



The Preuss School at UCSD:
Academic Performance of the Class of 2007

May 23, 2008

Christopher Reicher & Larry McClure

The Center for Research on Educational Equity,
Assessment and Teaching Excellence
University of California, San Diego
La Jolla California 92024-0036
<http://create.ucsd.edu/>

Table of Contents

Executive Summary.....	3
Section 1: School Characteristics & Possible Issues in the Analysis.....	4
Section 2: Issues Surrounding Standardized Test Performance	6
Section 3: Standardized Test Results by Subject Area	8
Section 4: Grade Point Averages and AP Classes	10
Section 5: A-G Completion Rates.....	11
Section 6: High School Exit Exam.....	12
Section 7: College Entrance Examinations and College Enrollment	13

Executive Summary

This report presents information on the academic performance of students who graduated from the Preuss School in 2007. Unlike previous years, there is no “comparison” group for this graduating class. At the time the Class of 2007 was admitted, the Preuss School was undergoing a planned expansion and the school was able to accept all qualified applicants. Lacking an appropriate comparison group, we were left with the choice of presenting achievement data for this graduating class in isolation or providing data on an additional group of students that was inappropriate for comparative purposes but may have contextual value. We reluctantly choose the later option and provide information on the performance of students attending the San Diego Unified School District (SDUSD) with the clear intent that the district data is informational and not comparative.¹ We look at standardized tests taken while in middle and high school, as well as high school grade point averages, A-G course completion rates, AP course completion rates, high school exit exams, SAT test taking, and college going information.

It is important not to over-interpret differences between Preuss students and the district. The students who apply to and are accepted to the Preuss School are not average performers and are not typical of students attending the district. Preuss attendees start out with higher academic performance than the rest of the district as measured by standardized test scores; we established this difference by comparing the 5th grade achievement test results of Preuss attendees and the remaining 5th grade students in the district. It is not terribly surprising that these initial differences persisted as students moved through the grade levels toward graduation. There were group differences on important academic indicators in the following areas:

- In every standardized test for which there are sufficient numbers to report, the Preuss students score higher, on average, throughout their entire time at Preuss. In interpreting mathematics and science test scores, one must exercise particular caution because of strong selection effects.
- Preuss students completed the courses required for admission to public colleges and universities at a much higher rate than students in the district or state had done in previous years.
- Preuss students had consistently high grade point averages at each grade level and in the cumulative averages at graduation.
- 87% of Preuss graduates filed a “Statement of Intent to Register” with the University of California, the California State University, or private four-year institutions.

¹ In a practical or statistical sense. Publicly available data was the primary source for information on district performance. While useful, these resources are not exhaustive and information on all desired performance indicators was not available for the desired time period. Because of this, there are unavoidable gaps in the comparisons between Preuss and the District. CREATE wishes to thank the San Diego Unified School District and the Preuss School for providing the data used for some of the calculations.

Section 1: School Characteristics and Issues in the Analysis

The Preuss School is a grade 6-12 charter school located on the campus of the University of California, San Diego. It was founded to expand educational opportunity for students from low-income households. The School offers all students a rigorous academic curriculum supported by a differentiated system of academic and social supports, including a longer school day, a longer school year, intensive tutoring, mentoring, counseling, and parent education opportunities. In the spring of 1999, the Preuss School accepted applications to fill spaces in grades 6, 7, and 8 for its first year of operation in the 1999/2000 academic year. Seven years later, the Preuss School had reached its maximum enrollment of approximately 800 students. It is anticipated that future intake to the school will occur primarily in the 6th grade, with about 125 students accepted each year.

Tables 1.1 through 1.3 show 2006/2007 enrollment by grade level, the Race/Ethnicity of students, and the average class size in selected subject areas. Teachers at the Preuss School have a slightly higher per-pupil ratio relative to the San Diego Unified School district, 25.5 versus 23.2, respectively. Of the 47 teachers at the school, four were not fully credentialed, with the credential status of one additional teacher unknown.

Table 1.1 Enrollment by Grade – 2006/2007 Academic Year

<i>Grade</i>	<i>Enrollment</i>
Grade 6	112
Grade 7	111
Grade 8	116
Grade 9	123
Grade 10	113
Grade 11	99
Grade 12	78
Total	752
Source: California Department of Education, Educational Demographics Office (CBEDS)	

Table 1.2 Enrollment Race/Ethnicity 2006/2007 Academic Year

	<i>SCHOOL</i>		<i>DISTRICT</i>
	<i>Enrollment</i>	<i>Percent of Total</i>	<i>Percent of Total</i>
American Indian	0	0.0%	0.6%
Asian	156	20.7%	8.7%
Pacific Islander	0	0.0%	1.0%
Filipino	19	2.5%	6.6%
Hispanic	443	58.9%	43.8%
African American	91	12.1%	13.7%
White	40	5.3%	25.5%
Multiple/No Response	3	0.4%	0.2%
Total	752	100%	100%
Source: California Department of Education, Educational Demographics Office (CBEDS)			

Table 1.3 Average Class Size 2006/2007 Academic Year

	<i>School</i>		<i>District</i>
	<i>Number of Classes</i>	<i>Average Class Size</i>	<i>Average Class Size</i>
Schoolwide	206	25.5	23.2
English	33	25.1	21.2
Math	33	24.0	24.2
Social Science	18	26.5	24.4
Science	28	26.4	24.5
Source: California Department of Education, Educational Demographics Office (CBEDS)			

The Preuss School admits only students who qualify for federal meal assistance at the time of application and whose parents or guardians have not graduated from a four-year college. In addition, the School seeks students who show academic promise but who may not have lived up to their full potential. Admission to the school follows a two step process: screening and selection by lottery. In the screening step, several readers score each completed application and identify students/families meeting the demographic criteria and demonstrating academic potential². If space is available, all students are admitted to the school, as was the case for applicants to the Class of 2007. If the number of screened applicants exceeds the spaces available, a lottery is held and the results of that random drawing determine which students receive an offer of admission to the school. Students who are unsuccessful in the lottery are placed on a waitlist and these students are admitted to the School if and when space becomes available. Members of the Preuss Board have told us that the number of applicants to the school has increased in recent years and that the school now holds an annual lottery for admission to 6th grade.

For the Class of 2007 there was no lottery to split the applicant pool into two demographically matched groups and for that reason we cannot follow the progress of students over time in a quasi-experimental fashion and determine if (and how) the groups differ on academic indicators. Instead, here we report on the performance of the Preuss students and provide information on district performance, where possible, across a number of academic indicators: standardized tests, unweighted and weighted GPA, completion of A-G admission requirements, AP class-taking, the California High School Exit Exam, and the SAT-1 college entrance examinations.

To determine if the pre-lottery performance of the Preuss and district wide groups within the graduating class of 2007 was different, we compared scaled scores from tests administered in the spring of the application year between those students who entered Preuss in the sixth grade and the entire district.³ Table 1.4 shows the group performance on

² It is our understanding, from discussions with personnel at the Preuss School, that the criteria used to determine “academic potential” was not restrictive. Applicants were not required to demonstrate high academic achievement, only potential, defined as performance at or above the 50th percentile on one subtest of the Stanford 9 (or the current State mandated standardized test). Students lacking a single subtest above the 50th percentile were also admitted if they had strong letters of support from teachers or personal statements that indicated academic potential.

³ Scaled scores are raw test scores which have been adjusted to account for content differences in versions of a standardized test. They allow for an “apples to apples” comparison of test performance. “Raw scores identify the number of items answered correctly on a test or sub-test. Raw scores are limited in their measurement precision because of differences among test items. For example, some items are more difficult than others. A scaled score takes item differences into account and is calculated to provide a more precise measure of the knowledge or skills tested. Through this calculation, an increase of one point at one place on the scale is described as being equal to a one- point increase anywhere else on the scale. Scaled scores are particularly useful for reporting changes over time” (California Department of Education).

the standardized tests for the Class of 2007 (the results of all statistical tests performed were such that they indicate near certain statistical significance against the null hypothesis that Preuss and district performance were the same). Looking at the tables it is clear that both the Preuss School and the district demonstrated systematically different performance. Looking at the differences between the scores in standard deviation units, rather than scale scores, the differences are large, on the order of half of a standard deviation.

Table 1.4 Class of 2007 – Fifth Grade Standardized Test Results

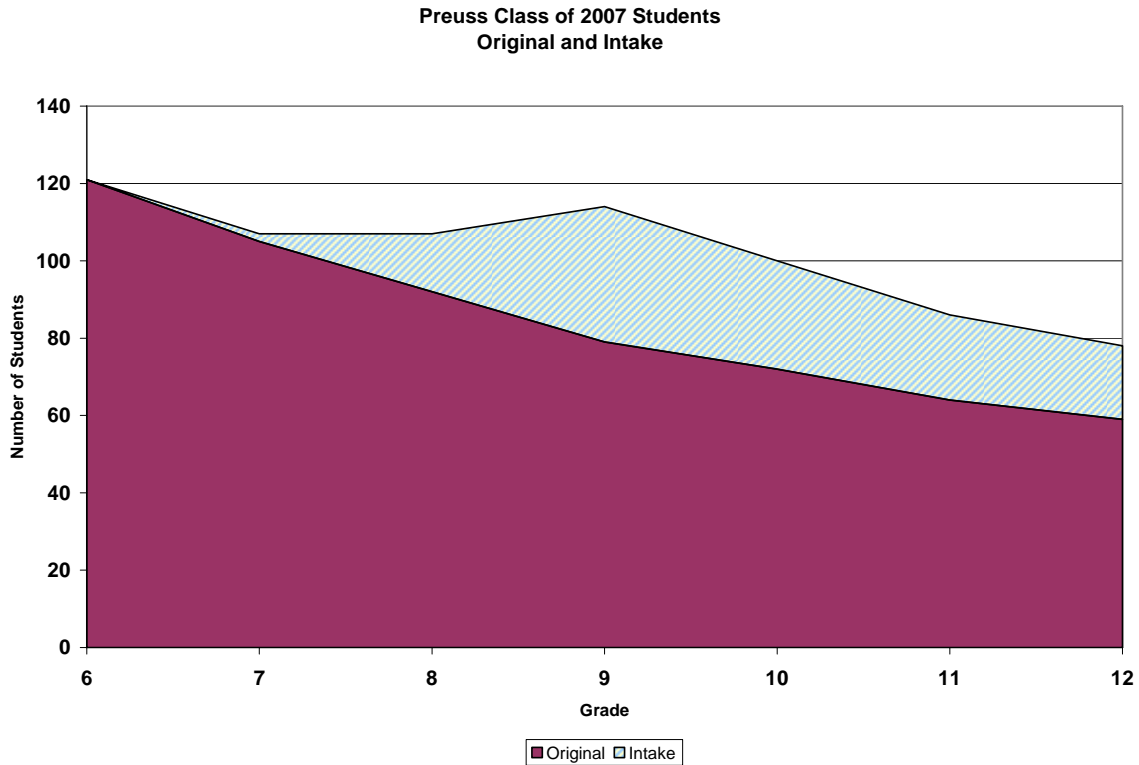
<i>TEST SUBJECT AREA (YEAR TAKEN)</i>	<i>PREUSS AVERAGE SCALE SCORE</i>	<i>SDUSD AVERAGE SCALE SCORE</i>	<i>DIFF. (STD. DEV. UNITS)</i>	<i>t STAT</i>
SAT9 Language Arts 5 th (2000)	658 (N=109)	637 (N=9531)	0.54	5.62
SAT9 Mathematics 5 th (2000)	666 (N=109)	645 (N=9578)	0.54	5.58
SAT9 Reading 5 th (2000)	666 (N=110)	646 (N=9478)	0.50	5.18
SAT9 Science 5 th (2000)	644 (N=109)	630 (N=9369)	0.41	4.25
SAT9 Spelling 5 th (2000)	654 (N=110)	636 (N=9596)	0.45	4.65

Section 2: Issues Surrounding Standardized Test Performance

In this section and the section that follows, we examine the standardized tests taken by the Class of 2007 from 6th grade through graduation. Over the past several years, the State of California has repeatedly changed the standardized test used to assess student performance and, because of these changes, the results of three different tests are reported: the Stanford Achievement Test, Version 9 (SAT-9), California Achievement Test, Version 6 (CAT-6) and the California Standards Test (CST). Analysis of students' performance through time is further complicated by the lack of consistency in the composition of both district and Preuss Classes of 2007; different students are included in the averages from year to year as students enter or leave Preuss or the district. Attrition from Preuss did not occur randomly, so comparisons across years are not "apples to apples". Students with somewhat lower test scores were more likely to leave Preuss over time, giving the illusion of an upward drift in test scores for the Preuss students.

Figure 2.1 shows the attrition of the Preuss students admitted to the graduating class as 6th grade students and subsequent intake over time. Of the 121 sixth graders admitted to Preuss for the Class of 2007, just under half (59) remained by the end of twelfth grade. Particularly during the eighth and ninth grades, Preuss admitted a number of students to "top off" the enrollment for the class. A closer examination of the test score data reveals that the original and intake students show very similar academic performance. There are no statistical or practical differences between these sets of students. This means that the students entering this graduating class after 6th grade are not driving the performance of the graduating class up or down, at least in terms of test scores.

Figure 2.1 - Class of 2007 Original and Intake Students



Both the SAT-9 and CAT-6 tested students using several examinations and each year students took examinations that were grade and subject specific (e.g., 9th grade English). The examinations were “vertically integrated”, that is, constructed so that test results within a subject area could be directly compared from one year to the next. For example, knowledge demonstrated on the Language Arts SAT-9 (or CAT-6) could be statistically assessed by comparing the year over year scaled scores earned by students on that examination.⁴ Both the SAT-9 and CAT-6 examinations were replaced by the CST in the 2002-2003 school year. While some CST subject tests are tied to specific grade levels and taken by all students (e.g., English and History), Mathematics and Science examinations are linked only to the courses taken by students and are independent of grade level. For example, there is no longer a 9th grade Mathematics examination; students taking Algebra I in the 8th or 9th grades would both take the same CST Algebra I examination. The CST is not vertically integrated and because of this the scores from one year cannot be compared to test results from other years.

For the purposes of this report, there were two unintended consequences associated with the introduction of the CST—smaller groups available for statistical analysis and differences in the courses (and tests) taken by students in the two groups. Table 2.1 provides information on which CST examinations were taken in each of the testing years. It is clear that the Preuss and SDUSD groups took the English and History examinations (World History and U.S. History) during the same years, but that there were pronounced differences in the Mathematics and Science tests taken by the groups. In 2005, 54 of the 96 Preuss students (56%) took the higher level Algebra 2 examination while only 28% of the

⁴ Although the CAT-6 was largely constructed with questions from the SAT-9, it is sufficiently different that student performance on the two tests cannot be compared.

SDUSD group took that exam. In 2004, all Preuss students took the Physics examination while only 81% of SDUSD students took Physics and the associated CST examination.

A pattern of proportionately more Preuss students taking higher level Mathematics and Science courses persists across testing years and subject areas. These differences may have introduced bias into the results reported, specifically, a bias favoring the SDUSD group. Using the 2004 Physics examination as an example, a reasonable interpretation is that the 19% of the SDUSD students who did not take Physics were largely students unprepared to take the course. Preuss deemed that all of its students were prepared to take Physics in that year, while SDUSD deemed that only 81% of its students were prepared. As a result, the reported exam results compare, more or less, the top four-fifths of the SDUSD students with all of the Preuss students. This would tend to favor the SDUSD students purely because of these selection effects.

The second issue was small group size. When the number of students (Preuss) taking a CST examination did not exceed 8-10, it is likely that any kind of statistical test would lack “power” – the ability to detect group differences, if they existed. Below this numeric threshold, the results of a statistical test are not reported as there was not a reasonable expectation that the tests performed were capable of detecting “true” group differences. Looking again at table 2.1, the sample size for the 2006 Geometry and Physics examinations were so small that the results of those exams could not be reported. Testing in the later school years had similar problems with small sample sizes in a variety of subject areas.

Table 2.1 - Class of 2007 CST Test-Taking Patterns Since 2003

<i>TEST</i>	<i>PREUSS (2003)</i>	<i>SDUSD (2003)</i>	<i>PREUSS (2004)</i>	<i>SDUSD (2004)</i>	<i>PREUSS (2005)</i>	<i>SDUSD (2005)</i>	<i>PREUSS (2006)</i>	<i>SDUSD (2006)</i>
English	105	9355	108	9499	96	8915	82	7233
World History	0	0	0	0	96	8779	0	0
U.S. History	0	0	0	0	0	0	82	7129
Algebra 1	95	6049	22	5585	3	847	0	128
Geometry	10	228	75	3227	28	4414	8	874
Algebra 2	0	17	11	243	54	2652	20	2654
H.S. Math 9-11	0	0	0	11	11	270	54	2352
Biology	0	0	0	626	0	581	63	5415
Chemistry	0	0	0	42	73	6818	18	917
Physics	0	0	108	8004	23	879	1	440
8 th Grade Hist	105	9248	0	0	0	0	0	0

Tests taken by SDUSD but not Preuss students (primarily lower-level math tests) are not included.

Section 3: Standardized Test Results by Subject Area

This section provides information on all standardized tests taken by the graduating Class of 2007, where sufficient numbers permit. Tables 3.1 – 3.6 show the specific test taken, the year the test was taken and the average scaled score earned by both the Preuss and SDUSD groups (including the number of students in each group). In each case, the Preuss students score higher than the SDUSD students, though one must keep in mind the caveats regarding selection bias from the previous sections. All data in these tables come from the CDE’s website.

Table 3.1 - Class of 2007 Standardized Test Performance, Social Sciences

<i>TEST</i>	<i>PREUSS SCALE SCORE</i>	<i>SDUSD SCALE SCORE</i>
CST 8 th Grade History (2003)	341.3 (N=105)	319.4 (N=9248)
CST World History (2005)	372.4 (N=96)	317.3 (N=8779)
CST U.S. History (2006)	397.1 (N=82)	332.3 (N=7129)

Table 3.2- Class of 2007 Standardized Test Performance, English Language Arts

<i>TEST</i>	<i>PREUSS SCALE SCORE</i>	<i>SDUSD SCALE SCORE</i>
SAT9 Language Arts 6 th (2001)	665.4 (N=113)	649.0 (N=9587)
SAT9 Language Arts 7 th (2002)	674.1 (N=133)	662.9 (N=9107)
CAT6 Language Arts 8 th (2003)	687.3 (N=105)	661.7 (N=9299)
CAT6 Language Arts 9 th (2004)	700.2 (N=108)	669.9 (N=9340)
CST English Language Arts 7 th (2002)	347.1 (N=104)	322.5 (N=8811)
CST English Language Arts 8 th (2003)	351.4 (N=105)	326.2 (N=9355)
CST English Language Arts 9 th (2004)	372.0 (N=108)	334.1 (N=9499)
CST English Language Arts 10 th (2005)	371.5 (N=96)	329.9 (N=8915)
CST English Language Arts 11 th (2006)	389.7 (N=82)	329.9 (N=7233)

Table 3.3 - Class of 2007 Standardized Test Performance, Reading

<i>TEST</i>	<i>PREUSS SCALE SCORE</i>	<i>SDUSD SCALE SCORE</i>
SAT9 Reading 6 th (2001)	678.3 (N=113)	661.5 (N=9519)
SAT9 Reading 7 th (2002)	684.5 (N=133)	676.9 (N=9102)
CAT6 Reading 8 th (2003)	690.9 (N=105)	666.4 (N=9299)
CAT6 Reading 9 th (2004)	705.6 (N=108)	672.4 (N=9340)

Table 3.4 - Class of 2007 Standardized Test Performance, Spelling

<i>TEST</i>	<i>PREUSS SCALE SCORE</i>	<i>SDUSD SCALE SCORE</i>
SAT9 Spelling 6 th (2001)	670.7 (N=113)	651.8 (N=9669)
SAT9 Spelling 7 th (2002)	679.4 (N=133)	666.1 (N=9201)
CAT6 Spelling 8 th (2003)	697.4 (N=105)	673.6 (N=9271)

Table 3.5 - Class of 2007 Standardized Test Performance, Mathematics

<i>TEST</i>	<i>PREUSS SCALE SCORE</i>	<i>SDUSD SCALE SCORE</i>
SAT9 Mathematics 6 th (2001)	687.0 (N=113)	662.9 (N=9601)
SAT9 Mathematics 7 th (2002)	696.7 (N=133)	675.4 (N=8994)
CAT6 Mathematics 8 th (2003)	707.8 (N=105)	679.8 (N=9281)
CAT6 Mathematics 9 th (2004)	727.9 (N=108)	691.7 (N=9306)
CST Mathematics 7 th (2002)	338.4 (N=105)	319.7 (N=9415)
CST Algebra 1 (2003)	317.7 (N=95)	303.3 (N=6049)
CST Algebra 1 (2004)	335.4 (N=22)	281.1 (N=5585)
CST Geometry (2004)	335.2 (N=75)	322.0 (N=3227)
CST Algebra 2 (2004)	366.0 (N=11)	361.6 (N=243)
CST Geometry (2005)	292.2 (N=28)	270.9 (N=4414)
CST Algebra 2 (2005)	315.3 (N=54)	304.9 (N=2652)
CST H.S. Math (2005)	362.3 (N=11)	359.2 (N=270)
CST Algebra 2 (2006)	294.5 (N=20)	259.3 (N=2654)
CST H.S. Math (2006)	325.5 (N=54)	310.4 (N=2352)

Table 3.6 - Class of 2007 Standardized Test Performance, Natural Sciences

<i>TEST</i>	<i>PREUSS SCALE SCORE</i>	<i>SDUSD SCALE SCORE</i>
CAT6 Science 9 th (2004)	699.7 (N=108)	678.3 (N=9306)
CST Physics (2004)	312.0 (N=108)	291.9 (N=8004)
CST Physics (2005)	306.3 (N=23)	286.8 (N=879)
CST Chemistry (2005)	330.8 (N=73)	300.8 (N=6818)
CST Chemistry (2006)	316.0 (N=18)	305.5 (N=917)
CST Biological Sciences (2006)	354.7 (N=63)	334.5 (N=5415)

There was no SAT9 or CAT6 science test given in the 6th through 8th grade.

Section 4: Grade Point Averages and AP Classes

A student's unweighted GPA represents the grades earned for courses taken, without adjustment for course difficulty. A student's weighted GPA takes into account the additional grade point earned for each advanced placement (AP), International Baccalaureate (IB), and honors course taken and passed during high school. Table 4.1 provides information on the average high school unweighted and weighted GPA for Preuss Graduating Class of 2007 students by year, and their average cumulative GPA through the end of the 2006/2007 school year.

Table 4.1 Class of 2007 Unweighted GPA by Academic Year

<i>ACADEMIC YEAR</i>	<i>PREUSS UNWEIGHTED GPA</i>	<i>PREUSS WEIGHTED GPA</i>
2003-04 (9 th Grade)	3.28	3.33
2004-05 (10 th Grade)	3.21	3.38
2005-06 (11 th Grade)	3.27	3.62
2006-07 (12 th Grade)	3.33	3.69
Cumulative	3.27	3.51

Table 4.2 shows the AP class-taking patterns of the Class of 2007. The first column shows the average number of AP classes attempted in a given school year per student. The second column shows the percentage of those classes passed with a grade “C” or higher. After taking course repeats into account, Preuss students attempted an average of 7.65 AP classes throughout their high school years. They passed 93% of them with a grade “C” or higher.

Table 4.2 Class of 2007 AP Classes by Academic Year⁵

<i>ACADEMIC YEAR</i>	<i>AP CLASSES ATTEMPTED</i>	<i>% PASSED ("C" OR HIGHER)</i>
2003-04 (9 th Grade)	0.43	82%
2004-05 (10 th Grade)	1.46	82%
2005-06 (11 th Grade)	2.82	94%
2006-07 (12 th Grade)	2.93	99%
Cumulative	7.65	93%

Section 5: A-G Completion Rates

The University of California and the California State University have jointly determined both the subject areas and number of courses a student must take and pass (with a grade of “C” or better) to be eligible for admission to public four-year institutions in California. Collectively, these requirements are referred to as the “A-G requirements.” Table 5.1 shows each of the subject areas and the minimum and recommended number of years of study required for college eligibility:

Table 5.1 A-G Requirements for CSU and UC Admission

REQUIREMENT	SUBJECT AREA	YEARS OF STUDY REQUIRED
“A”	History / Social Science	2
“B”	English	4
“C”	Mathematics	3 required (4 recommended)
“D”	Laboratory Science	2 required (3 recommended)
“E”	Language other than English	2 required (3 recommended)
“F”	Visual and Performing Arts	1
“G”	Electives	1
All Requirements	Total Years: 15 required, 18 recommended	

⁵ The CDE also reports AP test-taking patterns across schools, but it does not break things apart by grade level. As a result, it is impossible to track the performance of the Class of 2007 across years in this dimension. Individual-level test results are not available at this time.

For the Class of 2007 we analyzed courses taken using unofficial transcripts from the Preuss School and administrative datasets supplied by SDUSD. Table 5.2 shows the percentage of students in each group completing the A-G requirements and it also provides the average number of years of study accumulated by each group in the various subject areas. Although many SDUSD students in past years came close to completing the required years of study in several subject areas, the “all or none” nature of the A-G requirements drove down the percentage of students graduating with successful completion for that group.

Out of the 78 students in the graduating class, 71 Preuss students (91%) completed all A-G requirements successfully. Of the seven students not completing A-G, five failed to complete the A-G requirements for mathematics (the “C” requirement). This is by far the category with the greatest number of A-G non-completions. The requirements for English (“B”), foreign languages (“E”), and fine arts (“F”) saw one non-completion each. SDUSD has not yet produced comparable A-G completion rates or classes taken for the Class of 2007. For the Class of 2006, the district reports a 39% completion rate for all requirements taken together, and in that year, Preuss students posted similarly high performance to the Preuss Class of 2007.

Table 5.2 Class of 2007 A-G Completion Rates by Requirement

<i>A-G REQUIREMENT</i>	<i>PREUSS % COMPLETE</i>	<i>PREUSS # CLASSES</i>
A – History & Social Sciences	100%	2.00
B – English Language Arts	99%	4.00
C – Mathematics	94%	3.72
D – Natural Sciences	100%	2.98
E – Lang. other than English	99%	2.98
F – Visual and Performing Arts	99%	1.00
G – Elective	99%	1.00
All Requirements	91%	17.67

Section 6: High School Exit Exam

The State of California, as a requirement for graduation, requires each student to take and pass the California High School Exit Exam (CAHSEE). By the end of the tenth grade, each student is expected make their first attempts to take and pass sections in Mathematics and English. These sections may be taken and passed individually, with retakes allowed until the student passes. Table 6.1 reports the performance on the CAHSEE by the end of the tenth grade for the Preuss and SDUSD Class of 2007. The Preuss students entering the tenth grade in the 2004-05 school year took and passed both portions of the examination at a 97% rate and 56% of SDUSD students took and passed both portions by the end of the tenth grade. The SDUSD students take both portions at an 82% rate, but they pass the exams that they take at a substantially lower rate than the Preuss students.

Table 6.1 Class of 2007 10th Grade CAHSEE Performance

PERCENT OF STUDENTS...	PREUSS	SDUSD
Taking English	99%	85%
Passing English	99%	65%
Taking Mathematics	98%	83%
Passing Mathematics	97%	61%
Taking Both Portions	98%	82%
Passing Both Portions	97%	56%

N=98 students (Preuss), 10,887 students (SDUSD).

Section 7: College Entrance Examinations and College Enrollment

Table 7.1 provides the average scores earned, by decile, for the 2007 Preuss graduates compared against the SDUSD, San Diego County, and California statewide averages on the examinations.⁶ Two points are worth noting. The first is that the “percent tested” reported by the CDE is computed by dividing the total number of test scores recorded, by the 12th grade enrollment. This tends to inflate the percent of students reported as taking the test because the calculation includes all attempts and does not adjust for students making multiple attempts at the examination. The second point is that the information reported by the CDE does not isolate the “best score” achieved by each student. Because of this, we are unable to estimate whether multiple attempts at the examinations tend to inflate or deflate the differences in average scores reported by the CDE. If, on average, the higher scoring students made multiple attempts and those scores were as high as or higher than their initial attempt, then the net effect would be inflationary. The reverse would be true if predominantly lower scoring students made multiple attempts and did not improve on their initial performance in subsequent attempts.

Because all Preuss students were required to take the SAT I and II, it is not reasonable to compare their average score with that attained by schools where students were allowed to “self-select” whether to take the test or not. The exact percentage varies from school to school, but in general, fewer than 50% of students take these tests. Those students are likely college bound and in the upper half of their graduating classes in terms of GPA and courses taken. By presenting the average scores of Preuss students by deciles, readers are free to make their own judgment about what proportion of Preuss test takers represent an “apples to apples” comparison to the district.

The individual-level Preuss data report the average maximum score per student based on data provided by Preuss, by deciles. For instance, the top 50% of Preuss students had an average SAT-1 composite score of 1714, while the top 90% of Preuss students had an average SAT-I composite score of 1602. In the lower portion of the table, average scores are reported from the CDE website. The data in the upper and lower portions of the table come from different sources and are calculated using different methods—namely, the CDE uses the average score from multiple attempts while the individual-level calculations use each student’s highest score. This is at least part of the reason why the CDE’s average score for Preuss of 1517 do not match the average of 1564 calculated from the individual-level data. As such, one should exercise caution when comparing the individual-level data reported by Preuss with its average score as reported by the CDE.

⁶ Obtained from the California Department of Education website.

Looking at testing rates, Preuss students take the SAT-I at extremely high rates, while fewer than half of all students in the district do so. The scores reported by deciles demonstrate the importance of these different test-taking rates in determining the average performance of different groups of students. If the top half of the students in the district are being tested and compared with the Preuss students, this will bias the comparison in favor of the district to a large degree.

**Table 7.1 Preuss Class of 2007 SAT I and II Scores⁷
(Composite Score: Mathematics + English + Writing)**

TOP %	100	90	80	70	60	50	40	30	20	10
PREUSS (Individual)	1564	1602	1633	1659	1689	1714	1743	1780	1824	1884
	Testing Rate			Average Score						
PREUSS (CDE)	105.13%			1517						
SDUSD	48.35%			1458						
COUNTY	38.30%			1515						
STATE	36.90%			1497						

For the Class of 2007, the average score of the Preuss test takers was higher than that recorded by students in the district, county and state. The scores earned on the SAT's are indicators of academic achievement rather than the sole determinants of college acceptance. When combined with GPA and completion of the A-G requirements, these indicators determine both the eligibility and competitive standing of college the applications made by each graduate.

Table 7.2 shows the number and percentage of Preuss graduates in the Class of 2007 submitting a Statement of Intent to Register (SIR) to each segment of higher education as of May 2007, as provided by the Preuss Board of Directors. The SIR is not a perfect predictor of actual college enrollment, because students can change their mind even after they notify a college of their enrollment plans. However, until we obtain actual enrollment information from colleges, SIR is the best indicator we have available.

This table shows that 87% of the graduating class of 2007 intends to enroll in 4-year colleges and universities in the Fall of 2007 and 12% intend to enroll in community colleges. According to the Preuss Board of Directors, those Preuss students who attend California Community Colleges (CCC) are offered dual admission or Guaranteed Transfer in which students enter the UC as juniors after completing 2 years of approved community college course work.

Table 7.2 Preuss Class of 2007 SIR by Higher Education Segment

	NUMBER OF STUDENTS	PERCENT OF CLASS
UC	26	33%
CSU	33	42%
Private	9	12%
Total 4-Year College	68	87%
Community College	9	12%
US Armed Forces	1	1%
Total	78	100%

⁷ Average scores and percent of students taking the SAT 1 for the SDUSD, County, and State were obtained from the CDE website.