

# The Condition of College & Career Readiness 2018

## Pennsylvania Key Findings

### Performance

- In the 2018 Pennsylvania graduating class, 27,694 graduates (20 percent) took the ACT test with a Composite score average of 23.5. This compares to 27,136 (19 percent) with an average of 22.7 in 2014. Nationally, 55% of 2018 graduates took the ACT with an average Composite score of 20.8.
  - ~ There were 2,473 African American graduates from Pennsylvania who took the ACT (9 percent) with an average Composite score of 17.8. This compares to 2,747 (9 percent) with an average of 18.0, and 2,800 (10 percent) with an average of 17.0, for the 2017 and 2014 graduating classes, respectively.
  - ~ There were 19,645 White graduates from Pennsylvania who took the ACT (71 percent) with an average Composite score of 24.2. This compares to 21,971 (71 percent) with an average of 24.4, and 19,517 (72 percent) with an average of 23.5, for the 2017 and 2014 graduating classes, respectively.
  - ~ There were 1,394 Hispanic graduates from Pennsylvania who took the ACT (5 percent) with an average Composite score of 21.6. This compares to 1,469 (5 percent) with an average of 21.8, and 1,227 (5 percent) with an average of 20.3, for the 2017 and 2014 graduating classes, respectively.
  - ~ There were 1,551 Asian graduates from Pennsylvania who took the ACT (6 percent) with an average Composite score of 25.8. This compares to 1,782 (6 percent) with an average of 25.4, and 1,332 (5 percent) with an average of 23.6, for the 2017 and 2014 graduating classes, respectively.
- The 2018 Pennsylvania graduating class average English score was 23.3. This compares to 23.4 and 22.1 in 2017 and 2014, respectively.
- The 2018 Pennsylvania graduating class average math score was 23.2. This compares to 23.4 and 22.8 in 2017 and 2014, respectively.
- The 2018 Pennsylvania graduating class average reading score was 24.0. This compares to 24.2 and 23.0 in 2017 and 2014, respectively.
- The 2018 Pennsylvania graduating class average science score was 23.1. This compares to 23.3 and 22.2 in 2017 and 2014, respectively.
- In 2018, 43 percent of Pennsylvania graduates met all four ACT College Readiness Benchmarks. This compares to 45 and 38 percent of 2017 and 2014 graduates, respectively.
  - ~ In 2018, 16 percent of Pennsylvania graduates met zero ACT College Readiness Benchmarks. This compares to 15 and 20 percent of 2017 and 2014 graduates, respectively.
  - ~ In 2018, 80 percent of Pennsylvania graduates met the ACT English College Readiness Benchmark. This compares to 80 and 75 percent of 2017 and 2014 graduates, respectively.
    - 2018 Pennsylvania graduates taking more advanced English coursework demonstrated markedly higher average English scores than those who did not. In fact, 80 percent of Pennsylvania 2018 graduates taking four or more years of English met the ACT English College Readiness Benchmark. This compares to 61 percent of students taking less than four years of English meeting the benchmark.

- ~ In 2018, 60 percent of Pennsylvania graduates met the ACT Math College Readiness Benchmark. This compares to 62 and 59 percent of 2017 and 2014 graduates, respectively.
  - 2018 Pennsylvania graduates taking more advanced math coursework demonstrated markedly higher average math scores than those who did not. In fact, 61 percent of Pennsylvania 2018 graduates taking three or more years of math met the ACT Math College Readiness Benchmark. This compares to 14 percent of students taking less than three years of math meeting the benchmark.
- ~ In 2018, 64 percent of Pennsylvania graduates met the ACT Reading College Readiness Benchmark. This compares to 66 and 55 percent of 2017 and 2014 graduates, respectively.
  - 2018 Pennsylvania graduates taking more advanced social studies coursework demonstrated markedly higher average reading scores than those who did not. In fact, 64 percent of Pennsylvania 2018 graduates taking three or more years of social studies met the ACT Reading College Readiness Benchmark. This compares to 62 percent of students taking less than three years of social studies meeting the benchmark.
- ~ In 2018, 55 percent of Pennsylvania graduates met the ACT Science College Readiness Benchmark. This compares to 55 and 49 percent of 2017 and 2014 graduates, respectively.
  - 2018 Pennsylvania graduates taking more advanced science coursework demonstrated markedly higher average science scores than those who did not. In fact, 56 percent of Pennsylvania 2018 graduates taking three or more years of science met the ACT Science College Readiness Benchmark. This compares to 27 percent of students taking less than three years of science meeting the benchmark.
- In 2018, 16,235 (59 percent) of Pennsylvania graduates met three or four ACT College Readiness Benchmarks. This compares to 18,511 and 14,445 (60 and 53 percent) out of 2017 and 2014 graduates, respectively. For reference, the national percentage of 2018 graduates meeting three or four benchmarks was 38%.

## STEM

- In 2018, 15,711 Pennsylvania graduates (57 percent) indicated having an interest in STEM majors and/or careers.
  - ~ Nationally, 45 percent of graduates indicated having an interest in STEM.
- The STEM benchmark is an indicator of whether a student is well prepared for the types of first-year college courses required for a college STEM-related major. The STEM ACT College Readiness Benchmark is 26.
- Compared to 35 percent of 2018 Pennsylvania graduates meeting the ACT STEM College Readiness Benchmark, graduates in 2017 and 2014 had STEM Benchmark percentages of 36 and 30, respectively.
- In 2018, 20,760 Pennsylvania graduates (75 percent) indicated taking physics. This compares to 77 and 77 percent for the 2017 and 2014 graduating classes, respectively.
- 2018 graduates taking physics had an average science score of 23.9, compared to 20.7 for students not taking physics.
  - ~ 2018 Pennsylvania graduates meeting the ACT STEM College Readiness Benchmark had an average science score of 28.9. This compares to 28.2 in 2014.
- In 2018, 26,680 Pennsylvania graduates (96 percent) indicated taking three or more years of math. This compares to 97 and 97 percent for 2017 and 2014 graduating classes, respectively.
  - ~ 2018 graduates taking three or more years of math had an average math score of 23.3, compared to 17.2 for students taking less than three years of math.
  - ~ 61 percent of 2018 graduates taking three or more years of math met the ACT Math College Readiness Benchmark, compared to 14 percent for students taking less than three years of math.

## Career Readiness

- In 2018, 11,807 Pennsylvania graduates (43 percent) were likely to attain the Gold ACT WorkKeys® National Career Readiness Certificate® or higher based upon ACT Composite score, compared to 499,653 (26 percent) nationally.
  - ~ The ACT Composite scores associated with a 50% chance of earning each ACT WorkKeys NCRC® level or higher are: 13 for Bronze, 17 for Silver, 25 for Gold, and 35 for Platinum. Based on those cut scores, students who earned an ACT Composite score of less than 13 would be classified as “Needs Improvement,” 13 to 16 as “Bronze,” 17 to 24 as “Silver,” and 25 or above as “Gold or Higher.”

## Impact

- Based on the actual test volume and ACT score distributions of 2018 ACT-tested Pennsylvania high school graduates, ACT research estimates that an increase of 0.1 in state average ACT Composite score for the 2018 graduating class would result in:
  - ~ 58 more students enrolling in college.
  - ~ 68 more students persisting to year two.
  - ~ 42 fewer students needing remedial English.
  - ~ 71 fewer students needing remedial math.
  - ~ 78 more students persisting to year four.
  - ~ 85 more students earning a postsecondary degree within six years.

## Behaviors that Impact Access and Opportunity

- In Pennsylvania, 9,224 of the 2018 graduates (33.3%) taking the ACT two or more times had an average Composite score of 25.0, compared to an average of 22.8 for 18,470 of the 2018 graduates (66.7%) who took the ACT only once.
- 33,473 score reports were sent to colleges by 2018 Pennsylvania ACT-tested graduates.
  - ~ 8,479 score reports were sent to in-state public colleges by 2018 Pennsylvania ACT-tested graduates.
  - ~ For Pennsylvania’s 2018 ACT-tested graduates, the top five schools to which scores were sent were Penn State-University Park Campus, University of Pittsburgh, Temple University, West Chester University of Pennsylvania, and Duquesne University.
  - ~ For Pennsylvania’s 2018 ACT-tested graduates, the top three out-of-state schools to which scores were sent were West Virginia University, University of Delaware, and The Ohio State University.
- Compared to 68 percent of 2018 graduates nationally, 64 percent of Pennsylvania graduates opted into the ACT Educational Opportunity Service (EOS). EOS is a free service that allows students to gain exposure to recruitment, scholarship agencies, colleges, and universities that students may not have accessed on their own. The ACT Get Your Name in the Game initiative encourages colleges and universities to recruit underserved EOS participants to increase access and opportunity for all.
  - ~ Compared to 79 percent of African American students nationally, 82 percent of Pennsylvania African American 2018 graduates opted into EOS.
  - ~ Compared to 80 percent of Hispanic students nationally, 74 percent of Pennsylvania Hispanic 2018 graduates opted into EOS.
- In the 2017-2018 academic year, ACT issued 7,402 ACT fee waivers to qualified Pennsylvania students. However, 2,325 students (31.4 percent) did not take advantage of this opportunity to test for free. This compares to 542,506 waivers issued nationally, of which 152,227 (28.1 percent) students did not take advantage. This represents a great opportunity for high schools within the state to increase the socioeconomic diversity of its students tested. Note: this is the number of fee waivers issued for the state, not specific to this graduating class.

## Pipeline

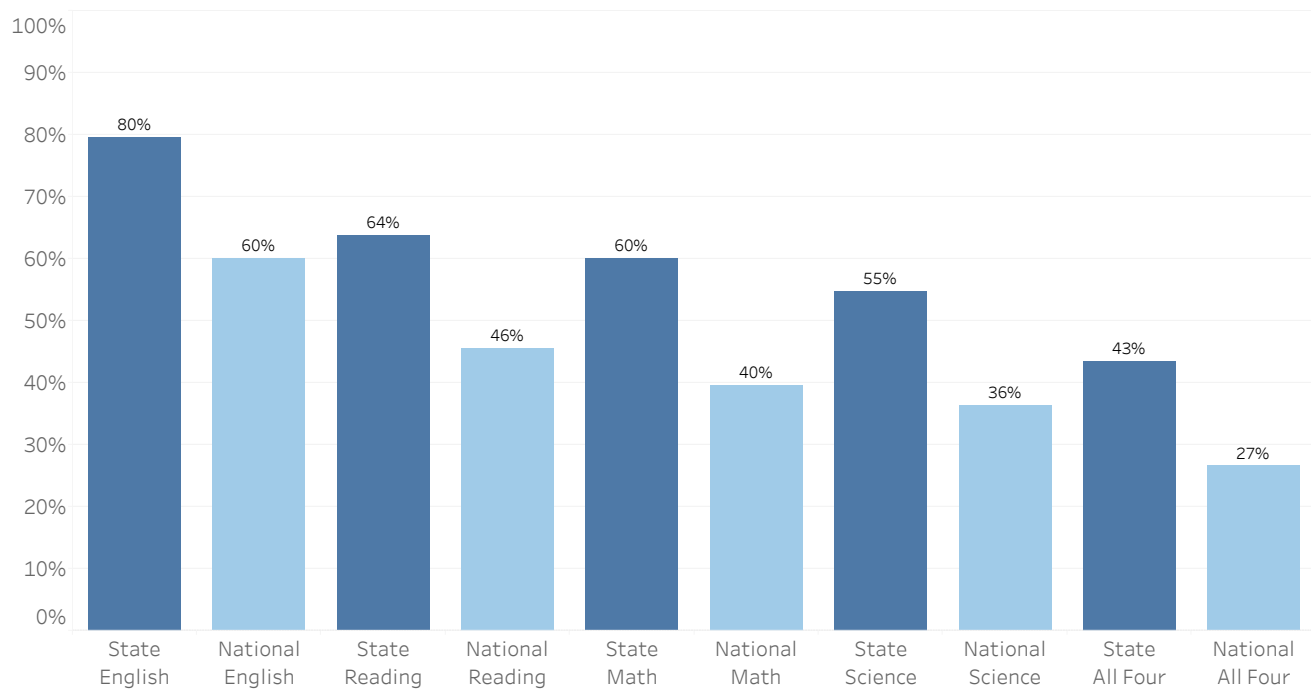
- Aspirations matter. Students who aspire to a higher level of postsecondary education typically achieve higher ACT Composite scores.
  - ~ 13,475 students (49 percent) aspired to attain a graduate or professional degree. They had an average Composite score of 25.3.
  - ~ 10,811 students (39 percent) aspired to attain a bachelor's degree. They had an average Composite score of 22.1.
- In the Pennsylvania graduating class of 2018, 2,102 students (8 percent) had parents who did not attend college.
- In order of prevalence, the five most commonly indicated college majors of interest for 2018 Pennsylvania graduates were: Undecided; Nursing, Registered (BS/RN); Medicine (Pre-Medicine); Biology, General; and Business Administration and Management, General.
  - ~ In the Pennsylvania graduating class of 2018, 1,054 (4 percent) indicated planning on majoring in education. They had an average Composite score of 21.3.

## Additional Points

- According to the US Department of Labor's Bureau of Labor Statistics, the fastest-growing careers in Pennsylvania requiring education beyond high school are: Home Health and Personal Care Aides, Computer Systems Analysts, Software Developers and Computer and Information Systems Managers.
- The ACT College and Career Readiness Champions are individuals across the country who support ACT's mission of education and workplace success. Congratulations to Pennsylvania Champion Kira Hudson (High School Senior).
- ACT is offering a series of College and Career Readiness Workshops across the state in fall 2018.

# PENNSYLVANIA College and Career Readiness Attainment, Participation, and Opportunity

Percent of 2018 ACT-Tested High School Graduates Meeting ACT College Readiness Benchmarks\* by Subject



Data From Graph Above

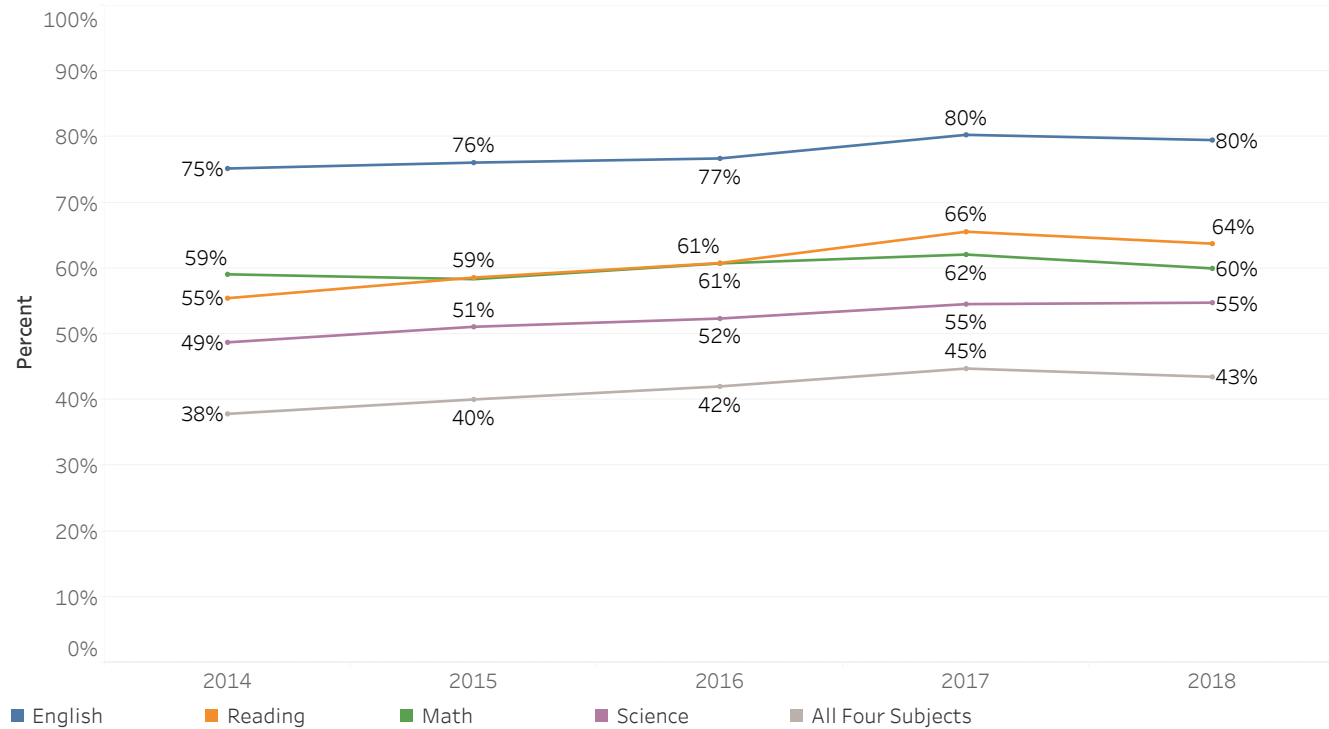
State English	National English	State Reading	National Reading	State Math	National Math	State Science	National Science	State All Four	National All Four
80%	60%	64%	46%	60%	40%	55%	36%	43%	27%

\* The ACT College Readiness Benchmarks are scores on the ACT subject area 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. Throughout this report, benchmark attainment corresponds with students meeting or exceeding 18 in English, 22 in Reading, 22 in Math and 23 in Science.

Note, missing data points in tables and graphs reflect insufficient data for reporting.

# PENNSYLVANIA College and Career Readiness Attainment, Participation, and Opportunity

Percent of 2014–2018 ACT-Tested High School Graduates Meeting ACT College Readiness Benchmarks\*



## Data From Graph Above

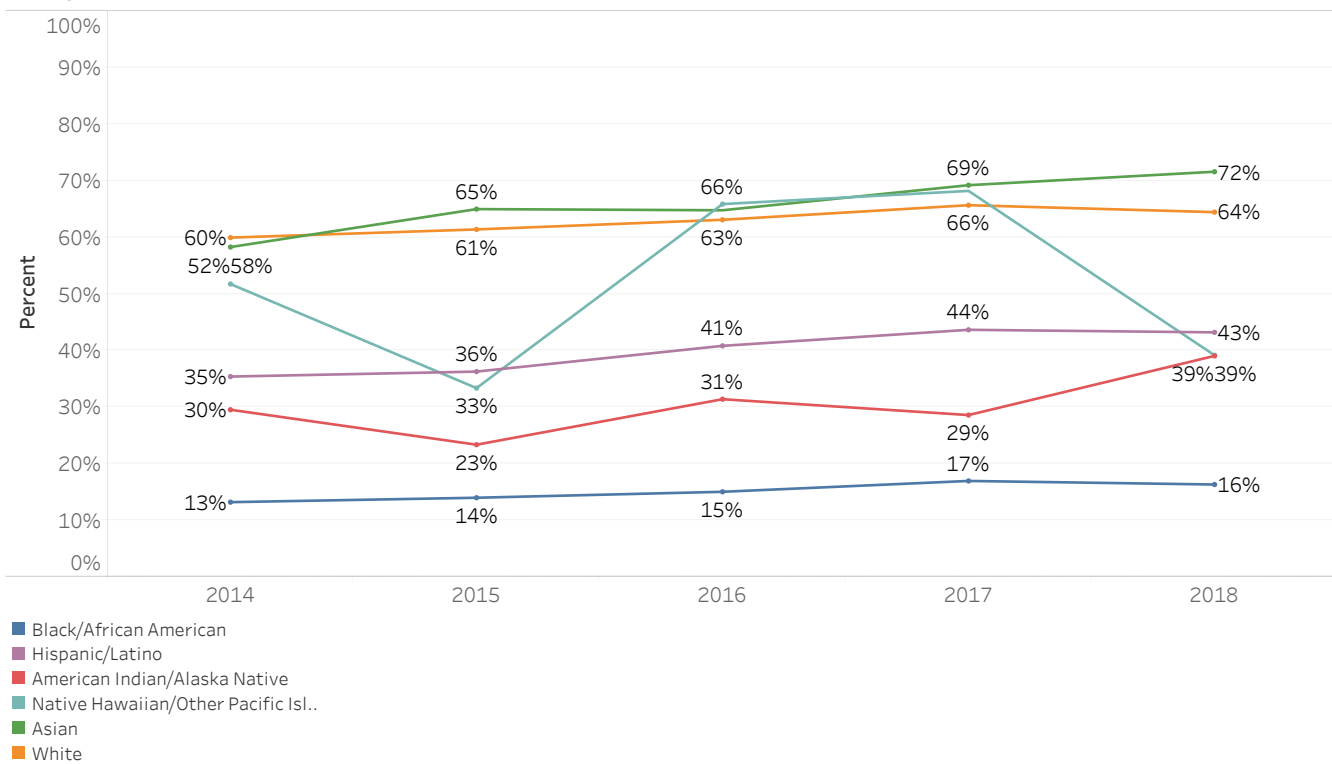
	English	Reading	Math	Science	All Four Subjects
2014	75%	55%	59%	49%	38%
2015	76%	59%	58%	51%	40%
2016	77%	61%	61%	52%	42%
2017	80%	66%	62%	55%	45%
2018	80%	64%	60%	55%	43%

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# PENNSYLVANIA College and Career Readiness Attainment, Participation, and Opportunity

Percent of 2014-2018 ACT-Tested High School Graduates Meeting Three or More Benchmarks by Race/Ethnicity



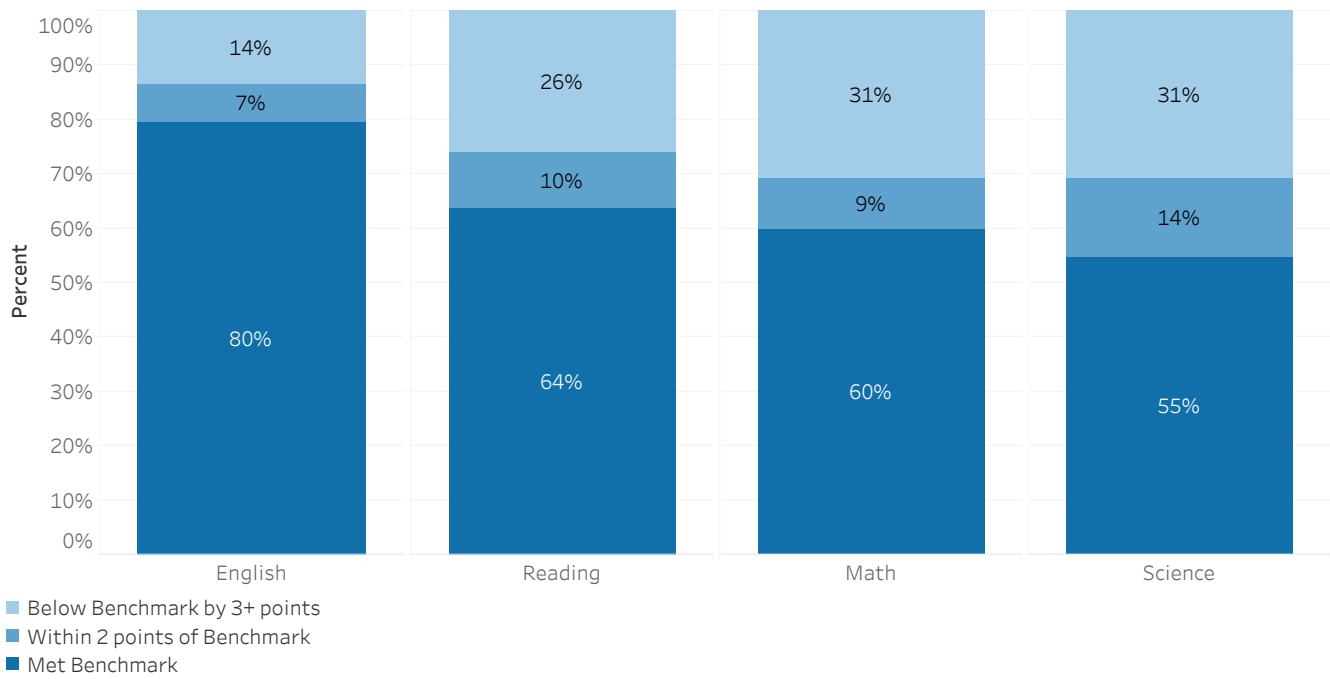
## Data From Graph Above

	Black/African American	Hispanic/Latino	American Indian/Alaska Native	Native Hawaiian/Other Pacific Islander	Asian	White
2014	13%	35%	30%	52%	58%	60%
2015	14%	36%	23%	33%	65%	61%
2016	15%	41%	31%	66%	65%	63%
2017	17%	44%	29%	68%	69%	66%
2018	16%	43%	39%	39%	72%	64%

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# PENNSYLVANIA College and Career Readiness Attainment, Participation, and Opportunity

Percent of 2018 ACT-Tested High School Graduates by ACT College Readiness Benchmark Attainment and Subject



## Data From Graph Above

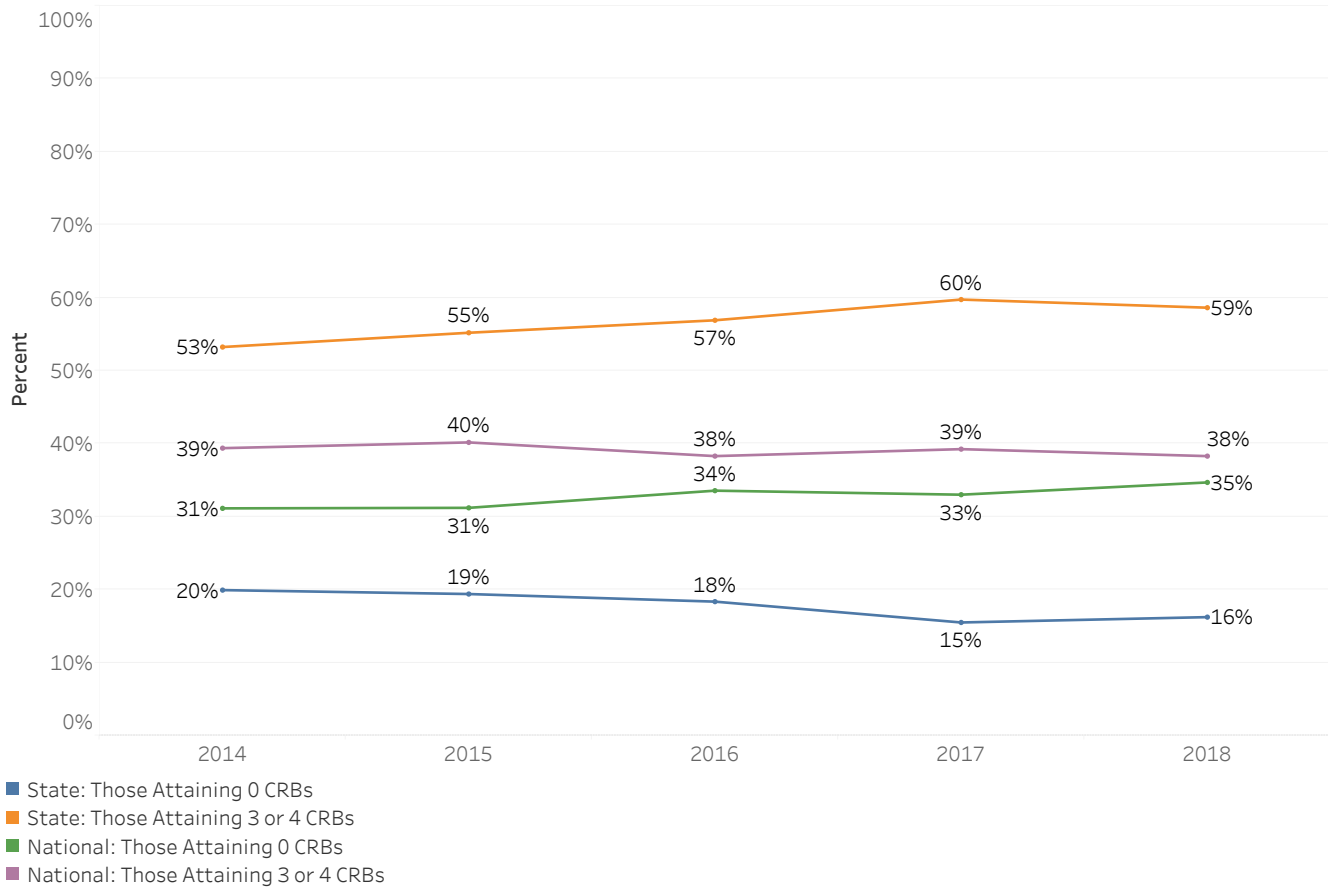
	Below Benchmark by 3+ points	Within 2 points of Benchmark	Met Benchmark
English	14%	7%	80%
Math	31%	9%	60%
Reading	26%	10%	64%
Science	31%	14%	55%

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# PENNSYLVANIA College and Career Readiness Attainment, Participation, and Opportunity

Percent of 2014–2018 ACT-Tested High School Graduates Meeting ACT College Readiness Benchmarks\*



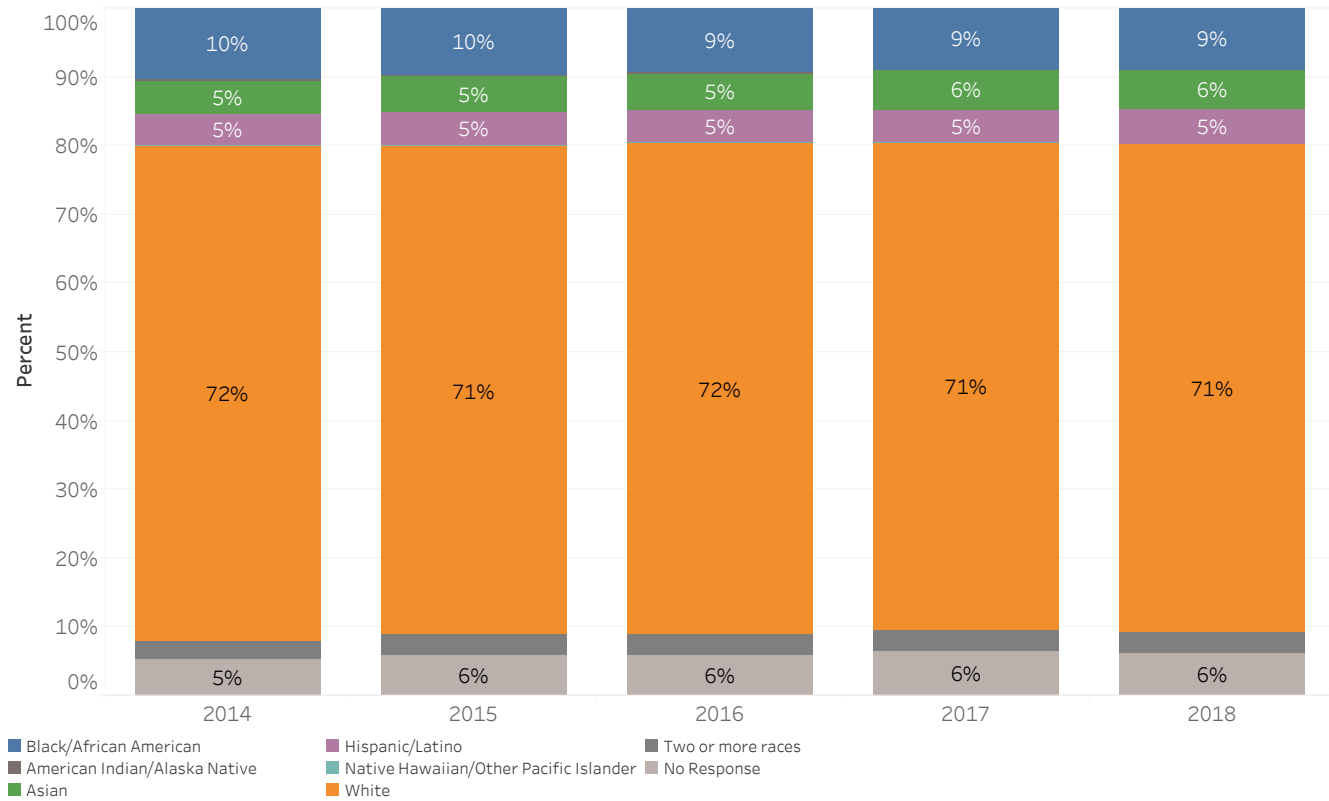
## Data from Graph Above

	State: Those Attaining 0 CRBs	State: Those Attaining 3 or 4 CRBs	National: Those Attaining 0 CRBs	National: Those Attaining 3 or 4 CRBs
2014	20%	53%	31%	39%
2015	19%	55%	31%	40%
2016	18%	57%	34%	38%
2017	15%	60%	33%	39%
2018	16%	59%	35%	38%

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# PENNSYLVANIA College and Career Readiness Attainment, Participation, and Opportunity

## Percent of 2014-2018 ACT-Tested High School Graduates by Race/Ethnicity



### Data From Graph Above

	Black/African American	American Indian/Alaska Native	Asian	Hispanic/Latino	Native Hawaiian/Other Pacific Islander	White	Two or more races	No Response
2014	10%	0%	5%	5%	0%	72%	3%	5%
2015	10%	0%	5%	5%	0%	71%	3%	6%
2016	9%	0%	5%	5%	0%	72%	3%	6%
2017	9%	0%	6%	5%	0%	71%	3%	6%
2018	9%	0%	6%	5%	0%	71%	3%	6%

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# PENNSYLVANIA College and Career Readiness Attainment, Participation, and Opportunity

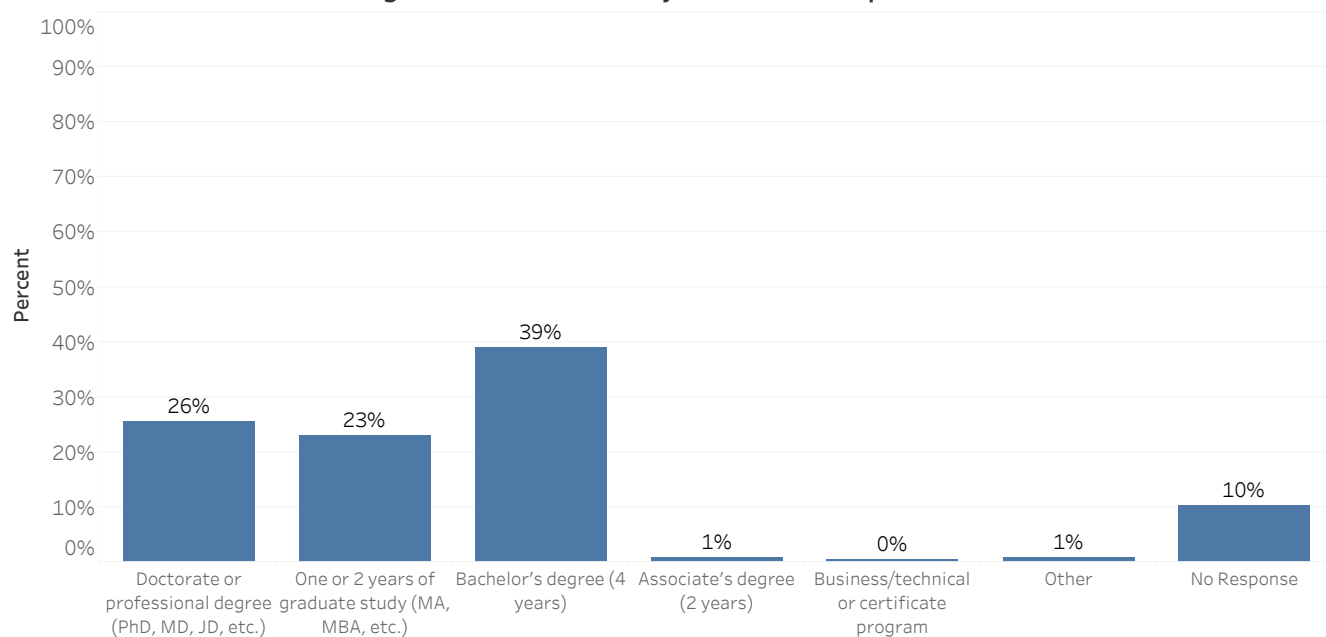
## Student Data Trends: 2014-2018, State vs. Nation

	2014	2015	2016	2017	2018
State N-count	27,136	29,776	31,342	30,987	27,694
National N-count	1,845,787	1,924,436	2,090,342	2,030,038	1,914,817
Average ACT English Score - State	22.1	22.5	22.6	23.4	23.3
Average ACT English Score - National	20.3	20.4	20.1	20.3	20.2
Average ACT Reading Score - State	23.0	23.2	23.6	24.2	24.0
Average ACT Reading Score - National	21.3	21.4	21.3	21.4	21.3
Average ACT Math Score - State	22.8	22.8	23.0	23.4	23.2
Average ACT Math Score - National	20.9	20.8	20.6	20.7	20.5
Average ACT Science Score - State	22.2	22.5	22.8	23.3	23.1
Average ACT Science Score - National	20.8	20.9	20.8	21.0	20.7
Average ACT Composite Score - State	22.7	22.9	23.1	23.7	23.5
Average ACT Composite Score - National	21.0	21.0	20.8	21.0	20.8

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# PENNSYLVANIA College and Career Readiness Attainment, Participation, and Opportunity

Percent of 2018 ACT-Tested High School Graduates by Educational Aspirations



## Data From Graph Above

	% of Graduates
Doctorate or professional degree (PhD, MD, JD, etc.)	26%
One or 2 years of graduate study (MA, MBA, etc.)	23%
Bachelor's degree (4 years)	39%
Associate's degree (2 years)	1%
Business/technical or certificate program	0%
Other	1%
No Response	10%

Note, missing data points in tables and graphs reflect insufficient data for reporting.