

ASSESSMENT BRIEF

DEPARTMENT OF TEACHING AND LEARNING

DEPARTMENT OF PLANNING, INNOVATION, AND ACCOUNTABILITY – NOVEMBER 9, 2018

ACT Results for the Graduating Class of 2018

Author: Douglas G. Wren, Ed.D., Educational Measurement and Assessment Specialist

Other Contact: Kipp D. Rogers, Ph.D., Chief Academic Officer

ABSTRACT

Data and results from the ACT college readiness assessment for graduates in the Virginia Beach City Public Schools (VBCPS) class of 2018 are described in this assessment brief. ACT data for VBCPS students are compared with state and national data, as well as with ACT results from previous VBCPS graduating classes. A total of 850 students, or 16.5 percent of the VBCPS class of 2018, took the ACT during high school and achieved average scores on each of the four tests—English, math, reading, and science—that were the highest on record for a VBCPS senior class. The VBCPS average ACT composite score of 23.1 was seven-tenths of a point lower than the average composite score of 2018 public school graduates in Virginia, but 2.3 points higher than the national average ACT composite score. Results for ACT test takers in the VBCPS class of 2018 indicated 40 percent of the students had a high likelihood of being successful in college English, math, reading, and science coursework, according to the ACT College Readiness Benchmarks. The division’s 2018 graduates included a higher percentage of test takers meeting ACT math and science benchmarks than any other VBCPS graduating class. In math, 58 percent of the test takers met or exceeded the benchmark; in science, 54 percent met or surpassed the benchmark.

KEY TOPICS:

Background	p. 1
ACT Participation	p. 1
ACT Subject and Composite Scores	p. 2
ACT Scores by Racial/Ethnic Group	p. 2
ACT College Readiness Benchmarks	p. 3
ACT Results by High School	p. 3
ACT Writing Test Scores	p. 4
Summary	p. 4

BACKGROUND

The first ACT test was administered in 1959 at the University of Iowa under the auspices of an education professor, E. F. Lindquist, and registrar Ted McCarrel. Unlike the much older Scholastic Aptitude Test (SAT), which focused on aptitude, the ACT assessed “academic achievement mastery of the skills and knowledge taught in schools.”¹

The current version of the ACT includes multiple-choice tests in English, mathematics, reading, and science, plus an optional writing test. Each test is designed to measure specific skills deemed to be vital for students to achieve success in college. Questions on ACT tests are aligned with high school course content.²

This brief summarizes ACT results for seniors in the class of 2018 who took the test at least once during grade 10, 11, or 12, and indicated their intent to graduate in 2018. Data are reported for ACT test takers across the nation, the Commonwealth of Virginia, and Virginia Beach City Public Schools (VBCPS). The brief includes data from previous graduating classes for comparison purposes.

ACT PARTICIPATION

For nearly 20 years, VBCPS experienced annual increases in the number of graduates who took the ACT. Starting with the class of 2017, this trend reversed. As shown in Table 1 on the following page, the number of ACT test takers also decreased at the state and national levels during the past two years, with the total number of graduating seniors who took the ACT dropping below two million nationally for the first time since 2015.

The most recent decrease in VBCPS graduates who took the ACT was not as dramatic as it was the preceding year. There were 201 fewer VBCPS graduates who took the ACT from the class of 2016 to the class of 2017, which was a drop of 18.7 percent. From 2017 to 2018, the decrease was only 22 students, or 2.5 percent. The decreases in ACT test takers for the Commonwealth of Virginia and the nation from the class of 2017 to the class of 2018 were 15.2 percent and 5.7 percent, respectively.

¹ACT, Inc., *About ACT: ACT History*, <https://www.act.org/content/act/en/about-act.html>, accessed on October 18, 2018.

²ACT, Inc., *About the ACT Test*, <http://www.act.org/content/act/en/products-and-services/the-act-educator/the-act-test.html>, accessed on October 18, 2018.

In addition to listing the number of test takers for the last five graduating classes, Table 1 shows the percentage of VBCPS graduates who took the ACT from 2014 through 2018. Although the drop in ACT participation cannot be fully explained, the numbers began to decline after the College Board rolled out the latest version of the SAT in March 2016.

Table 1
Number and Percent of Graduates Who Took the ACT – Five-Year Trends

Graduation Year	2014	2015	2016	2017	2018
VBCPS	906	1,011	1,073	872	850
Percent of VBCPS Graduates	18.6%	20.7%	22.1%	17.7%	16.5%
Virginia	22,977	25,038	25,866	25,518	21,645
Nation	1,845,787	1,924,436	2,090,342	2,030,038	1,914,817

Sources: ACT Profile Report - District, Graduating Class 2018 and VBCPS Report of Combined Term Graduates for each school year.

ACT SUBJECT AND COMPOSITE S

ACT test takers receive a score from 1 to 36 on each of the four subject tests. Composite scores are calculated for test takers by averaging their subject test scores. Table 2 contains the average ACT subject test and composite scores for the last five high school graduating classes at the division, state, and national levels. The average scores for students who attended public high schools in Virginia are shown in parentheses in the table.

The average scores on three of the four ACT subject tests increased from the previous year for VBCPS students and public school students in Virginia, while national scores decreased for all four subject tests. The average ACT scores in English, mathematics, science, and the ACT composite score for VBCPS seniors in the class of 2018 were the highest ever for a VBCPS graduating class. The 2018 average reading score equaled the score attained by 2017 graduates, also the highest on record for VBCPS. Despite the gains of Virginia Beach ACT test takers, the average scores for 2018 VBCPS graduates remained five-tenths to eight-tenths of a point below the average ACT scores of their public school peers across the state.

Table 2
Average ACT Scores – Five-Year Trends

Graduation Year	English			Mathematics			Reading			Science			Composite		
	VBCPS	VA	Nation												
2014	21.1	22.4 (22.0)	20.3	21.9	22.7 (22.5)	20.9	22.4	23.4 (23.1)	21.3	21.7	22.4 (22.3)	20.8	21.9	22.8 (22.6)	21.0
2015	21.7	22.8 (22.5)	20.4	22.0	22.8 (22.7)	20.8	22.5	23.6 (23.4)	21.4	22.2	22.8 (22.7)	20.9	22.2	23.1 (23.0)	21.0
2016	22.2	22.9 (22.5)	20.1	22.3	22.9 (22.7)	20.6	23.5	24.0 (23.8)	21.3	22.6	23.1 (23.0)	20.8	22.8	23.3 (23.1)	20.8
2017	22.6	23.5 (23.3)	20.3	22.5	23.3 (23.2)	20.7	23.7	24.6 (24.4)	21.4	22.9	23.5 (23.4)	21.0	23.0	23.8 (23.7)	21.0
2018	22.7	23.8 (23.5)	20.2	22.7	23.3 (23.2)	20.5	23.7	24.7 (24.5)	21.3	23.0	23.5 (23.5)	20.7	23.1	23.9 (23.8)	20.8

Note: Virginia and national scores are for public, private, and homeschooled students, except the scores for Virginia public school students shown in parentheses.
Sources: ACT Profile Report - District and State, Graduating Class 2018, Public High School Students.

ACT SCORES BY RACIAL/ETHNIC GROUP

Five-year comparisons of average ACT composite scores for the largest racial/ethnic groups in Virginia Beach are shown in Table 3 at the top of the next page. Additionally, the table provides the average ACT composite scores for the same racial/ethnic groups in the Commonwealth of Virginia and the nation.

The average ACT composite score trends for racial/ethnic groups in Table 3 are similar to the score trends in Table 2 above, where VBCPS average scores are consistently higher than the national averages, but lower than the average scores for Virginia. One notable exception to this pattern involved African American ACT test takers at the division level. The average composite score for African American students who graduated in 2018 from a VBCPS high school and took the ACT was slightly higher than the average ACT composite score of their public school counterparts in Virginia.

Conclusions from the data in Table 3 should be made carefully. Most of the VBCPS racial/ethnic groups are relatively small, so a few extremely high or low scores can skew a group’s average score. Furthermore, ACT test takers comprise samples that are self-selected and are not necessarily representative of the larger populations from which they are drawn.

Table 3
Average ACT Composite Scores by Race/Ethnicity – Five-Year Trends

Group	2014		2015		2016		2017		2018		2018 Virginia Public	2018 Virginia All	2018 Nation All
	n	Score	n	Score	n	Score	n	Score	n	Score			
Black/African American	209	18.2	184	17.8	202	18.2	160	18.5	158	18.9	18.8	18.9	16.9
White	451	23.8	532	23.4	551	24.2	463	24.6	444	24.3	24.9	24.9	22.2
Hispanic/Latino	84	20.2	94	21.3	95	22.8	89	22.0	68	22.0	22.5	22.6	18.8
Asian	43	24.2	59	24.5	66	24.9	56	24.8	57	25.0	26.9	26.7	24.5
Two or more races	82	21.2	87	22.8	94	22.1	70	22.9	83	24.0	23.9	24.1	21.1
Prefer not to respond/ No response	34	22.9	48	23.6	55	23.5	28	24.1	35	24.5	24.6	24.8	19.8
All Students	906	21.9	1,011	22.2	1,073	22.8	872	23.0	850	23.1	23.8	23.9	20.8

Notes: n = number tested. Only racial/ethnic groups with 10 or more VBCPS test takers for each year are included in the table. The numbers in the n columns do not add up to the totals in the "All Students" row due to the omission of the racial/ethnic groups with fewer than 10 test takers.

Sources: ACT Profile Reports – District, State, and National, Graduating Class 2018.

ACT COLLEGE READINESS BENCHMARKS

According to ACT, Inc., the ACT College Readiness Benchmarks are “scores on the ACT subject tests that represent the level of achievement required for students to have a 50% chance of obtaining a B or higher or about a 75% chance of obtaining a C or higher in corresponding credit-bearing first-year college courses.”³ College courses that correspond with ACT subject tests are:

- English Composition – ACT English test
- Algebra – ACT mathematics test
- Social Sciences – ACT reading test
- Biology – ACT science test

Table 4
Percent of Virginia Beach Students Meeting
ACT College Readiness Benchmark Scores – Five-Year Trends

Graduation Year	Number Tested	English (18)	Math (22)	Reading (22)	Science (23)	Met Each Benchmark
2014	906	70%	52%	51%	42%	33%
2015	1,011	72%	55%	55%	48%	36%
2016	1,073	74%	57%	60%	50%	40%
2017	872	79%	55%	64%	50%	40%
2018	850	76%	58%	60%	54%	40%
2018 VA Public	17,876	79%	60%	65%	56%	45%
2018 Virginia All	21,645	80%	60%	66%	57%	45%
2018 Nation All	1,914,817	60%	40%	46%	36%	27%

Note: The benchmark scores for each subject test are shown in parentheses.

Sources: ACT Profile Reports - District, State, and National, Graduating Class 2018.

Table 4 shows the percent of test takers at the division, state, and national levels who met or exceeded an ACT benchmark. The VBCPS class of 2018 had a higher percentage of test takers meeting the math and science benchmarks than any previous graduating class in Virginia Beach. While the VBCPS percentages were all somewhat lower than the state percentages, they were noticeably higher than the national percentages. On the four subject tests, the gap between VBCPS graduates and Virginia public high school grads in 2018 ranged from 2 to 5 percentage points. The range between VBCPS and the nation was 14 to 18 percentage points.

ACT RESULTS BY HIGH SCHOOL

On the following page, Table 5 shows the number of ACT test takers and average scores for seniors in the classes of 2017 and 2018 for each VBCPS high school, the division, state, and nation. Similar to using data in Table 3, caution should be exercised when data in Table 5 are used to make comparisons or draw conclusions. Sample sizes at many schools are quite small, and the number of ACT test takers at most of the schools fluctuates annually. Moreover, schools with advanced academic programs, primarily Ocean Lakes High School and Princess Anne High School, tend to have higher ACT scores due in part to the rigorous admission standards for students accepted to the programs, as well as a greater likelihood that academy students took the ACT compared with nonacademy students at these schools.

³ACT, Inc., *Why Scores on the ACT® Test Are Scores You Can Trust*, <http://www.act.org/content/act/en/research/scores-you-can-trust.html>, accessed on October 30, 2018.

Over half of the VBCPS ACT test takers were 2018 graduates from Cox, Kellam, Ocean Lakes, and Princess Anne high schools. These four schools, along with Bayside, First Colonial, and Salem high schools, saw an increase in ACT average composite scores from 2017. Average scores on all four subject tests increased for 2018 grads at Bayside, Cox, First Colonial, and Ocean Lakes.

Table 5
Virginia Beach ACT Results by High School – 2017 and 2018

School	Number Tested		English		Mathematics		Reading		Science		Composite	
	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
Bayside HS	83	76	19.7	21.0	20.5	21.0	21.1	21.8	21.0	21.6	20.7	21.5
Cox HS	77	98	23.6	24.0	22.5	23.8	24.3	25.4	23.3	23.7	23.5	24.4
First Colonial HS	116	89	22.4	22.7	22.1	22.4	23.9	24.3	22.9	23.0	23.0	23.2
Green Run Collegiate	12	12	18.6	19.0	21.2	19.5	21.4	21.5	20.8	19.8	20.7	20.0
Green Run HS	28	24	17.5	17.3	18.7	19.3	18.6	16.9	19.3	17.8	18.6	18.0
Kellam HS	95	122	23.6	23.5	22.4	22.8	24.5	24.1	23.1	23.5	23.5	23.6
Kempsville HS	30	24	21.2	20.8	21.3	20.8	21.8	22.0	21.3	21.0	21.4	21.3
Landstown HS	71	72	21.3	20.6	21.3	22.0	22.3	21.2	21.5	21.4	21.7	21.4
Ocean Lakes HS	120	105	24.3	25.7	24.8	25.7	25.5	26.2	25.2	26.0	25.1	26.0
Princess Anne HS	132	102	26.3	26.5	25.3	24.6	26.6	27.0	25.2	25.5	25.9	26.0
Salem HS	51	46	20.3	20.7	21.2	21.9	21.9	22.8	21.7	21.4	21.4	21.8
Tallwood HS	56	80	20.5	19.0	20.1	19.8	22.4	20.5	20.7	20.4	21.1	20.0
VBCPS	872	850	22.6	22.7	22.5	22.7	23.7	23.7	22.9	23.0	23.0	23.1
Virginia Public	21,299	17,876	23.3	23.5	23.2	23.2	24.4	24.5	23.4	23.5	23.7	23.8
Virginia All	25,518	21,645	23.5	23.8	23.3	23.3	24.6	24.7	23.5	23.5	23.8	23.9
Nation All	2,030,038	1,914,817	20.3	20.2	20.7	20.5	21.4	21.3	21.0	20.7	21.0	20.8

Note: The number tested column
Sources: ACT Profile Reports - High School, District, and State, Graduating Class 2018.

ACT WRITING TEST SCORES

Table 6 contains average ACT writing scores for VBCPS, Virginia, and the nation. Of the 850 VBCPS graduates in the class of 2018 who took the ACT, 37.2 percent opted to take the writing test. The percent of ACT writing test takers across the state was comparable at 39.4 percent. At the national level, 47.2 percent of ACT test takers in the class of 2018 took the writing test. In 7 of the 12 states that use the ACT as their mandatory high school assessment, students are required to take the writing portion.⁴

The number of VBCPS graduates who took the ACT writing test dropped from 452 in 2017 to 316 in 2018, which was a 30.1 percent decrease. The greatest decreases were for White and Hispanic test takers, at 32.9 and 55.1 percent, respectively. The VBCPS average writing scores, however, did not change by more than three-tenths of a point from the previous year for any group. Likewise, the gaps between VBCPS writing scores and average writing scores for all Virginia ACT test takers did not exceed three-tenths of a point.

SUMMARY

Virginia Beach students in the class of 2018 attained the highest average ACT scores on record for a VBCPS graduating class, with 16.5 percent of 2018 graduates taking the test. Average scores on the ACT also increased for public school graduates at the state level, and were five-tenths to eight-tenths of a point higher than the VBCPS averages. The gap between VBCPS average ACT scores and national average ACT scores ranged from 2.3 to 2.5 points.

Table 6
2018 Average ACT Writing Test Scores by Race/Ethnicity

Group	n	VBCPS	Virginia	Nation
Black/African American	57	6.2	6.5	5.6
White	165	7.6	7.6	6.8
Hispanic/Latino	22	7.2	7.4	6.4
Asian	23	8.1	8.0	7.5
Two or more races	34	7.3	7.6	6.7
Prefer not/No response	13	7.3	7.5	6.3
All Students	316	7.3	7.5	6.5

Notes: n = number tested. The n column does not add up to the VBCPS total due to the omission of the racial/ethnic groups with fewer than 10 test takers.
Sources: ACT Profile Reports - District and State, Graduating Classes 2018.

⁴PrepScholar, SAT/ACT Prep Online Guides and Tips: Which States Require the SAT? Full List and Advice, <https://blog.prepscholar.com/which-states-require-the-act-full-list-and-advice>, accessed on November 1, 2018.