

# ASSESSMENT BRIEF

DEPARTMENT OF PLANNING, INNOVATION, AND ACCOUNTABILITY  
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## 2016 COLLEGE AND WORK READINESS ASSESSMENT RESULTS

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### ABSTRACT

This report summarizes the results from the administration of the College and Work Readiness Assessment (CWRA+) to juniors enrolled in Virginia Beach City Public Schools (VBCPS) during the 2013-2014, 2014-2015, and 2015-2016 school years. The CWRA+ includes a performance task involving a realistic problem, with documents that students must analyze before responding to an open-ended prompt, and 25 selected-response questions that measure scientific and quantitative reasoning, critical reading and evaluation, and critiquing an argument.

The total CWRA+ mean score for the 4,283 VBCPS juniors with valid CWRA+ scores in 2016 was 1036, 24 points higher than the 2015 total mean score for juniors and 30 points higher than 2014. The total CWRA+ mean score increased from 2014 at all but one of the participating schools ranging from 13 to 57 points.

The VBCPS mean score for the 2016 performance task was 1011, 22 points higher than the 2015 VBCPS mean score, and 18 points higher than the 2014 VBCPS mean score. The performance task mean score increased from 2014 at 10 schools ranging from 3 to 53 points. The VBCPS mean score for the selected-response portion of the CWRA+ was 1060, 42 points higher than the 2014 VBCPS mean score. The selected-response mean score increased from 2014 at all schools ranging from 23 to 88 points.

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### BACKGROUND

Since 2006, the Council for Aid to Education (CAE) has used the College and Work Readiness Assessment (CWRA) to offer institutions a value-added approach to the measurement of higher-order thinking skills. Initially, CAE's assessments focused on helping institutions estimate their contribution to the development of students' higher-order thinking skills. In 2013, CAE expanded this scope with the introduction of the CWRA+. The enhanced version of this examination provides valuable and reliable information about educational growth, not only at the institutional level, but at the student level. Other features of the CWRA+ are the inclusion of subscores for scientific and quantitative reasoning, critical reading and evaluation, and critiquing an argument. The addition of mastery levels also supports the reporting of criterion-referenced results in relation to skill proficiency. The CWRA+ includes two sections: a performance task (PT) and a series of selected-response questions (SRQs).

The first section is the PT, which presents students with a real-world situation that requires a purposeful written response. Each PT includes several documents in an online document library that students use to respond to questions about a hypothetical but realistic situation. Each performance task assesses analysis and problem solving, writing effectiveness, and writing mechanics. Students are allowed up to 60 minutes to examine the documents and construct their written responses.

The second section of the CWRA+ consists of 25 SRQs. Ten questions measure scientific and quantitative reasoning, ten questions measure critical reading and evaluation, and another five questions call for students to critique arguments by identifying logical flaws and questionable assumptions. The questions are document-based and require students to draw information from provided materials. Students are allowed up to 30 minutes to complete this section of the assessment. When the PT and SRQ sections are combined, the result is a measurement of critical-thinking skills, which are in high demand in college and the workforce.

The CWRA+ is administered exclusively online, and the responses are scored using a combination of an automated scoring engine and trained raters. The skills measured by the CWRA+ are aligned with *Compass to 2020* (Goal 1 - High Academic Expectations). The CWRA+

provides useful and dependable information about attainment of globally competitive skills at the institutional level and individual student level. Additionally, the CWRA+ is one of several industry certification examinations and occupational competency assessments that has been identified by the Virginia Board of Education as meeting criteria to satisfy requirements of the career and technical education seal, the seal of advanced mathematics and technology, and student-selected verified credit. This makes the CWRA+ yet another opportunity for Virginia Beach students to meet graduation requirements.

In January and February of 2016, the CWRA+ was administered to 4,283 juniors enrolled in one of the English courses listed in Table 1 at Renaissance Academy and all 12 comprehensive high schools in Virginia Beach. Some students did not take the CWRA+ due to testing exemptions and documented testing accommodations that could not be facilitated for the online CWRA+ administration, while others did not take the CWRA+ due to extended absences from school.

**Table 1**  
**English 11 Courses**

AP English 11 Language & Composition	HAS English 11 (Honors)
AP Virtual Virginia English Language	IB English 11
English 11	LSA English 11 (Honors)
GSWLA English 11	Online English 11
Honors English 11	TA English 11 (Honors)

Students enrolled in English 11 courses began taking the CWRA during the 2011-2012 school year. Prior to 2011-2012, VBCPS students in English 12 courses took the CWRA. However, it was determined that results from the assessment would be more useful to individual students and schools if the scores were received while the students were still in high school. Consequently, the decision was made to administer the CWRA to juniors.

**METHODOLOGY**

The information presented in this brief is based on data of juniors included in the *Spring 2014 CWRA+ Results*, the *Spring 2015 CWRA+ Results*, and the *Spring 2016 CWRA+ Results* for the Virginia Beach School District and for each of the 12 high schools and Renaissance Academy. The reports include tables that compare the Virginia Beach CWRA+ test takers with students at other secondary schools that administered the CWRA+. Comparisons for Green Run Collegiate were not made as 2016 was the first year of the school’s CWRA+ administration. Data from the spring 2014, spring 2015, and spring 2016 CWRA+ Excel data files compiled by CAE was utilized to summarize some of the data elements in this brief. The Excel files also provide individual data (disaggregated for selected data elements) for each VBCPS student who took the CWRA+ in January and February of 2014, 2015, and 2016. Valid scores were not available for students whose responses were unscorable (i.e., off topic, no response, did not properly utilize the document library) or for students who did not answer at least half of the questions in the selected-response section.

**MEAN SCORES AND MASTERY LEVELS**

The first administration of the CWRA+ was during the 2013-2014 school year to 5,341 high school juniors at 26 private and public schools across the nation as noted in Table 2. In addition, 6,498 high school seniors at 109 private and public schools across the nation took the same CWRA+ performance task. In the 2015-2016 school year, CWRA+ was administered to 8,733 high school juniors at 55 private and public schools across the nation. In addition, 4,758 high school seniors at 88 private and public schools across the nation took the CWRA+. These administrations allow comparisons with national samples. It should be noted that in 2013-2014, most of the junior sample was comprised of Virginia Beach students, in 2014-2015, Virginia Beach juniors made up more

**Table 2**  
**Results Across CWRA+ Institutions**

Year	All Juniors Across All Institutions			All Seniors Across All Institutions		
	Number of Students	Number of Schools	Total CWRA+ Mean Score	Number of Students	Number of Schools	Total CWRA+ Mean Score
2013-2014	5,341	26	1012	6,498	109	1073
2014-2015	6,682	53	1018	5,812	113	1078
2015-2016	8,733	55	1047	4,758	88	1094
<b>Change From 2013-2014</b>	<b>3,392</b>	<b>29</b>	<b>35</b>	<b>-1,740</b>	<b>-21</b>	<b>21</b>

Sources: Council for Aid to Education (CAE).

than half of the national junior sample, and in 2016, Virginia Beach juniors made up almost half of the national junior sample. Many students in both national samples attended private college-prep schools.

Table 3 shows the total mean scores for Virginia Beach juniors who took the CWRA+ over the past two years and the mastery levels for each school and the division. The CWRA+ has five mastery levels: Below Basic, Basic, Proficient, Accomplished, and Advanced. The first three columns of data list the total CWRA+ mean score for each VBCPS school, followed by the

**Table 3**  
**Mastery Levels by High School**

School	Mean Score for Juniors				
	Total CWRA+ Score (400-1600)				
	2014	2015	2016	Change From 2014	Current Year Mastery Level
Bayside	979	965	979	0	Proficient
Cox	1009	1037	1022	13	Proficient
First Colonial	1033	1053	1064	31	Proficient
Green Run	906	916	947	41	Basic
Green Run Collegiate	NA	NA	1080	NA	Proficient
Kellam	1047	1047	1054	7	Proficient
Kempsville	965	972	1021	56	Proficient
Landstown	979	995	1028	49	Proficient
Ocean Lakes	1030	1048	1064	34	Proficient
Princess Anne	1070	1069	1102	32	Accomplished
Renaissance Academy	800	794	857	57	Basic
Salem	994	1014	1034	40	Proficient
Tallwood	1024	991	1050	26	Proficient
<b>VBCPS</b>	<b>1006</b>	<b>1012</b>	<b>1036</b>	<b>30</b>	<b>Proficient</b>

Sources: CWRA+ data files, CWRA+ Report for Virginia Beach School District, and CWRA+ Institutional Reports for 2014, 2015, and 2016 (Section 1 and 2).

Beach juniors was 11 points lower than the national high school junior mean score. The mean score for juniors at six schools was higher than the national junior mean score of 1047 (First Colonial, Green Run Collegiate, Kellam, Ocean Lakes, Princess Anne, and Tallwood high schools). Princess Anne High School surpassed the mean for high school seniors of 1094.

Table 4 shows the percentage of students who performed at the Below Basic and Basic levels and students who performed at the Proficient level or higher. In 2016, 63 percent of the VBCPS students scored at the Proficient level or higher and 36 percent at the Below Basic or Basic level. The highest percent of students scoring in the Proficient or higher mastery level was at Green Run Collegiate with 81 percent.

**Table 4**  
**Proficiency Levels by High School**

School	Percent of Juniors							
	Basic and Below Basic				Proficient and Higher			
	2014	2015	2016	Change From Last Year	2014	2015	2016	Change From Last Year
Bayside	46	51	50	4	53	49	51	-2
Cox	40	34	38	-2	60	66	63	3
First Colonial	34	29	29	-5	66	71	71	5
Green Run	67	66	61	-6	33	35	39	6
Green Run Collegiate	NA	NA	20	NA	NA	NA	81	NA
Kellam	30	30	29	-1	70	70	71	1
Kempsville	48	50	38	-10	52	49	62	10
Landstown	47	45	38	-9	52	56	62	10
Ocean Lakes	38	35	34	-4	62	65	66	4
Princess Anne	28	32	29	1	72	67	72	0
Renaissance Academy	91	90	87	-4	9	10	13	4
Salem	44	36	35	-9	56	63	65	9
Tallwood	39	43	32	-7	61	57	68	7
<b>VBCPS</b>	<b>42</b>	<b>41</b>	<b>36</b>	<b>-6</b>	<b>59</b>	<b>60</b>	<b>63</b>	<b>4</b>

Sources: CWRA+ data files, CWRA+ Report for Virginia Beach School District, and CWRA+ Institutional Reports for 2014, 2015, and 2016 (Section 2).

corresponding mastery level. The total CWRA+ mean score increased 30 points for VBCPS when compared to 2014. All but one school showed an increase in the total CWRA+ mean score ranging from 7 to 57 points. In 2016, ten VBCPS high schools scored within the proficient mean mastery level and one in the accomplished level.

As previously noted in Table 2, the national total mean CWRA+ score for high school juniors was 1047 and the total mean score for high school seniors was 1094. The total mean CWRA+ score of 1036 for Virginia

**TIME SPENT AND OVERALL MEAN SCORES ON THE CWRA+**

Students are given a 60-minute time limit in which to read the performance task scenario and documents, respond in writing to the open-ended prompt, and submit their responses online.

Table 5 shows the average number of minutes junior test takers at each VBCPS school with valid CWRA+ Performance Task scores took to complete the CWRA+ Performance Task and the overall PT mean score.

The VBCPS overall PT mean score increased 18 points from 2014. Ten schools showed an increase in the overall PT score ranging from 3 to 53 points while two schools showed a decrease in the overall PT.

Students are given a 30-minute time limit to complete the SRQs. Table 6 shows the average

**Table 5**  
**Average Time Spent on the Performance Task and Mean Scores by High School**

School	Minutes Spent on the PT (0-60)				Performance Task Mean Scores (400-1600)			
	2014	2015	2016	Change From 2014	2014	2015	2016	Change From 2014
Bayside	35	37	37	2	968	936	941	-27
Cox	36	40	38	2	991	1013	994	3
First Colonial	38	44	41	3	1025	1040	1042	17
Green Run	33	35	36	3	888	877	921	33
Green Run Collegiate	NA	NA	47	NA	NA	NA	1073	NA
Kellam	40	40	39	-1	1043	1034	1032	-11
Kempsville	34	36	39	5	951	943	975	24
Landstown	36	39	42	6	961	979	1014	53
Ocean Lakes	40	42	41	1	1023	1015	1037	14
Princess Anne	43	43	43	0	1058	1052	1082	24
Renaissance Academy	29	30	29	0	771	787	814	43
Salem	37	40	42	5	978	993	1010	32
Tallwood	41	39	43	2	1009	966	1029	20
<b>VBCPS</b>	<b>38</b>	<b>40</b>	<b>41</b>	<b>3</b>	<b>993</b>	<b>989</b>	<b>1011</b>	<b>18</b>

Sources: CWRA+ data files, CWRA+ Report for Virginia Beach School District, and CWRA+ Institutional Reports for 2014, 2015, and 2016.

**Table 6**  
**Average Time Spent on the Selected Response Questions and Mean Scores by High School**

School	Minutes Spent on the SRQ (0-30)				Selected-Response Questions Mean Score (400-1600)			
	2014	2015	2016	Change From 2014	2014	2015	2016	Change From 2014
Bayside	22	24	24	2	990	994	1016	26
Cox	23	23	22	-1	1026	1060	1050	24
First Colonial	23	24	23	0	1042	1066	1086	44
Green Run	18	21	23	5	925	954	973	48
Green Run Collegiate	NA	NA	28	NA	NA	NA	1086	NA
Kellam	24	25	24	0	1052	1060	1075	23
Kempsville	20	23	25	5	979	1000	1067	88
Landstown	22	24	23	1	997	1011	1042	45
Ocean Lakes	23	24	25	2	1037	1080	1090	53
Princess Anne	23	25	25	2	1081	1086	1121	40
Renaissance Academy	14	15	18	4	830	801	899	69
Salem	22	25	24	2	1010	1035	1057	47
Tallwood	24	24	25	1	1039	1015	1070	31
<b>VBCPS</b>	<b>22</b>	<b>24</b>	<b>24</b>	<b>2</b>	<b>1018</b>	<b>1035</b>	<b>1060</b>	<b>42</b>

Sources: CWRA data files, CWRA Report for Virginia Beach School District, and CWRA Institutional Reports for 2014, 2015, and 2016 (Section 3).

number of minutes the junior test takers with valid CWRA+ selected-response scores took to complete the CWRA+ selected-response section and the overall SRQ score.

The VBCPS overall SRQ mean score increased 42 points from 2014. All schools showed an increase in the SRQ mean score ranging from 23 to 88 points.

## SUMMARY

The CWRA+ measures higher-order thinking skills. In Virginia Beach, the CWRA, and now the CWRA+, has been administered at every high school for seven consecutive years. The first large-scale administration of the CWRA+ in VBCPS was in January and February 2014.

The 2016 total mean CWRA+ score for VBCPS was 1036 and the mean CWRA+ scores for Virginia Beach schools ranged from 857 to 1102. The 2016 VBCPS total CWRA+ mean score increased 30 points when compared to 2014. Eleven schools showed an increase in the total CWRA+ mean score ranging from 7 to 57 points when compared to 2014. The VBCPS overall PT mean score increased 18 points from 2014. Ten schools showed an increase in the overall PT score ranging from 3 to 53 points while two schools showed a decrease in the overall PT. The VBCPS overall SRQ mean score increased 42 points from 2014. All schools showed an increase in the SRQ mean score ranging from 23 to 88 points.

Nationally, the mean CWRA+ score for high school juniors was 1047 and the mean score for high school seniors was 1094. The mean CWRA+ score of 1036 for Virginia Beach juniors was 11 points lower than the national high school junior mean score. The mean score for juniors at six schools was higher than the national junior mean score of 1047. (First Colonial, Green Run Collegiate, Kellam, Ocean Lakes, Princess Anne, and Tallwood high schools). Princess Anne High School surpassed the mean for high school seniors of 1094.

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