104	14.4	4,753	13.8
2 of 6	2,923	7.7	2,856	8.1	2,898	8.4
1 of 6	1,416	3.7	1,380	3.9	1,609	4.7
0 of 6	954	2.5	1,302	3.7	2,948	8.6
Total Tested:	37,947	100.0	35,472	100.0	34,429	100.0

* HFZ = Healthy Fitness Zone
** Total Tested = Number of students tested, including partially tested students

Table 11: Summary of Test Results by Fitness Area – American Indian/Alaskan Native

	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ *	% Not In HFZ	Total Tested	% In HFZ	% Not In HFZ	Total Tested	% In HFZ	% Not In HFZ
Aerobic Capacity	3,965	50.8	49.2	3,960	53.9	46.1	4,232	45.2	54.8
Body Composition	3,965	62.8	37.2	3,960	63.9	36.1	4,232	63.4	36.6
Abdominal Strength	3,965	78.7	21.3	3,960	82.3	17.7	4,232	80.4	19.6
Trunk Extensor Strength	3,965	87.1	12.9	3,960	88.7	11.3	4,232	84.1	15.9
Upper Body Strength	3,965	64.9	35.1	3,960	66.7	33.3	4,232	65.5	34.5
Flexibility	3,965	62.9	37.1	3,960	66.9	33.1	4,232	66.1	33.9

Table 12: Summary of Test Results by Number of Fitness Standards Achieved – American Indian/Alaskan Native

						%
6 of 6	825	20.8	962	24.3	963	22.8
5 of 6	1,004	25.3	1,050	26.5	1,069	25.3
4 of 6	838	21.1	830	21.0	868	20.5
3 of 6	631	15.9	549	13.9	580	13.7
2 of 6	377	9.5	288	7.3	318	7.5
1 of 6	180	4.5	162	4.1	161	3.8
0 of 6	110	2.8	119	3.0	273	6.5
Total Tested:	3,965	100.0	3,960	100.0	4,232	100.0

* HFZ = Healthy Fitness Zone
** Total Tested = Number of students tested, including partially tested students

Table 13: Summary of Test Results by Fitness Area – Asian/Asian American

	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ *	% Not In HFZ	Total Tested	% In HFZ	% Not In HFZ	Total Tested	% In HFZ	% Not In HFZ
Aerobic Capacity	37,818	63.7	36.3	37,917	71.4	28.6	37,921	62.9	37.1
Body Composition	37,818	77.7	22.3	37,917	79.6	20.4	37,921	80.5	19.5
Abdominal Strength	37,818	83.4	16.6	37,917	89.0	11.0	37,921	87.5	12.5
Trunk Extensor Strength	37,818	88.1	11.9	37,917	90.1	9.9	37,921	87.6	12.4
Upper Body Strength	37,818	72.5	27.5	37,917	78.3	21.7	37,921	78.0	22.0
Flexibility	37,818	75.5	24.5	37,917	80.6	19.4	37,921	77.7	22.3

Table 14: Summary of Test Results by Number of Fitness Standards Achieved – Asian/Asian American

						%
6 of 6	12,206	32.3	15,765	41.6	14,365	37.9
5 of 6	10,883	28.8	10,943	28.9	11,188	29.5
4 of 6	7,386	19.5	5,977	15.8	6,387	16.8
3 of 6	4,113	10.9	3,014	7.9	3,019	8.0
2 of 6	1,966	5.2	1,331	3.5	1,280	3.4
1 of 6	835	2.2	505	1.3	512	1.4
0 of 6	429	1.1	382	1.0	1,170	3.1
Total Tested:	37,818	100.0	37,917	100.0	37,921	100.0

* HFZ = Healthy Fitness Zone
** Total Tested = Number of students tested, including partially tested students

Table 15: Summary of Test Results by Fitness Area – Filipino/Filipino American

	Grade 5			Grade 7			Grade 9		
	Total Tested**	% In HFZ *	% Not In HF	Total Tested	% In HFZ	% Not In HFZ	Total Tested	% In HFZ	% Not In HFZ
Aerobic Capacity	13,380	56.4	43.6	14,158	60.3	39.7	14,996	53.7	46.3
Body Composition	13,380	68.8	31.2	14,158	71.9	28.1	14,996	71.9	28.1
Abdominal Strength	13,380	81.8	18.2	14,158	86.1	13.9	14,996	85.7	14.3
Trunk Extensor Strength	13,380	87.0	13.0	14,158	89.8	10.2	14,996	87.8	12.2
Upper Body Strength	13,380	70.6	29.4	14,158	75.7	24.3	14,996	76.0	24.0
Flexibility	13,380	72.6	27.4	14,158	78.6	21.4	14,996	76.2	23.8

Table 16: Summary of Test Results by Number of Fitness Standards Achieved – Filipino/Filipino American

						%
6 of 6	3,535	26.4	4,694	33.2	4,575	30.5
5 of 6	3,671	27.4	4,086	28.9	4,342	29.0
4 of 6	2,795	20.9	2,714	19.2	2,885	19.2
3 of 6	1,820	13.6	1,487	10.5	1,713	11.4
2 of 6	955	7.1	660	4.7	768	5.1
1 of 6	380	2.8	239	1.7	295	2.0
0 of 6	224	1.7	278	2.0	418	2.8
Total Tested:	13,380	100.0	14,158	100.0	14,996	100.0

* HFZ = Healthy Fitness Zone
** Total Tested = Number of students tested, including partially tested students

Table 17: Summary of Test Results by Fitness Area – Hispanic/Latino

	Total Tested**		% Not In HF	Total Tested					In HFZ
Aerobic Capacity	228,629	55.3	44.7	210,009	54.4	45.6	194,842	44.1	55.9
Body Composition	228,629	59.2	40.8	210,009	58.9	41.1	194,842	59.3	40.7
Abdominal Strength	228,629	76.8	23.2	210,009	80.5	19.5	194,842	76.9	23.1
Trunk Extensor Strength	228,629	86.6	13.4	210,009	87.4	12.6	194,842	81.6	18.4
Upper Body Strength	228,629	61.2	38.8	210,009	63.0	37.0	194,842	63.3	36.7
Flexibility	228,629	61.4	38.6	210,009	68.6	31.4	194,842	65.7	34.3

Table 18: Summary of Test Results by Number of Fitness Standards Achieved – Hispanic/Latino

						%
6 of 6	42,611	18.6	46,774	22.3	39,433	20.2
5 of 6	56,059	24.5	52,575	25.0	47,397	24.3
4 of 6	50,807	22.2	44,477	21.2	40,178	20.6
3 of 6	38,801	17.0	32,570	15.5	28,476	14.6
2 of 6	24,412	10.7	19,515	9.3	16,682	8.6
1 of 6	11,190	4.9	8,719	4.2	8,515	4.4
0 of 6	4,749	2.1	5,379	2.6	14,161	7.3
Total Tested:	228,629	100.0	210,009	100.0	194,842	100.0

* HFZ = Healthy Fitness Zone
** Total Tested = Number of students tested, including partially tested students

Table 19: Summary of Test Results by Fitness Area – Pacific Islander

	Total Tested**		% Not In HFZ	Total Tested		% Not In HFZ			In HFZ
Aerobic Capacity	3,484	55.8	44.2	3,358	57.6	42.4	3,391	52.2	47.8
Body Composition	3,484	59.7	40.3	3,358	60.5	39.5	3,391	60.0	40.0
Abdominal Strength	3,484	82.5	17.5	3,358	85.0	15.0	3,391	84.3	15.7
Trunk Extensor Strength	3,484	88.1	11.9	3,358	88.6	11.4	3,391	86.1	13.9
Upper Body Strength	3,484	72.2	27.8	3,358	72.6	27.4	3,391	71.5	28.5
Flexibility	3,484	64.7	35.3	3,358	70.6	29.4	3,391	69.5	30.5

Table 20: Summary of Results by Number of Fitness Standards Achieved – Pacific Islander

						%
6 of 6	765	22.0	896	26.7	852	25.1
5 of 6	978	28.1	920	27.4	905	26.7
4 of 6	733	21.0	671	20.0	702	20.7
3 of 6	537	15.4	448	13.3	463	13.7
2 of 6	292	8.4	246	7.3	210	6.2
1 of 6	128	3.7	109	3.2	115	3.4
0 of 6	51	1.5	68	2.0	144	4.2
Total Tested:	3,484	100.0	3,358	100.0	3,391	100.0

* HFZ = Healthy Fitness Zone
** Total Tested = Number of students tested, including partially tested students

Table 21: Summary of Test Results by Fitness Area – White (Not of Hispanic Origin)

									In HFZ
Aerobic Capacity	140,107	64.6	35.4	144,130	67.1	32.9	147,974	59.0	41.0
Body Composition	140,107	75.0	25.0	144,130	74.6	25.4	147,974	74.4	25.6
Abdominal Strength	140,107	84.7	15.3	144,130	87.8	12.2	147,974	86.8	13.2
Trunk Extensor Strength	140,107	89.5	10.5	144,130	90.7	9.3	147,974	88.0	12.0
Upper Body Strength	140,107	72.4	27.6	144,130	73.6	26.4	147,974	73.9	26.1
Flexibility	140,107	69.7	30.3	144,130	73.8	26.2	147,974	72.7	27.3

Table 22: Summary of Test Results by Number of Fitness Standards Achieved – White (Not of Hispanic Origin)

						%
6 of 6	45,673	32.6	52,240	36.2	49,868	33.7
5 of 6	39,450	28.2	40,717	28.3	42,071	28.4
4 of 6	25,311	18.1	24,409	16.9	25,996	17.6
3 of 6	15,394	11.0	13,934	9.7	14,254	9.6
2 of 6	8,205	5.9	7,279	5.1	6,804	4.6
1 of 6	3,605	2.6	2,972	2.1	2,978	2.0
0 of 6	2,469	1.8	2,579	1.8	6,003	4.1
Total Tested:	140,107	100.0	144,130	100.0	147,974	100.0

* HFZ = Healthy Fitness Zone
** Total Tested = Number of students tested, including partially tested students

Table 23: 2003-05 Comparison of Test Results by Fitness Area – All Students

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	% In HFZ*			% In HFZ*			% In HFZ*		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
Aerobic Capacity	56.4	58.5	58.4	58.5	59.2	59.8	48.9	49.7	50.9
Body Composition	65.0	67.5	66.4	65.6	67.1	66.7	65.4	67.1	66.9
Abdominal Strength	79.5	80.8	80.2	82.7	83.5	83.7	79.3	80.7	81.3
Trunk Extensor Strength	85.6	87.0	87.4	87.8	88.8	88.5	81.8	83.0	84.3
Upper Body Strength	64.9	66.5	66.6	66.4	67.7	68.5	65.5	67.5	68.7
Flexibility	65.0	66.4	65.7	70.7	72.3	71.5	67.8	69.1	69.3

Table 24: 2003-05 Comparison of Test Results by Number of Fitness Standards Achieved – All Students

Number of Fitness Standards Achieved	Grade 5			Grade 7			Grade 9		
	% of Students			% of Students			% of Students		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
6 of 6	23.0	24.8	24.5	27.1	29.1	28.8	24.1	26.3	26.7
5 of 6	26.1	26.2	26.3	26.6	26.3	26.6	25.9	25.9	26.3
4 of 6	21.0	20.9	20.7	19.7	19.2	19.3	19.6	19.0	19.2
3 of 6	14.5	14.4	14.4	13.2	12.9	12.7	12.8	12.3	12.1
2 of 6	8.3	8.2	8.4	7.3	7.1	7.2	7.1	6.9	6.6
1 of 6	3.7	3.7	3.8	3.2	3.1	3.1	3.6	3.6	3.2
0 of 6	3.3	1.8	2.0	2.9	2.3	2.3	6.9	6.1	5.8

* HFZ = Healthy Fitness Zone

Table 25: 2003-05 Comparison of Test Results by Fitness Area – Females

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	% In HFZ*			% In HFZ*			% In HFZ*		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
Aerobic Capacity	57.1	59.8	60.2	60.2	61.2	61.7	44.8	46.1	47.9
Body Composition	73.5	76.4	75.4	71.3	73.1	72.7	66.9	69.3	69.1
Abdominal Strength	78.8	80.2	79.7	82.2	83.0	83.1	79.4	80.8	81.1
Trunk Extensor Strength	86.3	87.7	88.2	88.8	89.6	89.4	83.0	84.1	85.5
Upper Body Strength	61.1	63.0	63.2	64.3	66.1	66.8	64.2	66.2	67.8
Flexibility	68.2	69.8	69.2	74.5	75.8	74.9	69.0	70.5	70.3

Table 26: 2003-05 Comparison of Test Results by Number of Fitness Standards Achieved – Females

Number of Fitness Standards Achieved	Grade 5			Grade 7			Grade 9		
	% of Students			% of Students			% of Students		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
6 of 6	24.5	26.7	26.7	28.8	31.3	30.9	22.4	25.3	25.8
5 of 6	26.9	27.1	27.0	27.3	26.9	27.2	26.4	26.2	26.8
4 of 6	21.0	20.8	20.6	19.7	19.0	19.1	20.9	19.9	20.1
3 of 6	13.7	13.5	13.5	12.5	12.0	11.9	13.3	12.5	12.2
2 of 6	7.5	7.3	7.3	6.5	6.2	6.3	7.1	6.7	6.4
1 of 6	3.3	3.1	3.2	2.7	2.6	2.6	3.4	3.4	3.1
0 of 6	3.1	1.5	1.7	2.5	2.0	2.0	6.5	5.9	5.6

* HFZ= Healthy Fitness Zone

Table 27: 2003-05 Comparison of Test Results by Fitness Area – Males

Physical Fitness Area	Grade 5			Grade 7			Grade 9		
	% In HFZ*			% In HFZ*			% In HFZ*		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
Aerobic Capacity	55.8	57.3	56.8	56.9	57.2	57.9	52.8	53.2	53.9
Body Composition	57.0	58.9	57.8	60.2	61.3	60.9	64.1	65.0	64.8
Abdominal Strength	80.2	81.4	80.7	83.3	84.0	84.3	79.3	80.6	81.4
Trunk Extensor Strength	85.0	86.4	86.7	86.8	88.1	87.7	80.7	81.9	83.2
Upper Body Strength	68.7	69.9	69.9	68.6	69.2	70.2	66.9	68.7	69.6
Flexibility	62.0	63.2	62.3	67.2	69.0	68.2	66.6	67.9	68.4

Table 28: 2003-05 Comparison of Test Results by Number of Fitness Standards Achieved – Males

Number of Fitness Standards Achieved	Grade 5			Grade 7			Grade 9		
	% of Students			% of Students			% of Students		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
6 of 6	21.7	22.9	22.3	25.5	27.0	26.8	25.7	27.2	27.5
5 of 6	25.4	25.4	25.6	26.0	25.7	26.1	25.5	25.5	25.9
4 of 6	21.0	21.0	20.8	19.7	19.4	19.5	18.5	18.1	18.4
3 of 6	15.2	15.2	15.2	13.9	13.7	13.5	12.4	12.2	12.1
2 of 6	9.0	9.2	9.4	8.1	8.0	8.0	7.1	7.0	6.8
1 of 6	4.2	4.2	4.4	3.6	3.6	3.6	3.7	3.7	3.4
0 of 6	3.5	2.0	2.2	3.2	2.6	2.5	7.2	6.3	5.9

* HFZ= Healthy Fitness Zone

Appendix A
FITNESSGRAM®
Standards for Healthy Fitness Zone*

The *FITNESSGRAM®* uses criterion-referenced standards to evaluate fitness performance. These standards, established by The Cooper Institute, represent levels of fitness that offer protection against the diseases that result from sedentary living. (Rev. 10/11/2005)

FEMALES

Age	One Mile Run min:sec	20m PACER # laps	Walk Test VO_{2max}*** ml/kg/min	Skinfold Measurement percent fat	Body Mass Index	Curl-Up # completed
5	Completion of distance. Time standards not recommended.	Participate in run. Lap count standards not recommended.	VO_{2max} standards not available.	17 – 32	16.2 – 21.0	2 – 10
6				17 – 32	16.2 – 21.0	2 – 10
7				17 – 32	16.2 – 22.0	4 – 14
8				17 – 32	16.2 – 22.0	6 – 20
9				13 – 32	13.5 – 23.0	9 – 22
10	12:30 – 9:30	7 – 41		13 – 32	13.7 – 23.5	12 – 26
11	12:00 – 9:00	15 – 41		13 – 32	14.0 – 24.0	15 – 29
12	12:00 – 9:00	15 – 41		13 – 32	14.5 – 24.5	18 – 32
13	11:30 – 9:00	23 – 51	36 – 44	13 – 32	14.9 – 24.5	18 – 32
14	11:00 – 8:30	23 – 51	35 – 43	13 – 32	15.4 – 25.0	18 – 32
15	10:30 – 8:00	32 – 51	35 – 43	13 – 32	16.0 – 25.0	18 – 35
16	10:00 – 8:00	32 – 61	35 – 43	13 – 32	16.4 – 25.0	18 – 35
17	10:00 – 8:00	41 – 61	35 – 43	13 – 32	16.8 – 26.0	18 – 35
17+	10:00 – 8:00	41 – 72	35 – 43	13 – 32	17.2 – 27.3	18 – 35

Age	Trunk Lift inches	Push-Up # completed	Modified Pull-Up # completed	Flexed-Arm Hang seconds	Back-Saver Sit & Reach** inches	Shoulder Stretch
5	6 – 12	3 – 8	2 – 7	2 – 8	9	Touching fingertips together behind the back on both the right and left sides.
6	6 – 12	3 – 8	2 – 7	2 – 8	9	
7	6 – 12	4 – 10	3 – 9	3 – 8	9	
8	6 – 12	5 – 13	4 – 11	3 – 10	9	
9	6 – 12	6 – 15	4 – 11	4 – 10	9	
10	9 – 12	7 – 15	4 – 13	4 – 10	9	
11	9 – 12	7 – 15	4 – 13	6 – 12	10	
12	9 – 12	7 – 15	4 – 13	7 – 12	10	
13	9 – 12	7 – 15	4 – 13	8 – 12	10	
14	9 – 12	7 – 15	4 – 13	8 – 12	10	
15	9 – 12	7 – 15	4 – 13	8 – 12	12	
16	9 – 12	7 – 15	4 – 13	8 – 12	12	
17	9 – 12	7 – 15	4 – 13	8 – 12	12	
17+	9 – 12	7 – 15	4 – 13	8 – 12	12	

*Number on the left is lower end of the HFZ; number on right is the upper end of the HFZ.
**Test scored pass/fail. The student must reach this distance to pass.
***Aerobic capacity (VO_{2max}) reflects the maximum rate that oxygen can be taken up and utilized by the body during exercise. Aerobic capacity is estimated by inserting age, gender, weight, mile walk time, and heart rate at the end of the walk into the Rockport Fitness Walking Test equation.

Appendix A
FITNESSGRAM®
Standards for Healthy Fitness Zone*

The *FITNESSGRAM®* uses criterion-referenced standards to evaluate fitness performance. These standards, established by The Cooper Institute, represent levels of fitness that offer protection against the diseases that result from sedentary living. (Rev. 10/11/2005)

MALES

Age	One Mile Run min:sec	20m PACER # laps	Walk Test VO_{2max}*** ml/kg/min	Skinfold Measurement percent fat	Body Mass Index	Curl-Up # completed
5	Completion of distance. Time standards not recommended.	Participate in run. Lap count standards not recommended.	VO_{2max} standards not available.	10 – 25	14.7 – 20.0	2 – 10
6				10 – 25	14.7 – 20.0	2 – 10
7				10 – 25	14.9 – 20.0	4 – 14
8				10 – 25	15.1 – 20.0	6 – 20
9				7 – 25	13.7 – 20.0	9 – 24
10	11:30 – 9:00	23 – 61		7 – 25	14.0 – 21.0	12 – 24
11	11:00 – 8:30	23 – 72		7 – 25	14.3 – 21.0	15 – 28
12	10:30 – 8:00	32 – 72		7 – 25	14.6 – 22.0	18 – 36
13	10:00 – 7:30	41 – 83	42 – 52	7 – 25	15.1 – 23.0	21 – 40
14	9:30 – 7:00	41 – 83	42 – 52	7 – 25	15.6 – 24.5	24 – 45
15	9:00 – 7:00	51 – 94	42 – 52	7 – 25	16.2 – 25.0	24 – 47
16	8:30 – 7:00	61 – 94	42 – 52	7 – 25	16.6 – 26.5	24 – 47
17	8:30 – 7:00	61 – 106	42 – 52	7 – 25	17.3 – 27.0	24 – 47
17+	8:30 – 7:00	72 – 106	42 – 52	7 – 25	17.8 – 27.8	24 – 47

Age	Trunk Lift inches	Push-Up # completed	Modified Pull-Up # completed	Flexed-Arm Hang seconds	Back-Saver Sit & Reach** inches	Shoulder Stretch
5	6 – 12	3 – 8	2 – 7	2 – 8	8	Touching fingertips together behind the back on both the right and left sides.
6	6 – 12	3 – 8	2 – 7	2 – 8	8	
7	6 – 12	4 – 10	3 – 9	3 – 8	8	
8	6 – 12	5 – 13	4 – 11	3 – 10	8	
9	6 – 12	6 – 15	5 – 11	4 – 10	8	
10	9 – 12	7 – 20	5 – 15	4 – 10	8	
11	9 – 12	8 – 20	6 – 17	6 – 13	8	
12	9 – 12	10 – 20	7 – 20	10 – 15	8	
13	9 – 12	12 – 25	8 – 22	12 – 17	8	
14	9 – 12	14 – 30	9 – 25	15 – 20	8	
15	9 – 12	16 – 35	10 – 27	15 – 20	8	
16	9 – 12	18 – 35	12 – 30	15 – 20	8	
17	9 – 12	18 – 35	14 – 30	15 – 20	8	
17+	9 – 12	18 – 35	14 – 30	15 – 20	8	

*Number on the left is lower end of the HFZ; number on right is the upper end of the HFZ.
**Test scored pass/fail. The student must reach this distance to pass.
***Aerobic capacity (VO_{2max}) reflects the maximum rate that oxygen can be taken up and utilized by the body during exercise. Aerobic capacity is estimated by inserting age, gender, weight, mile walk time, and heart rate at the end of the walk into the Rockport Fitness Walking Test equation.