

# ASSESSMENT BRIEF

DEPARTMENT OF TEACHING AND LEARNING

DEPARTMENT OF PLANNING, INNOVATION, AND ACCOUNTABILITY – MAY 10, 2017

## SAT Results for the Graduating Class of 2016

Author: Douglas G. Wren, Ed.D., Assessment Specialist

Other Contacts: Amy E. Cashwell, Ed.D., Chief Academic Officer

Donald E. Robertson, Jr., Ph.D., Chief Strategy and Innovation Officer

### ABSTRACT

The SAT results for Virginia Beach City Public Schools (VBCPS) high school students who took the SAT at least once through January 2016 and indicated that they would graduate in 2016 are summarized in this assessment brief. Also included in the brief are data for 2016 graduates who took the assessment in Virginia, in the U.S., or at an international test center. The composite mean SAT score of 1515 was the highest ever by a Virginia Beach graduating class on the test. The VBCPS mean scores of 514 in critical reading, 511 in math, and 490 in writing surpassed the section mean scores of every other school division in Hampton Roads but were slightly lower than the mean scores for public school graduates in Virginia. The percent of SAT test takers in the VBCPS class of 2016 who met or exceeded the SAT College and Career Readiness Benchmark scores in critical reading and math was higher than the percent of Virginia public school graduates who reached the benchmarks. Most of the results reported in this brief do not include data from administrations of the newest version of the SAT, administered by the College Board in March, May, and June of 2016.

### KEY TOPICS:

Background.....	p. 1
Characteristics of SAT Test Takers.....	p. 1
SAT Participation .....	p. 2
SAT Scores by Ethnicity.....	p. 3
College and Career Readiness Benchmarks ...	p. 3
PSAT Experience and SAT Scores .....	p. 4
SAT Results by High School .....	p. 4
Comparison with Local School Divisions.....	p. 5
Summary .....	p. 5

### BACKGROUND

The Scholastic Aptitude Test (SAT) was initiated in a 1926 pilot study whose purpose was to develop an assessment “for colleges and universities to measure aptitude, or innate mental ability, rather than mastery of subjects learned.”<sup>1</sup> During the 90 years that followed, the SAT has had numerous revisions—including a 1994 name change to its acronym<sup>2</sup>—and has been administered extensively across the country and around the world.

The not-for-profit College Board has overseen the SAT since its inception, and has long since abandoned the claim that the test measures innate ability. The latest version of the SAT, introduced in March 2016, is “more focused on the skills and knowledge at the heart of education.”<sup>3</sup> However, the information in this brief is based primarily on results from the previous version of the SAT, administered from 2005 through January 2016.

The College Board produces and distributes annual *College-Bound Seniors* reports for schools, divisions, and states, as well as for the total group of SAT test takers. The reports contain data for students who took the SAT at least once during high school and reported, at the time they registered for the test, their intent to graduate in 2016. Unlike prior years’ reports, the 2016 *College-Bound Seniors* reports do not include data for students who waited until March or later of their senior year to take the test.

### CHARACTERISTICS OF SAT TEST TAKERS

At the time they register for the SAT, students must complete an online questionnaire that asks them to report their gender, ethnicity, citizenship, level of parental education, family income, and other information such as high school class rank, grade point average, and courses taken. Because self-reported data relies on each respondent’s knowledge and truthfulness, it is possible that some data in Table 1 on the following page are not precise. The accuracy of the data was also affected by the fact that a considerable number of students chose not to respond to certain questions (i.e., ethnicity, highest level of parental education, and family income).

<sup>1</sup>Kaplan, *A Brief History of the SAT*, <http://www.kaptest.com/blog/admission-possible/a-brief-history-of-the-sat-from-kaplan-test-prep>, accessed on September 13, 2016.

<sup>2</sup>Applebome, New York Times, *Insisting It’s Nothing, Creator Says SAT, Not S.A.T.*, <http://www.nytimes.com/1997/04/02/us/insisting-it-s-nothing-creator-says-sat-not-sat.html>, accessed on September 13, 2016.

<sup>3</sup>College Board, *Inside the Test*, <https://collegereadiness.collegeboard.org/sat/inside-the-test>, accessed on September 13, 2016.

Table 1 shows that among students who graduated in the class of 2016 and took the SAT during high school, there were higher percentages of females than males in Virginia Beach City Public Schools (VBCPS), the Commonwealth of Virginia, and for the

**Table 1**  
**Demographic Summary of 2016 Graduates Who Took the SAT**

Characteristic	VBCPS	Virginia	Total Group
<b>Total Number of Test Takers</b>	<b>2,875</b>	<b>57,861</b>	<b>1,637,589</b>
<b>Gender</b>			
Male	44%	46%	47%
Female	56%	54%	53%
<b>Ethnicity</b>			
Asian or Asian American	9%	9%	12%
Black or African American	20%	19%	12%
Hispanic, Latino, or Latin American	9%	9%	22%
White	53%	55%	45%
Two or More Races, non-Hispanic	5%	3%	2%
No Response	2%	3%	5%
<b>Citizenship</b>			
U.S. Citizen / U.S. National	98%	95%	85%
U.S. Permanent Resident or Refugee	1%	2%	3%
Citizen of Another Country	0.7%	2%	7%
Other, Unknown, or No Response	0.1%	1%	4%
<b>Highest Level of Parental Education</b>			
No High School Diploma	1%	3%	7%
High School Diploma	25%	23%	26%
Associate Degree	10%	7%	7%
Bachelor's Degree	35%	32%	28%
Graduate Degree	23%	30%	23%
No Response	5%	5%	10%
<b>Family Income</b>			
Less than \$40,000	16%	13%	17%
\$40,000 to less than \$80,000	22%	16%	15%
\$80,000 to less than \$140,000	25%	21%	16%
\$140,000 and above	12%	17%	11%
No Response	26%	34%	40%
<b>Year SAT Test Last Taken</b>			
Senior	67%	65%	62%
Junior	33%	35%	38%
Sophomore	0.2%	0.3%	0.4%

Notes: Data are from SAT administrations through January 2016. Percentages for characteristics may not add up to 100 due to decimal rounding error and because ethnic groups comprising less than 2% of test takers were omitted.

Sources: 2016 College-Bound Seniors District Profile Report (Tables 2, 3, 7, 10), 2016 College-Bound Seniors State Profile Report (Tables 2, 3, 8, 11), and 2016 College-Bound Seniors Total Group Profile Report (Tables 2, 3, 7, 10).

total group of SAT examinees. African American and White students comprised the two largest ethnic groups of test takers at both the division and state levels, while Hispanic and White students made up the largest groups of SAT examinees in the total group. The lower percentage of U.S. citizens in the total group compared to VBCPS and Virginia is due to the frequent administrations of the SAT in international venues.

Approximately one-fourth of Virginia Beach SAT test takers came from families in which their parents' highest level of education was a high school diploma, and the parents of 68 percent of VBCPS test takers had reportedly earned their associate, bachelor's, or graduate degrees. The percentage of examinees' parents whose highest level of education was a bachelor's degree was greater for the division than for the state or total group; however, the percentage of SAT examinees with a parent holding a graduate degree was considerably greater at the state level than for VBCPS and the total group.

The family income data for SAT test takers who graduated in 2016 shows that about 47 percent of the VBCPS examinees' family incomes were in the midranges (i.e., \$40,000 to \$80,000 and \$80,000 to \$140,000). This was 10 and 16 points greater than the corresponding midrange percentages for the state and total group, respectively.

As shown in the last section of Table 1, most of the SAT test takers in the graduating class of 2016 took the test for the last or only time during their senior year in high school. The "freshman" row was omitted from the table because no VBCPS graduates took the SAT for the last time while they were freshmen and less than one-tenth of one percent of SAT test takers at the state and total group levels last took the test as freshmen.

**SAT PARTICIPATION**

Table 2 shows a decrease from the class of 2015 to the class of 2016 in the number and percent of VBCPS graduates who took the SAT. The Commonwealth and total group experienced a one-year decline in test takers as well. It should be noted that the data in Table 2 are for all

**Table 2**  
**Number and Percent of Graduates Who Took the SAT – Five-Year Trends**

Graduation Year	2012	2013	2014	2015	2016
VBCPS	3,323	3,122	3,110	3,156	<b>2,998</b>
Percent of VBCPS Graduates	66.2%	64.5%	63.8%	64.5%	<b>61.7%</b>
Virginia	61,655	60,640	59,906	59,621	59,268
Total Group	1,664,479	1,660,047	1,672,395	1,698,521	1,674,169

Sources: College-Bound Seniors District Profile Report (Tables 1 and 4) and Virginia Department of Education Report of Combined Term Graduates for each school year; SAT Educator Reporting Tool, SAT Class of 2016: Benchmarks by Institution; and 2016 College Board Program Results, Virginia.

administrations of the SAT, including the new SAT given in March, May, and June 2016. A total of 123 VBCPS seniors took the SAT for the first time during one of the administrations of the new SAT.

**SAT SCORES BY ETHNICITY**

The SAT mean scores for the largest ethnic groups of seniors in Virginia Beach and the state as well as for all test takers are shown in Table 3 below. Unlike Table 2, the data in Table 3 do not include results from the new SAT; this explains the decrease in the number of SAT test takers from 2015 to 2016 for every ethnicity except the Hispanic group, which saw growth from 2015 to 2016. This increase could be partly attributed to the College Board’s revision of their ethnicity reporting categories in June 2015.

**Table 3  
Number of 2016 Graduates Who Took the SAT and Mean Scores by Ethnicity**

Ethnicity	Group	2015				2016			
		n	Reading	Math	Writing	n	Reading	Math	Writing
Asian or Asian American	VBCPS	327	520	533	497	266	511	530	488
	Virginia	5,757	539	585	534	5,389	551	594	544
	Total Group	211,238	523	598	530	196,735	529	602	534
Black or African American	VBCPS	657	445	441	424	562	449	445	427
	Virginia	11,603	442	435	423	11,133	442	433	420
	Total Group	219,018	431	429	418	199,306	430	425	415
Hispanic, Latino, or Latin American	VBCPS	232	501	489	477	265	511	495	487
	Virginia	4,535	496	492	478	5,151	498	492	475
	All	322,873	449	456	439	355,829	448	453	436
White	VBCPS	1,666	527	525	506	1,514	540	538	515
	Virginia	33,976	543	535	519	31,912	545	538	520
	Total Group	800,236	529	534	513	742,436	528	533	511
Two or More Races, non-Hispanic	VBCPS	-	-	-	-	133	507	491	483
	Virginia	-	-	-	-	1,644	515	503	488
	Total Group	-	-	-	-	28,460	511	505	488
All Test Takers	VBCPS	3,156	507	504	484	2,875	514	511	490
	Virginia	59,621	518	516	499	57,861	520	517	498
	Total Group	1,698,521	495	511	484	1,637,589	494	508	482

The mean scores for VBCPS graduates in the class of 2016 improved from the previous year’s mean scores by at least 6 points on each section of the SAT. The critical reading mean score of 514 and the writing mean of 490 were the highest VBCPS mean scores ever attained on these sections from administrations of the three-section version of the SAT, which was adopted by the College Board in 2005.

Virginia Beach students in the African American, Hispanic, and White groups also made gains in the mean scores on each SAT section from the mean scores of their counterparts in the previous graduating class. In addition, all of the mean SAT scores for the African American and Hispanic student groups in VBCPS exceeded the mean scores of the same groups of SAT examinees across the Commonwealth of Virginia.

Note: “Two or More Races, non-Hispanic” was not a reporting category in the *College-Bound Seniors Profile Reports* published before 2016. Sources: *College-Bound Seniors District Profile Report* (Table 7), *College-Bound Seniors State Profile Report* (Table 8), and *College-Bound Seniors Total Group Profile Report* (Table 7) for each school year.

**COLLEGE AND CAREER READINESS BENCHMARKS**

The SAT College and Career Readiness Benchmarks were developed to “help educators better understand how many and also which students are on track to have the skills necessary for college-entry, credit-bearing courses.”<sup>4</sup> Table 4 shows the percent of 2016 graduates whose scores were at or above 500 on an SAT section as well as the percent whose composite SAT score was at least 1550. It should be noted that the score range on each section of the SAT is 200 to 800, and that the

**Table 4  
Percent of 2016 Graduates Meeting or Exceeding SAT College and Career Readiness Benchmark Scores**

Group	Number Tested	Reading (500)	Math (500)	Writing (500)	Composite (1550)
VBCPS	2,998	55%	53%	45%	43%
Virginia Public	52,428	54%	52%	45%	44%
Total Group	1,674,169	46%	50%	41%	39%

Source: SAT Educator Reporting Tool, *SAT Class of 2016: Benchmarks by Institution*.

<sup>4</sup>College Board, *SAT: Understanding Scores 2016*, <https://collegereadiness.collegeboard.org/pdf/understanding-sat-scores-2016.pdf>, accessed on October 6, 2016.

data in Table 4 are based on results from administrations of the SAT through June 2016. The percent of VBCPS graduates who met or exceeded the benchmark scores in the reading and math sections surpassed the percentages for the total group and for public school graduates in Virginia. The percentage of VBCPS students who reached the writing benchmark equaled the state public school percentage, while the state’s composite percentage was slightly higher than the VBCPS composite percentage.

**PSAT EXPERIENCE AND SAT SCORES**

The Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/NMSQT) is available to all VBCPS students in grades 9-11 at no cost; this is reflected in Table 5 by the high percentage of 2016 graduates who reported taking the PSAT/NMSQT prior to their senior year. Although over 25 percent of the students did not indicate when they took the PSAT/NMSQT, the data clearly show that SAT scores are higher for students who take the PSAT/NMSQT more than once during high school.

**Table 5**  
**PSAT/NMSQT Experience and**  
**SAT Mean Scores of VBCPS 2016 Graduates**

High School Year PSAT/NMSQT Taken	Percent	Reading	Math	Writing
As a Junior and as a Sophomore or Younger	49.7%	541	537	519
As a Sophomore or Younger	12.9%	520	522	498
As a Junior	8.7%	492	493	471
Did Not Take the PSAT	3.0%	460	464	438
No Response	25.8%	473	466	444

Source: 2016 College-Bound Seniors District Profile Report (Table 10).

**SAT RESULTS BY HIGH SCHOOL**

The College Board has stated that “educators, the media, and others should not rank or rate teachers, educational institutions, districts, or states solely on aggregate scores derived from tests that are intended primarily as a measure of individual students.”<sup>5</sup> Each high school and school division in Virginia consists of a unique population of students that includes individuals who choose to take the SAT. These test-taking students comprise a self-selected sample within each population. Another consideration when examining SAT scores in Virginia Beach is that the two VBCPS high schools housing advanced academic programs tend to have higher SAT mean scores than other Virginia Beach schools. This is in part because the students admitted to these programs

**Table 6**  
**Number of Senior SAT Test Takers and SAT Mean Scores by High School**

School	Number Tested		Critical Reading		Mathematics		Writing	
	2015	2016	2015	2016	2015	2016	2015	2016
Bayside	238	<b>202</b>	478	<b>492</b>	464	<b>479</b>	454	<b>481</b>
Cox	313	<b>313</b>	518	<b>530</b>	525	<b>534</b>	502	<b>511</b>
First Colonial	334	<b>310</b>	522	<b>525</b>	510	<b>513</b>	490	<b>494</b>
Green Run	175	<b>196</b>	446	<b>453</b>	449	<b>447</b>	428	<b>425</b>
Kellam	350	<b>346</b>	516	<b>519</b>	506	<b>512</b>	500	<b>498</b>
Kempsville	202	<b>176</b>	496	<b>499</b>	498	<b>504</b>	467	<b>477</b>
Landstown	340	<b>290</b>	488	<b>491</b>	493	<b>498</b>	459	<b>461</b>
Ocean Lakes	356	<b>283</b>	522	<b>558</b>	537	<b>571</b>	501	<b>529</b>
Princess Anne	287	<b>246</b>	552	<b>567</b>	540	<b>553</b>	538	<b>548</b>
Salem	269	<b>267</b>	493	<b>507</b>	488	<b>496</b>	467	<b>480</b>
Tallwood	288	<b>244</b>	503	<b>484</b>	493	<b>479</b>	484	<b>465</b>
<b>VBCPS</b>	3,156	<b>2,875</b>	507	<b>514</b>	504	<b>511</b>	484	<b>490</b>
Virginia Public	52,362	51,223	515	516	513	513	495	493
Virginia	59,621	57,861	518	520	516	517	499	498
Total Group	1,698,521	1,637,589	495	494	511	508	484	482

Note: The VBCPS number tested includes a small number of Renaissance Academy SAT examinees (n < 5 for each year).

Sources: *College-Bound Seniors High School Profile Reports* (Table 1) and *College-Bound Seniors District Profile Report* (Tables 1 and 4) for each school year; Virginia Department of Education, *VDOE News* (September 3, 2015 and September 27, 2016); and *College Board State Integrated Summary 2015-2016: Virginia Public Schools*.

are typically skilled test takers; many advanced academy students also plan to attend colleges or universities that require above average SAT scores.

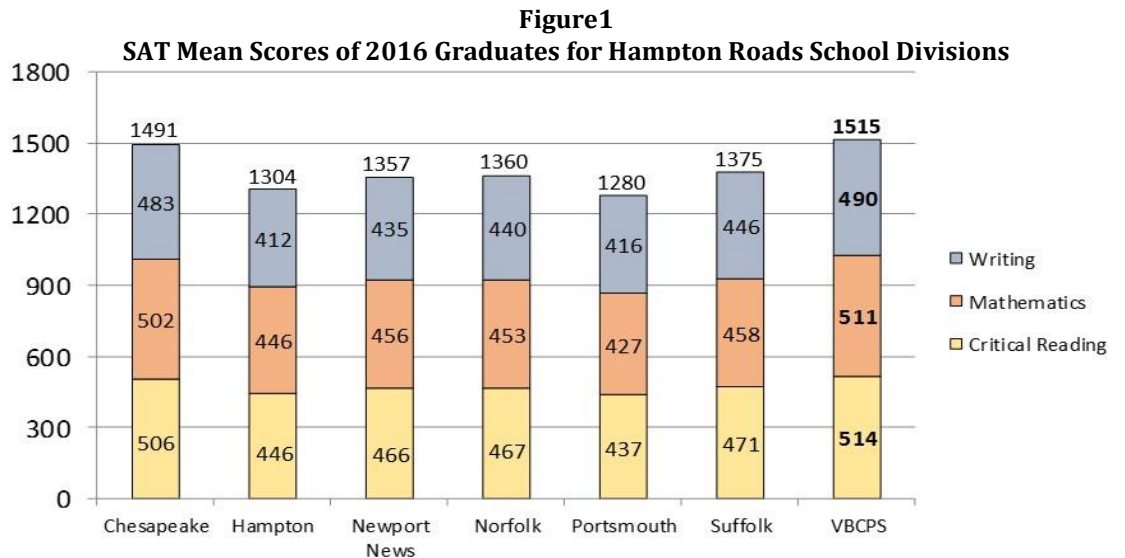
Table 6 provides data for SAT test takers in the classes of 2015 and 2016. The data are exclusively from administrations of the three-section SAT administered through January 2016. Although the 2016 data included only four administrations and the 2015 data included seven, Cox and Green Run high schools maintained or increased the number of SAT test takers from the previous year. Comparisons between VBCPS and public school students in Virginia show that Virginia Beach students have closed the SAT gap to 3 points in writing and 2 points in critical reading and math.

<sup>5</sup>College Board, *Guidelines on the Uses of College Board Test Scores and Related Data*, <http://media.collegeboard.com/digitalServices/pdf/research/guidelines-on-uses-of-college-board-test-scores-and-data.pdf>, accessed on October 6, 2016.



**COMPARISON WITH LOCAL SCHOOL DIVISIONS**

As illustrated in Figure 1, the mean scores for VBCPS graduates in the class of 2016 were higher on all three sections of the SAT than the mean scores of graduates in the six other school divisions in Hampton Roads, which are Chesapeake Public Schools, Hampton City Schools, Newport News City Public Schools, Norfolk Public Schools, Portsmouth Public Schools, and Suffolk Public Schools. The critical reading and math mean scores for VBCPS and Chesapeake Public Schools graduates were the only local mean scores that exceeded the SAT College and Career Readiness Benchmark scores, but the composite score gap between VBCPS and Chesapeake was a substantial 24 points.



Source: College Board, Virginia Public Schools, Summary by District: SAT®, SAT Subject Tests™, AP®, PSAT/NMSQT®.

**SUMMARY**

Slightly fewer than 3,000 students in the VBCPS graduating class took the SAT at least once during high school. Approximately two-thirds of these students took the SAT for the last or only time while they were seniors, and over half of the test takers were female students. The VBCPS composite mean score of 1515 was the highest SAT composite score ever recorded by a graduating class in Virginia Beach.

The VBCPS class of 2016 closed the mean score gap with Virginia public school graduates who took the SAT to 3 points in writing and 2 points in critical reading and math, and surpassed their counterparts at the state level in the percentage of students who met or exceeded the SAT College and Career Readiness Benchmark scores in critical reading and math. Four VBCPS high schools recorded mean scores on all three SAT sections that were higher than the mean scores of Virginia public school graduates.

Once again, the mean scores for VBCPS graduates topped the mean scores of every other school division in Hampton Roads on each section of the SAT. Virginia Beach’s composite mean score of 1515 was 24 points higher than the composite mean score of Chesapeake Public Schools and 180 points above the average composite mean score for the other five local school divisions.