

2003 California Physical Fitness Testing

**Report to the Governor
and the Legislature**

prepared by the
California Department of Education

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Introduction

In the spring of 2003, 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 2003 test administration and provides a summary comparison with the results from 2002.

Background

Assembly Bill (AB) 265, signed into law in October 1995 (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 (SB) 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 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.

Description of Test

The *Fitnessgram* was developed by the Cooper Institute for Aerobics Research 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, the *Fitnessgram* provides a number of options for each fitness area so that all students, including those with special needs, have the maximum opportunity to participate in the tests. Availability of options is especially important in measurement of body composition, which is the component of physical fitness that tends to concern parents the most. With an additional alternative for body composition measurement, school districts are more comfortable completing this fitness area task.



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

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
- Modified Pull-Up
- 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 music, which provides a valid and fun alternative to the customary distance run. It is strongly encouraged for students in kindergarten through third grade, but may be used in all grades. 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 percent 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. Although not as accurate an indicator of body composition as the skinfold measurements, school districts and schools find this measurement less of a parent concern than skinfold measurements.

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 and is important in maintaining functional health and promoting good posture. It is important to have strong muscles that can work forcefully and/or over a period of time.

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



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.

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

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 a ruler attached 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. 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 should be able 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 for Aerobics Research to represent a level of fitness that offers some degree of protection against diseases that result from sedentary living. Findings from current research, expert opinions, known relationships, theoretical perspectives, and similar relationships have been used as the basis for establishing the *Fitnessgram* standards.

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. All students should strive to achieve a score within the HFZ. 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

Statewide data collection in 2003 was done electronically. School districts submitted their data to the CDE by June 30, 2003, through the Internet, or by diskette, CD-ROM, or via e-mail.

Physical fitness test results for 2003 are reported by school, school district, county, and state on the CDE Web site at <http://www.cde.ca.gov/statetests/pe/pe.html>. No individual student data are reported.

Participation in 2003 Testing

Tables 1 through 22, which begin on page 8, provide a comprehensive summary of the results from the spring 2003 physical fitness test. In 2003, the physical fitness test was taken by 96 percent of all fifth grade students, 92 percent of all seventh grade students, and 76 percent of all ninth grade students for a total of 1,323,058 students. Tables 1 and 2 present the gender and racial/ethnic composition of the student population participating in physical fitness testing.

Results of 2003 Testing

In Table 3, entitled Summary of Test Results for All Students, the overall results for 2003 are reported in two ways. First, the percentage of students in the Healthy Fitness Zone (HFZ) for each fitness area is reported. A student not in the HFZ indicates that the student did not meet the minimum level of fitness for that fitness area. This table shows that a significant percentage of students did meet minimum fitness levels for each of the fitness areas. A summary of Table 3 is as follows:

- Aerobic Capacity: 49–59 percent of students were in the HFZ across all grades
- Body Composition: 65–66 percent of students were in the HFZ across all grades
- Abdominal Strength: 79–83 percent of students were in the HFZ across all grades
- Trunk Extensor Strength: 82–88 percent of students were in the HFZ across all grades
- Upper Body Strength: 65–66 percent of students were in the HFZ across all grades
- Flexibility: 65–71 percent of students were in the HFZ across all grades

Table 4 reports the number of fitness standards achieved. Achievement of any 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 tasks for a fitness area (e.g., aerobic capacity, flexibility, etc.), and a student must meet all six of the fitness standards to be considered fit for their grade level. Table 4 shows that most of the students tested did not demonstrate fitness. Only 23 percent of students in grade five, 27 percent in grade seven, and 24 percent in grade nine meet all six fitness standards. The columns in Table 4 display the percentage of students achieving six, five, four, three, two, one, and no standards and provide an indication that a significant level of improvement is needed before California students can be said to be physically fit.



Subgroup data are presented in Tables 5 through 22. Table 5 shows that in grades five and seven, more females than males meet all six fitness standards. In grade nine, however, more males than females meet the six standards. Across all grade levels, more females than males are in the HFZ for body composition, flexibility, and trunk extensor strength, but more males than females are in the HFZ for upper body strength.

Although no ethnic subgroup exhibits high levels of fitness, subgroup results displayed in Tables 9 through 22 show performance differences among the ethnicities. Asian/Asian American and White (not of Hispanic origin) subgroups have the highest percentage of students who meet all of the fitness standards, while the Hispanic/Latino and African/African American subgroups have the lowest. The difference between subgroups who have the highest percentage of students who meet all standards and subgroups who have the lowest percentage of students who meet this goal is approximately 11.3 percent in grade five, 14.7 percent in grade seven, and 15 percent in grade nine.

Comparison of 2002 and 2003 Participation and Physical Fitness Test Results

Tables 23 through 28 display 2002 and 2003 physical fitness test results. Results for the 2003 physical fitness tests are reported for 1,323,058 students. This is a notable increase from 1,265,546 students tested in 2002. This higher participation rate can be attributed to:

- Increases in training opportunities
- Availability of multiple options for reporting data electronically
- Increases in the visibility of the physical fitness test
- Increases in efforts to improve physical fitness due to the growing prevalence of obesity
- Follow-up letters mailed to schools that failed to report data in 2002
- First-year participation by charter schools

Tables 23 and 24 show there are no major changes between 2002 and 2003 physical fitness test results. However, across all grade levels, there is a small increase from 24 percent to 25 percent in the number of students who are considered fit (i.e., met all six fitness standards). In addition, across all grade levels, there is a small decrease from 6.0 percent to 4.4 percent in the number of students who achieved zero of six fitness standards.

In summary, the results indicate that there are only minimal changes between the 2002 and 2003 physical fitness testing data and that a significant percentage of California students do not meet minimum levels of fitness.

Summary

Four years of available data show that most students at all three grade levels are not fit when compared to standards established for the *Fitnessgram*. Although there is a one percent increase overall in number of students considered fit, 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 backgrounds could benefit from a greater emphasis on all areas of physical fitness, especially aerobic capacity, body composition, upper body strength, and flexibility. School districts and schools are encouraged to use the data from this test to examine their physical education programs. These data also can inform plans and strategies to improve physical education instruction and the physical activity opportunities offered to students during the school day.

This is only the fourth time in 14 years that quality data about fitness of California's youth has been reported. Full and complete public access to summary data is available via the CDE Web site, providing reports for every county, school district, and school. Teachers, parents, and administrators have the opportunity to examine the fitness levels of their children on an annual basis and use this information to make important changes to instruction. An analysis by the CDE of academic achievement and the physical fitness of California's public school students provides evidence that physical fitness correlates positively with academic achievement.

Implications for California Students

Schools are required by law to include physical fitness test results in the School Accountability Report Card (SARC) and to provide students with their individual results (Education Code Section 2, Chapter 6, Section 60800). The most recent physical fitness data are to be reported, including the percent of students scoring in the HFZ on all six fitness standards. Data are reported for the school, school district, county, and state for the purpose of comparison. The physical fitness test results provide physical educators with high quality information to make program changes to promote higher levels of physical activity and fitness in the daily lives of their students.



2003 California Physical Fitness Test Data Tables

Table 1: Participation by Gender

Gender	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
Females	228,668	49.0	224,085	48.9	192,579	48.5
Males	238,342	51.0	234,164	51.1	204,692	51.5
No Gender Information	129	0.0	221	0.0	178	0.0

Table 2: Participation by Ethnicity

Subgroup	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
African/African American	36,276	7.8	36,387	7.9	30,034	7.6
American Indian/Alaskan Native	5,355	1.1	5,084	1.1	4,053	1.0
Asian/Asian American	34,532	7.4	34,726	7.6	32,199	8.1
Filipino/Filipino American	11,496	2.5	11,906	2.6	11,214	2.8
Hispanic/Latino	216,808	46.4	200,797	43.8	166,803	42.0
Pacific Islander	6,266	1.3	5,942	1.3	5,405	1.4
White – Not of Hispanic Origin	146,838	31.4	154,111	33.6	135,363	34.1
Non-Response	9,568	2.0	9,517	2.1	12,378	3.1



Table 3: Summary of Test Results for 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	467,139	56.4	43.6	458,470	58.5	41.5	397,449	48.9	51.1
Body Composition	467,139	65.0	35.0	458,470	65.6	34.4	397,449	65.4	34.6
Abdominal Strength	467,139	79.5	20.5	458,470	82.7	17.3	397,449	79.3	20.7
Trunk Extensor Strength	467,139	85.6	14.4	458,470	87.8	12.2	397,449	81.8	18.2
Upper Body Strength	467,139	64.9	35.1	458,470	66.4	33.6	397,449	65.5	34.5
Flexibility	467,139	65.0	35.0	458,470	70.7	29.3	397,449	67.8	32.2

Table 4: Summary of Fitness Standards Achieved for All Students

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	107,634	23.0	124,233	27.1	95,660	24.1
5 of 6	122,017	26.1	121,888	26.6	102,964	25.9
4 of 6	98,014	21.0	90,316	19.7	78,003	19.6
3 of 6	67,626	14.5	60,578	13.2	50,952	12.8
2 of 6	38,758	8.3	33,583	7.3	28,321	7.1
1 of 6	17,468	3.7	14,491	3.2	14,162	3.6
0 of 6	15,622	3.3	13,381	2.9	27,387	6.9
Total Tested:	467,139	100.0	458,470	100.0	397,449	100.0

* HFZ = Healthy Fitness Zone

** Total Tested = Number of students tested, including partially tested students.

**Table 5: Summary of Test Results for 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	228,668	57.1	42.9	224,085	60.2	39.8	192,579	44.8	55.2
Body Composition	228,668	73.5	26.5	224,085	71.3	28.7	192,579	66.9	33.1
Abdominal Strength	228,668	78.8	21.2	224,085	82.2	17.8	192,579	79.4	20.6
Trunk Extensor Strength	228,668	86.3	13.7	224,085	88.8	11.2	192,579	83.0	17.0
Upper Body Strength	228,668	61.1	38.9	224,085	64.3	35.7	192,579	64.2	35.8
Flexibility	228,668	68.2	31.8	224,085	74.5	25.5	192,579	69.0	31.0

Table 6: Summary of Fitness Standards Achieved for Females

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	55,962	24.5	64,630	28.8	43,139	22.4
5 of 6	61,490	26.9	61,115	27.3	50,848	26.4
4 of 6	48,069	21.0	44,086	19.7	40,192	20.9
3 of 6	31,414	13.7	27,996	12.5	25,553	13.3
2 of 6	17,234	7.5	14,539	6.5	13,697	7.1
1 of 6	7,449	3.3	6,018	2.7	6,596	3.4
0 of 6	7,050	3.1	5,701	2.5	12,554	6.5
Total Tested:	228,668	100.0	224,085	100.0	192,579	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.

**Table 7: Summary of Test Results for Males**

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	238,342	55.8	44.2	234,164	56.9	43.1	204,692	52.8	47.2
Body Composition	238,342	57.0	43.0	234,164	60.2	39.8	204,692	64.1	35.9
Abdominal Strength	238,342	80.2	19.8	234,164	83.3	16.7	204,692	79.3	20.7
Trunk Extensor Strength	238,342	85.0	15.0	234,164	86.8	13.2	204,692	80.7	19.3
Upper Body Strength	238,342	68.7	31.3	234,164	68.6	31.4	204,692	66.9	33.1
Flexibility	238,342	62.0	38.0	234,164	67.2	32.8	204,692	66.6	33.4

Table 8: Summary of Fitness Standards Achieved for Males

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	51,672	21.7	59,603	25.5	52,521	25.7
5 of 6	60,527	25.4	60,773	26.0	52,116	25.5
4 of 6	49,945	21.0	46,230	19.7	37,811	18.5
3 of 6	36,212	15.2	32,582	13.9	25,399	12.4
2 of 6	21,524	9.0	19,044	8.1	14,624	7.1
1 of 6	10,019	4.2	8,473	3.6	7,566	3.7
0 of 6	8,443	3.5	7,459	3.2	14,655	7.2
Total Tested:	238,342	100.0	234,164	100.0	204,692	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.

**Table 9: Summary of Test Results for African/African American**

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	35,320	51.0	49.0	35,242	49.2	50.8	28,634	39.8	60.2
Body Composition	34,289	65.5	34.5	33,836	63.3	36.7	26,122	60.5	39.5
Abdominal Strength	35,510	79.5	20.5	35,535	78.7	21.3	28,881	73.0	27.0
Trunk Extensor Strength	35,238	83.5	16.5	35,153	82.4	17.6	28,738	76.2	23.8
Upper Body Strength	35,249	68.6	31.4	35,205	64.6	35.4	28,599	60.7	39.3
Flexibility	35,696	64.9	35.1	35,752	66.7	33.3	29,170	63.6	36.4

Table 10: Summary of Fitness Standards Achieved for African/African American

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	7,515	20.7	7,851	21.6	5,432	18.1
5 of 6	9,690	26.7	9,140	25.1	7,040	23.4
4 of 6	8,167	22.5	7,613	20.9	6,168	20.5
3 of 6	5,471	15.1	5,383	14.8	4,319	14.4
2 of 6	2,911	8.0	3,158	8.7	2,622	8.7
1 of 6	1,328	3.7	1,587	4.4	1,608	5.4
0 of 6	1,194	3.3	1,655	4.5	2,845	9.5
Total Tested:	36,276	100.0	36,376	100.0	30,034	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.

**Table 11: Summary of Test Results for American Indian/Alaskan Native**

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	5,191	48.4	51.6	4,929	53.7	46.3	3,873	44.1	55.9
Body Composition	4,897	61.7	38.3	4,843	64.4	35.6	3,688	62.3	37.7
Abdominal Strength	5,223	75.1	24.9	4,963	80.8	19.2	3,905	77.7	22.3
Trunk Extensor Strength	5,191	82.5	17.5	4,949	88.5	11.5	3,863	80.1	19.9
Upper Body Strength	5,177	61.1	38.9	4,915	64.4	35.6	3,898	63.6	36.4
Flexibility	5,257	61.5	38.5	5,004	68.5	31.5	3,733	61.1	38.9

Table 12: Summary of Fitness Standards Achieved for American Indian/Alaskan Native

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	1,105	20.6	1,283	25.2	790	19.5
5 of 6	1,271	23.7	1,274	25.1	993	24.5
4 of 6	1,075	20.1	1,015	20.0	871	21.5
3 of 6	812	15.2	723	14.2	603	14.9
2 of 6	472	8.8	436	8.6	301	7.4
1 of 6	240	4.5	201	4.0	163	4.0
0 of 6	380	7.1	152	3.0	332	8.2
Total tested:	5,355	100.0	5,084	100.0	4,053	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.

**Table 13: Summary of Test Results for Asian/Asian American**

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	33,971	60.7	39.3	34,253	66.4	33.6	31,458	60.5	39.5
Body Composition	33,346	74.0	26.0	33,931	76.4	23.6	30,525	77.8	22.2
Abdominal Strength	34,050	82.9	17.1	33,848	86.4	13.6	31,535	86.6	13.4
Trunk Extensor Strength	33,777	86.7	13.3	34,158	90.2	9.8	31,423	85.2	14.8
Upper Body Strength	33,690	70.7	29.3	33,980	74.3	25.7	31,073	74.5	25.5
Flexibility	34,126	75.2	24.8	34,364	80.8	19.2	31,623	77.7	22.3

Table 14: Summary of Fitness Standards Achieved for Asian/Asian American

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	9,864	28.6	12,467	35.9	10,747	33.4
5 of 6	10,186	29.5	10,347	29.8	9,809	30.5
4 of 6	7,045	20.4	6,235	18.0	5,883	18.3
3 of 6	4,124	11.9	3,308	9.5	2,903	9.0
2 of 6	2,005	5.8	1,434	4.1	1,278	4.0
1 of 6	784	2.3	503	1.4	527	1.6
0 of 6	524	1.5	432	1.2	1,052	3.3
Total Tested:	34,532	100.0	34,726	100.0	32,199	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.



Table 15: Summary of Test Results for Filipino/Filipino American

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	11,314	54.3	45.7	11,738	62.6	37.4	10,892	52.1	47.9
Body Composition	11,171	67.3	32.7	11,591	71.4	28.6	10,512	71.3	28.7
Abdominal Strength	11,305	81.7	18.3	11,730	86.0	14.0	10,906	83.2	16.8
Trunk Extensor Strength	11,240	86.6	13.4	11,708	89.0	11.0	10,868	84.2	15.8
Upper Body Strength	11,214	70.3	29.7	11,696	73.3	26.7	10,834	72.2	27.8
Flexibility	11,353	72.7	27.3	11,791	79.4	20.6	10,913	74.3	25.7

Table 16: Summary of Fitness Standards Achieved for Filipino/Filipino American

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	2,837	24.7	3,917	32.9	3,109	27.7
5 of 6	3,229	28.1	3,465	29.1	3,144	28.0
4 of 6	2,482	21.6	2,206	18.5	2,341	20.9
3 of 6	1,543	13.4	1,302	10.9	1,311	11.7
2 of 6	850	7.4	617	5.2	568	5.1
1 of 6	332	2.9	198	1.7	242	2.2
0 of 6	223	1.9	201	1.7	499	4.4
Total Tested:	11,496	100.0	11,906	100.0	11,214	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.



Table 17: Summary of Test Results for Hispanic/Latino

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	213,408	53.0	47.0	197,760	54.1	45.9	162,193	42.7	57.3
Body Composition	206,707	58.3	41.7	191,307	58.8	41.2	148,222	58.4	41.6
Abdominal Strength	213,612	75.8	24.2	197,758	79.6	20.4	161,677	74.2	25.8
Trunk Extensor Strength	212,390	84.1	15.9	197,004	86.7	13.3	161,117	78.4	21.6
Upper Body Strength	212,124	59.1	40.9	196,087	61.3	38.7	160,703	59.8	40.2
Flexibility	213,960	60.0	40.0	198,366	67.0	33.0	162,796	63.4	36.6

Table 18: Summary of Fitness Standards Achieved for Hispanic/Latino

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	37,545	17.3	42,529	21.2	30,747	18.4
5 of 6	52,464	24.2	50,167	25.0	38,760	23.2
4 of 6	48,190	22.2	42,867	21.3	34,108	20.4
3 of 6	36,793	17.0	31,675	15.8	25,154	15.1
2 of 6	22,467	10.4	18,635	9.3	15,297	9.2
1 of 6	10,405	4.8	8,245	4.1	8,028	4.8
0 of 6	8,944	4.1	6,679	3.3	14,709	8.8
Total Tested:	216,808	100.0	200,797	100.0	166,803	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.



Table 19: Summary of Test Results for Pacific Islander

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	6,183	52.8	47.2	5,844	58.4	41.6	5,274	47.3	52.7
Body Composition	5,861	64.7	35.3	5,776	68.0	32.0	5,106	70.1	29.9
Abdominal Strength	6,182	79.6	20.4	5,856	85.4	14.6	5,268	83.5	16.5
Trunk Extensor Strength	6,147	83.3	16.7	5,841	88.9	11.1	5,231	85.4	14.6
Upper Body Strength	6,165	67.9	32.1	5,831	72.0	28.0	5,255	73.6	26.4
Flexibility	6,166	68.2	31.8	5,885	76.3	23.7	5,253	70.8	29.2

Table 20: Summary of Fitness Standards Achieved for Pacific Islander

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	1,467	23.4	1,770	29.8	1,377	25.5
5 of 6	1,687	26.9	1,677	28.2	1,571	29.1
4 of 6	1,315	21.0	1,149	19.3	1,162	21.5
3 of 6	841	13.4	737	12.4	609	11.3
2 of 6	455	7.3	359	6.0	285	5.3
1 of 6	158	2.5	148	2.5	116	2.1
0 of 6	343	5.5	102	1.7	285	5.3
Total Tested:	6,266	100.0	5,942	100.0	5,405	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.



Table 21: Summary of Test Results for White – Not of Hispanic Origin

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	143,281	62.3	37.7	150,710	64.9	35.1	131,097	56.5	43.5
Body Composition	141,257	72.8	27.2	149,095	72.5	27.5	127,489	72.7	27.3
Abdominal Strength	144,153	84.2	15.8	151,042	86.9	13.1	131,388	85.5	14.5
Trunk Extensor Strength	143,459	88.3	11.7	150,842	90.0	10.0	131,094	86.5	13.5
Upper Body Strength	142,874	70.7	29.3	149,707	71.0	29.0	130,338	71.1	28.9
Flexibility	144,553	69.5	30.5	152,001	73.5	26.5	131,748	71.5	28.5

Table 22: Summary of Fitness Standards Achieved for White – Not of Hispanic Origin

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	No.	%	No.	%	No.	%
6 of 6	44,755	30.5	51,993	33.7	41,250	30.5
5 of 6	40,998	27.9	43,479	28.2	38,591	28.5
4 of 6	27,911	19.0	27,394	17.8	24,927	18.4
3 of 6	16,885	11.5	16,142	10.5	14,366	10.6
2 of 6	8,966	6.1	8,221	5.3	7,201	5.3
1 of 6	3,923	2.7	3,295	2.1	3,162	2.3
0 of 6	3,400	2.3	3,587	2.3	5,866	4.3
Total Tested:	146,838	100.0	154,111	100.0	135,363	100.0

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.



Table 23: Comparison of Test Results — 2002 & 2003

Physical Fitness Area	Grade 5		Grade 7		Grade 9	
	2002 % In HFZ*	2003 % In HFZ	2002 % In HFZ	2003 % In HFZ	2002 % In HFZ	2003 % In HFZ
Aerobic Capacity	56.5	56.4	57.4	58.5	47.5	48.9
Body Composition	65.9	65.0	66.3	65.6	64.7	65.4
Abdominal Strength	78.1	79.5	80.7	82.7	77.7	79.3
Trunk Extensor Strength	84.1	85.6	86.4	87.8	79.7	81.8
Upper Body Strength	62.5	64.9	62.2	66.4	61.1	65.5
Flexibility	63.7	65.0	69.3	70.7	65.5	67.8

Table 24: Comparison of Fitness Standards Achieved — 2002 & 2003

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	2002 %	2003 %	2002 %	2003 %	2002 %	2003 %
6 of 6	22.2	23.0	25.9	27.1	22.7	24.1
5 of 6	25.6	26.1	26.2	26.6	25.2	25.9
4 of 6	21.1	21.0	19.7	19.7	19.5	19.6
3 of 6	14.7	14.5	13.1	13.2	12.9	12.8
2 of 6	8.5	8.3	7.3	7.3	7.0	7.1
1 of 6	3.8	3.7	3.2	3.2	3.5	3.6
0 of 6	4.1	3.3	4.5	2.9	9.3	6.9

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.



Table 25: Comparison of Results for Females — 2002 & 2003

Physical Fitness Area	Grade 5		Grade 7		Grade 9	
	2002 % In HFZ*	2003 % In HFZ	2002 % In HFZ	2003 % In HFZ	2002 % In HFZ	2003 % In HFZ
Aerobic Capacity	57.5	57.1	59.1	60.2	43.4	44.8
Body Composition	74.8	73.5	72.2	71.3	66.6	66.9
Abdominal Strength	78.1	78.8	80.9	82.2	78.1	79.4
Trunk Extensor Strength	85.2	86.3	87.8	88.8	81.3	83.0
Upper Body Strength	59.0	61.1	60.3	64.3	60.0	64.2
Flexibility	66.8	68.2	73.0	74.5	66.4	69.0

Table 26: Comparison of Fitness Standards for Females — 2002 & 2003

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	2002 %	2003 %	2002 %	2003 %	2002 %	2003 %
6 of 6	23.4	24.5	27.3	28.8	21.0	22.4
5 of 6	26.5	26.9	27.0	27.3	25.6	26.4
4 of 6	21.7	21.0	20.0	19.7	20.9	20.9
3 of 6	14.3	13.7	12.7	12.5	13.5	13.3
2 of 6	7.9	7.5	6.7	6.5	7.0	7.1
1 of 6	3.5	3.3	2.8	2.7	3.5	3.4
0 of 6	2.8	3.1	3.4	2.5	8.5	6.5

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.



Table 27: Comparison of Results for Males — 2002 & 2003

Physical Fitness Area	Grade 5		Grade 7		Grade 9	
	2002 % In HFZ*	2003 % In HFZ	2002 % In HFZ	2003 % In HFZ	2002 % In HFZ	2003 % In HFZ
Aerobic Capacity	56.6	55.8	56.9	56.9	52.1	52.8
Body Composition	58.3	57.0	61.8	60.2	63.8	64.1
Abdominal Strength	79.6	80.2	81.9	83.3	78.5	79.3
Trunk Extensor Strength	84.5	85.0	86.6	86.8	79.4	80.7
Upper Body Strength	67.0	68.7	65.0	68.6	63.0	66.9
Flexibility	61.8	62.0	66.9	67.2	65.6	66.6

Table 28: Comparison of Fitness Standards for Males — 2002 & 2003

Number of Fitness Standards Achieved	Grade 5		Grade 7		Grade 9	
	2002 %	2003 %	2002 %	2003 %	2002 %	2003 %
6 of 6	21.5	21.7	25.0	25.5	24.6	25.7
5 of 6	25.2	25.4	25.8	26.0	25.2	25.5
4 of 6	21.0	21.0	19.7	19.7	18.5	18.5
3 of 6	15.3	15.2	13.7	13.9	12.4	12.4
2 of 6	9.2	9.0	8.1	8.1	7.0	7.1
1 of 6	4.2	4.2	3.7	3.6	3.6	3.7
0 of 6	3.5	3.5	4.0	3.2	8.7	7.2

*HFZ = Healthy Fitness Zone

**Total Tested = Number of students tested, including partially tested students.



Appendix A

FITNESSGRAM

Standards for Healthy Fitness Zone *

FEMALES

Age	One Mile min:sec	PACER # laps	Walk Test VO _{2max} ml/kg/min***	Percent Fat	Body Mass Index	Curl-Up # completed
10	12:30 — 9:30	15 — 41	40 — 48	32 — 17	23.5 — 16.6	12 — 26
11	12:00 — 9:00	15 — 41	39 — 47	32 — 17	24 — 16.9	15 — 29
12	12:00 — 9:00	23 — 41	38 — 46	32 — 17	24.5 — 16.9	18 — 32
13	11:30 — 9:00	23 — 51	37 — 45	32 — 17	24.5 — 17.5	18 — 32
14	11:00 — 8:30	23 — 51	36 — 44	32 — 17	25 — 17.5	18 — 32
15	10:30 — 8:00	23 — 51	35 — 43	32 — 17	25 — 17.5	18 — 35
16	10:00 — 8:00	32 — 61	35 — 43	32 — 17	25 — 17.5	18 — 35

Age	Trunk Lift inches	Push-Up # completed	Modified Pull-Up # completed	Pull-Up # completed	Flexed Arm Hang seconds	Back-Saver Sit & Reach ** inches	Shoulder Stretch
10	9 — 12	7 — 15	4 — 13	1 — 2	4 — 10	9	Passing = Touching the fingertips together behind the back.
11	9 — 12	7 — 15	4 — 13	1 — 2	6 — 12	10	
12	9 — 12	7 — 15	4 — 13	1 — 2	7 — 12	10	
13	9 — 12	7 — 15	4 — 13	1 — 2	8 — 12	10	
14	9 — 12	7 — 15	4 — 13	1 — 2	8 — 12	10	
15	9 — 12	7 — 15	4 — 13	1 — 2	8 — 12	12	
16	9 — 12	7 — 15	4 — 13	1 — 2	8 — 12	12	

MALES

Age	One Mile min:sec	PACER # laps	Walk Test VO _{2max} ml/kg/min***	Percent Fat	Body Mass Index	Curl-Up # completed
10	11:30 — 9:00	23 — 61	42 — 52	25 — 10	21 — 15.3	12 — 24
11	11:00 — 8:30	23 — 72	42 — 52	25 — 10	21 — 15.8	15 — 28
12	10:30 — 8:00	32 — 72	42 — 52	25 — 10	22 — 16.0	18 — 36
13	10:00 — 7:30	41 — 72	42 — 52	25 — 10	23 — 16.6	21 — 40
14	9:30 — 7:00	41 — 83	42 — 52	25 — 10	24.5 — 17.5	24 — 45
15	9:00 — 7:00	51 — 94	42 — 52	25 — 10	25 — 18.1	24 — 47
16	8:30 — 7:00	61 — 94	42 — 52	25 — 10	26.5 — 18.5	24 — 47

Age	Trunk Lift inches	Push-Up # completed	Modified Pull-Up # completed	Pull-Up # completed	Flexed Arm Hang seconds	Back-Saver Sit & Reach ** inches	Shoulder Stretch
10	9 — 12	7 — 20	5 — 15	1 — 2	4 — 10	8	Passing = Touching the fingertips together behind the back.
11	9 — 12	8 — 20	6 — 17	1 — 3	6 — 13	8	
12	9 — 12	10 — 20	7 — 20	1 — 3	6 — 13	8	
13	9 — 12	12 — 25	8 — 22	1 — 4	12 — 17	8	
14	9 — 12	14 — 30	9 — 25	2 — 5	15 — 20	8	
15	9 — 12	16 — 35	10 — 27	3 — 7	15 — 20	8	
16	9 — 12	18 — 35	12 — 30	5 — 8	15 — 20	8	

* Number on left is lower end of HFZ; number on right is upper end of HFZ.

** Test scored Pass/Fail; must reach this distance to pass.

*** VO_{2max} reflects the maximum rate that oxygen can be taken up and utilized by the body during exercise.