CALIFORNIA PHYSICAL FITNESS TEST 1999

REPORT TO THE GOVERNOR AND LEGISLATURE

PREPARED BY THE CALIFORNIA DEPARTMENT OF EDUCATION
STANDARDS AND ASSESSMENT DIVISION
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California Physical Fitness Test
Report to Governor and Legislature
1999

Executive Summary

In the spring of 1999, physical fitness testing was conducted in California for students in grades 5, 7, and 9. The test that was used was the *Fitnessgram*, which assesses six major fitness areas, including aerobic capacity, body composition, trunk extensor strength and flexibility, upper body strength and flexibility, abdominal strength and endurance, and overall flexibility

The results of the test indicate that most students at all three grade levels are not fit, based upon the standards established for the *Fitnessgram* by the Cooper Institute for Aerobics Research. Full and complete public access to the data will be available via Internet in January 2000, providing state, county, district and school reports.

Both males and females 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. Districts and schools are encouraged to use the data from this test to examine their physical education programs and plan improvements in their current programs.

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Introduction

In the spring of 1999, physical fitness testing was conducted in California for students in grades 5, 7, and 9. The test that was used was the *Fitnessgram*. This report summarizes the results of the 1999 testing.

Background

Assembly Bill 265, signed into law in October 1995 (E.C. Section 2, Chapter 6. Section 60800) re-established the statewide physical performance test and mandated that:

> "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."

AB265 also required that the physical fitness testing data be collected at least once every two years. 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 Legislature at least once every two years. This report is to standardize data, track the development of high-quality fitness programs, and compare the performance of California's pupils to national norms.

All students in the specified grades were expected take the physical fitness test, regardless of whether they were in a physical education class or not. Students who were physically unable to take all of the physical fitness test were to be given as much of the test as conditions permitted.

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* program 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 each performance task so that all students, including those with special needs, have the maximum opportunity to complete the test. This availability of options is especially important in measurement of body composition, which is the component of physical fitness that tends to be the most controversial due to assessment method. With an additional alternative for body composition measurement, districts were more comfortable completing that section of the fitness test.

Physical fitness consists of three components: 1) aerobic capacity, 2) body composition, and 3) muscular strength, endurance, and flexibility. To ensure thorough measurement of all three components, the *Fitnessgram* test assesses the following six major fitness areas, with several performance tasks for each area.

Aerobic Capacity
- Pacer
- Mile Walk/Run
- Walk Test

Abdominal Strength and Endurance
- Curl-up

Upper Body Strength and Flexibility
- Push-up
- Modified Pull-up
- Pull-up
- Flexed Arm Hang

Body Composition
- Percent Fat
- Body Mass Index

Trunk Extensor Strength and Flexibility
- Trunk Lift

Flexibility
- Back-saver Sit and Reach
- Shoulder Stretch

To complete the *Fitnessgram*, students were required to be tested in the following:
- one of the options from aerobic capacity
- one of the options from body composition
- one of the options from upper body strength
- the curl-up test
- the trunk lift test

The flexibility component was optional, since most young people tend to be quite flexible.

A brief description of the major areas of *Fitnessgram* and the alternative tasks are included here.

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

The Pacer (Progressive Aerobic Cardiovascular Endurance Run). This is a multi-stage fitness test set to music, which provides a valid, engaging alternative to the customary distance run. It is strongly encouraged for students K – 3, but may be used for all ages. The objective is to run as long as possible back and forth across a 20-meter distance at a specified pace that increases each minute.

One Mile Walk/Run. The objective is to walk and/or run a mile distance at the fastest pace possible.

Walk Test. The objective is to walk a one mile distance as quickly as possible while maintaining a constant walking pace the entire distance. This test is for students ages 13 and older. It is scored in minutes, seconds, and heart rate.

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 made up of muscles, bones, and organs.

Percent Fat. Measurements of the thickness of the skinfold on the back of the upper 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 and a body mass index number is calculated. Although not as accurate an indicator of body composition, districts and schools find this measurement less controversial 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 Test. 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 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 12 inches off the floor using the muscles of the back and to hold the position to allow for the measurement.

Upper Body Strength and Endurance. This test measures the strength and endurance of the upper body and is related to maintenance of correct 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.

Modified Pull-up. The objective of this test is to successfully complete as many modified pull-ups as possible.

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 with the chin above a bar as long as possible.

Flexibility. Flexibility is generally not a problem for young people. Thus this item is optional.

Back Saver Sit and Reach. The objective is to assess the flexibility of the lower back and posterior thigh. The student should be able to reach a specified distance while sitting at a sit-and-reach box. Both the right and left side of the body are measured

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 the 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 based on the United States national norms have been used as the basis for establishing the *Fitnessgram* standards.

Performance is classified into two general areas: "in the healthy fitness zone (HFZ)" and "not in the HFZ." Appendix 1 provides a list of the standards for the HFZ. All students should strive to achieve a score within the HFZ. It is possible that some students score above the HFZ. For the purpose of this report, scores are reported as meeting the standard (falling in the fitness zone) or not meeting the standard (falling lower than the HFZ).

Data Collection

Statewide data collection in 1998-99 was done electronically. Districts submitted their data to CDE by July 15, 1999 through the Internet, or by diskette, CD-ROM, data tape, or through e-mail. The data collection process put in place for this program is serving as a successful pilot of technologies that will be used in other parts of the state testing system, including the Standardized Testing and Reporting (STAR) program and the Golden State Examination (GSE) program.

Fitness test results will be reported via Internet in January 2000. The results will be presented by school, county, district, and state. These results will be available on the California Department of Education website at http://www.cde.ca.gov/cilbranch/sca. No individual student data will be reported on Internet.

Results

Data from the 1999 physical fitness test were reported for 77 percent of all grade 5 students, 74 percent of all grade 7 students, and 60 percent of all grade 9 students for a total of 1,039,449 students. The optional flexibility assessment was completed by 70 percent of all grade 5 students, 68 percent of all grade 7 students, and 54 percent of all grade 9 students. The body composition assessment was completed by 75 percent, 72 percent and 58 percent of all grade 5, 7, and 9 students respectively.

Data was collected from approximately 70 percent of school districts. Participation improved from 46 percent in 1996-97, nevertheless, participation in physical fitness testing appears to have been affected by the following:

- the logistical and fiscal impact on districts having to acquire test materials and train staff without state or other resources
- the logistical and fiscal burden of creating data files to be transferred to the state

- a lack of appropriate facilities in which to conduct testing
- coordination time for district and school staff, especially during a time when there are many other testing requirements

Table 1 presents the gender and racial/ethnic composition of the student population participating in physical fitness testing.

In Table 2, the overall results are reported in two ways. First, the percentage of students in the healthy fitness zone (HFZ) for each fitness task is reported. A student not in the fitness zone has not met the minimum level of fitness for that fitness task. As this section of the table shows, for every fitness task, a significant percentage of students do not meet minimum fitness levels. A summary of this section of Table 2 follows:

- aerobic capacity: across all grades, 40-50% of students were not in the HFZ
- body composition: across all grades, 30-40% of students were not in the HFZ
- upper body strength: across all grades, 40% of students were not in the HFZ
- abdominal strength: across all grades, 18-20% of students were not in the HFZ
- trunk strength: across all grades, 13-20% of students were not in the HFZ
- flexibility: across all grades, 30-35% of students were not in HFZ

Of concern is the percent of students that were not in the HFZ for flexibility. The test developers considered this task optional because students are, by nature, flexible at these ages. Based upon the results in California, where as many as 35% students did not fall in the HFZ, flexibility should not be considered optional in future years.

Table 2 also reports achievement of six, five, four, three, two, one, or none of the six fitness standards. Achievement of the fitness standards is based upon a test score falling in the HFZ. Since each of the six tasks measures a different aspect of fitness, and since the fitness standard (HFZ) represents minimal levels of satisfactory achievement on the tasks, a student must meet all of the fitness standards before he or she is considered fit. Students meeting six of six fitness standards can be considered the total percentage of students in the specified grade that are fit. Table 2 shows that 20 percent of grade 5, 22 percent of grade 7, and 20 percent of grade 9 students met six fitness standards. The rows in Table 2 that display the percentage of students achieving 5, 4, 3, 2, 1, or no standards indicate how much improvement is needed before the students can be considered fit.

Subgroup data are presented in tables 3 - 10. Table 3 shows that approximately one in five students regardless of gender met six of six fitness standards. Table 3 also shows that at grades 5 and 7, more females than males met all six fitness standards, while at grade 9, more males than females did. Across all grade levels, more females than males were in the HFZ for flexibility and body composition, while more males than females were in the fitness zone for upper body strength.

No one racial/ethnic group exhibited high levels of fitness, but tables 4 – 10 show there are differences among ethnic groups and the characteristics of these differences change over the grade levels.

Tracking High-quality Fitness Programs

The 1999 physical fitness testing data should be considered baseline data, as this is the first time in nearly a decade that statewide collection and reporting of information about the fitness levels of students has occurred. Thus, tracking of high quality fitness programs through trends in physical fitness data over time will begin after the 2000 – 2001 fitness test, when statewide data will be collected and reported again. However, identification of quality physical education programs has existed in California through the two recognition programs described below. The addition of physical fitness data to the program criteria will serve to enrich these two programs in the future.

Each year, schools in California with exemplary programs in health education and physical education are identified and recognized through the California Physical Education and Health Education Exemplary School award program. The award program is a collaborative effort by the California Department of Education; the American Cancer Society, California Division; and the Governor's Council on Physical Fitness and Sports. As part of the application process, schools submit a self-scoring rubric which examines various areas of their health education and physical education programs, including: curriculum, professional development, instructional strategies, assessment, learning environment, family/school/community involvement and coordination, and after-school enrichment programs. In 1998-99, four California public schools were named as recipients of the award. These schools join sixteen other schools named as award recipients in the three previous years.

In addition, each year the California Association of Health, Physical Education, Recreation and Dance (CAHPERD) has recognized outstanding programs in elementary, middle and secondary physical education. The criteria for selection include compliance with the *Physical Education Framework for California Public Schools*, compliance with the spirit and intent of the Title IX guidelines, and evidence of a physical education staff that demonstrates a variety of instructional strategies that create opportunities for all students to succeed. An award was made in 1999 to an exemplary elementary school program, however, awards have not been made at the middle and high school level since 1995.

Summary

The data indicate that most students at all three grade levels are not fit, based upon standards established by the Cooper Institute for the *Fitnessgram*, a measurement of fitness levels used nationally. Both males and females from all ethnic backgrounds could benefit from greater emphasis on all areas of physical fitness, especially aerobic capacity, body composition, upper body strength and flexibility. Districts and schools are encouraged to use the data from this test to examine their physical education programs and plan improvements in their current programs.

Two efforts currently exist to identify exemplary physical education programs in California. Building upon these efforts, identification of exemplary physical fitness programs will be a priority for the future. Results of physical fitness testing will provide additional evidence in the selection of exemplary programs.

This report is the first in ten years to provide quality data about the fitness of California's youth. Full and complete public access to these data will be available via Internet, providing reports for every county, district and school. Teachers, parents, and administrators will have the opportunity to examine the fitness levels of their children and use this information to make program changes that will lead to improved fitness levels. A child who is well-educated physically is more likely to be academically motivated, alert, and successful.

Table 1

1999 California Physical Fitness Test
Composition of Tested Population

Gender

	Grade 5		Grade 7		Grade 9	
Students Tested	**No.**	**%**	**No.**	**%**	**No.**	**%**
Females	169,827	49.0	154,732	49.0	135,297	48.6
Males	176,681	50.9	160,862	50.9	142,050	51.1
No Gender Information	387	0.1	256	0.1	871	0.3

Race/Ethnicity

	Grade 5		Grade 7		Grade 9	
Students Tested	**No.**	**%**	**No.**	**%**	**No.**	**%**
African/African American	28,528	8.2	25,033	7.9	19,462	7.0
American Indian/Alaskan Native	3,853	1.1	3,371	1.1	2,952	1.1
Asian/Asian American	29,143	8.4	27,004	8.5	25,983	9.3
Filipino/Filipino American	9,402	2.7	8,997	2.8	8,087	2.9
Hispanic/Latino	136,293	39.3	119,183	37.7	104,707	37.6
Pacific Islander	3,679	1.1	3,606	1.1	3,091	1.1
White – Not of Hispanic Origin	121,513	35.0	112,954	35.8	96,866	34.8
Non-Response	14,484	4.2	15,702	5.0	17,070	6.1

Table 2

1999 California Physical Fitness Test
Summary of Results

	Grade 5			Grade 7			Grade 9		
Physical Fitness Tests	**No. Tested**	**% in HFZ ***	**% Not In HFZ**	**No. Tested**	**% in HFZ**	**% Not In HFZ**	**No. Tested**	**% in HFZ**	**% Not In HFZ**
Aerobic Capacity	338,905	58.3	41.7	306,492	58.6	41.4	266,583	48.6	51.4
Body Composition	337,517	67.6	32.4	308,150	66.8	33.2	269,893	67.4	32.6
Abdominal Strength	339,054	80.0	20.0	306,659	81.6	18.4	266,828	79.5	20.5
Trunk Extension Strength	336,849	85.2	14.8	305,185	86.9	13.1	263,178	80.3	19.7
Upper Body Strength	333,168	62.5	37.5	301,371	60.7	39.3	262,351	60.5	39.5
Flexibility	317,951	64.7	35.3	293,763	70.0	30.0	250,170	69.8	30.2

Number of fitness standards achieved	Grade 5			Grade 7			Grade 9		
	No.	**%**	**Cum. %**	**No.**	**%**	**Cum. %**	**No.**	**%**	**Cum. %**
6 of 6 fitness standards	67,904	19.6	19.6	69,509	22.0	22.0	53,788	19.4	19.4
5 of 6 fitness standards	90,572	26.1	45.7	82,508	26.1	48.2	70,083	25.3	44.7
4 of 6 fitness standards	77,113	22.3	68.0	66,319	21.0	69.2	57,723	20.8	65.5
3 of 6 fitness standards	53,157	15.3	83.3	45,154	14.3	83.5	38,118	13.7	79.2
2 of 6 fitness standards	28,783	8.3	91.6	24,436	7.7	91.2	20,204	7.3	86.5
1 of 6 fitness standards	12,074	3.5	95.1	10,326	3.3	94.5	9,492	3.4	89.9
0 of 6 fitness standards	16,905	4.9	100.0	17,342	5.5	100.0	27,939	10.1	100.0
Total tested:	346,508	99.7	0.0	315,594	99.6	0.0	277,347	98.9	0.0

* HFZ = Healthy Fitness Zone

Table 3

1999 California Physical Fitness Test
Subgroup Results – Gender

Females

Percent of FEMALES in HFZ for:	Grade 5			Grade 7			Grade 9		
	No. Tested	% in HFZ *	% Not In HFZ	No. Tested	% in HFZ	% Not In HFZ	No. Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	166,051	57.9	42.1	150,214	58.3	41.7	129,707	42.5	57.5
Body Composition	165,436	74.3	25.7	151,351	70.9	29.1	131,716	68.8	31.2
Abdominal Strength	166,187	79.0	21.0	150,380	80.9	19.1	130,190	79.2	20.8
Trunk Extension Strength	165,135	85.5	14.5	149,675	87.5	12.5	128,452	81.5	18.5
Upper Body Strength	162,995	57.2	42.8	147,688	56.8	43.2	127,958	56.6	43.4
Flexibility	156,062	70.1	29.9	144,483	77.3	22.7	122,709	77.1	22.9

Percent of FEMALES who achieved:	Grade 5			Grade 7			Grade 9		
	No.	%	Cum. %	No.	%	Cum. %	No.	%	Cum. %
6 of 6 fitness standards	34,704	20.4	20.4	35,848	23.2	23.2	24,764	18.3	18.3
5 of 6 fitness standards	44,678	26.3	46.7	40,806	26.4	49.5	33,912	25.1	43.4
4 of 6 fitness standards	38,658	22.8	69.5	33,212	21.5	71.0	30,049	22.2	65.6
3 of 6 fitness standards	25,599	15.1	84.6	21,608	14.0	85.0	19,531	14.4	80.0
2 of 6 fitness standards	13,040	7.7	92.3	10,938	7.1	92.0	9,600	7.1	87.1
1 of 6 fitness standards	5,317	3.1	95.4	4,417	2.9	94.9	4,327	3.2	90.3
0 of 6 fitness standards	7,831	4.6	100.0	7,903	5.1	100.0	13,114	9.7	100.0
Total tested:	169,827	99.7	0.0	154,732	99.7	0.0	135,297	99.0	0.0

Males

Percent of MALES in HFZ for:	Grade 5			Grade 7			Grade 9		
	No. Tested	% in HFZ	% Not In HFZ	No. Tested	% in HFZ	% Not In HFZ	No. Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	172,854	58.6	41.4	156,278	58.8	41.2	136,876	54.4	45.6
Body Composition	172,081	61.2	38.8	156,799	62.8	37.2	138,177	66.0	34.0
Abdominal Strength	172,867	80.9	19.1	156,279	82.3	17.7	136,638	79.8	20.2
Trunk Extension Strength	171,714	85.0	15.0	155,510	86.3	13.7	134,726	79.1	20.9
Upper Body Strength	170,173	67.5	32.5	153,683	64.5	35.5	134,393	64.3	35.7
Flexibility	161,889	59.5	40.5	149,280	63.0	37.0	127,461	62.8	37.2

Percent of MALES who achieved:	Grade 5			Grade 7			Grade 9		
	No.	%	Cum. %	No.	%	Cum. %	No.	%	Cum. %
6 of 6 fitness standards	33,200	18.8	18.8	33,661	20.9	20.9	29,024	20.4	20.4
5 of 6 fitness standards	45,894	26.0	44.8	41,702	25.9	46.8	36,171	25.5	45.9
4 of 6 fitness standards	38,455	21.8	66.5	33,107	20.6	67.4	27,674	19.5	65.4
3 of 6 fitness standards	27,558	15.6	82.1	23,546	14.6	82.1	18,587	13.1	78.5
2 of 6 fitness standards	15,743	8.9	91.0	13,498	8.4	90.5	10,604	7.5	85.9
1 of 6 fitness standards	6,757	3.8	94.9	5,909	3.7	94.1	5,165	3.6	89.6
0 of 6 fitness standards	9,074	5.1	100.0	9,439	5.9	100.0	14,825	10.4	100.0
Total tested:	176,681	99.7	0.0	160,862	99.6	0.0	142,050	98.8	0.0

* HFZ = Healthy Fitness Zone

Table 4

1999 California Physical Fitness Test
Subgroup Results – Ethnicity
African/African American

	Grade 5			Grade 7			Grade 9		
Percent of African/African American students in HFZ for:	**No. Tested**	**% in HFZ ***	**% Not In HFZ**	**No. Tested**	**% in HFZ**	**% Not In HFZ**	**No. Tested**	**% in HFZ**	**% Not In HFZ**
Aerobic Capacity	27,574	50.8	49.2	23,793	47.3	52.7	18,234	37.9	62.1
Body Composition	27,772	66.4	33.6	24,302	64.9	35.1	18,589	60.8	39.2
Abdominal Strength	27,531	77.4	22.6	23,970	75.4	24.6	18,301	69.7	30.3
Trunk Extension Strength	27,356	80.5	19.5	23,835	82.5	17.5	18,077	71.5	28.5
Upper Body Strength	27,097	60.6	39.4	23,474	56.3	43.7	17,743	51.8	48.2
Flexibility	26,222	59.6	40.4	22,716	62.3	37.7	17,178	61.5	38.5

Percent of African/African American students who achieved:	Grade 5			Grade 7			Grade 9		
	No.	**%**	**Cum. %**	**No.**	**%**	**Cum. %**	**No.**	**%**	**Cum. %**
6 of 6 fitness standards	4,460	15.6	15.6	3,852	15.4	15.4	2,593	13.3	13.3
5 of 6 fitness standards	6,814	23.9	39.5	5,746	23.0	38.3	4,065	20.9	34.2
4 of 6 fitness standards	6,604	23.1	62.7	5,435	21.7	60.1	3,848	19.8	54.0
3 of 6 fitness standards	4,712	16.5	79.2	4,166	16.6	76.7	2,726	14.0	68.0
2 of 6 fitness standards	2,626	9.2	88.4	2,410	9.6	86.3	1,645	8.5	76.4
1 of 6 fitness standards	1,208	4.2	92.6	1,224	4.9	91.2	903	4.6	81.1
0 of 6 fitness standards	2,104	7.4	100.0	2,200	8.8	100.0	3,682	18.9	100.0
Total tested:	28,528	99.4	0.0	25,033	99.3	0.0	19,462	97.5	0.0

* HFZ = Healthy Fitness Zone

Table 5

1999 California Physical Fitness Test
Subgroup Results – Ethnicity
American Indian/Alaskan Native

	Grade 5			Grade 7			Grade 9		
Percent of American Indian/Alaskan Native students in HFZ for:	**No. Tested**	**% in HFZ ***	**% Not In HFZ**	**No. Tested**	**% in HFZ**	**% Not In HFZ**	**No. Tested**	**% in HFZ**	**% Not In HFZ**
Aerobic Capacity	3,758	54.3	45.7	3,275	54.0	46.0	2,874	45.2	54.8
Body Composition	3,728	66.8	33.2	3,307	64.9	35.1	2,912	64.3	35.7
Abdominal Strength	3,774	79.0	21.0	3,295	78.8	21.2	2,887	76.2	23.8
Trunk Extension Strength	3,767	84.5	15.5	3,270	81.5	18.5	2,867	78.4	21.6
Upper Body Strength	3,745	60.5	39.5	3,238	58.3	41.7	2,854	56.7	43.3
Flexibility	3,267	62.4	37.6	3,094	69.0	31.0	2,568	67.0	33.0

Percent of American Indian/Alaskan Native students who achieved:	Grade 5			Grade 7			Grade 9		
	No.	**%**	**Cum. %**	**No.**	**%**	**Cum. %**	**No.**	**%**	**Cum. %**
6 of 6 fitness standards	650	16.9	16.9	669	19.8	19.8	581	19.7	19.7
5 of 6 fitness standards	918	23.8	40.7	804	23.9	43.7	664	22.5	42.2
4 of 6 fitness standards	914	23.7	64.4	726	21.5	65.2	573	19.4	61.6
3 of 6 fitness standards	653	16.9	81.4	521	15.5	80.7	434	14.7	76.3
2 of 6 fitness standards	366	9.5	90.9	283	8.4	89.1	220	7.5	83.7
1 of 6 fitness standards	159	4.1	95.0	131	3.9	93.0	118	4.0	87.7
0 of 6 fitness standards	193	5.0	100.0	237	7.0	100.0	362	12.3	100.0
Total tested:	3,853	99.6	0.0	3,371	99.7	0.0	2,952	99.6	0.0

* HFZ = Healthy Fitness Zone

Table 6

1999 California Physical Fitness Test
Subgroup Results – Ethnicity
Asian/Asian American

Percent of Asian/Asian American students in HFZ for:	Grade 5			Grade 7			Grade 9		
	No. Tested	% in HFZ *	% Not In HFZ	No. Tested	% in HFZ	% Not In HFZ	No. Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	28,759	60.2	39.8	26,621	66.5	33.5	25,561	55.1	44.9
Body Composition	28,163	75.4	24.6	26,470	77.1	22.9	25,694	76.6	23.4
Abdominal Strength	28,781	81.6	18.4	26,546	84.5	15.5	25,520	82.5	17.5
Trunk Extension Strength	28,521	85.3	14.7	26,547	88.7	11.3	25,250	80.7	19.3
Upper Body Strength	28,386	66.6	33.4	26,279	68.0	32.0	25,214	67.1	32.9
Flexibility	27,360	71.9	28.1	25,976	77.4	22.6	23,886	76.1	23.9

Percent of Asian/Asian American students who achieved:	Grade 5			Grade 7			Grade 9		
	No.	%	Cum. %	No.	%	Cum. %	No.	%	Cum. %
6 of 6 fitness standards	6,936	23.8	23.8	8,583	31.8	31.8	6,776	26.1	26.1
5 of 6 fitness standards	8,232	28.2	52.0	7,808	28.9	60.7	7,499	28.9	54.9
4 of 6 fitness standards	6,523	22.4	74.4	5,051	18.7	79.4	5,216	20.1	75.0
3 of 6 fitness standards	3,898	13.4	87.8	2,816	10.4	89.8	2,783	10.7	85.7
2 of 6 fitness standards	1,847	6.3	94.1	1,203	4.5	94.3	1,197	4.6	90.3
1 of 6 fitness standards	674	2.3	96.5	455	1.7	96.0	492	1.9	92.2
0 of 6 fitness standards	1,033	3.5	100.0	1,088	4.0	100.0	2,020	7.8	100.0
Total tested:	29,143	99.9	0.0	27,004	99.9	0.0	25,983	99.7	0.0

* HFZ = Healthy Fitness Zone

Table 7

1999 California Physical Fitness Test
Subgroup Results – Ethnicity
Filipino/Filipino American

Percent of Filipino/Filipino American students in HFZ for:	Grade 5			Grade 7			Grade 9		
	No. Tested	% in HFZ *	% Not In HF	No. Tested	% in HFZ	% Not In HFZ	No. Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	9,258	55.2	44.8	8,845	59.2	40.8	7,893	49.2	50.8
Body Composition	9,099	65.9	34.1	8,866	67.2	32.8	7,968	72.7	27.3
Abdominal Strength	9,271	82.6	17.4	8,810	85.3	14.7	7,841	82.0	18.0
Trunk Extension Strength	9,224	85.1	14.9	8,794	88.8	11.2	7,792	82.1	17.9
Upper Body Strength	9,145	66.9	33.1	8,744	67.8	32.2	7,823	66.4	33.6
Flexibility	8,838	71.3	28.7	8,473	78.0	22.0	7,346	74.8	25.2

Percent of Filipino/Filipino American students who achieved:	Grade 5			Grade 7			Grade 9		
	No.	%	Cum. %	No.	%	Cum. %	No.	%	Cum. %
6 of 6 fitness standards	1,849	19.7	19.7	2,161	24.0	24.0	1,817	22.5	22.5
5 of 6 fitness standards	2,636	28.0	47.7	2,649	29.4	53.5	2,269	28.1	50.5
4 of 6 fitness standards	2,202	23.4	71.1	1,992	22.1	75.6	1,735	21.5	72.0
3 of 6 fitness standards	1,432	15.2	86.4	1,187	13.2	88.8	985	12.2	84.2
2 of 6 fitness standards	701	7.5	93.8	566	6.3	95.1	429	5.3	89.5
1 of 6 fitness standards	250	2.7	96.5	184	2.0	97.1	185	2.3	91.8
0 of 6 fitness standards	332	3.5	100.0	258	2.9	100.0	667	8.2	100.0
Total tested:	9,402	99.8	0.0	8,997	99.9	0.0	8,087	99.4	0.0

* HFZ = Healthy Fitness Zone

Table 8

1999 California Physical Fitness Test
Subgroup Results – Ethnicity
Hispanic/Latino

Percent of Hispanic/Latino students in HFZ for:	Grade 5			Grade 7			Grade 9		
	No. Tested	% in HFZ *	% Not In HF	No. Tested	% in HFZ	% Not In HFZ	No. Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	133,211	56.0	44.0	114,917	53.9	46.1	99,079	44.5	55.5
Body Composition	133,601	62.2	37.8	116,119	60.9	39.1	100,709	62.7	37.3
Abdominal Strength	132,870	76.9	23.1	114,720	78.8	21.2	98,830	77.1	22.9
Trunk Extension Strength	132,186	84.9	15.1	114,235	87.4	12.6	97,529	80.1	19.9
Upper Body Strength	129,440	57.5	42.5	112,230	55.4	44.6	96,695	56.2	43.8
Flexibility	126,931	61.5	38.5	111,452	67.5	32.5	93,996	68.6	31.4

Percent of Hispanic/Latino students who achieved:	Grade 5			Grade 7			Grade 9		
	No.	%	Cum. %	No.	%	Cum. %	No.	%	Cum. %
6 of 6 fitness standards	20,870	15.3	15.3	19,701	16.5	16.5	15,371	14.7	14.7
5 of 6 fitness standards	32,988	24.2	39.5	28,620	24.0	40.5	23,890	22.8	37.5
4 of 6 fitness standards	31,718	23.3	62.8	26,804	22.5	63.0	22,951	21.9	59.4
3 of 6 fitness standards	24,355	17.9	80.7	20,693	17.4	80.4	17,271	16.5	75.9
2 of 6 fitness standards	14,265	10.5	91.1	12,142	10.2	90.6	10,148	9.7	85.6
1 of 6 fitness standards	6,127	4.5	95.6	5,330	4.5	95.1	4,838	4.6	90.2
0 of 6 fitness standards	5,970	4.4	100.0	5,893	4.9	100.0	10,238	9.8	100.0
Total tested:	136,293	99.7	0.0	119,183	99.5	0.0	104,707	98.2	0.0

* HFZ = Healthy Fitness Zone

Table 9

1999 California Physical Fitness Test
Subgroup Results – Ethnicity
Pacific Islander

Percent of Pacific Islander students in HFZ for:	Grade 5			Grade 7			Grade 9		
	No. Tested	% in HFZ *	% Not In HFZ	No. Tested	% in HFZ	% Not In HFZ	No. Tested	% in HFZ	% Not In HFZ
Aerobic Capacity	3,638	48.9	51.1	3,525	53.8	46.2	3,014	34.5	65.5
Body Composition	3,617	51.7	48.3	3,569	50.7	49.3	3,048	54.6	45.4
Abdominal Strength	3,635	78.1	21.9	3,539	82.3	17.7	3,032	68.0	32.0
Trunk Extension Strength	3,625	81.6	18.4	3,527	85.1	14.9	3,004	68.8	31.2
Upper Body Strength	3,612	59.1	40.9	3,508	61.7	38.3	2,981	51.6	48.4
Flexibility	3,426	63.7	36.3	3,390	71.1	28.9	2,845	55.1	44.9

Percent of Pacific Islander students who achieved:	Grade 5			Grade 7			Grade 9		
	No.	%	Cum. %	No.	%	Cum. %	No.	%	Cum. %
6 of 6 fitness standards	549	14.9	14.9	591	16.4	16.4	410	13.3	13.3
5 of 6 fitness standards	833	22.6	37.6	898	24.9	41.3	647	20.9	34.2
4 of 6 fitness standards	824	22.4	60.0	869	24.1	65.4	606	19.6	53.8
3 of 6 fitness standards	695	18.9	78.9	644	17.9	83.3	417	13.5	67.3
2 of 6 fitness standards	382	10.4	89.2	319	8.8	92.1	229	7.4	74.7
1 of 6 fitness standards	157	4.3	93.5	111	3.1	95.2	111	3.6	78.3
0 of 6 fitness standards	239	6.5	100.0	174	4.8	100.0	671	21.7	100.0
Total tested:	3,679	99.7	0.0	3,606	99.9	0.0	3,091	99.1	0.0

* HFZ = Healthy Fitness Zone

Table 10

1999 California Physical Fitness Test
Subgroup Results – Ethnicity
White – Not of Hispanic Origin

	Grade 5			Grade 7			Grade 9		
Percent of White – Not of Hispanic origin students in HFZ for:	**No. Tested**	**% in HFZ ***	**% Not In HF**	**No. Tested**	**% in HFZ**	**% Not In HFZ**	**No. Tested**	**% in HFZ**	**% Not In HFZ**
Aerobic Capacity	119,163	62.6	37.4	110,637	64.3	35.7	94,474	54.3	45.7
Body Composition	118,453	74.0	26.0	110,891	72.3	27.7	95,418	72.4	27.6
Abdominal Strength	119,452	83.8	16.2	110,733	85.5	14.5	94,770	84.3	15.7
Trunk Extension Strength	118,542	87.5	12.5	110,089	88.3	11.7	93,447	83.9	16.1
Upper Body Strength	118,275	67.3	32.7	109,085	65.5	34.5	93,699	65.3	34.7
Flexibility	109,393	67.6	32.4	104,138	72.6	27.4	87,623	72.1	27.9

Percent of White – Not of Hispanic origin students who achieved:	Grade 5			Grade 7			Grade 9		
	No.	**%**	**Cum. %**	**No.**	**%**	**Cum. %**	**No.**	**%**	**Cum. %**
6 of 6 fitness standards	30,049	24.7	24.7	31,239	27.7	27.7	23,764	24.5	24.5
5 of 6 fitness standards	34,560	28.4	53.2	31,736	28.1	55.8	27,278	28.2	52.7
4 of 6 fitness standards	25,360	20.9	74.0	22,255	19.7	75.5	19,285	19.9	72.6
3 of 6 fitness standards	15,540	12.8	86.8	13,243	11.7	87.2	11,382	11.8	84.4
2 of 6 fitness standards	7,656	6.3	93.1	6,481	5.7	92.9	5,229	5.4	89.8
1 of 6 fitness standards	3,098	2.5	95.7	2,447	2.2	95.1	2,350	2.4	92.2
0 of 6 fitness standards	5,250	4.3	100.0	5,553	4.9	100.0	7,578	7.8	100.0
Total tested:	121,513	99.8	0.0	112,954	99.8	0.0	96,866	99.5	0.0

* HFZ = Healthy Fitness Zone

Appendix 1

FITNESSGRAM
Standards for Healthy Fitness Zone*

FEMALES

Age	One Mile min:sec		PACER # laps		VO 2max ml/kg/min		Percent Fat		Body Mass Index		Curl-up # completed	
10	12:30	9:30	7	35	39	47	32	17	23.5	16.6	12	26
11	12:00	9:00	9	37	38	46	32	17	24	16.9	15	29
12	12:00	9:00	13	40	37	45	32	17	24.5	16.9	18	32
13	11:30	9:00	15	42	36	44	32	17	24.5	17.5	18	32
14	11:00	8:30	18	44	35	43	32	17	25	17.5	18	32
15	10:30	8:00	23	50	35	43	32	17	25	17.5	18	35
16	10:00	8:00	28	56	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		VO 2max ml/kg/min		Percent Fat		Body Mass Index		Curl-up # completed	
10	11:30	9:00	17	55	42	52	25	10	21	15.3	12	24
11	11:00	8:30	23	61	42	52	25	10	21	15.8	15	28
12	10:30	8:00	29	68	42	52	25	10	22	16.0	18	36
13	10:00	7:30	35	74	42	52	25	10	23	16.6	21	40
14	9:30	7:00	41	80	42	52	25	10	24.5	17.5	24	45
15	9:00	7:00	46	85	42	52	25	10	25	18.1	24	47
16	8:30	7:00	52	90	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	10	15	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.