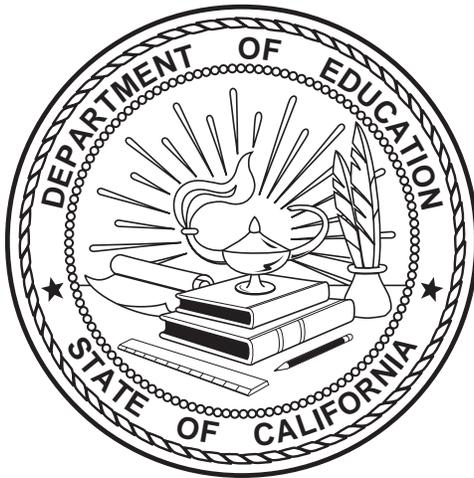


California Department of Education

**Report to the Governor and the Legislature:
2010–11 California Physical Fitness Test Report**



**Prepared by:
Assessment Development and Administration Division
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June 2012

Description: This report, which is required every two years, encompasses the California Physical Fitness Test results from 2008–09, 2009–10, and 2010–11.

Authority: California Education Code Section 60800

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Executive Summary

Pursuant to California *Education Code* Section 60800, all public school districts in California are required to administer the physical fitness test (PFT) annually to all students in fifth, seventh, and ninth grades. The test used for the PFT is the *FITNESSGRAM*,¹ which is designated for this purpose by the State Board of Education. This report, which is required every two years by California *Education Code* Section 60800, summarizes PFT results of the 2010–11 test administration and provides a summary comparison with the results from 2008–09 and 2009–10.

A total of 1,452,386 students were administered the California PFT in spring 2011, representing approximately 92 percent of California public school students enrolled in fifth, seventh, and ninth grades.

The Healthy Fitness Zones (HFZs) changed for Aerobic Capacity and Body Composition in 2010–11. Documentation of HFZ changes can be found on the California Department of Education (CDE) PFT *FITNESSGRAM*: Healthy Fitness Zone Charts Web page at <http://www.cde.ca.gov/ta/tg/pf/healthfitzones.asp>. [Note: the preceding Web address is no longer valid.]

Current data show that approximately one-third of the students at the three grades tested are scoring in the HFZ for six-out-of-six fitness areas. California's students could benefit from a greater emphasis on all areas of physical fitness, especially aerobic capacity and body composition.

You can find this report on the CDE PFT Web page at <http://www.cde.ca.gov/ta/tg/pf/pftresources.asp>. [Note: the preceding Web address is no longer valid.] To order a hard copy of the *2010–11 California Physical Fitness Test Report*, please contact Linda Hooper, Education Research and Evaluation Consultant, High School and Physical Fitness Assessment Office, by phone at 916-319-0345 or by e-mail at lhooper@cde.ca.gov. [Note: the preceding Web address is no longer valid.]

¹ The *FITNESSGRAM* and Healthy Fitness Zone (HFZ) are registered trademarks of The Cooper Institute.

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Introduction

By law (California *Education Code* [EC] Section 60800), all local educational agencies (LEAs)² in California are required to administer the physical fitness test (PFT) annually to all students in fifth, seventh, and ninth grades. The test used for the PFT is the *FITNESSGRAM*,³ which is designated for this purpose by the State Board of Education. EC Section 60800 also requires that all public schools include their results in their School Accountability Report Cards and provide students with their individual results.

This report summarizes results from the spring 2010–11 PFT administration, which was the twelfth consecutive year of the PFT. It also provides a comparison with the summary results from the previous two years. The data in this report incorporates the 2010–11 results submitted and corrected by LEAs during the third and final data submission and correction window. Therefore, the data in this report may be slightly different from the preliminary results released to the public on November 30, 2011.

The last PFT *Report to the Governor and the Legislature* was published in March 2010. It included the results from 2006–07, 2007–08, and 2008–09. This report encompasses the results from 2008–09, 2009–10, and 2010–11 and fulfills the EC Section 60800 requirement to provide a PFT report every two years to the Governor and the Legislature.

Test Description

The *FITNESSGRAM* was developed by The Cooper Institute of Dallas, Texas. A primary goal of this test is to assist students in establishing physical activity as part of their daily lives. In order to help students reach this goal, the *FITNESSGRAM* provides a number of test options so that all students, including students with disabilities, have the maximum opportunity to participate in the test.

The *FITNESSGRAM* is a comprehensive test that assesses three broad components of fitness: 1) aerobic capacity; 2) body composition; and 3) muscular strength, endurance, and flexibility. This third component is further divided into four areas: abdominal

² LEAs include school districts, county offices of education, and charter schools that are independent for assessment purposes (i.e., independent charter schools).

³ The *FITNESSGRAM* and Healthy Fitness Zone (HFZ) are registered trademarks of The Cooper Institute.

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strength and endurance, trunk extensor strength and flexibility, upper body strength and endurance, and flexibility. Altogether, the *FITNESSGRAM* covers the following six fitness areas with multiple test options in four of the six areas:

- **Aerobic Capacity** – Progressive Aerobic Cardiovascular Endurance Run (PACER), One-Mile Run, or Walk Test
- **Body Composition** – Skinfold Measurements, Bioelectric Impedance Analyzer, or 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, or Flexed-Arm Hang
- **Flexibility** – Back-Saver Sit and Reach or Shoulder Stretch

For the four fitness areas with multiple test options, the decision about which option(s) to administer is locally determined. If multiple options are administered to students, the option with the best score is reported for the PFT. In 2010–11, the following were the most widely administered test options:

- **Aerobic Capacity** – One-Mile Run (81%)
- **Body Composition** – Body Mass Index (96%)
- **Upper Body Strength and Endurance** – Push-Up (92%)
- **Flexibility** – Shoulder Stretch (57%)

Performance Standards

The *FITNESSGRAM* uses criterion-referenced standards to evaluate fitness performance. These standards represent a level of fitness that offers protection against diseases associated with physical inactivity. Performance on each fitness area is classified into two or three general levels, as follows:

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- **Aerobic Capacity and Body Composition**
 - Healthy Fitness Zone
 - Needs Improvement
 - Needs Improvement – High Risk
- **Abdominal Strength and Endurance, Trunk Extensor Strength and Flexibility, Upper Body Strength and Endurance, and Flexibility**
 - Healthy Fitness Zone
 - Needs Improvement

The desired performance goal for each fitness area is the Healthy Fitness Zone or HFZ. This indicates a student's level of fitness is sufficient for good health. The Needs Improvement or NI designation signifies a fitness area where the student's score is not in the HFZ and where the student would benefit from physical activities designed to improve performance in the designated fitness area to achieve the HFZ. Needs Improvement – High Risk, or NI – HR, specifically indicates increased health risks due to the student's level of fitness. It may be possible for some students to exceed the HFZ; however, this practice is not recommended since exceeding the HFZ may result in injury to the students. Therefore, the California Department of Education (CDE) scores a student who exceeds the HFZ as NI. For Body Composition only, however, the CDE considers a student who exceeds the HFZ as meeting the HFZ.

More detailed information about the *FITNESSGRAM*, the six fitness areas, and the performance standards can be found on the CDE PFT Web page at <http://www.cde.ca.gov/ta/tg/pf/>.

Adjustments to the Physical Fitness Test

Since 2008–09, a number of significant adjustments occurred in the PFT data collection, scoring, and reporting process. It is important to highlight these adjustments, as they affect the interpretations of the results provided in this report.

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State Physical Fitness Test Contractor

In July 2010, the San Joaquin County Office of Education (SJCOE) became the new state PFT contractor. The SJCOE responsibilities include supporting LEAs with their PFT data submission, scoring the data, producing summary and individual student reports, and hosting and maintaining the California PFT Web site at <http://www.pftdata.org/>. The SJCOE took on the responsibility for the PFT contract by completing the 2009–10 data submission and reporting.

Since taking over the contract, the SJCOE instituted new data submission procedures for 2010–11. The new procedures allow LEAs to view and correct data online and to do so within 24 hours of submitting their data through a secure data submission portal. In addition, the data correction process includes on-screen help and guidance to assist LEAs with the data correction activities.

Calculations Procedures

Beginning with 2010–11, the calculations for two Aerobic Capacity test options (One-Mile Run and PACER) were changed to be reported in terms of $VO_2\text{max}$.⁴ The third Aerobic Capacity test option, the Walk Test, has always been reported in terms of $VO_2\text{max}$. These changes ensure the interchangeability of the results from the three test options for comparison purposes. Students can be assessed with any of the three test options, and the result will be based on the same estimate of aerobic capacity or $VO_2\text{max}$.

Ranges and Healthy Fitness Zone

Also beginning with 2010–11, adjustments were made to the HFZs for Aerobic Capacity and Body Composition. For Aerobic Capacity, the adjustments accounted for gender and age differences in the new $VO_2\text{max}$ reporting. For Body Composition, the adjustments took into account the natural developmental differences of the genders, improved the interchangeability of Body Mass Index values with percent body fat (i.e., Skinfold Measurements and Bioelectrical Impedance Analyzer), and provided for the

⁴ $VO_2\text{max}$ refers to the maximum oxygen consumption of an individual during exercise. The acronym is derived from V = volume per time; O_2 = oxygen; and max = maximum.

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identification of students at risk for metabolic syndrome. (Metabolic syndrome is an indicator of current and future health risk and includes a variety of factors such as high blood pressure, high triglycerides, and a large waist circumference.) As a result of these changes to the HFZs, from 2009–10 to 2010–11, the Body Composition area saw a greater impact than Aerobic Capacity. This impact is evident in the results provided in Tables 2 through 4 of this report.

Results

As indicated in the introduction, this report provides summary results from the spring 2011 (i.e., 2010–11) PFT administration and provides a comparison with the results from 2009 (i.e., 2008–09) and 2010 (i.e., 2009–10). It begins with Table 1, which shows the total numbers of students in fifth, seventh, and ninth grades who were partially or fully tested with the PFT across the three years. This table reveals a slight decrease in the percentage of students tested in 2011.

Table 1. Number of Students Tested by Grade

Year	Grade 5	Grade 7	Grade 9	Total Tested	Total Enrolled ¹	Percent of Students ²
2009	454,281	456,447	470,230	1,380,958	1,485,804	92.9
2010	447,863	444,024	454,905	1,346,792	1,451,668	92.8
2011	456,409	444,072	447,012	1,347,493	1,452,386	92.4

¹ Total enrolled taken from California Basic Educational Data System (CBEDS) and California Longitudinal Pupil Achievement Data System (CALPADS) Fall 1 enrollment reports.

² Percent of total California public school students enrolled in fifth, seventh, and ninth grades.

Tables 2 through 4 provide three-year summaries of the PFT results organized by grade. The percentage of students in the HFZ for each fitness area is presented. In order to permit the comparisons across the three years, the tables only include the percentages of students achieving the HFZ. The percentage of students not achieving the HFZ (i.e., NI or NI – HR) may be calculated by subtracting the percentages presented in the table from 100 percent.

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**Table 2. Percentages of Fifth Grade Students
in Healthy Fitness Zone by Fitness Area**

Fitness Area	2009	2010	2011	Percent Change 2011 to 2010	Percent Change 2011 to 2009
Aerobic Capacity ¹	65.7	65.4	61.4	-4.0	-4.3
Body Composition ¹	68.4	68.5	52.1	-16.4	-16.3
Abdominal Strength	80.1	79.4	78.9	-0.5	-1.2
Trunk Extensor Strength	88.2	88.2	87.4	-0.8	-0.8
Upper Body Strength	69.8	69.5	69.0	-0.5	-0.8
Flexibility	70.8	71.1	70.9	-0.2	0.1

¹ HFZs changed for Aerobic Capacity and Body Composition in 2011. Documentation of HFZ changes can be found on the CDE PFT *FITNESSGRAM* Healthy Fitness Zone Charts Web page at <http://www.cde.ca.gov/ta/tg/pf/healthfitzones.asp>. [Note: the preceding Web address is no longer valid.]

**Table 3. Percentages of Seventh Grade Students
in Healthy Fitness Zone by Fitness Area**

Fitness Area	2009	2010	2011	Percent Change 2011 to 2010	Percent Change 2011 to 2009
Aerobic Capacity ¹	66.1	67.1	63.0	-4.1	-3.1
Body Composition ¹	68.7	68.8	55.5	-13.3	-13.2
Abdominal Strength	84.8	85.3	85.1	-0.2	0.3
Trunk Extensor Strength	90.1	90.3	90.2	-0.1	0.1
Upper Body Strength	71.8	72.7	72.2	-0.5	0.4
Flexibility	77.4	78.7	79.1	0.4	1.7

¹ HFZs changed for Aerobic Capacity and Body Composition in 2011. Documentation of HFZ changes can be found on the CDE PFT *FITNESSGRAM* Healthy Fitness Zone Charts Web page at <http://www.cde.ca.gov/ta/tg/pf/healthfitzones.asp>. [Note: the preceding Web address is no longer valid.]

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**Table 4. Percentages of Ninth Grade Students
in Healthy Fitness Zone by Fitness Area**

Fitness Area	2009	2010	2011	Percent Change 2011 to 2010	Percent Change 2011 to 2009
Aerobic Capacity ¹	63.0	64.1	61.7	-2.4	-1.3
Body Composition ¹	69.8	71.3	59.4	-11.9	-10.4
Abdominal Strength	86.0	87.0	87.2	0.2	1.2
Trunk Extensor Strength	90.7	91.7	92.0	0.3	1.3
Upper Body Strength	76.8	77.4	77.3	-0.1	0.5
Flexibility	81.0	82.7	83.7	1.0	2.7

¹ HFZs changed for Aerobic Capacity and Body Composition in 2011. Documentation of HFZ changes can be found on the CDE PFT *FITNESSGRAM* Healthy Fitness Zone Charts Web page at <http://www.cde.ca.gov/ta/tg/pf/healthfitzones.asp>. [Note: the preceding Web address is no longer valid.]

Of the six fitness areas tested on the *FITNESSGRAM*, Trunk Extensor Strength reports the strongest results. This is a pattern that has remained constant since the first administration of the PFT. Conversely, for the first time in 12 years, Body Composition shows the lowest results. To a large extent, the change in Body Composition is due to the 2010–11 adjustments to the ranges and HFZs, which were described earlier in this report. The changes observed in the Aerobic Capacity results were similarly due to the changes to the calculations and adjustments to the HFZs. These changes and adjustments had the greatest impact on fifth grade, followed by seventh grade and then ninth grade students.

The PFT performance goal is for students to achieve the HFZ for all six fitness areas tested (i.e., six-out-of-six fitness areas in the HFZ). Table 5 displays the percentages of students by grade achieving this goal. To allow for comparison to 2010 and 2009 results, the students tested in 2011 were scored using both the 2010 and 2011 standards.

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**Table 5. Percentage of Fifth, Seventh, and Ninth Grade Students
in the Healthy Fitness Zone for Six-Out-of-Six Fitness Areas**

Grade	2009	2010	2011 ¹	2011 ²	Percent Change 2011 ¹ to 2010	Percent Change 2011 ¹ to 2009	Percent Change 2011 ² to 2010	Percent Change 2011 ² to 2009
Grade 5	29.2	29.0	29.1	25.2	0.1	-0.1	-3.8	-4.0
Grade 7	34.2	35.0	35.2	32.1	0.2	1.0	-2.9	-2.1
Grade 9	37.9	38.7	38.1	36.8	-0.6	0.2	-1.9	-1.1

¹ 2010 standards applied to Aerobic Capacity and Body Composition fitness areas used to compute six-out-of-six fitness areas

² New 2011 standards applied to Aerobic Capacity and Body Composition fitness areas are located on the CDE PFT Program Resources Web page at <http://www.cde.ca.gov/ta/tg/pf/pftresources.asp>.
[Note: the preceding Web address is no longer valid.]

The results of the 2011 students, after applying the 2010 standards, show very little improvement when compared to students who tested in 2010 and 2009. However, when the 2011 standards are applied to the 2011 students, fewer students scored in the HFZ for six-out-of-six fitness areas. This decline is primarily due to the changes in the HFZ for Aerobic Capacity and Body Composition and changes to the calculations for Aerobic Capacity. Nevertheless, these results highlight that only about one-third of students meet the desired performance goal of achieving the HFZ for all six fitness areas of the PFT.

Summary and Implications

Full and complete public access to the summary data is available on the CDE PFT Web page at <http://www.cde.ca.gov/ta/tg/pf/>. This Web page provides access to summary reports for the state and every county, school district, and school that has students in fifth, seventh, and ninth grades and reported PFT data.

Current and past data continue to show that about one-third of California's students at the three grades tested are meeting the performance goals established for the PFT. Students would definitely benefit from greater emphasis in all areas of physical fitness, especially aerobic capacity and body composition.

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School, school district, county office of education, and charter school administrators along with teachers, parents, and guardians can regularly examine the PFT data to get a more complete picture of the yearly fitness levels of their students and children. LEAs are encouraged to use the data they receive from the PFT to examine and make improvements to their physical education programs. Schools, parents, and guardians are encouraged to work together to use the information to inform plans and strategies to improve the physical activity opportunities offered to students during and outside of the regular school day.

All stakeholders are encouraged to take advantage of initiatives and programs designed to promote awareness and make changes in student health and fitness. For example, in November 2011, State Superintendent of Public Instruction Tom Torlakson launched the Team California for Healthy Kids effort, which initially had three major goals, including an increase in daily physical activity. Local efforts and collaboration among all stakeholders are the keys to effectively increasing the health-related physical fitness of all California students.