

The 9th Annual

## AP' Report to the Nation

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ECollegeBoard

## About the Data

Because a central source of demographic data for nonpublic schools is not available for all states, this report represents public school students only. References to the total number of high school graduates represent projections supplied in Knocking at the College Door (Western Interstate Commission for Higher Education, 2008).

Additionally, this report looks at students' entire experience with $\mathrm{AP}^{\circledR}$ - tracking exams taken by graduates throughout their high school careers - as opposed to just reporting exam results from a particular calendar year.

Additional data are available exclusively online at apreport.collegeboard.org.

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## A Right to Rigor: Fulfilling Student Potential



All students who are academically ready for the rigor of $\mathrm{AP}^{\oplus}$ no matter their location, background, or socioeconomic status have a right to fulfill that potential. Last year, however, hundreds of thousands of prepared students in this country either did not take an available AP subject for which they had potential or attended a school that did not offer the subject.

How can educators determine readiness for AP? Many schools use a student's prior GPA or grade in a prerequisite course to determine admission to an AP course. The problem with emphasizing these criteria is that they only have low correlations to success in AP, so they should not be used in isolation or in lieu of more strongly correlated predictors. ${ }^{1}$ Currently, the strongest predictor of success in many AP courses is a student's performance on particular Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/ NMSOT ${ }^{\oplus}$ ) sections that are highly correlated to AP success. ${ }^{2}$ From these PSAT/NMSOT results, researchers can identify students with a 60 percent or higher likelihood of success in particular AP subjects.

Analysis of the more than 300,000 students in the graduating class of 2012 who had been identified as having such "AP potential" yet who did not take any recommended AP course reveals striking inequities. In most subject areas, black/African American, Hispanic/Latino, and American Indian/Alaska Native students who have the same AP readiness as their white and Asian/ Asian American/Pacific Islander peers are significantly less likely to experience such AP course work. Take, for example, AP course work in mathematics (see facing page). Among 10 Asian/Asian American/Pacific Islander students with strong likelihood of success in an AP math course, 6 take that course, whereas 4 in 10 white, 3 in 10 Hispanic/Latino, 3 in 10 black/African American, and 2 in 10 American Indian/Alaska Native students do. ${ }^{3}$

This report aims to illuminate the nation's progress as well as its remaining inequities through stories and data. In the first section, we highlight examples of classrooms, districts, and colleges that are contributing to the expansion of rigorous course work for high school students. Next, we look closely at national data to show where these efforts have resulted in gains for students. The final section offers strategies many are using to expand AP opportunities for prepared and motivated students, and identifies some of the partnerships that strengthen this ongoing collaboration.

## Our Potential Loss

In each graduating class,

## hundreds of thousands of students

demonstrate high potential for success in AP math course work


Where is the greatest
potential lost?
Among students with high potential for success in AP math course work, only:


## 3 out of 10

Hispanic/Latino students


## 3 out of 10

black/African
American students


## 2 out of 10

American Indian/
Alaska Native students

...took any such AP math course.


# AID. A Collaborative <br> Community 



At its core, AP is a collaboration. In schools and districts, it's not only about the teachers who inspire and the students who rise to the challenge; it's also about the AP Coordinators and counselors who perform all of the tasks of an exam administration, from ordering the tests to setting up the exam rooms, to coordinating the proctors and keeping all of the materials secure, to doing the crucial work of organizing their schools' AP programs.

At colleges and universities, it's not just about the admission officials who recognize AP students' commitment to rigorous course work, and the administrators who reward successful

AP Exam scores through credit and advanced placement; it's about the faculty who develop AP courses and exams, review AP syllabi, and score the exams.

On the following pages, you're going to see examples of how this collaboration works in a classroom, a district, and a university. You'll see how diverse groups of teachers, administrators, admission officials, and college faculty from all corners of education in the United States are working together to ensure equitable access to - and success in rigorous AP course work and college and career readiness.

## AP in:

A Classroom
A District
A University

# "I know that my students have problem-solving skills that they didn't have to begin with ... and that has a transformative effect on them. ... It changes who they are. ... They become better thinkers." 

Michael Towne, AP Physics Teacher, Citrus Hill High School, Perris, California


There is one AP Physics teacher at Citrus Hill High school in Perris, California: MichaelTowne. He teaches Physics B, Physics C: Electricity and Magnetism, and Physics C: Mechanics. Eighty percent of his students are low income, 72 percent are Hispanic/Latino, and the majority of parents here never attended college.

Towne's energy and enthusiasm have motivated his students to tackle AP Physics and succeed. In 2012, 63 percent of Towne's students who took AP Physics C: Mechanics and 55 percent of his students who took AP Physics C: Electricity and

## 5,984

U.S. high school teachers taught an AP Physics course last year Magnetism scored a 3 or higher on the AP Exam. Ten of his AP Physics students received a score of 5 in 2012, up from three students who earned the top score the year before.

Towne is dedicated to showing his students that they have what it takes to master AP Physics, to excel in college, and to pursue the career of their dreams.

One of Towne's former students, Manuel Sanchez currently studying physics at UCLA - is the first in his family to attend college.
"[Towne] was not only an instructor but a life coach, motivating his class to do well and succeed," said Sanchez. "He offered tutor ing every weekday, Monday through Friday. He pre-

86,739
U.S. public high school graduates took an AP
Physics Exam pared me for college with problem-solving, studying, and test-taking strategies. He showed me the beauty of physics."

Towne engages his students by showing them how to build amplifiers and wind turbines. He takes them on trips to local universities and nanotechnology and engineering labs to show them that, with the right skills and determination, anything is possible.
"[My students] find themselves challenging themselves to a level that they never thought they could achieve," saysTowne. "In the next 10, 20 years ... the explosion of jobs ... is primarily going to come in high-tech fields ... the jobs that are going to be high paying and provide the kind of challenges that these students will aspire to."

Thanks to Towne, AP Physics continues to grow in popularity at Citrus Hill High School. In May 2013, his students will take 149 AP Physics Exams, almost triple the number of exams taken here in 2012.

## AP in:

A Classroom A District
A University

## "You see a ... leveling of the playing field, and you can see it in the students. They recognize it [and think] 'I can do this work as long as I'm willing to commit myself and work hard ... I'm going to be supported doing it ... and this is going to take me somewhere beyond Copiague."

Charles A. Leunig, Superintendent, Copiague Public Schools, New York

In 2012, the Copiague School District was selected by the College Board as an AP District of the Year for increasing access to AP course work while simultaneously increasing the percentage of students earning scores of 3 or higher on at least one AP Exam.
"We improved the honors curriculum at the middle school level, and tried as best we could to align it so that these students are going to come out fully prepared to start AP course work. And, it's working," said Superintendent Charles A. Leunig.

Teacher Michelle Penyy expanded Walter G. O'Connell Copiague High School's AP program by adding Microeconomics, Macroeconomics, and U.S. Government and Politics. "Because I am Latina I feel I can make a connection with the students. I think that they are going to work a little bit harder because they know I recognize what

## 253,774

low-income public high school graduates took at least one AP Exam they're going through," said Penyy. "We have so many more kids in the AP program that now other students are looking up to our students in AP, so the entire culture

## 120,254

low-income public high school graduates scored 3 or higher on an AP Exam during high school [of our school] is changing as a result."
"Many [of the] students come from ... El Salvador, [the] Dominican Republic [and] Colombia. ... We also have a very high poverty rate in the district, which makes it challenging," said Matthew Miles, an AP English Language and Composition teacher. "We show them the type of learning that propels them toward college, which is different from what we've seen in traditional high school classrooms. When they get a little confidence and receive a small reward, they thrive."


# Florida State University 

Tallahassee, Florida


Florida State University's focus on student academic engagement has resulted in a retention-rate increase of eight percentage points over the past 10 years. Part of this focus involves ensuring that students transition smoothly from high school to college academics. FSU faculty and admission staff play a role in just about every aspect of the AP Program, from exam creation to professional development for teachers to awarding credit and placement.

## 3,308

U.S. colleges and universities received AP scores for credit, placement, and/ or consideration in the admission process

College faculty in Florida - including Florida State University faculty - serve on the Florida Articulation Coordinating Committee, a body that informs a statewide AP policy. According to Matthew Bouck, director of Florida's Office of Articulation, "Faculty committees make recommendations for AP course
equivalencies and review all AP Exams. This coordination has resulted in a common agreement statewide regarding credit for AP Exams, enabling students to be assured of specific course and credit awards once they enter college."
"[With AP] we're looking at students who ... have been academically engaged in high school [and have taken] a nationally standardized examination, which shows us their performance," said Karen Laughlin, dean of undergraduate studies at FSU. "AP provides a reliable source of acceleration that I find is beneficial to our students and to the university."

There's no doubt at FSU that AP students tend to be academically successful. According to John Barnhill, assistant vice president for enrollment management, "AP students actually have higher GPAs than students that don't have AP course work, an average of .32 higher."

Jane Piper Clendinning, professor of music theory, is a former chair of the AP Music Theory Development Committee and has served as an AP Reader, scoring the free-response sections of the AP Music Theory Exams. She has also led an AP Summer Institute, where she trains AP Music Theory teachers. "I've actually learned quite a lot by working with the [AP] Program. ... It's changed my teaching. I teach the pedagogy course, so it's getting passed right on down to my students."

## Advances in AP: Course and Exam Redesign

## AP Course <br> Launch Schedule

Fall 2011

- French Language and Culture
- German Language and Culture

Fall 2012

- Biology
- Latin
- Spanish Literature and Culture


## Fall 2013

- Chemistry
- Spanish Language and Culture


## Fall 2014

- Physics 1:

Algebra-Based

- Physics 2:

Algebra-Based

- United States History

As part of its commitment to continually enhance alignment with current practices in college instruction, AP evaluates its courses and exams regularly and revises them to deepen the focus on critical thinking skills and to reflect the most recent developments in each discipline.

## Hallmarks of the AP Course and Exam Redesign

- Greater emphasis on discipline-specific critical thinking, inquiry, reasoning, and communication skills: science practices, historical thinking skills and, for world languages, the instructional goals identified by the Standards for Foreign Language Learning
- Rigorous, research-based curricula, modeled on introductory college courses, that strike a balance between breadth of content coverage and depth of understanding
- Standards informed by the recommendations of national disciplinary organizations and the results of curriculum studies conducted at four-year colleges and universities
- Detailed curriculum frameworks that tie concepts, themes, and skills relevant within each discipline to a set of key learning objectives
- Exam questions designed to elicit evidence of student achievement for each specific learning objective

Response from the academic community to the AP course and exam redesign has been overwhelmingly positive. Bruce Alberts, editor-inchief of Science magazine and former president of the National Academy of Sciences, has called the science redesign "a major reform in science education that will enable many more young Americans to experience science as a special 'way of knowing' about the world."

Brian G. Kennelly, professor in the Modern Languages and Literatures Department at California Polytechnic State University, served as the cochair of the committee that worked on the AP French Language and Culture course and exam redesign. "With the redesign of the course and exam, we have ... confirmed the relevance of French within a global and interdisciplinary framework, and convincingly demonstrated how it helps students and faculty reach a more nuanced view of the world in which we live and interact."


## "The AP course and exam redesign provides thematic focus, historical thinking skills, and the time to go into detail. Those are the exact skills and knowledge that I want to see when I get students in my class."

Suzanne Sinke, Associate Professor of History at Florida State University and Co-Chair of the AP U.S. History Curriculum Development and Assessment Committee

College faculty have played an integral role in developing the redesigned courses and exams, working side by side with AP teachers as participants in the course and exam redesign committees. Their involvement is crucial to ensuring the alignment of AP courses with college courses. Suzanne Sinke, co-chair of the committee that worked on the U.S. History redesign and associate professor of history at FSU, said, "The consensus building was tremendous. We had four college professors, and we had four AP U.S. History teachers." She feels the new course includes key themes and content, while teaching the historical thinking skills that students will need in college.
"The new AP Chemistry course and exam received input from hundreds of educators at both the high school and college levels," said David Yaron, associate professor of chemistry at Carnegie Mellon University and co-chair of the AP Chemistry Course Development and Assessment Committee. "The result is a consensus design that is informed by the current state of AP and college classrooms and takes a significant, yet manageable, step towards moving all AP classrooms towards the best of current practice."
"The scientific community is reacting positively to the changes to the AP Biology Exam. ... The changes will more closely align what goes on during a high school biology course with the current 'best practices' for introductory college biology,' notes Steven L'Hernault, professor and chair of the Biology Department at Emory University.

## Progress on College Readiness

In 2008, the College Board's College Completion Agenda established the goal of increasing the percentage of 25 - to 34 -year-olds who hold an associate degree or higher to 55 percent by $2025 .{ }^{4}$

To see our progress toward this goal continue, three efforts are critical:

- Increasing rigor in the nation's classrooms;
- Promoting equitable access to these rigorous academic experiences; and
- Ensuring that students develop the knowledge and skills critical for success in college and careers.

In this report, you're going to see a lot of data - data that can serve as a guidepost for our progress. But it's not all about the numbers. The charts and graphs on these pages represent the hard work and successes of students and teachers in classrooms in your state and around the country.

To hear their stories, turn to pages 4-11, and visit apreport.collegeboard.org to see videos.

## Increasing Rigor

In order for more students to succeed in college, they need preparation for and access to demanding college-level work while they're still in high school. AP students are already engaged in the rigorous level of work they will encounter in their first year of college.

## Promoting Equity

Underserved minority ${ }^{6}$ and low-income students remain underrepresented not only in the AP classroom and in the population of successful AP students but also among Americans with a college degree.

## 37.6\%

of first- and secondyear undergraduate students require remedial course work in college ${ }^{5}$

## 20.8\%

of Hispanic/Latino 25 - to 34 -year-olds have an associate degree or higher ${ }^{7}$

## Developing Critical Knowledge and Skills

In collaboration with college and university faculty and a dedicated community of teachers, AP courses and exams are built on rigorous standards to ensure that students are developing the knowledge and skills they'll need to be successful in college and beyond.

## 512,374

U.S. public high school graduates scored a 3 or higher on an AP math, science, English, history, or social science exam in high school

## Increasing Rigor

In the last decade, more students than ever before have experienced college-level rigor while still in high school by taking AP courses and exams. As you'll see on the next few pages, many states have seen a comparable increase in students scoring 3 or higher on AP Exams. Other states are working hard to close the gap between participation and success.

To read about strategies that schools, districts, states, and higher education institutions can use to increase rigor and prepare students for college success, turn to pages 28 and 29.

## Figure 1:

What do the data show?

## More graduates

are succeeding on
AP Exams today than took AP Exams in 2002

Number of graduates taking and scoring a 3 or higher on an AP Exam

- Number of graduates leaving high school having taken an AP Exam
- Number of graduates scoring 3+ on an AP Exam during high school


Figure 2:
Percentage of the class of 2012 scoring a 3 or higher on an AP Exam during high school


What do the data show?

## 19.5\%

of U.S. public high school graduates scored a 3 or higher on an AP Exam during high school

## 17

states exceeded the national average of graduates scoring a 3 or higher

## 29.6\%

of Maryland's graduates scored a 3 or higher on an AP Exam, leading the nation

Figure 3:
Percentage of the classes of 2002 and 2012 scoring a 3 or higher on an AP Exam during high school, ranked by percentage point change

What do the data show?
7.9
point increase since 2002 in the percentage of U.S. public high school graduates scoring a 3 or higher

## 20

states had a larger percentage point change over time than the national average

## 13.1

point increase in the percentage of Maryland's graduates scoring a 3 or higher on an AP Exam over the past 10 years, leading the nation


[^0]Figure 4:
Score distributions of AP Exams taken by the class of 2012 during high school


[^1]
## Promoting Equity

Ttates have made great strides in recent years in closing equity gaps for underserved Nminority and low-income students, but these students remain underrepresented in AP classrooms and in the population of students scoring 3 or higher on AP Exams. To achieve equity, we must increase diversity and performance at the same time, and ensure that the demographics of both AP participation and success align with the demographics of the overall student population.

In Figure 6, you'll see which states have closed the equity gap in participation, and which have closed the gap in success. Although work remains in the coming years to continue this progress, we have a lot to celebrate. For instance, 32 states have made progress since last year in closing the participation gap for black/African American students, and 38 states and the District of Columbia have made progress in closing the success gap for these students.

On pages 28 and 29, you'll find strategies for supporting teachers and giving underserved students the confidence, encouragement, and preparation they need to take on the challenge of AP courses and to succeed at them.

What do the data show?

## Black/

African American
graduates
were the most underrepresented
group among
AP Exam takers

Figure 5:
Demographics of the class of 2012, AP Exam takers, and graduates scoring 3 or higher

Overall Student Population $\square$ AP Exam Taker Population $\square$ Population Scoring 3+ on an AP Exam

## 80\%



[^2]Figure 6a:
Equity gaps among traditionally underserved students in the class of 2012

| Black/ <br> African American |  | Participation |  |  | Success |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \% of <br> Graduating Class | $\%$ of AP <br> Exam Takers | Equity Gap Eliminated | Progress Since Last Year | \% of AP Exam <br> Takers Scoring 3+ <br> During High School | Equity Gap Eliminated | Progress Since Last Yea |  |
| $\mathbf{9 0 \%}$ District of Columbia | 90.5 | 65.9 |  | $\nabla$ | 41.9 |  | $\triangle$ |  |
| 80\% |  |  |  |  |  |  |  |  |
| 70\% |  |  |  |  |  |  |  |  |
| 60\% Mississippi | 50.7 | 31.8 |  | $\nabla$ | 10.0 |  | $\nabla$ |  |
| 50\% South Carolina | 36.9 | 16.1 |  | - | 8.6 |  | $\square$ |  |
| Maryland | 35.8 | 21.9 |  | $\nabla$ | 11.4 |  | 1 |  |
| Georgia | 34.5 | 26.5 |  | 4 | 13.6 |  | 4 |  |
| Louisiana | 32.5 | 26.2 |  | 1 | 11.2 |  | $\checkmark$ |  |
| Alabama | 32.0 | 23.3 |  | $\Delta$ | 9.4 |  | $\nabla$ |  |
| 30\% Delaware | 30.0 | 14.0 |  | $\Delta$ | 8.4 |  | 1 |  |
| North Carolina | 29.7 | 12.6 |  | $\nabla$ | 7.2 |  | 1 |  |
| Virginia | 23.8 | 13.2 |  | 4 | 7.4 |  | 1 |  |
| Tennessee | 21.8 | 18.9 |  | $\nabla$ | 7.9 |  | - |  |
| 20\% Arkansas | 21.0 | 14.8 |  | $\nabla$ | 5.1 |  | - |  |
| 2\% Florida | 18.6 | 14.8 |  | 4 | 7.4 |  | 1 |  |
| Missouri | 16.4 | 11.7 |  | $\Delta$ | 3.8 |  | 1 |  |
| Illinois | 15.9 | 12.4 |  | $\triangle$ | 4.5 |  | 1 |  |
| Michigan | 15.9 | 6.4 |  | 4 | 2.7 |  | 4 |  |
| New Jersey | 15.8 | 6.3 |  | 1 | 3.6 |  | - |  |
| Texas | 15.6 | 9.0 |  | 1 | 4.7 |  | $\checkmark$ |  |
| New York | 15.0 | 9.1 |  | $\Delta$ | 4.8 |  | $\triangle$ |  |
| UNITED STATES | 14.5 | 92 |  | 1 | 4.4 |  | 1 |  |
| Pennsylvania | 14.1 | 8.3 |  | $\nabla$ | 2.7 |  | 1 |  |
| Ohio | 13.4 | 7.0 |  | $\Delta$ | 3.3 |  | - | In the Equity Gap Eliminated columns in Figures $6 \mathrm{a}, 6 \mathrm{~b}$, and 6 c , a indicates that the percentage of either AP |
| Connecticut | 11.9 | 6.1 |  | $\nabla$ | 2.9 |  | 1 |  |
| Nevada | 11.4 | 5.5 |  | $\nabla$ | 3.5 |  | A |  |
| Oklahoma | 10.2 | 7.4 |  | $\square$ | 3.8 |  | $\triangle$ |  |
| 10\% Kentucky | 10.0 | 6.1 |  | A | 3.6 |  | A |  |
| 10\% Indiana | 9.4 | 5.9 |  | $\square$ | 2.8 |  | $\sim$ | Exam takers or successful AP Exam takers in the class of 2012 who are a |
| Rhode Island | 8.6 | 5.4 |  | 4 | 2.4 |  | $\cdots$ |  |
| Kansas | 7.0 | 4.5 |  | A | 2.3 |  | $\checkmark$ |  |
| California | 6.9 | 3.8 |  | $\checkmark$ | 2.3 |  | $\sim$ | particular race/ethnicity is greater than or equal |
| Massachusetts | 6.7 | 5.3 |  | $\checkmark$ | 2.9 |  | 1 | to the percentage of |
| Minnesota | 6.6 | 3.4 |  | - | 2.2 |  | $\wedge$ | the overall graduating |
| Wisconsin | 6.6 | 2.7 |  | $\nabla$ | 1.1 |  | $\nabla$ | class who are of that |
| Arizona | 6.1 | 3.7 |  | $\triangle$ | 2.7 |  | 1 | race/ethnicity. |
| Nebraska | 6.0 | 3.8 |  | 1 | 2.1 |  | 4 | The Progress Since |
| Colorado | 5.8 | 3.8 |  | $\checkmark$ | 2.3 |  | 4 | Last Year columns |
| 5\% Washington | 5.0 | 3.5 |  | 1 | 2.2 |  | 1 | compare the size of |
| 5\% . lowa | 4.9 | 23 |  | A | 1.5 |  | $\ddot{\sim}$ | the equity gaps in the |
| West Virginia | 4.8 | 2.1 |  | $\checkmark$ | 1.3 |  | $\nabla$ | classes of 2011 and 2012 <br> and are computed using |
| Alaska | 3.6 | 2.1 |  | $\checkmark$ | 1.8 |  | - | and are computed using unrounded calculations. |
| Maine | 2.7 | 1.2 |  | $\nabla$ | 0.8 |  | $\nabla$ | States making progress |
| New Mexico | 2.7 | 2.0 |  | 4 | 1.4 |  | $\triangle$ | in decreasing these |
| Oregon | 2.4 | 1.7 |  | - | 1.2 |  | A | gaps are displayed as |
| New Hampshire | 1.9 | 0.7 |  | A | 0.5 |  | A | A, while states where |
| Hawaii | 1.8 | 2.1 | - | $\triangle$ | 1.6 |  | $\checkmark$ | the gap increased in |
| North Dakota | 1.7 | 0.5 |  | $\Delta$ | 0.5 |  | $\checkmark$ | size are displayed as $\boldsymbol{\nabla}$. |
| Utah | 1.4 | 0.7 |  | $\checkmark$ | 0.6 |  | $\checkmark$ | States with no change are |
| South Dakota | 1.3 | 1.4 | - | $\checkmark$ | 1.1 |  | 4 | indicated with a dash. |
| Vermont | 1.3 | 1.1 |  | $\pm$ | 0.7 |  | 1 | You can find the complote numbers used |
| Wyoming | 1.3 | 0.7 |  | - | 0.4 |  | $\nabla$ | in these calculations in |
| Montana | 1.0 | 0.3 |  | $\nabla$ | 0.2 |  | $\nabla$ | Appendix D, available at |
| Idaho | 0.9 | 0.9 | - | $\triangle$ | 0.6 |  | $\nabla$ | apreport.collegeboard.org. |

Figure 6b:
Equity gaps among traditionally underserved students in the class of 2012


Figure 6c:
Equity gaps among traditionally underserved students in the class of 2012

| American Indian/ Alaska Native |  | Participation |  |  | Success |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | \% of Graduating Class | \% of AP <br> Exam Takers | Equity Gap Eliminated | Progress <br> Since <br> Last Year | \% of AP Exam <br> Takers Scoring 3+ <br> During High School | Equity Gap <br> Eliminated | Progress Since Last Year |  |
| 50\% |  |  |  |  |  |  |  |  |
| 40\% |  |  |  |  |  |  |  |  |
| 30\% Alaska | 211 |  |  |  |  |  |  |  |
|  | 21.1 20.0 | 4.3 8.9 |  | $\checkmark$ | 2.9 7.2 |  | $\checkmark$ |  |
| 10\% New Mexico | 11.0 | 5.6 |  | 1 | 2.4 |  | 1 |  |
| 10\% Montana | 7.7 | 3.2 |  | 1 | 1.1 |  | 1 |  |
| North Dakota | 6.8 | 0.9 |  | 1 | 1.1 |  | 1 |  |
| 5\% Arizona | 5.6 | 2.6 |  | $\triangle$ | 1.0 |  | 1 |  |
| \% South Dakota | 4.9 | 2.5 |  | A | 1.2 |  | 1 |  |
| Oregon | 2.2 | 0.9 |  | $\nabla$ | 0.9 |  | $\triangle$ |  |
| Idaho | 1.9 | 0.6 |  | $\nabla$ | 0.4 |  | $\nabla$ |  |
| Washington | 1.9 | 1.0 |  | 1 | 0.8 |  | $\checkmark$ |  |
| Wyoming | 1.9 | 0.9 |  | 1 | 1.1 |  | 1 |  |
| Minnesota | 1.4 | 0.5 |  | 1 | 0.4 |  | 1 |  |
| Kansas | 1.3 | 1.1 |  | - | 0.8 |  | 1 |  |
| Utah | 1.3 | 0.6 |  | A | 0.5 |  | - |  |
| Nevada | 1.2 | 0.8 |  | - | 0.7 |  | - |  |
| Arkansas | 1.1 | 1.1 | $\bigcirc$ | $\triangle$ | 1.3 | - | $\triangle$ |  |
| Nebraska | 1.1 | 0.7 |  | 1 | 0.6 |  | 1 |  |
| North Carolina | 1.1 | 0.8 |  | 1 | 0.6 |  | 1 |  |
| UNITED STATES | 1.1 | 0.6 |  | - | 0.5 |  | - |  |
| Wisconsin | 1.1 | 0.5 |  | - | 0.5 |  |  |  |
| Alabama | 1.0 | 0.6 |  | $\nabla$ | 0.7 |  | $\nabla$ |  |
| Colorado | 1.0 | 0.8 |  | - | 0.6 |  | $\checkmark$ |  |
| 1\% Louisiana | 1.0 | 0.6 |  | - | 0.5 |  | $\checkmark$ |  |
| California | 0.7 | 0.4 |  | - | 0.4 |  | - |  |
| Michigan | 0.7 | 0.4 |  | - | 0.4 |  | - |  |
| Rhode Island | 0.7 | 0.2 |  | $\nabla$ | 0.2 |  | - |  |
| Maine | 0.6 | 0.5 |  | $\nabla$ | 0.3 |  | $\nabla$ |  |
| New York | 0.6 | 0.3 |  | - | 0.2 |  | - |  |
| Hawaii | 0.5 | 0.3 |  | - | 0.3 |  | $\nabla$ |  |
| lowa | 0.5 | 0.4 |  | A | 0.4 |  | A |  |
| Missouri | 0.5 | 0.5 | $\bigcirc$ | A | 0.5 | - | - |  |
| Connecticut | 0.4 | 0.2 |  | - | 0.2 |  | $\nabla$ |  |
| Delaware | 0.4 | 0.6 | - | 4 | 0.5 | - | $\nabla$ |  |
| Florida | 0.4 | 0.4 | $\bigcirc$ | - | 0.3 |  | - |  |
| Maryland | 0.4 | 0.5 | - | $\triangle$ | 0.4 | - | $\square$ |  |
| New Jersey | 0.4 | 0.1 |  | $\nabla$ | 0.1 |  | $\nabla$ |  |
| Texas | 0.4 | 0.6 | - | - | 0.6 | - | - |  |
| Virginia | 0.4 | 0.5 | $\bigcirc$ | - | 0.5 | - | - |  |
| Illinois | 0.3 | 0.2 |  | - | 0.2 |  | - |  |
| New Hampshire | 0.3 | 0.2 |  | - | 0.2 |  | - |  |
| South Carolina | 0.3 | 0.4 | $\bigcirc$ | $\checkmark$ | 0.4 | $\bigcirc$ | - |  |
| Indiana | 0.2 | 0.3 | - | - | 0.2 | - | - |  |
| Massachusetts | 02 | 0.2 | - | - | 0.2 | - | - |  |
| Vermont | 0.2 | 0.5 | $\bigcirc$ | 1 | 0.4 | - | 1 |  |
| Georgia | 0.1 | 0.3 | - | - | 0.3 | - | - |  |
| Kentucky | 0.1 | 0.4 | $\bigcirc$ | A | 0.4 | - | 1 |  |
| Mississippi | 0.1 | 0.4 | - | - | 0.5 | - | A |  |
| Ohio | 0.1 | 0.3 | $\bigcirc$ | - | 0.2 | $\bigcirc$ | - |  |
| Pennsylvania | 0.1 | 02 | $\bigcirc$ | - | 0.2 | - | - | *Precise number of <br> American Indian/Alaska |
| Tennessee | 0.1 | 0.4 | $\bigcirc$ | A | 0.4 | $\bigcirc$ | A | Native graduates for the |
| West Virginia | 0.1 | 0.4 | - | $\nabla$ | 0.3 | - | - | District of Columbia is |
| District of Columbia | * | 0.1 | * | * | 0.0 | * | * | not available. |

## A Closer Look at AP Students

## Low Income

Figure 7a:
Demographics of low-income AP Exam takers from the class of 2012


## Black/African American

Figure 7b:
Top five most popular AP Exams taken by black/African American graduates


## Hispanic/Latino

Figure 7c:
Top five most popular AP Exams taken by Hispanic/Latino graduates


169,521
Hispanic/Latino graduates took an AP Exam during high school

## American Indian/Alaska Native

Figure 7d:
Top five most popular AP Exams taken by American Indian/Alaska Native graduates


## Developing Critical Knowledge and Skills

APcourses are built around well-defined goals for student learning that give teachers a clear understanding of what students should know and be able to do by the end of the course. AP students in all subjects develop their knowledge of key concepts and practices essential to each subject, including critical thinking, reading, and writing skills. In AP English, history, and social science classrooms, students learn to read complex texts carefully, see many sides of an issue, and write arguments and analyses grounded in evidence. In AP science and mathematics courses, students apply similar critical reasoning skills to investigate scientific questions and solve mathematical problems. In AP arts courses, students analyze, evaluate, create, and perform as a means to deepen their appreciation and understanding of the arts. In AP world language courses, students develop and practice the speaking, listening, reading, and writing skills essential for understanding other languages and cultures.

## Figure 8:

Numbers of graduates taking and scoring a 3 or higher on an AP Exam

- Number of graduates leaving high school having taken an AP Exam in these disciplines
- Number of graduates scoring 3+ on an AP Exam in these disciplines during high school

2002 2007

2011
2012


Figure 9:
Score distributions of AP Exams taken by the class of 2012 during high school

*Due to rounding, percentages do not always add up to 100.0.

## School

Closing the Opportunity Gap

- Use AP Potential ${ }^{T M^{8}}$ to identify students at your school who are likely to succeed in AP courses. Where there are sufficient numbers of potential students for particular subjects, consider starting new AP courses or sections.
- Your school may already have the resources it needs to start new AP courses. Find out how your school can launch a new AP course at collegeboard.org/startapcourse.


## District

- Contact your regional College Board office for free training on how to use AP Potential to identify new courses to offer at your schools.
- Visit collegeboard.org/shareap for resources to help you recruit students to your district's AP classes.

Increasing Rigor

- Use AP Instructional Planning Reports to target areas for increased attention and focus in the curriculum.
- Develop plans to recruit, retain, train, and mentor new and less experienced AP teachers.
- Implement summer programs (e.g., summer "boot" or "boost" camps) to help students prepare for specific AP courses.
- Ensure AP course offerings align with your district's graduation requirements. (For instance, if a U.S. government course is required for all students, do they have access to AP U.S. Government and Politics?)

Promoting Equity

- Build emotional and academic support for students through targeted peer mentoring, counseling, and tutoring programs.
- Offer parents a checklist and glossary of the academic opportunities offered at your school, along with a summary of the graduation requirements for their children.
- Use AP Potential results to invite students and parents from underserved backgrounds to targeted sessions of an AP night at your school that highlights the courses offered.
- Work with middle and high school counselors to identify students who initially need extra academic and personal support to succeed in AP. Develop an AP inclusion process that involves parent meetings, school visits and tours, and summer bridge programs.
- Review your district's AP data, and require schools to review their AP enrollment practices. Together, use this information to ensure that underrepresented students have access to academic pathways that will prepare them for AP, and that your schools see proportionate, equitable AP enrollment and success.

Developing
Critical Knowledge and Skills

- Adopt rigorous academic standards and curricula that allow students to build a progression of content and skills anchored in AP.
- Develop and share a road map of the content and skills that students will need to be college and career ready.
- Set clear and measurable goals about college readiness for all students in your district.
- Make information available to students about whether they are on track to be (or already are) successful in college-level courses by the end of high school.


## State

- Build teacher capacity by requiring AP teachers to complete content-specific professional development before or during their first year and to update their training regularly.
- Make funding available for attending these professional development events.


## College or University

- Host an AP Summer Institute or other professional development event for AP teachers in your area.
- Increase recruitment of successful AP students.
- Set a clear, measurable statewide goal for AP participation and success to be incorporated into the state report card.
- Establish AP participation and performance indicators on state report cards.
- Encourage and reward faculty involvement in AP course development, exam scoring, course syllabus review, and research.
- Recognize successful AP scores with courseequivalent credit, placement, and/or scholarships.
- Provide targeted assistance and resources to schools serving traditionally underserved populations: for example, funding for materials, supplies, outreach efforts, and tutoring programs.
- Clearly communicate your state's graduation requirements, and share information about funding opportunities that enable students to participate and succeed in AP. Communicate the advantages of AP for students attending your state's universities.
- Target recruitment outreach to underserved students who earn AP scores of 3 or higher.
- Recognize and collaborate with AP Districts of the Year near your institution. Support their continued progress through collaborative activities such as AP teacher training, college fairs, and parent and community outreach.
- Develop policies that allow AP course work and exam scores to substitute for statewide graduation requirements.
- Provide resources to schools and districts to support research-based programs that build content knowledge and skills - particularly in literacy and math - to prepare students for success in AP course work, and in college and careers.
- Provide incentives for faculty to collaborate with local AP teachers to align expectations of what students in college-level courses should know and be able to do.
- Organize special events for local AP students to visit your institution (e.g., lab tours, author presentations, and speakers from your history or English departments). Make admission counselors available to meet with students at these events.


Success is rarely the result of just one element; it's a collaborative effort at many levels, from many constituents. To address the opportunity gap discussed on pages 2-3 at its root, we need to ensure that more AP courses - and the training needed for teachers to lead them - are available, particularly in traditionally underserved schools. Initiatives aimed at starting and expanding AP programs are crucial to this effort.

States, districts, and schools are leading this critical work, and the College Board is supporting however it can. States like California, Florida, and West Virginia are funding the teacher training and materials needed to expand AP programs in some of their most underserved schools. ${ }^{9}$ Districts such as Copiague Public Schools in New York (profiled on pages 8-9) are demonstrating sustainable success in improving equity and success in AP classrooms. More than 800 AP teachers received scholarships to attend AP Summer Institutes last year, and the College Board plans to expand this funding next year.

The AP collaborative community also extends to organizations interested in promoting equity and success in AP classrooms.

Here we're spotlighting three such partnerships:

- AVID (Advancement via Individual Determination) is a college readiness program focused on providing low-income and underserved minority students with the support they may need to succeed in rigorous course work. Over the last six years, the proportion of AVID seniors taking at least one AP course has increased steadily, from 68.6 percent in 2007 to 72 percent in 2012. ${ }^{10}$
- The National Math and Science Initiative (NMSI) has implemented a training and incentive program in nine states to increase teacher effectiveness and student achievement in AP math and science courses. Between 2011 and 2012, schools participating in the program for the first time saw the number of successful AP Exam scores in math, science, and English at their schools nearly double. ${ }^{11}$
- Made possible by a $\$ 5$ million grant from Google to DonorsChoose.org, the AP STEM Access program is an initiative to increase the number of traditionally underrepresented minority and female high school students who participate in AP courses in STEM (science, technology, engineering, and math). ${ }^{12}$


## Opening Access to AP with AVID

For more than 30 years, AVID has proven to be one of the most effective ways to increase the likelihood that a student who comes from a low-income family will graduate from high school, enroll in college, and persist to graduation. The AVID system is a vital component of a schoolwide college readiness plan. It provides the academic foundation and skill delivery system for school curricula and student achievement programs. AVID methodologies and strategies can be applied schoolwide to most aspects of teaching, including specialized applications and targeted populations.

## Transforming Schools with the National Math and Science Initiative

For many of the poverty-strained students and their families in Texas's Pasadena Independent School District, college seemed out of the question. Pasadena ISD had a different vision. In 2005, the district's superintendent created a plan to turn things around for the struggling community, and he enlisted the National Math and Science Initiative's teacher training program to help lead the transformation. What happened over the next six years was unprecedented. By opening the door for every student to take AP courses and by ensuring that all teachers received training to match the rigor of those courses, the number of qualifying scores earned on AP math, science, and English exams increased from 172 in 2006 to 586 in 2012. Where poverty once defined Pasadena ISD, a college-ready culture does today.

## Expanding Access to STEM with Google and DonorsChoose.org

The AP STEM Access program will provide start-up funding for the classroom resources, educational materials, and professional development for teachers needed to start 500 new AP math and science courses in schools with large numbers of underrepresented minority and female students who are ready for the challenge of rigorous course work in STEM. Participating schools will start the new AP math and science courses in fall 2013 and will make a commitment to offer these new AP courses for a minimum of three years. In addition, all AP STEM teachers in qualifying schools who are able to increase diversity in their classrooms, while also helping their students earn AP Exam scores of 3 or higher, will be eligible to receive DonorsChoose.org gift cards to further invest in classroom resources - with the goal of driving student engagement and achievement for years to come.

## Celebrating AP Districts of the Year

On pages 4-9, you heard from students and educators in districts that were honored with the second annual AP District of the Year awards for their innovative initiatives and strategies to support equity and success in the AP classroom. The following three school districts received the third annual AP District of the Year awards for their efforts and success in opening AP classroom doors to a significantly broader pool of students while increasing the percentage of students earning scores of 3 or higher on at least one AP Exam.

We hope that they can serve as inspiration for your school, district, or state.
"NEISD is humbled to receive the large district award from the College Board. Our teachers and administrators are dedicated to reaching 'every child, every day,' and this accolade acknowledges the district's commitment to success for all students. ... We have put support structures in place to provide AP opportunities to a diverse group of students, many of whom will be the first in their families to attend college. Our efforts to increase AP participation and success are opening doors for more students to pursue their dreams after high school."

Brian G. Gottardy, Superintendent

Celebrating AP Districts of the Year

## North East Independent School District, Texas


"Glendale Union High School District is honored to be named a District of the Year by AP. This accomplishment has been made possible by a committed community of parents, teachers, and students who expect and give their very best. Dedicated teachers challenge students every day - teachers truly do make the difference.
"This recognition validates Glendale Union's core belief that 'all students can learn.' Long before students take their first AP Exams, teachers in all classes have set high expectations. Our culture of rigorous standards prepares our students for the AP pathway. We encourage all students to participate in AP and partner in their success.
"Glendale Union is proud to have been named a District of the Year, and we look forward to our students' continued AP success."

Eugene Dudo, Superintendent

Celebrating AP Districts of the Year
Glendale Union High School District, Arizona

"As a school district, we are committed to a multi-year strategy of simultaneously expanding access and improving performance of our students on AP Exams. We believe by prioritizing and valuing our Pre-AP and AP programs from the middle grades through high school, we are preparing our students for college success while also raising the standards for students across all subjects. Our administrators, teachers, students, and community believe in our AP program as the door of opportunity for college access, and we are committed to expanding and deepening our success in the coming years."

Mary M. Bourque, Superintendent

Celebrating AP Districts of the Year

## Chelsea Public School District, Massachusetts



## Appendix A:

Raw numbers for Figures 2 and 3

## Participation

|  | Total Number of Graduates |  |  |  | Number of Graduates Who Took an AP Exam During High School |  |  |  | Percentage of Graduates Who Took an AP Exam During High School |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2002 | 2007 | 2011 | 2012 | 2002 | 2007 | 2011 | 2012 | 2002 | 2007 | 2011 | 2012 |
| Alabama | 35,887 | 38,076 | 39,108 | 38,318 | 3,103 | 4,181 | 8,584 | 9,852 | 8.6 | 11.0 | 21.9 | 25.7 |
| Alaska | 6,945 | 7,955 | 7,202 | 7,143 | 1,085 | 1,497 | 1,599 | 1,621 | 15.6 | 18.8 | 22.2 | 22.7 |
| Arizona | 47,175 | 70,944 | 79,878 | 82,885 | 5,100 | 9,087 | 13,297 | 14,407 | 10.8 | 12.8 | 16.6 | 17.4 |
| Arkansas | 26,984 | 27,940 | 28,296 | 28,546 | 2,630 | 8,781 | 11,326 | 12,175 | 9.7 | 31.4 | 40.0 | 42.7 |
| California | 325,895 | 376,385 | 386,595 | 386,844 | 78,638 | 110,253 | 136,787 | 144,801 | 24.1 | 29.3 | 35.4 | 37.4 |
| Colorado | 40,760 | 46,797 | 47,987 | 47,369 | 8,585 | 13,753 | 17,303 | 18,358 | 21.1 | 29.4 | 36.1 | 38.8 |
| Connecticut | 32,327 | 37,412 | 36,647 | 36,059 | 6,790 | 9,819 | 12,906 | 13,332 | 21.0 | 26.2 | 35.2 | 37.0 |
| Delaware | 6,482 | 7,073 | 7,570 | 7,647 | 1,017 | 1,843 | 2,191 | 2,417 | 15.7 | 26.1 | 28.9 | 31.6 |
| District of Columbia | 3,090 | 3,519 | 4,175 | 3,917 | 584 | 1,017 | 1,471 | 1,512 | 18.9 | 28.9 | 35.2 | 38.6 |
| Florida | 119,537 | 151,427 | 153,381 | 143,928 | 28,170 | 49,234 | 72,767 | 76,128 | 23.6 | 32.5 | 47.4 | 52.9 |
| Georgia | 65,983 | 76,675 | 83,201 | 81,912 | 13,518 | 21,730 | 31,764 | 33,647 | 20.5 | 28.3 | 38.2 | 41.1 |
| Hawaii | 10,452 | 10,685 | 10,588 | 10,511 | 1,239 | 1,702 | 2,338 | 2,905 | 11.9 | 15.9 | 22.1 | 27.6 |
| Idaho | 15,874 | 16,391 | 17,050 | 17,127 | 1,795 | 2,507 | 3,016 | 3,150 | 11.3 | 15.3 | 17.7 | 18.4 |
| Illinois | 116,657 | 129,652 | 132,309 | 133,159 | 18,833 | 27,798 | 37,723 | 40,653 | 16.1 | 21.4 | 28.5 | 30.5 |
| Indiana | 56,722 | 61,369 | 62,873 | 61,807 | 7,575 | 11,306 | 20,047 | 21,260 | 13.4 | 18.4 | 31.9 | 34.4 |
| lowa | 33,789 | 35,446 | 35,029 | 34,204 | 2,667 | 3,989 | 5,345 | 5,542 | 7.9 | 11.3 | 15.3 | 16.2 |
| Kansas | 29,541 | 29,480 | 28,485 | 28,160 | 2,458 | 3,519 | 4,853 | 5,167 | 8.3 | 11.9 | 17.0 | 18.3 |
| Kentucky | 36,337 | 38,594 | 39,453 | 39,010 | 4,537 | 7,036 | 10,872 | 12,218 | 12.5 | 18.2 | 27.6 | 31.3 |
| Louisiana | 37,905 | 31,676 | 26,439 | 24,482 | 1,399 | 1,957 | 3,528 | 3,931 | 3.7 | 6.2 | 13.3 | 16.1 |
| Maine | 12,593 | 13,409 | 12,096 | 11,837 | 2,572 | 3,680 | 4,400 | 4,576 | 20.4 | 27.4 | 36.4 | 38.7 |
| Maryland | 50,881 | 57,207 | 55,919 | 55,219 | 12,019 | 20,232 | 25,934 | 26,640 | 23.6 | 35.4 | 46.4 | 48.2 |
| Massachusetts | 55,272 | 62,344 | 59,315 | 58,316 | 12,084 | 17,036 | 21,605 | 22,808 | 21.9 | 27.3 | 36.4 | 39.1 |
| Michigan | 95,001 | 105,990 | 104,127 | 101,304 | 14,706 | 20,129 | 25,709 | 26,822 | 15.5 | 19.0 | 24.7 | 26.5 |
| Minnesota | 57,440 | 59,548 | 57,338 | 56,055 | 8,926 | 12,527 | 16,181 | 16,780 | 15.5 | 21.0 | 28.2 | 29.9 |
| Mississippi | 23,740 | 24,542 | 25,255 | 24,705 | 1,659 | 2,605 | 3,605 | 3,615 | 7.0 | 10.6 | 14.3 | 14.6 |
| Missouri | 54,487 | 59,682 | 60,657 | 57,978 | 3,895 | 5,846 | 8,560 | 9,235 | 7.1 | 9.8 | 14.1 | 15.9 |
| Montana | 10,554 | 10,109 | 9,387 | 9,233 | 1,367 | 1,543 | 1,823 | 1,913 | 13.0 | 15.3 | 19.4 | 20.7 |
| Nebraska | 19,910 | 19,799 | 19,799 | 19,342 | 1,199 | 1,882 | 2,665 | 2,886 | 6.0 | 9.5 | 13.5 | 14.9 |
| Nevada | 16,270 | 17,880 | 21,206 | 21,656 | 2,239 | 4,371 | 6,217 | 6,890 | 13.8 | 24.4 | 29.3 | 31.8 |
| New Hampshire | 12,452 | 14,259 | 13,392 | 13,305 | 1,919 | 2,850 | 3,206 | 3,238 | 15.4 | 20.0 | 23.9 | 24.3 |
| New Jersey | 77,664 | 96,323 | 98,025 | 95,785 | 15,350 | 21,944 | 26,546 | 27,433 | 19.8 | 22.8 | 27.1 | 28.6 |
| New Mexico | 18,094 | 17,493 | 17,567 | 17,182 | 2,496 | 3,434 | 4,274 | 4,815 | 13.8 | 19.6 | 24.3 | 28.0 |
| New York | 140,139 | 159,701 | 156,401 | 152,224 | 42,000 | 54,201 | 63,032 | 64,946 | 30.0 | 33.9 | 40.3 | 42.7 |
| North Carolina | 65,955 | 81,141 | 84,401 | 85,732 | 15,008 | 22,315 | 25,709 | 26,633 | 22.8 | 27.5 | 30.5 | 31.1 |
| North Dakota | 8,114 | 7,229 | 6,799 | 6,450 | 562 | 768 | 888 | 882 | 6.9 | 10.6 | 13.1 | 13.7 |
| Ohio | 110,608 | 120,040 | 120,855 | 117,362 | 14,057 | 19,929 | 24,585 | 25,170 | 12.7 | 16.6 | 20.3 | 21.4 |
| Oklahoma | 36,852 | 36,917 | 36,385 | 35,985 | 5,032 | 7,018 | 7,806 | 8,140 | 13.7 | 19.0 | 21.5 | 22.6 |
| Oregon | 31,153 | 32,082 | 31,495 | 31,049 | 3,643 | 6,107 | 7,706 | 8,059 | 11.7 | 19.0 | 24.5 | 26.0 |
| Pennsylvania | 114,943 | 129,814 | 128,223 | 125,965 | 15,890 | 21,887 | 27,357 | 28,750 | 13.8 | 16.9 | 21.3 | 22.8 |
| Rhode Island | 9,006 | 10,198 | 9,716 | 9,646 | 1,118 | 1,438 | 1,907 | 2,176 | 12.4 | 14.1 | 19.6 | 22.6 |
| South Carolina | 31,302 | 38,024 | 35,456 | 34,616 | 6,444 | 8,142 | 10,149 | 10,564 | 20.6 | 21.4 | 28.6 | 30.5 |
| South Dakota | 8,796 | 8,245 | 7,948 | 7,788 | 1,003 | 1,268 | 1,509 | 1,545 | 11.4 | 15.4 | 19.0 | 19.8 |
| Tennessee | 40,894 | 50,559 | 50,851 | 50,313 | 5,193 | 7,954 | 10,067 | 10,743 | 12.7 | 15.7 | 19.8 | 21.4 |
| Texas | 225,167 | 256,959 | 276,131 | 270,657 | 43,308 | 65,788 | 90,673 | 96,166 | 19.2 | 25.6 | 32.8 | 35.5 |
| Utah | 30,183 | 31,304 | 33,083 | 32,846 | 7,744 | 8,737 | 9,761 | 10,439 | 25.7 | 27.9 | 29.5 | 31.8 |
| Vermont | 7,083 | 7,160 | 6,370 | 6,238 | 1,280 | 1,913 | 2,061 | 2,151 | 18.1 | 26.7 | 32.4 | 34.5 |
| Virginia | 66,519 | 78,655 | 80,324 | 79,257 | 17,825 | 25,627 | 32,212 | 33,626 | 26.8 | 32.6 | 40.1 | 42.4 |
| Washington | 58,311 | 65,048 | 64,315 | 62,679 | 8,513 | 14,741 | 19,305 | 20,581 | 14.6 | 22.7 | 30.0 | 32.8 |
| West Virginia | 17,128 | 17,242 | 16,852 | 16,637 | 1,806 | 2,505 | 3,453 | 3,722 | 10.5 | 14.5 | 20.5 | 22.4 |
| Wisconsin | 60,575 | 64,418 | 62,068 | 61,166 | 10,205 | 14,454 | 17,280 | 18,076 | 16.8 | 22.4 | 27.8 | 29.6 |
| Wyoming | 6,106 | 5,352 | 5,098 | 4,986 | 619 | 825 | 892 | 974 | 10.1 | 15.4 | 17.5 | 19.5 |
| UNITED STATES | 2,621,534 | 2,956,169 | 2,993,120 | 2,946,541 | 471,404 | 694,705 | 904,794 | 954,070 | 18.0 | 23.5 | 30.2 | 32.4 |

## Notes

## Success

|  | Number of Graduates Who Scored 3+ on an AP Exam During High School |  |  |  | Percentage of Graduates Who Scored 3+ on an AP Exam During High School |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2002 | 2007 | 2011 | 2012 | 2002 | 2007 | 2011 | 2012 |
| Alabama | 1,710 | 2,398 | 3,872 | 4,258 | 4.8 | 6.3 | 9.9 | 11.1 |
| Alaska | 762 | 957 | 1,006 | 1,062 | 11.0 | 12.0 | 14.0 | 14.9 |
| Arizona | 3,285 | 5,428 | 7,675 | 8,307 | 7.0 | 7.7 | 9.6 | 10.0 |
| Arkansas | 1,333 | 2,620 | 3,827 | 4,227 | 4.9 | 9.4 | 13.5 | 14.8 |
| California | 53,816 | 72,097 | 90,409 | 95,695 | 16.5 | 19.2 | 23.4 | 24.7 |
| Colorado | 5,582 | 8,569 | 10,692 | 11,442 | 13.7 | 18.3 | 22.3 | 24.2 |
| Connecticut | 5,006 | 7,089 | 9,270 | 9,685 | 15.5 | 18.9 | 25.3 | 26.9 |
| Delaware | 617 | 979 | 1,172 | 1,257 | 9.5 | 13.8 | 15.5 | 16.4 |
| District of Columbia | 234 | 211 | 323 | 389 | 7.6 | 6.0 | 7.7 | 9.9 |
| Florida | 17,256 | 26,360 | 36,707 | 39,306 | 14.4 | 17.4 | 23.9 | 27.3 |
| Georgia | 7,686 | 11,592 | 16,476 | 17,767 | 11.6 | 15.1 | 19.8 | 21.7 |
| Hawaii | 682 | 867 | 1,060 | 1,200 | 6.5 | 8.1 | 10.0 | 11.4 |
| Idaho | 1,156 | 1,605 | 2,079 | 2,115 | 7.3 | 9.8 | 12.2 | 12.3 |
| Illinois | 13,666 | 18,857 | 24,449 | 26,461 | 11.7 | 14.5 | 18.5 | 19.9 |
| Indiana | 4,134 | 5,786 | 8,772 | 9,634 | 7.3 | 9.4 | 14.0 | 15.6 |
| lowa | 1,828 | 2,640 | 3,392 | 3,481 | 5.4 | 7.4 | 9.7 | 10.2 |
| Kansas | 1,631 | 2,208 | 2,943 | 3,117 | 5.5 | 7.5 | 10.3 | 11.1 |
| Kentucky | 2,396 | 3,518 | 5,393 | 6,067 | 6.6 | 9.1 | 13.7 | 15.6 |
| Louisiana | 775 | 920 | 1,474 | 1,531 | 2.0 | 2.9 | 5.6 | 6.3 |
| Maine | 1,701 | 2,275 | 2,755 | 2,933 | 13.5 | 17.0 | 22.8 | 24.8 |
| Maryland | 8,414 | 12,882 | 15,586 | 16,327 | 16.5 | 22.5 | 27.9 | 29.6 |
| Massachusetts | 8,773 | 12,307 | 15,129 | 16,251 | 15.9 | 19.7 | 25.5 | 27.9 |
| Michigan | 9,594 | 13,062 | 16,628 | 17,262 | 10.1 | 12.3 | 16.0 | 17.0 |
| Minnesota | 5,631 | 7,815 | 10,493 | 11,067 | 9.8 | 13.1 | 18.3 | 19.7 |
| Mississippi | 696 | 845 | 1,133 | 1,145 | 2.9 | 3.4 | 4.5 | 4.6 |
| Missouri | 2,566 | 3,686 | 4,959 | 5,554 | 4.7 | 6.2 | 8.2 | 9.6 |
| Montana | 929 | 1033 | 1,196 | 1,205 | 8.8 | 10.2 | 12.7 | 13.1 |
| Nebraska | 733 | 1105 | 1,605 | 1,724 | 3.7 | 5.6 | 8.1 | 8.9 |
| Nevada | 1,375 | 2,430 | 3,451 | 3,607 | 8.5 | 13.6 | 16.3 | 16.7 |
| New Hampshire | 1,341 | 2,052 | 2,454 | 2,430 | 10.8 | 14.4 | 18.3 | 18.3 |
| New Jersey | 11,230 | 15,772 | 19,486 | 20,283 | 14.5 | 16.4 | 19.9 | 21.2 |
| New Mexico | 1,215 | 1,642 | 1,954 | 2,108 | 6.7 | 9.4 | 11.1 | 12.3 |
| New York | 28,196 | 35,707 | 41,427 | 42,627 | 20.1 | 22.4 | 26.5 | 28.0 |
| North Carolina | 9,016 | 12,858 | 15,545 | 16,558 | 13.7 | 15.8 | 18.4 | 19.3 |
| North Dakota | 402 | 542 | 555 | 553 | 5.0 | 7.5 | 8.2 | 8.6 |
| Ohio | 8,896 | 12,301 | 15,453 | 16,201 | 8.0 | 10.2 | 12.8 | 13.8 |
| Oklahoma | 2,620 | 3,268 | 3,892 | 4,023 | 7.1 | 8.9 | 10.7 | 11.2 |
| Oregon | 2,477 | 3,812 | 4,719 | 5,025 | 8.0 | 11.9 | 15.0 | 16.2 |
| Pennsylvania | 10,918 | 14,442 | 17,631 | 18,665 | 9.5 | 11.1 | 13.8 | 14.8 |
| Rhode Island | 666 | 900 | 1,168 | 1,302 | 7.4 | 8.8 | 12.0 | 13.5 |
| South Carolina | 3,944 | 4,765 | 5,855 | 6,231 | 12.6 | 12.5 | 16.5 | 18.0 |
| South Dakota | 610 | 793 | 974 | 1,005 | 6.9 | 9.6 | 12.3 | 12.9 |
| Tennessee | 3,153 | 4,344 | 5,274 | 5,790 | 7.7 | 8.6 | 10.4 | 11.5 |
| Texas | 24,801 | 34,869 | 46,025 | 49,062 | 11.0 | 13.6 | 16.7 | 18.1 |
| Utah | 5,586 | 5,896 | 6,853 | 7,298 | 18.5 | 18.8 | 20.7 | 22.2 |
| Vermont | 910 | 1,311 | 1,360 | 1,425 | 12.8 | 18.3 | 21.4 | 22.8 |
| Virginia | 11,198 | 16,007 | 20,542 | 21,524 | 16.8 | 20.4 | 25.6 | 27.2 |
| Washington | 5,619 | 8,938 | 11,865 | 12,542 | 9.6 | 13.7 | 18.4 | 20.0 |
| West Virginia | 886 | 1,148 | 1,483 | 1,631 | 5.2 | 6.7 | 8.8 | 9.8 |
| Wisconsin | 7,100 | 10,053 | 12,058 | 12,590 | 11.7 | 15.6 | 19.4 | 20.6 |
| Wyoming | 347 | 443 | 501 | 523 | 5.7 | 8.3 | 9.8 | 10.5 |
| UNITED STATES | 305,098 | 424,004 | 541,000 | 573,472 | 11.6 | 14.3 | 18.1 | 19.5 |

1. "The Aptitude-Achievement Connection: Using an Aptitude Test to Aid in Allocating Educational Resources." From Uneducated Guesses: Using Evidence to Uncover Misguided Education Policies by Howard Wainer, 2011.
2. Average correlations between grades in relevant course work and AP Exam performance and between high school GPA and AP Exam performance were only .25 and .28 , respectively. Maureen Ewing, Wayne J. Camara, and Roger E. Millsap: The Relationship Between PSAT/ NMSQT Scores and AP Examination Grades: A Follow-Up Study (http://research.collegeboard. org/sites/default/files/publications/2012/7/ researchreport-2006-1-psat-nmsqt-scores-ap-examination-grades-follow-up.pdf). The College Board, 2006.
3. These data are based on the nearly 2 million public school students in the class of 2012 who took the PSAT/NMSQT as 10th- or 11thgraders. Students were classified as taking a recommended AP subject if they completed an AP Exam in a subject for which they had potential to succeed. AP subjects in mathematics are Calculus $A B$, Calculus $B C$, Computer Science A, and Statistics.
4. For more information, visit the College Board's College Completion Agenda at completionagenda.collegeboard.org.
5. The College Completion Agenda 2011 Progress Report (New York: The College Board, 2011).
6. Underserved minorities are defined throughout this report as American Indian/Alaska Native black/African American, and Hispanic/Latino
7. The College Completion Agenda 2012 Progress Report (New York: The College Board, 2012).
8. AP Potential is a free, Web-based tool that uses PSAT/NMSOT results to find students who are likely to succeed in AP. For more information, visit appotential.collegeboard.org.
9. The California AP Potential Expansion (CAPE) program provides funding for materials and teacher training for AP courses to approximately 200 California public schools that currently offer few or no AP courses, yet have many students with strong potential to succeed. The College Board Florida Partnership for Minority and Underrepresented Student Achievement has funded AP professional development for the past 11 years in schools and districts throughout Florida. The West Virginia Center for Professional Development (WVCPD) pays for AP professional development for its AP teachers, principals, and AP Coordinators to expand equity and access to $A P$ in the state.
10. For more information, visit avid.org.
11. For more information, visit nationalmathandscience.org.
12. For more information, visit collegeboard.org/apstem.

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[^0]:    Data in this figure have been rounded, and raw numbers are available in Appendix A. Ties are alphabetized by state name.
    *Tie with United States is based on rounding.

[^1]:    *Due to rounding, percentages do not always add up to 100.0.

[^2]:    Note: Because some AP Exam takers identify themselves as "Other" for race/ethnicity or do not provide race/ethnicity, the "AP Exam Taker Population" in this figure only represents a total of 94.6 percent of all AP Exam takers.

