

FitnessGram Texas Statewide Report 2016-17 School Year

This report summarizes FitnessGram® results from the 2016-17 school year. Across the Texas public school system, 972 school districts, 6,504 campuses, and 2,178,249 individual students participated in the FitnessGram® assessment.¹ The following summary presents Healthy Fitness Zone (HFZ) achievement percentages for the six core FitnessGram® fitness components – Abdominal Strength, Aerobic Capacity, Body Composition, Flexibility, Trunk Extensor Strength, and Upper Body Strength – by gender and school level (i.e., elementary, middle, and high school). Results of correlational analyses conducted between HFZ achievement and State of Texas Assessments of Academic Readiness (STAAR) Mathematics performance, STAAR Reading performance, and students' attendance rate are also presented.

Fitness Achievement by Gender

On each of the six FitnessGram® fitness components, the majority of Texas public school students achieved the HFZ in 2016-17. As noted below, however, results varied by fitness component and gender (see also Figure 1).

Females:

- On the Abdominal Strength component, 78.5% of females achieved the HFZ. The HFZ achievement rate was lowest for females in Grade 5 (76.0%) and highest in Grade 11 (81.4%).
- On the Aerobic Capacity component, 53.9% of females achieved the HFZ. The HFZ achievement rate was lowest for females in Grade 3 (41.5%) and highest in Grade 4 (60.1%).²
- On the Body Composition component, 60.1% of females achieved the HFZ. The HFZ achievement rate was lowest for females in Grade 5 (57.6%) and highest in Grade 11 (68.5%).
- On the Flexibility component, 79.5% of females achieved the HFZ. The HFZ achievement rate was lowest for females in Grade 3 (75.5%) and highest in Grade 8 (83.6%).
- On the Trunk Extensor Strength component, 88.2% of females achieved the HFZ. The HFZ achievement rate was lowest for females in Grade 5 (82.0%) and highest in Grade 11 (93.0%).
- On the Upper Body Strength component, 73.2% of females achieved the HFZ. The HFZ achievement rate was lowest for females in Grade 4 (67.9%) and highest in Grade 11 (81.2%).

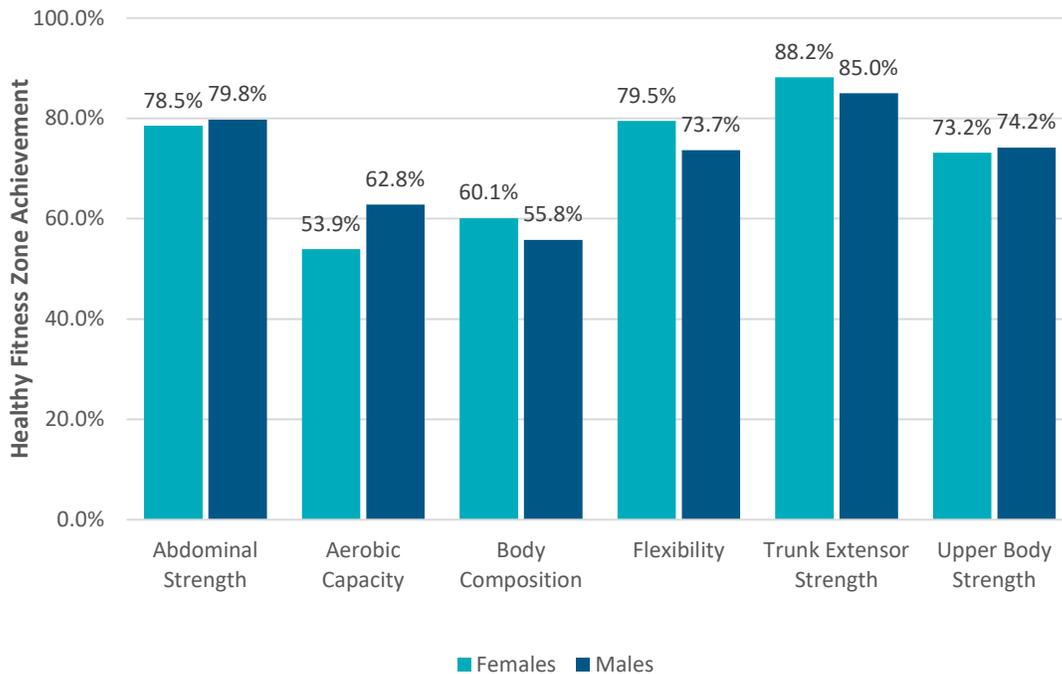
Males:

¹ 7,695 students completed a FitnessGram® assessment in more than one Texas public school district in 2016-17. All FitnessGram® assessments are included in the state-level results presented in this report.

² Students under the age of 10 were not evaluated on their performance for any aerobic capacity tests. As a result, the majority of Grade 3 students were not included in the aerobic capacity results.

- On the Abdominal Strength component, 79.8% of males achieved the HFZ. The HFZ achievement rate was lowest for males in Grade 5 (77.6%) and highest in Grade 7 (82.3%).
- On the Aerobic Capacity component, 62.8% of males achieved the HFZ. The HFZ achievement rate was lowest for males in Grade 12 (47.6%) and highest in Grade 4 (68.9%).
- On the Body Composition component, 55.8% of males achieved the HFZ. The HFZ achievement rate was lowest for males in Grade 5 (52.9%) and highest in Grade 10 (59.5%).
- On the Flexibility component, 73.7% of males achieved the HFZ. The HFZ achievement rate was lowest for males in Grade 3 (67.2%) and highest in Grade 10 (79.5%).
- On the Trunk Extensor Strength component, 85.0% of males achieved the HFZ. The HFZ achievement rate was lowest for males in Grade 5 (77.8%) and highest in Grade 11 (92.0%).
- On the Upper Body Strength component, 74.2% of males achieved the HFZ. The HFZ achievement rate was lowest for males in Grade 9 (68.7%) and highest in Grade 6 (77.2%).

Figure 1. Healthy Fitness Zone Achievement, by Fitness Component and Gender, 2016-17



Fitness Achievement by School Level and Gender

In 2016-17, the percentage of students achieving the HFZ on each FitnessGram® component varied by gender and school level.³ Results are presented below (see also Figures 2-7).

Females:

- Abdominal Strength (Elementary: 77.5%, Middle: 79.4%, High: 79.8%)
- Aerobic Capacity (Elementary: 57.4%, Middle: 53.6%, High: 47.7%)
- Body Composition (Elementary: 58.4%, Middle: 59.4%, High: 66.3%)
- Flexibility (Elementary: 77.9%, Middle: 82.1%, High: 78.8%)
- Trunk Extensor Strength (Elementary: 86.6%, Middle: 88.4%, High: 92.2%)
- Upper Body Strength (Elementary: 68.6%, Middle: 76.6%, High: 79.4%)

Males:

- Abdominal Strength (Elementary: 78.3%, Middle: 82.2%, High: 79.2%)
- Aerobic Capacity (Elementary: 67.0%, Middle: 64.8%, High: 51.9%)
- Body Composition (Elementary: 54.6%, Middle: 55.8%, High: 58.7%)
- Flexibility (Elementary: 69.4%, Middle: 76.7%, High: 79.1%)
- Trunk Extensor Strength (Elementary: 83.2%, Middle: 84.6%, High: 90.6%)
- Upper Body Strength (Elementary: 74.7%, Middle: 75.4%, High: 70.7%)

³ Elementary students were in Grades 3-5, middle school students were in Grades 6-8, and high school students were in Grades 9-12. Grade levels used in the presentation of these results are based on a student's reported grade level on the FitnessGram® assessment.

Figure 2. Healthy Fitness Zone Achievement, by School Level and Gender, 2016-17, Abdominal Strength

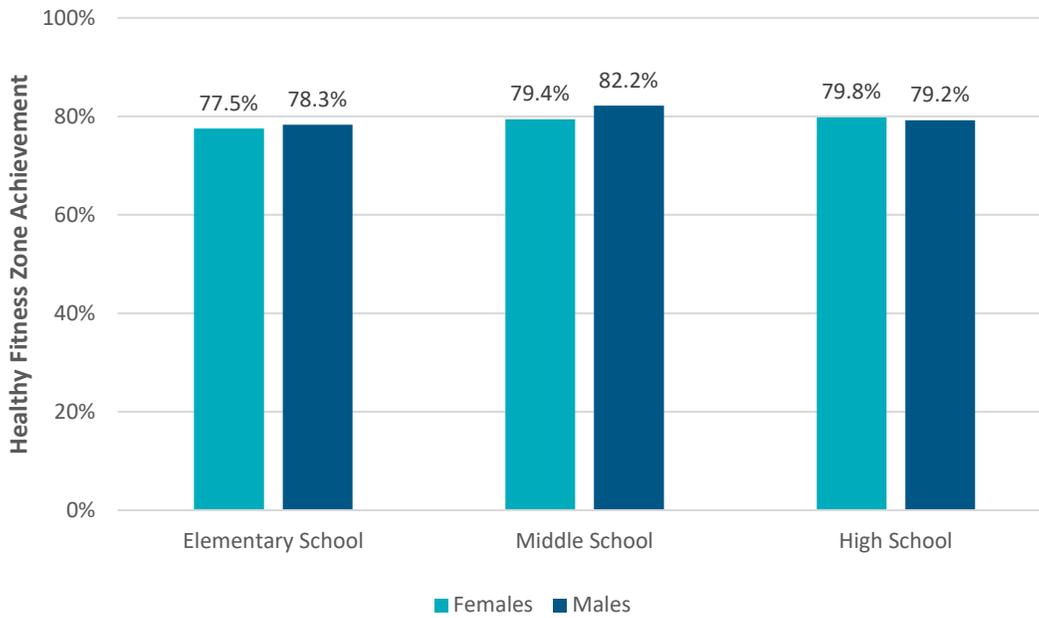


Figure 3. Healthy Fitness Zone Achievement, by School Level and Gender, 2016-17, Aerobic Capacity

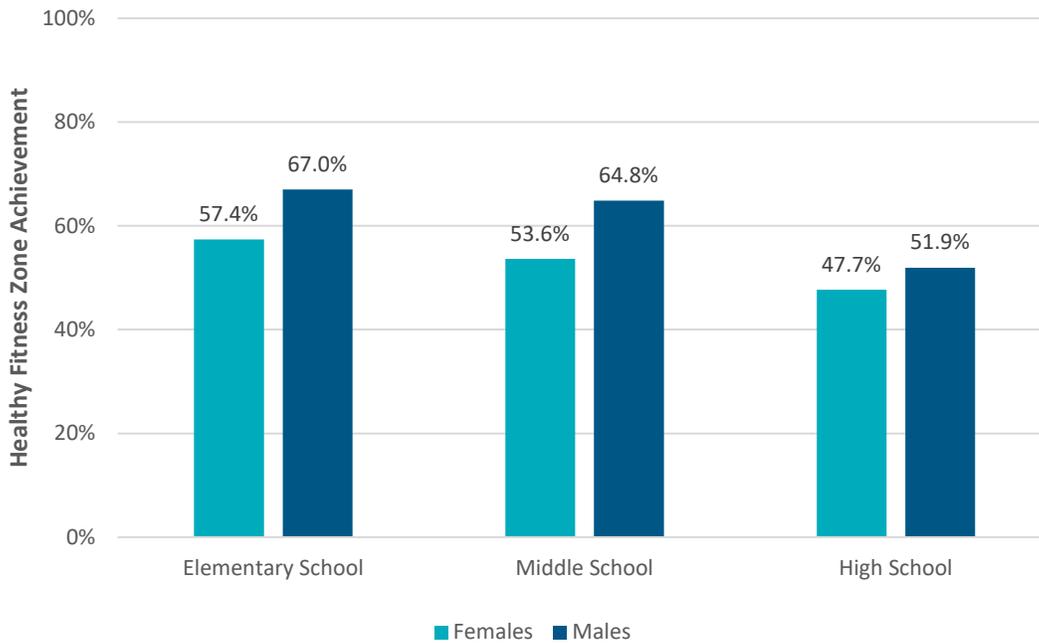


Figure 4. Healthy Fitness Zone Achievement, by School Level and Gender, 2016-17, Body Composition

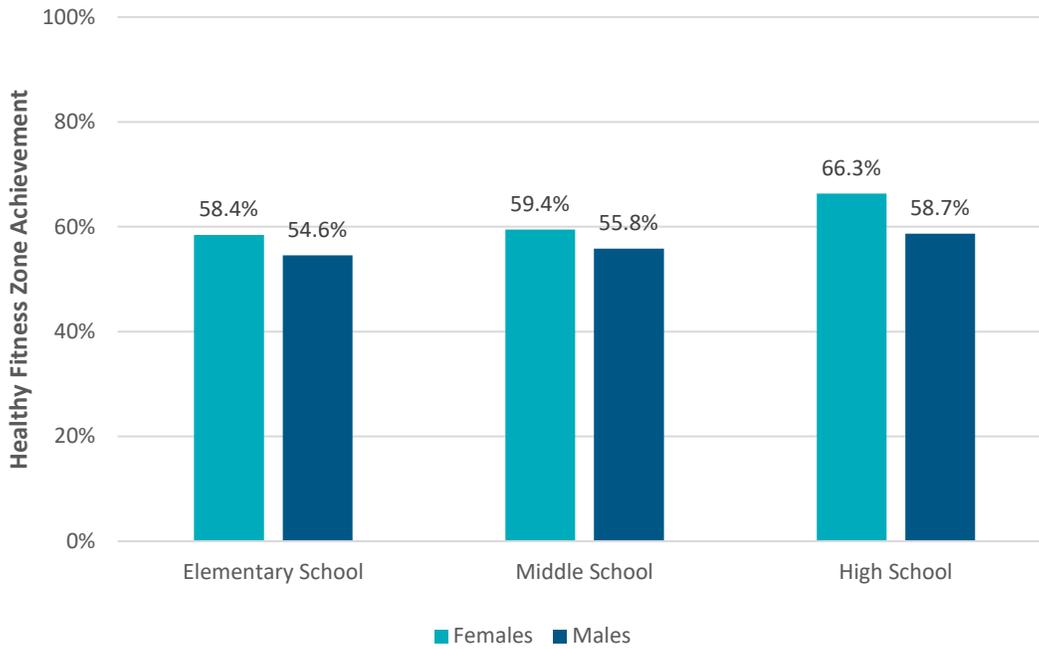


Figure 5. Healthy Fitness Zone Achievement, by School Level and Gender, 2016-17, Flexibility

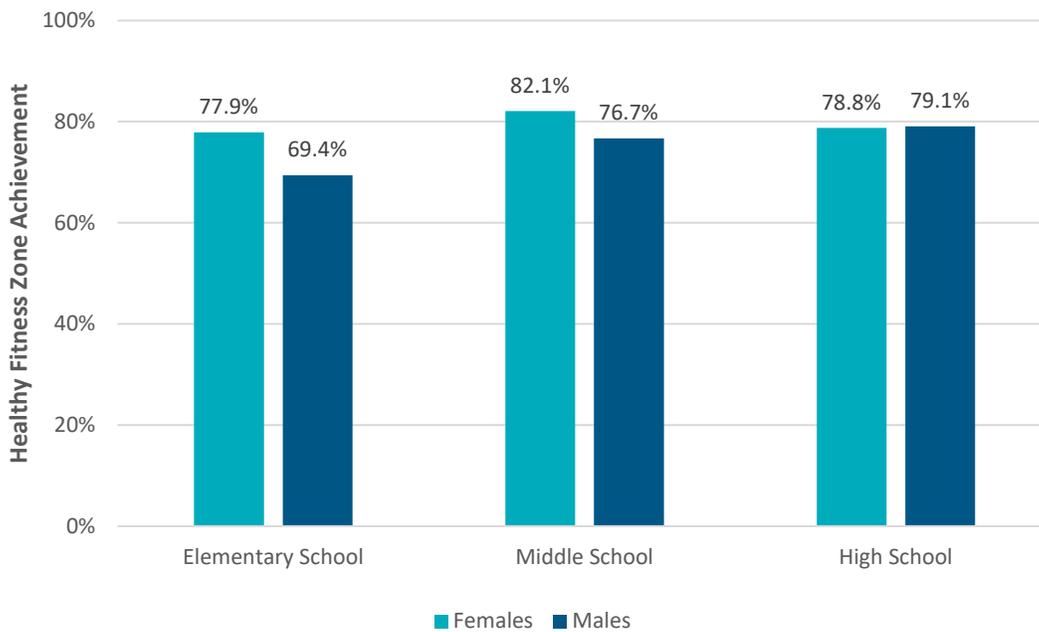


Figure 6. Healthy Fitness Zone Achievement, by School Level and Gender, 2016-17, Trunk Extensor Strength

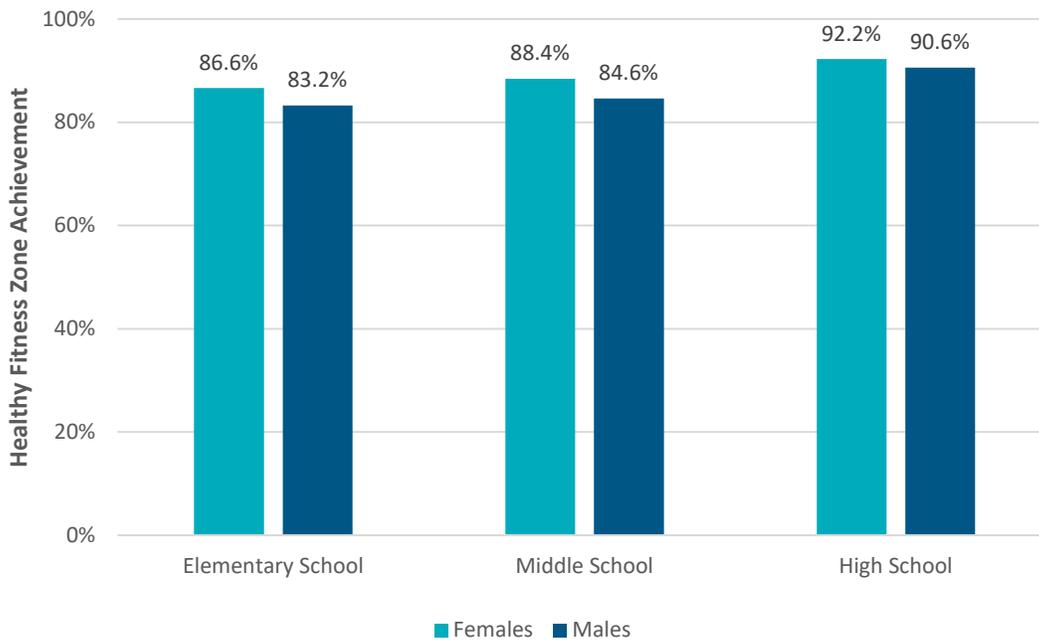
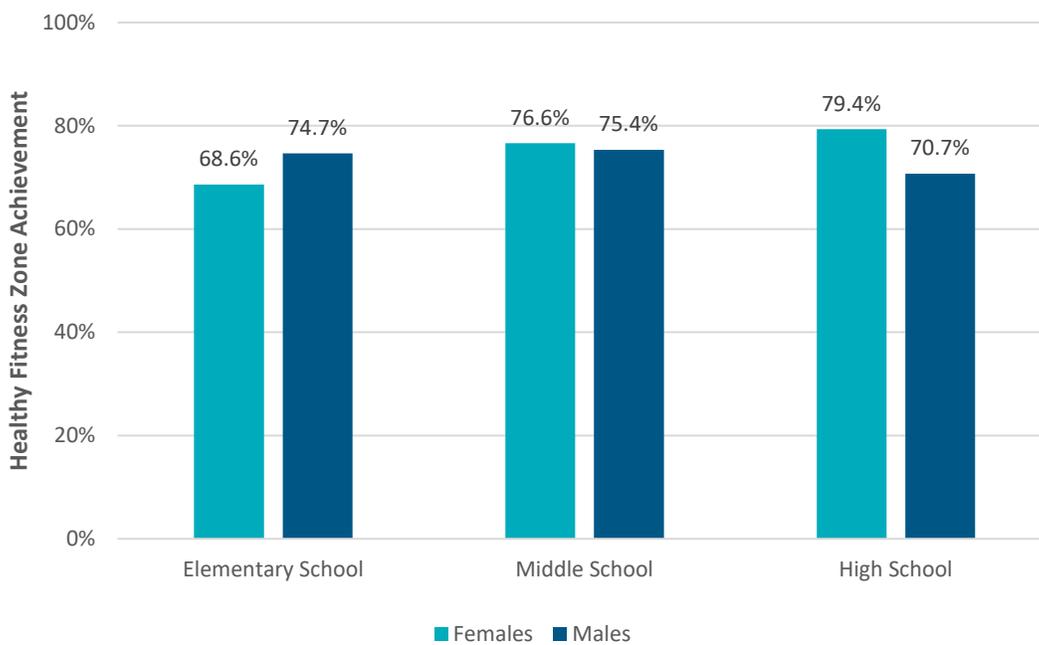


Figure 7. Healthy Fitness Zone Achievement, by School Level and Gender, 2016-17, Upper Body Strength



Associations between HFZ Achievement and Academic Indicators

Correlational analyses were conducted to examine associations between FitnessGram® HFZ achievement and academic indicators. Among the academic indicators examined in 2016-17 were STAAR Mathematics performance, STAAR Reading performance, and students' attendance rate.

Achievement on each of the six FitnessGram® components were all found to be positively correlated with the academic indicators, and these correlations were statistically significant. The strength of these associations, however, was very weak ($r_s < .20$). In other words, there was a weak linear relationship between fitness achievement and academic indicators such that higher performance on the Fitnessgram components was associated with higher performance on STAAR and higher attendance rates for very few students. It is worth noting that within extremely large sample sizes, such as those analyzed in this report, very small correlations can be statistically significant. As such, these correlations, although statistically significant, may not necessarily be meaningful.

- The correlation coefficients between HFZ achievement and STAAR Mathematics performance were very weak and ranged from 0.057 (Trunk Extensor Strength) to 0.177 (Aerobic Capacity).
- The correlation coefficients between HFZ achievement and STAAR Reading performance were very weak and ranged from 0.061 (Trunk Extensor Strength) to 0.152 (Aerobic Capacity).
- The correlation coefficients between HFZ achievement and attendance rate were very weak and ranged from 0.007 (Trunk Extensor Strength) to 0.132 (Aerobic Capacity).