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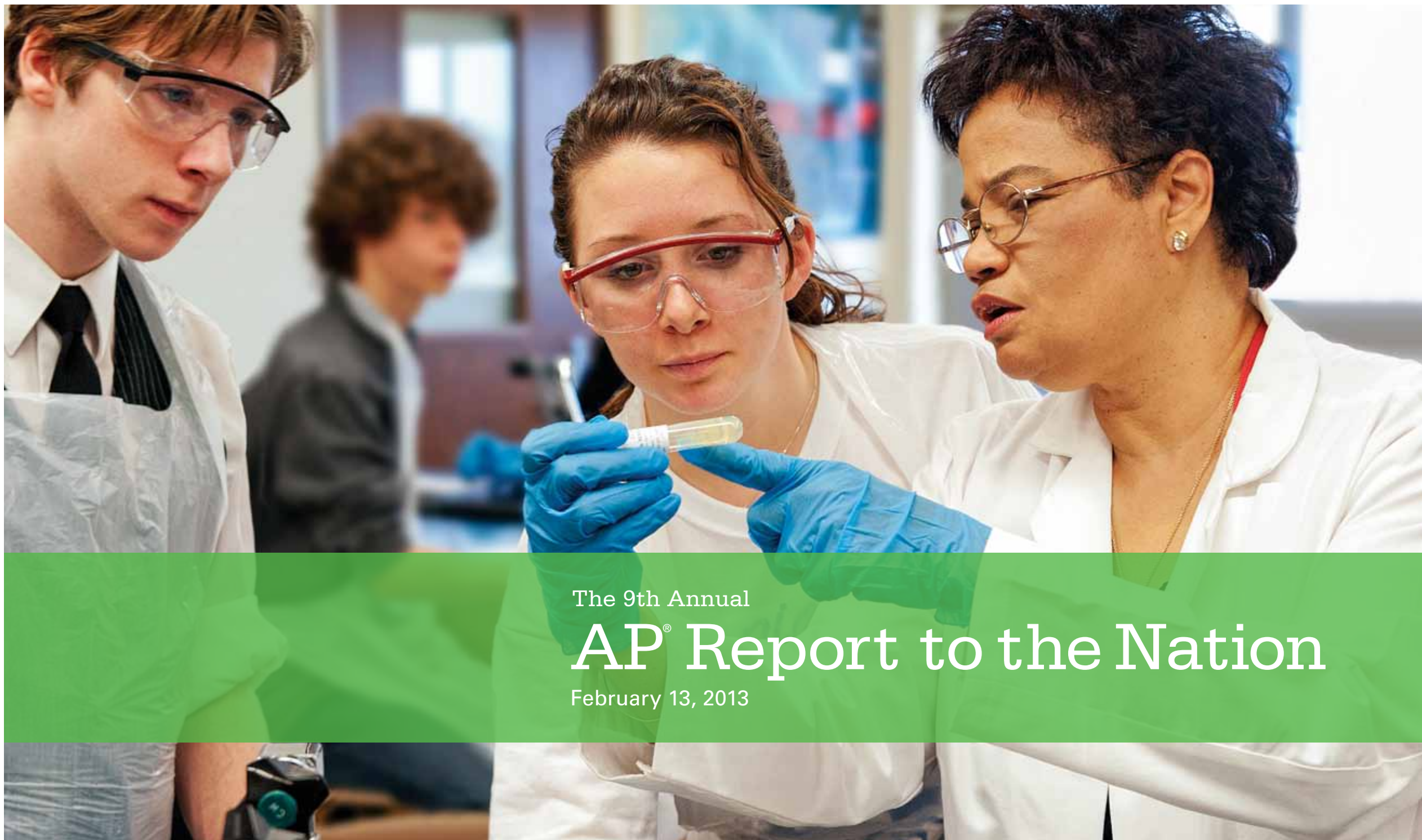
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The 9th Annual

# AP® Report to the Nation

February 13, 2013

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 AP® — 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](http://apreport.collegeboard.org).

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# A Right to Rigor: Fulfilling Student Potential



All students who are academically ready for the rigor of AP® — 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.

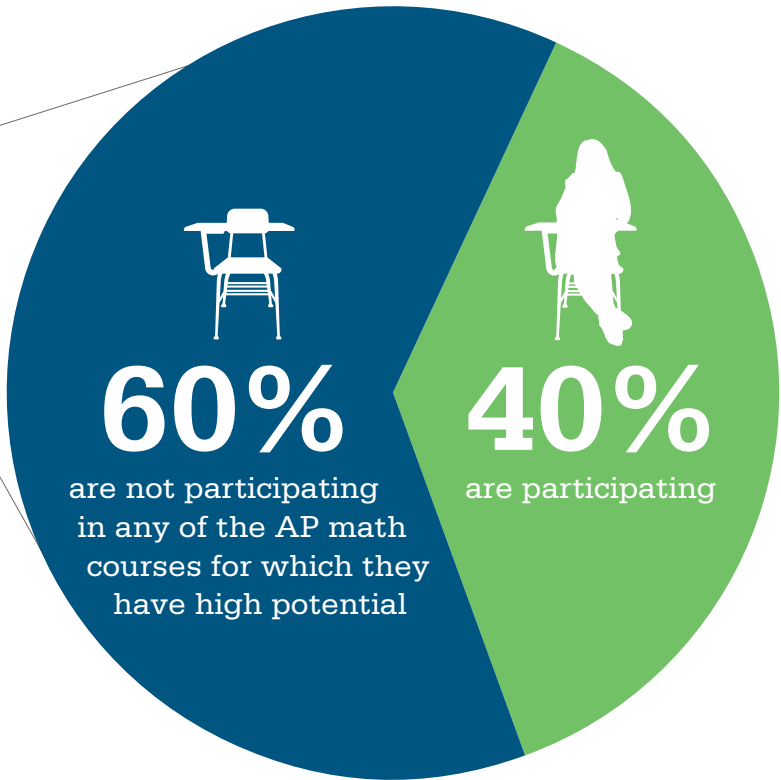
How can educators determine readiness for AP? Many schools use a student’s prior GPA or grade in a prerequisite course to determine admission to an AP course. The problem with emphasizing these criteria is that they only have low correlations to success in AP, so they should not be used in isolation or in lieu of more strongly correlated predictors.<sup>1</sup> 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/NMSQT®) sections that are highly correlated to AP success.<sup>2</sup> From these PSAT/NMSQT 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.<sup>3</sup>

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

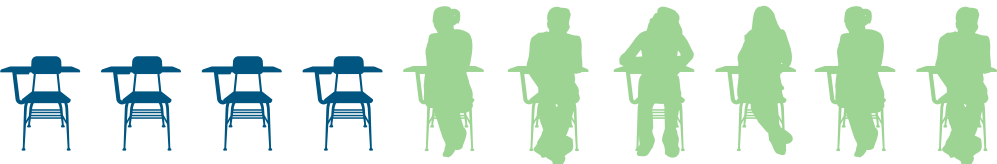


## Where is the greatest potential lost?

Among students with high potential for success in AP math course work, only:

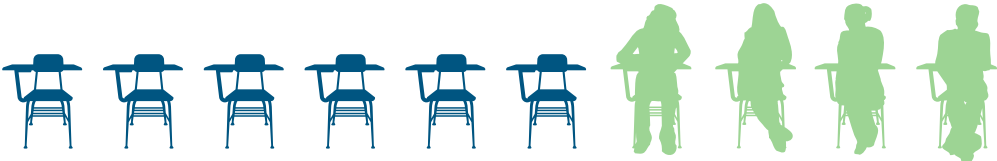
### 6 out of 10

Asian/Asian American/  
Pacific Islander students



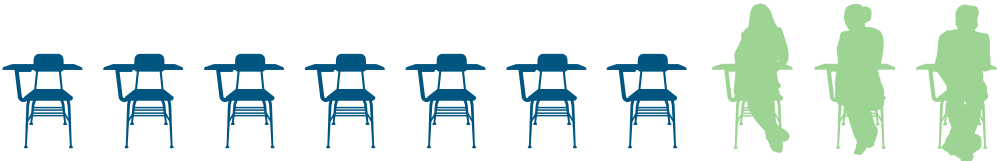
### 4 out of 10

white students



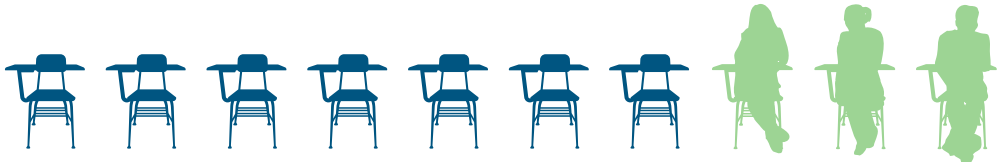
### 3 out of 10

Hispanic/Latino students



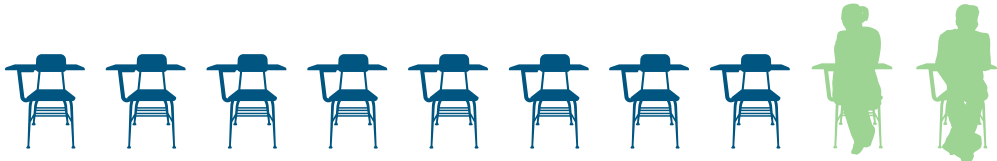
### 3 out of 10

black/African  
American students



### 2 out of 10

American Indian/  
Alaska Native students



...took any such AP math course.



## AP in:

A Classroom  
A District  
A University

**954,070**

U.S. public high school graduates took at least one AP Exam

**127,358**

U.S. high school teachers taught an AP course last year

“[AP] opens the doors for students to show them that they can be competitive. ... Many students will be the first ones in their family to graduate [from] high school and have the hopes and dreams of attending college.”

*Michael McCormick,  
Assistant Superintendent,  
Val Verde Unified School District*

**5,400**

college faculty participated in reviewing the syllabi of AP teachers, developing curricula, or scoring AP Exams

**20,943**

AP Coordinators, counselors, and principals used AP data to shape their schools' programs

# AP<sup>®</sup>: A Collaborative Community

**A**t 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*

**T**here is one AP Physics teacher at Citrus Hill High school in Perris, California: Michael Towne. 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 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.

**5,984**

U.S. high school teachers taught an AP Physics course last year

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 tutoring every weekday, Monday through Friday. He prepared me for college with problem-solving, studying, and test-taking strategies. He showed me the beauty of physics.”

**86,739**

U.S. public high school graduates took an AP Physics Exam

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,” says Towne. “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 Physics Classroom

Citrus Hill High School

Val Verde Unified School District, Perris, California



## 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 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

**253,774**

low-income  
public high  
school graduates  
took at least  
one AP Exam

in AP, so the entire culture [of our school] is changing as a result.”

**120,254**

low-income  
public high school  
graduates scored  
3 or higher on an  
AP Exam during  
high school

“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.”

# Copiague Public Schools

Copiague, New York



## AP in:

A Classroom  
A District  
A University

**“When we review transcripts and see an AP course ... we know that students have challenged themselves. We know that they are really pushing the envelope of their own intellectual curiosity. ... We love that spirit.”**

*John Barnhill, Assistant Vice President for Enrollment Management, Florida State University*

# 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 state-wide 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.”

## 661,391

U.S. public high school graduates reported AP scores to colleges and universities



# Advances in AP: Course and Exam Redesign

## AP Course 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-in-chief 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 co-chair 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.”

## AP in:

A Classroom  
A District  
A University

## Collaborating with Higher Education

**“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.<sup>4</sup>

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](http://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.

Why is this important?

37.6%

of first- and second-year undergraduate students require remedial course work in college<sup>5</sup>

## Promoting Equity

Underserved minority<sup>6</sup> 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.

20.8%

of Hispanic/Latino 25- to 34-year-olds have an associate degree or higher<sup>7</sup>

## 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

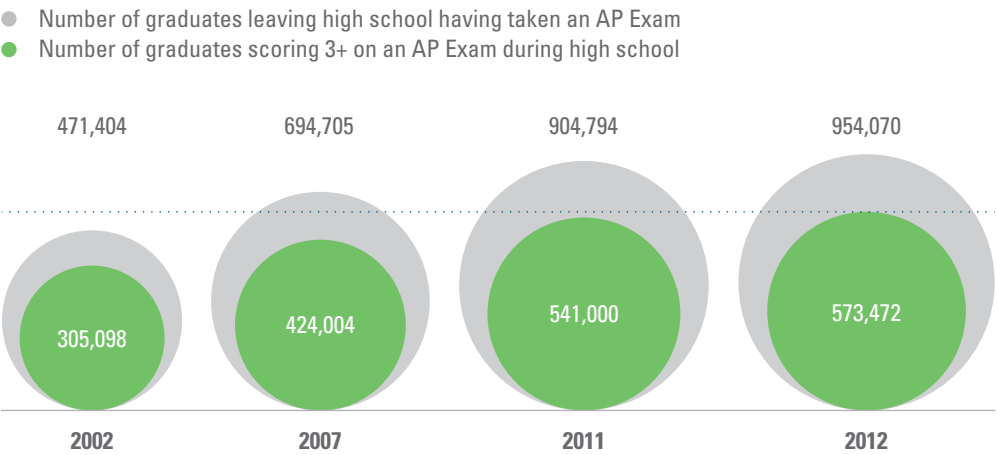
In the last decade, more students than ever before have experienced college-level rigor while still in high school by taking AP courses and exams. As you'll see on the next few pages, many states have seen a comparable increase in students scoring 3 or higher on AP Exams. Other states are working hard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

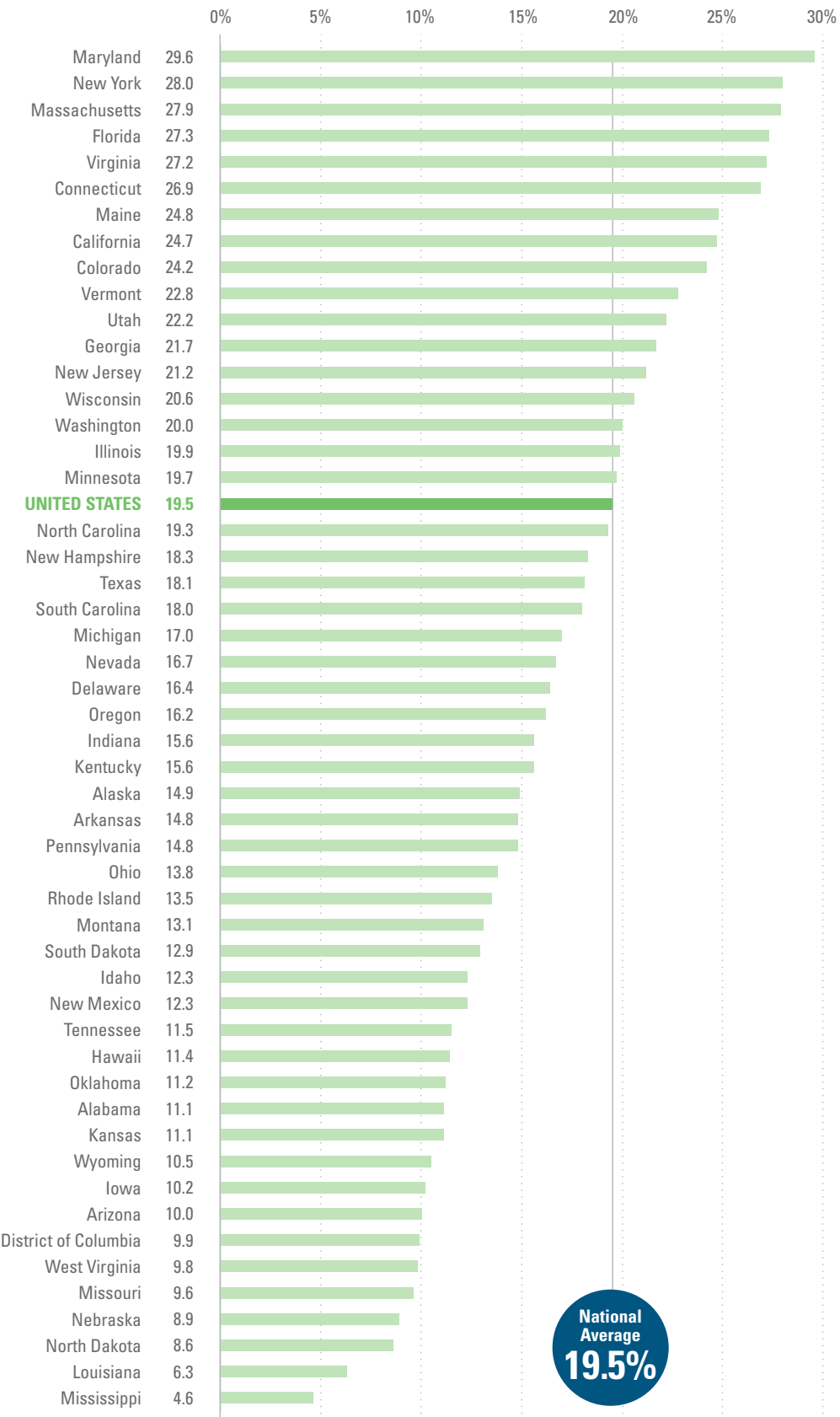
What do the data show?

**More graduates** are succeeding on AP Exams today than took AP Exams in 2002

**Figure 1:**  
Number of graduates taking and scoring a 3 or higher on an AP Exam



**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

Raw numbers for this figure are available in Appendix A. Ties are alphabetized by state name.



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

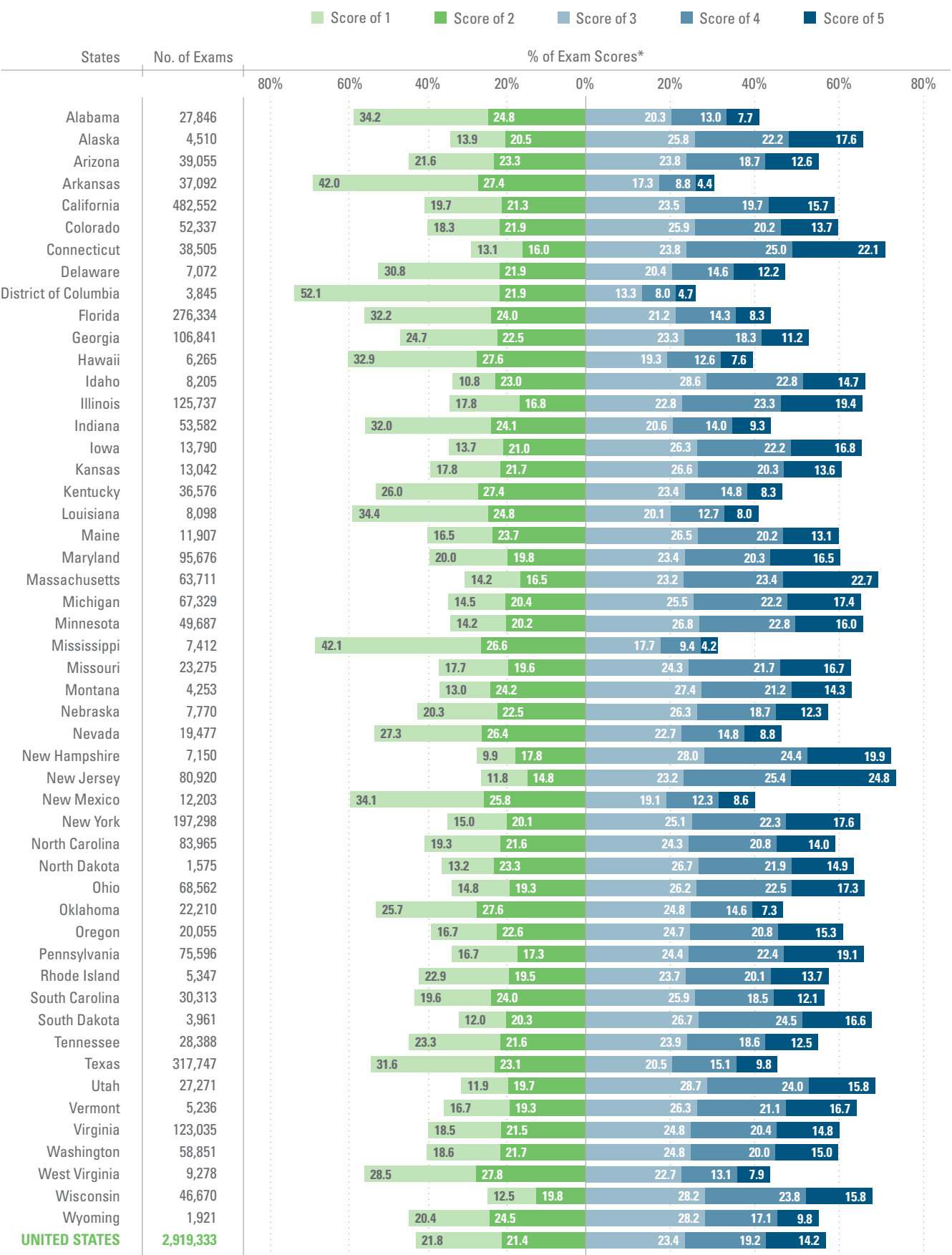
13.1 point increase in the percentage of Maryland's graduates scoring a 3 or higher on an AP Exam over the past 10 years, leading the nation

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

	Change	2002 %	2012 %
Maryland	13.1	16.5	29.6
Florida	12.9	14.4	27.3
Massachusetts	12.0	15.9	27.9
Connecticut	11.4	15.5	26.9
Maine	11.3	13.5	24.8
Colorado	10.5	13.7	24.2
Virginia	10.4	16.8	27.2
Washington	10.4	9.6	20.0
Georgia	10.1	11.6	21.7
Vermont	10.0	12.8	22.8
Arkansas	9.9	4.9	14.8
Minnesota	9.9	9.8	19.7
Kentucky	9.0	6.6	15.6
Wisconsin	8.9	11.7	20.6
Indiana	8.3	7.3	15.6
California	8.2	16.5	24.7
Illinois	8.2	11.7	19.9
Nevada	8.2	8.5	16.7
Oregon	8.2	8.0	16.2
New York	7.9*	20.1	28.0
UNITED STATES	7.9	11.6	19.5
New Hampshire	7.5	10.8	18.3
Texas	7.1	11.0	18.1
Delaware	6.9	9.5	16.4
Michigan	6.9	10.1	17.0
New Jersey	6.7	14.5	21.2
Alabama	6.3	4.8	11.1
Rhode Island	6.1	7.4	13.5
South Dakota	6.0	6.9	12.9
Ohio	5.8	8.0	13.8
Kansas	5.6	5.5	11.1
New Mexico	5.6	6.7	12.3
North Carolina	5.6	13.7	19.3
South Carolina	5.4	12.6	18.0
Pennsylvania	5.3	9.5	14.8
Nebraska	5.2	3.7	8.9
Idaho	5.0	7.3	12.3
Hawaii	4.9	6.5	11.4
Missouri	4.9	4.7	9.6
Iowa	4.8	5.4	10.2
Wyoming	4.8	5.7	10.5
West Virginia	4.6	5.2	9.8
Louisiana	4.3	2.0	6.3
Montana	4.3	8.8	13.1
Oklahoma	4.1	7.1	11.2
Alaska	3.9	11.0	14.9
Tennessee	3.8	7.7	11.5
Utah	3.7	18.5	22.2
North Dakota	3.6	5.0	8.6
Arizona	3.0	7.0	10.0
District of Columbia	2.3	7.6	9.9
Mississippi	1.7	2.9	4.6

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.

Figure 4: 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.



Promoting Equity

States have made great strides in recent years in closing equity gaps for underserved minority 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

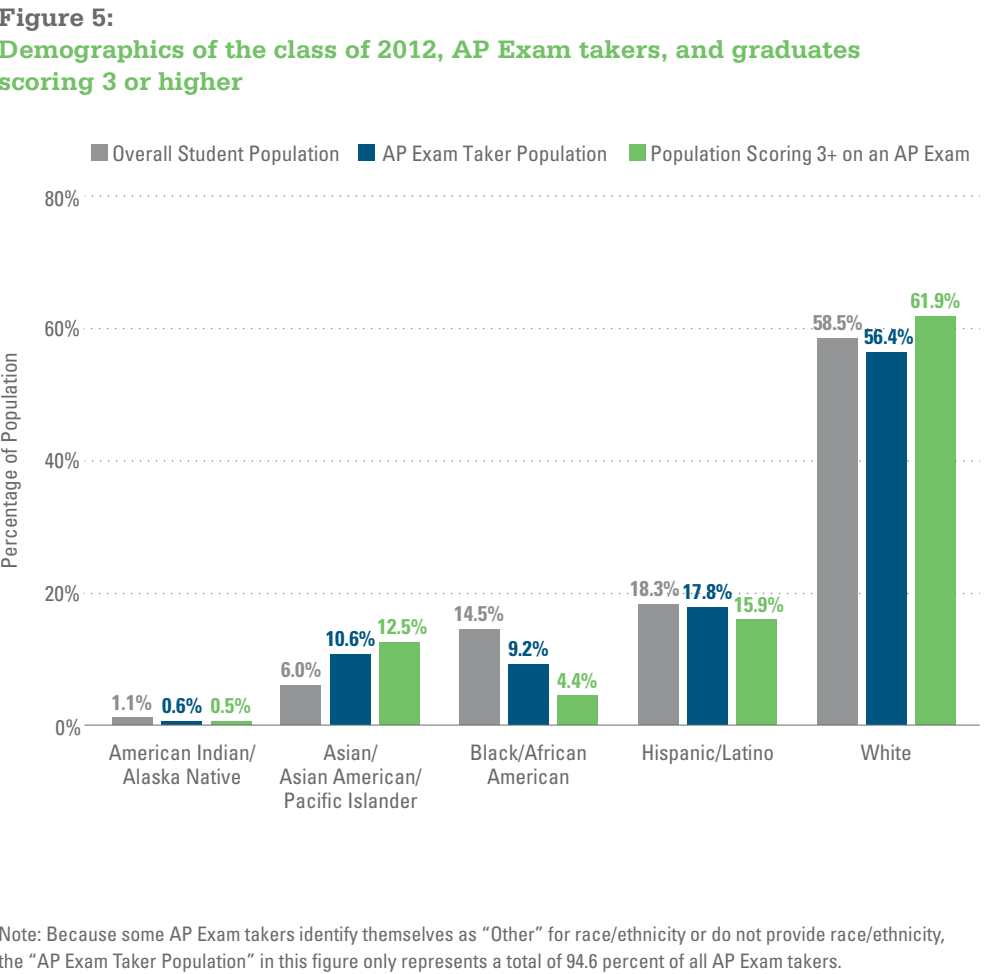


Figure 6a:  
Equity gaps among traditionally underserved students in the class of 2012

Black/ African American		% of Graduating Class	Participation			Success		
			% of AP Exam Takers	Equity Gap Eliminated	Progress Since Last Year	% of AP Exam Takers Scoring 3+ During High School	Equity Gap Eliminated	Progress Since Last Year
90%	District of Columbia	90.5	65.9		▼	41.9		▲
80%								
70%								
60%								
50%	Mississippi	50.7	31.8		▼	10.0		▼
	South Carolina	36.9	16.1		▲	8.6		▲
	Maryland	35.8	21.9		▼	11.4		▲
	Georgia	34.5	26.5		▲	13.6		▲
	Louisiana	32.5	26.2		▲	11.2		▲
	Alabama	32.0	23.3		▲	9.4		▼
	Delaware	30.0	14.0		▲	8.4		▲
30%	North Carolina	29.7	12.6		▼	7.2		▲
	Virginia	23.8	13.2		▲	7.4		▲
	Tennessee	21.8	18.9		▼	7.9		▲
	Arkansas	21.0	14.8		▼	5.1		—
20%	Florida	18.6	14.8		▲	7.4		▲
	Missouri	16.4	11.7		▲	3.8		▲
	Illinois	15.9	12.4		▲	4.5		▲
	Michigan	15.9	6.4		▲	2.7		▲
	New Jersey	15.8	6.3		▲	3.6		▲
	Texas	15.6	9.0		▲	4.7		▲
	New York	15.0	9.1		▲	4.8		▲
	UNITED STATES	14.5	9.2		▲	4.4		▲
	Pennsylvania	14.1	8.3		▼	2.7		▲
	Ohio	13.4	7.0		▲	3.3		▲
	Connecticut	11.9	6.1		▼	2.9		▲
	Nevada	11.4	5.5		▼	3.5		▲
	Oklahoma	10.2	7.4		▲	3.8		▲
	Kentucky	10.0	6.1		▲	3.6		▲
10%	Indiana	9.4	5.9		▲	2.8		▲
	Rhode Island	8.6	5.4		▲	2.4		▲
	Kansas	7.0	4.5		▲	2.3		▼
	California	6.9	3.8		▲	2.3		▲
	Massachusetts	6.7	5.3		▲	2.9		▲
	Minnesota	6.6	3.4		—	2.2		▲
	Wisconsin	6.6	2.7		▼	1.1		▼
	Arizona	6.1	3.7		▲	2.7		▲
	Nebraska	6.0	3.8		▲	2.1		▲
	Colorado	5.8	3.8		▲	2.3		▲
5%	Washington	5.0	3.5		▲	2.2		▲
	Iowa	4.9	2.3		▲	1.5		▲
	West Virginia	4.8	2.1		▼	1.3		▼
	Alaska	3.6	2.1		▼	1.8		—
	Maine	2.7	1.2		▼	0.8		▼
	New Mexico	2.7	2.0		▲	1.4		▲
	Oregon	2.4	1.7		—	1.2		▲
	New Hampshire	1.9	0.7		▲	0.5		▲
	Hawaii	1.8	2.1	●	▲	1.6		▲
	North Dakota	1.7	0.5		▲	0.5		▲
	Utah	1.4	0.7		▼	0.6		▼
	South Dakota	1.3	1.4	●	▲	1.1		▲
	Vermont	1.3	1.1		▲	0.7		▲
	Wyoming	1.3	0.7		—	0.4		▼
	Montana	1.0	0.3		▼	0.2		▼
	Idaho	0.9	0.9	●	▲	0.6		▼

In the Equity Gap Eliminated columns in Figures 6a, 6b, and 6c, a ● indicates that the percentage of either AP Exam takers or successful AP Exam takers in the class of 2012 who are a particular race/ethnicity is greater than or equal to the percentage of the overall graduating class who are of that race/ethnicity. The Progress Since Last Year columns compare the size of the equity gaps in the classes of 2011 and 2012 and are computed using unrounded calculations. States making progress in decreasing these gaps are displayed as ▲, while states where the gap increased in size are displayed as ▼. States with no change are indicated with a dash. You can find the complete numbers used in these calculations in Appendix D, available at [apreport.collegeboard.org](http://apreport.collegeboard.org).



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

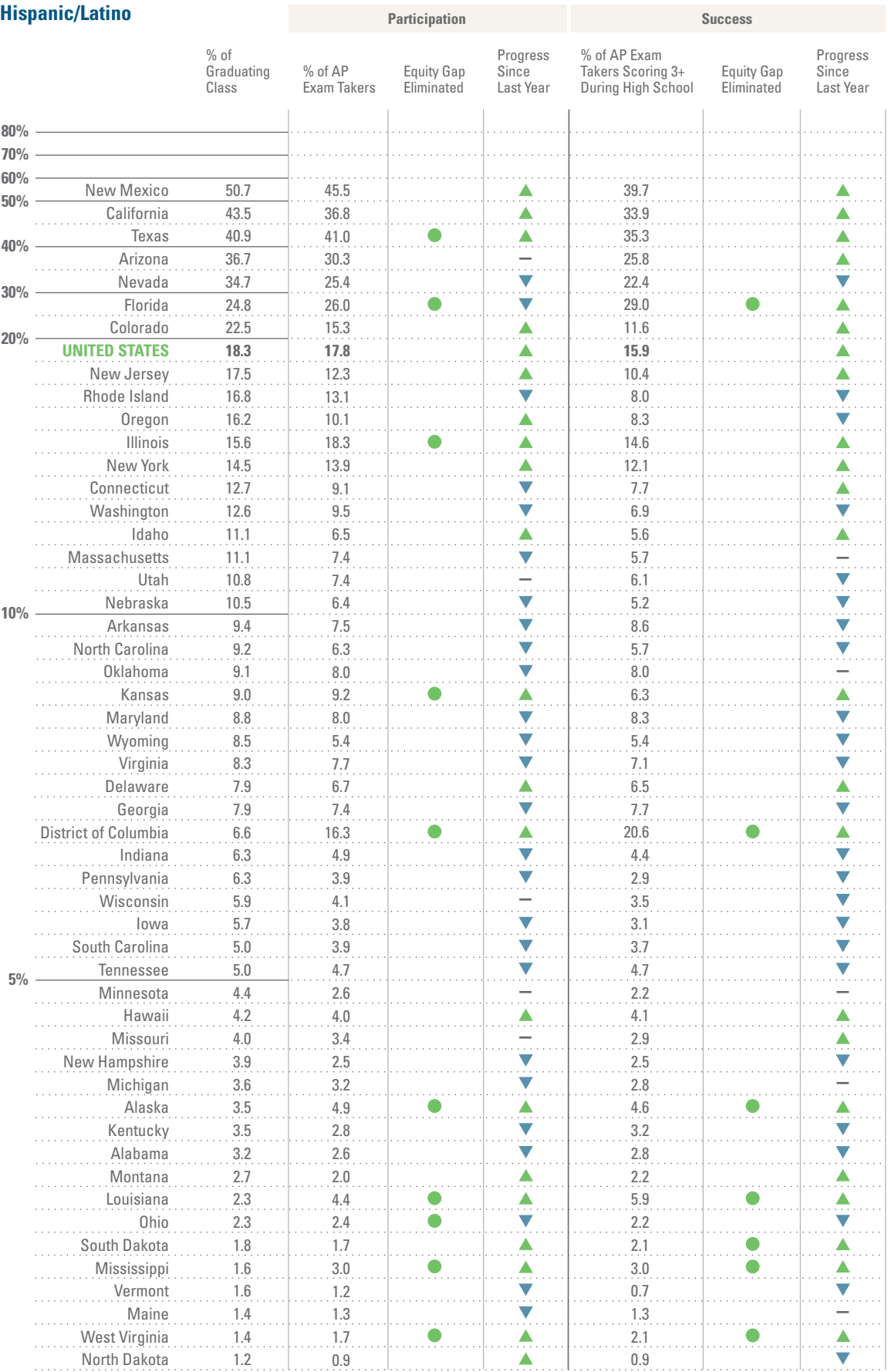
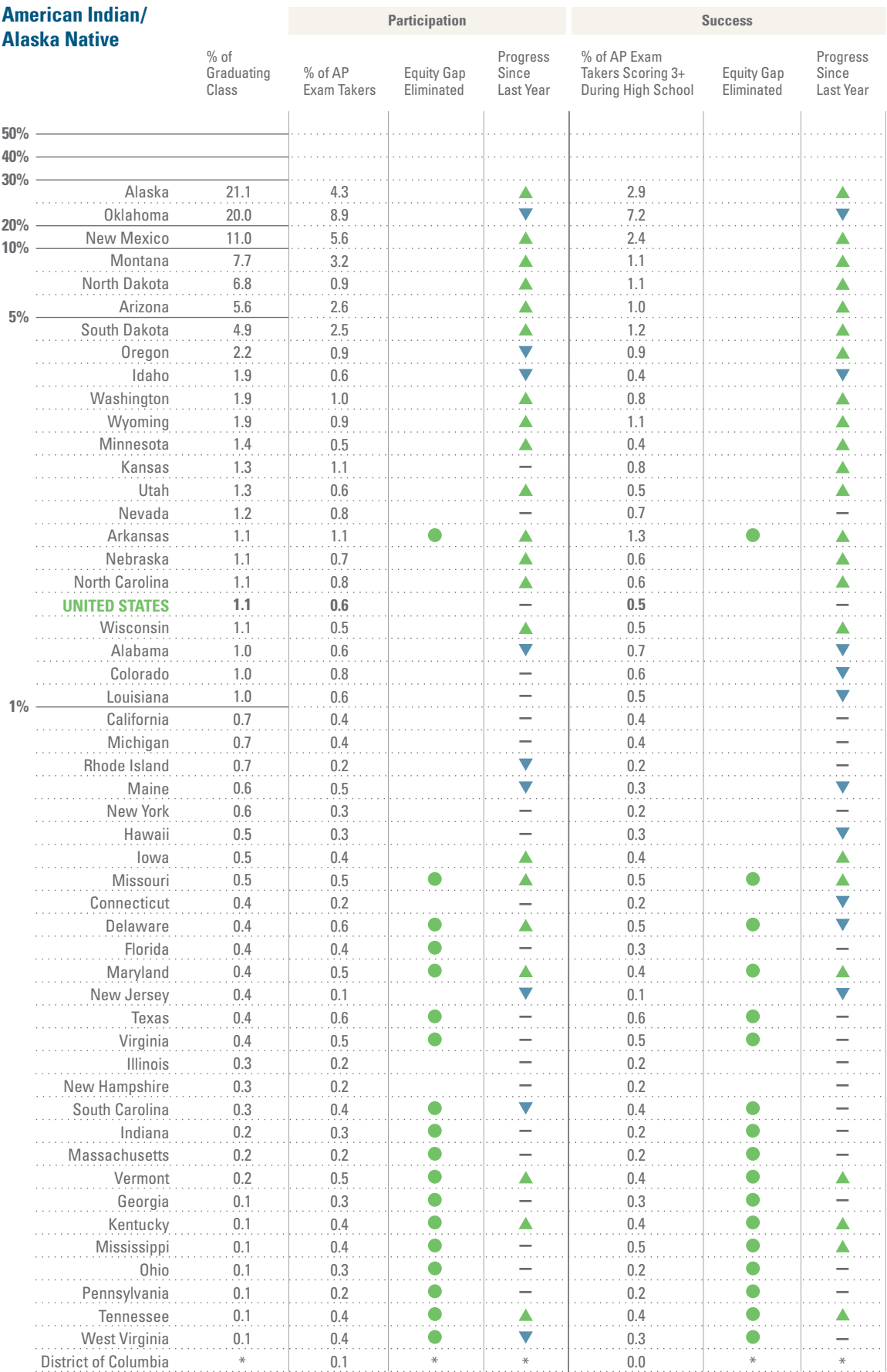


Figure 6c:  
Equity gaps among traditionally underserved students in the class of 2012



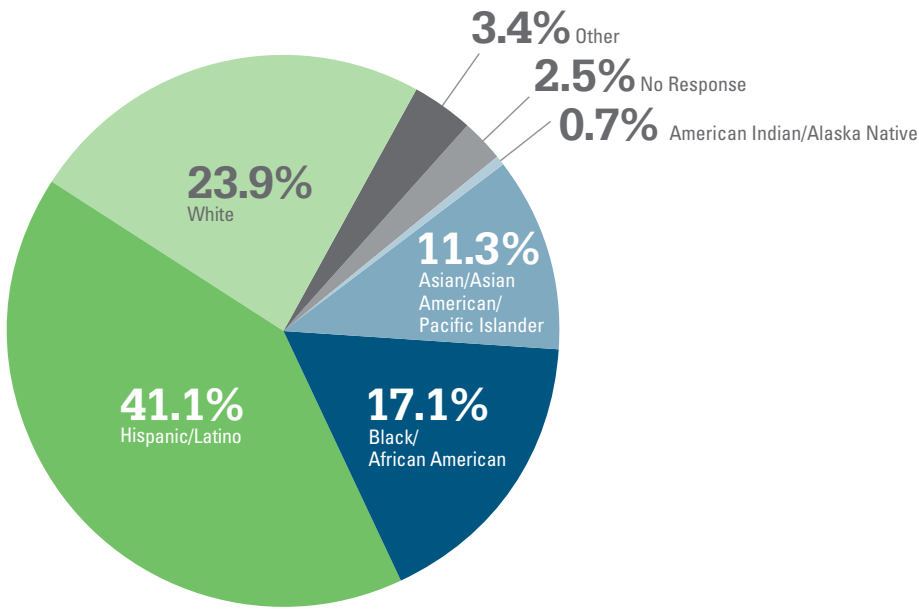
\*Precise number of American Indian/Alaska Native graduates for the District of Columbia is not available.



# A Closer Look at AP Students

## Low Income

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

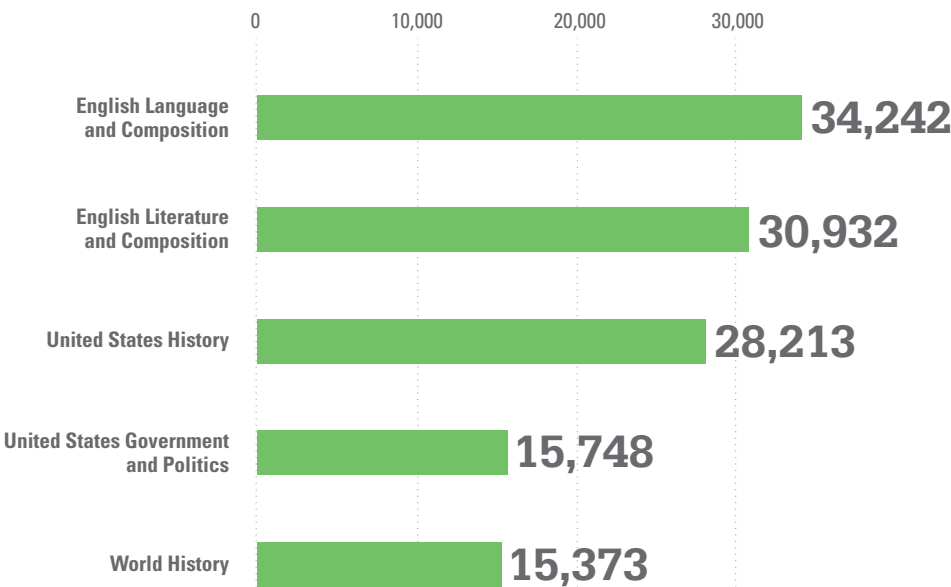


**58.9%**  
of low-income AP  
Exam takers in the  
class of 2012 were  
from underserved  
minority groups

**733,416**  
AP Exams were  
taken by low-  
income graduates

## Black/African American

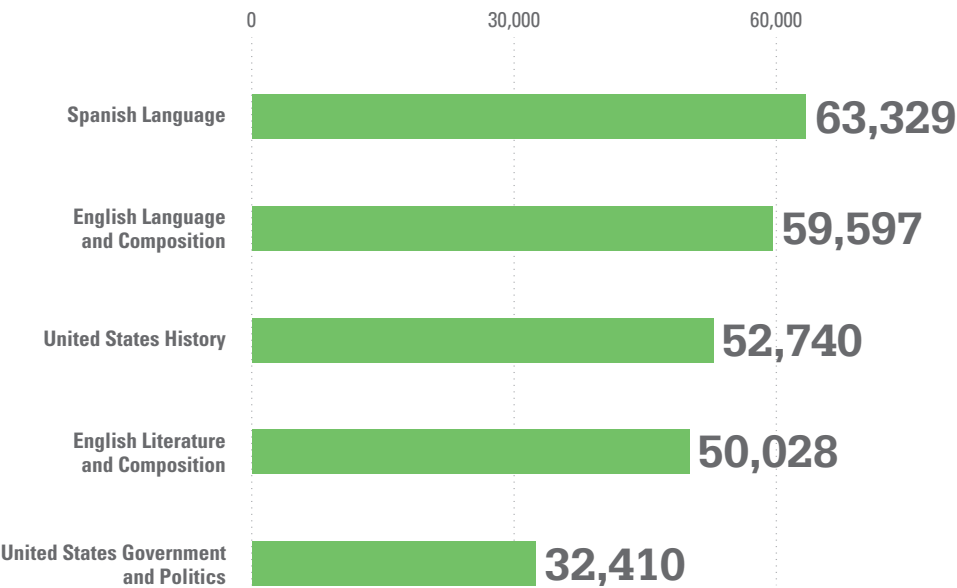
Figure 7b:  
Top five most popular AP Exams taken by black/African American graduates



**88,198**  
black/African  
American graduates  
took an AP Exam  
during high school

## Hispanic/Latino

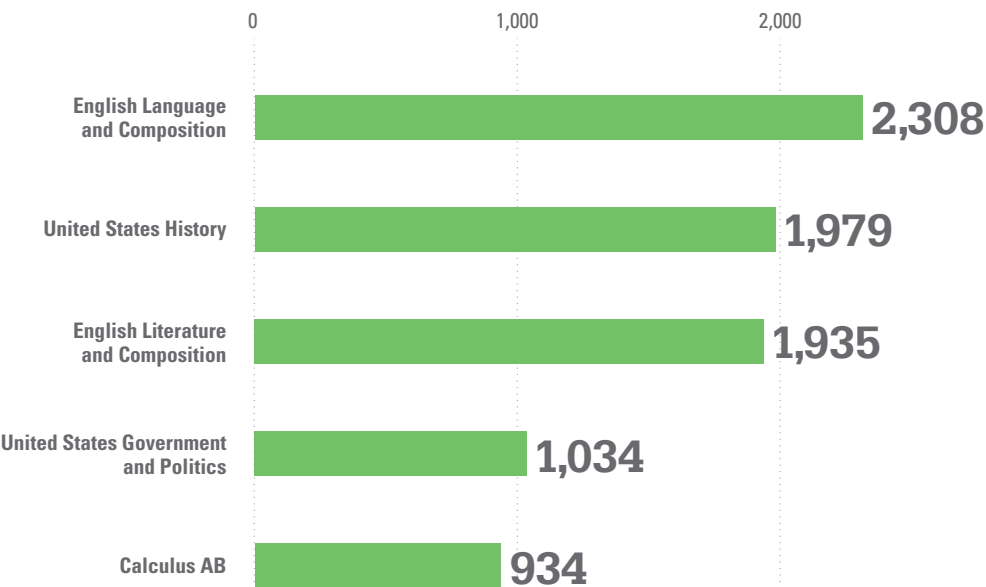
Figure 7c:  
Top five most popular AP Exams taken by Hispanic/Latino graduates



**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



**5,637**  
American Indian/  
Alaska Native  
graduates took an  
AP Exam during  
high school



# Developing Critical Knowledge and Skills

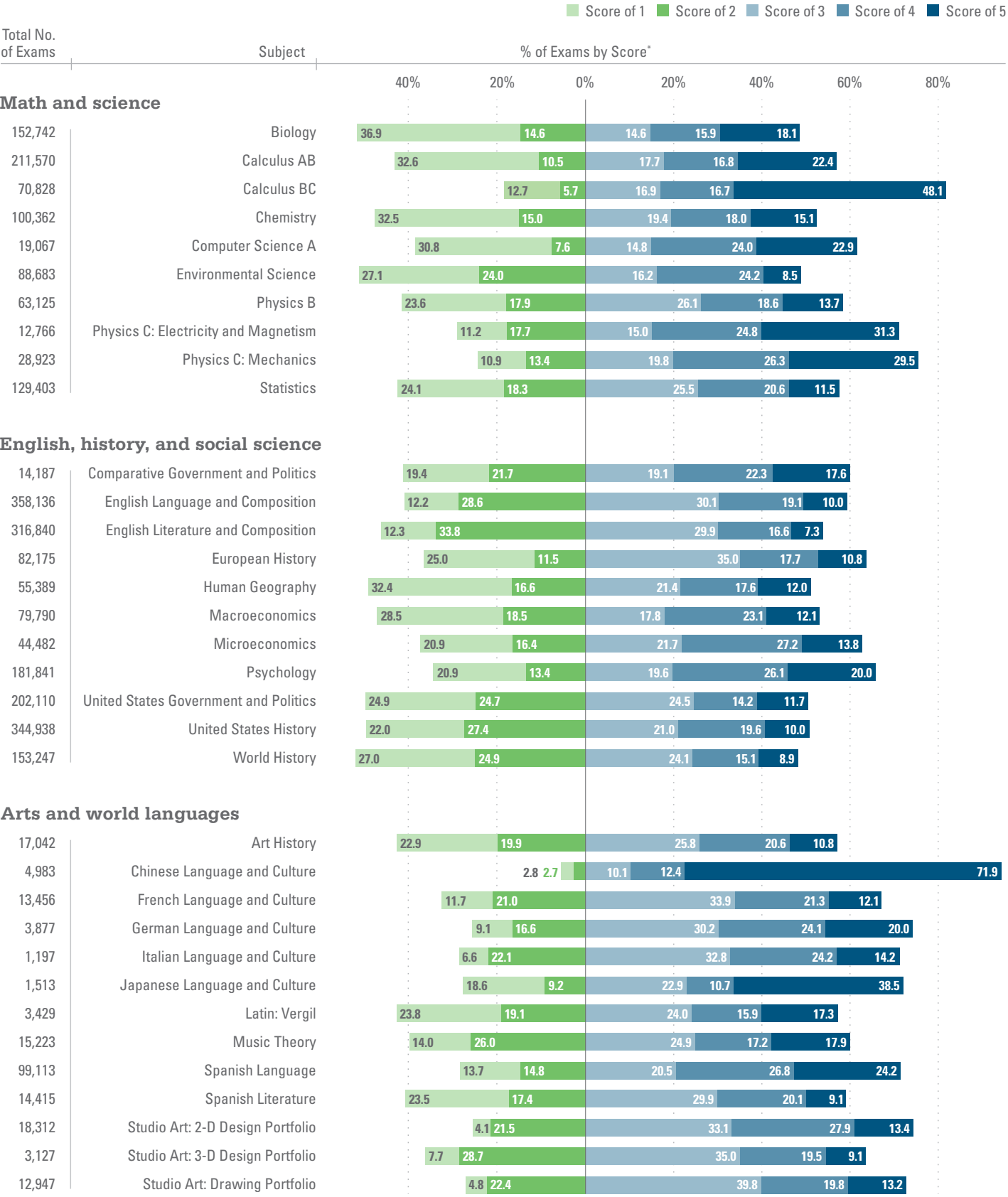
**AP** courses are built around well-defined goals for student learning that give teachers a clear understanding of what students should know and be able to do by the end of the course. AP students in all subjects develop their knowledge of key concepts and practices essential to each subject, including 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



**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.



# Strategies for Progress

We hope schools, districts, states, and colleges and universities will consider the following strategies for increasing rigor, promoting equity, and developing critical knowledge and skills in high school classrooms.

	School	District	State	College or University
Closing the Opportunity Gap	<ul style="list-style-type: none"><li>Use AP Potential™<sup>8</sup> 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.</li><li>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.</li></ul>	<ul style="list-style-type: none"><li>Contact your regional College Board office for free training on how to use AP Potential to identify new courses to offer at your schools.</li><li>Visit collegeboard.org/shareap for resources to help you recruit students to your district’s AP classes.</li></ul>	<ul style="list-style-type: none"><li>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.</li><li>Make funding available for attending these professional development events.</li></ul>	<ul style="list-style-type: none"><li>Host an AP Summer Institute or other professional development event for AP teachers in your area.</li><li>Increase recruitment of successful AP students.</li></ul>
Increasing Rigor	<ul style="list-style-type: none"><li>Use AP Instructional Planning Reports to target areas for increased attention and focus in the curriculum.</li><li>Develop plans to recruit, retain, train, and mentor new and less experienced AP teachers.</li></ul>	<ul style="list-style-type: none"><li>Implement summer programs (e.g., summer “boot” or “boost” camps) to help students prepare for specific AP courses.</li><li>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?)</li></ul>	<ul style="list-style-type: none"><li>Set a clear, measurable statewide goal for AP participation and success to be incorporated into the state report card.</li><li>Establish AP participation and performance indicators on state report cards.</li></ul>	<ul style="list-style-type: none"><li>Encourage and reward faculty involvement in AP course development, exam scoring, course syllabus review, and research.</li><li>Recognize successful AP scores with course-equivalent credit, placement, and/or scholarships.</li></ul>
Promoting Equity	<ul style="list-style-type: none"><li>Build emotional and academic support for students through targeted peer mentoring, counseling, and tutoring programs.</li><li>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.</li><li>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.</li></ul>	<ul style="list-style-type: none"><li>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.</li><li>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.</li></ul>	<ul style="list-style-type: none"><li>Provide targeted assistance and resources to schools serving traditionally underserved populations: for example, funding for materials, supplies, outreach efforts, and tutoring programs.</li><li>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.</li></ul>	<ul style="list-style-type: none"><li>Target recruitment outreach to underserved students who earn AP scores of 3 or higher.</li><li>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.</li></ul>
Developing Critical Knowledge and Skills	<ul style="list-style-type: none"><li>Adopt rigorous academic standards and curricula that allow students to build a progression of content and skills anchored in AP.</li><li>Develop and share a road map of the content and skills that students will need to be college and career ready.</li></ul>	<ul style="list-style-type: none"><li>Set clear and measurable goals about college readiness for all students in your district.</li><li>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.</li></ul>	<ul style="list-style-type: none"><li>Develop policies that allow AP course work and exam scores to substitute for statewide graduation requirements.</li><li>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.</li></ul>	<ul style="list-style-type: none"><li>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.</li><li>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.</li></ul>





# AP Partnerships

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.<sup>9</sup> 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.<sup>10</sup>
- 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.<sup>11</sup>
- 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).<sup>12</sup>

## 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
Iowa	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

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
Iowa	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

Notes

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-](http://research.collegeboard.org/sites/default/files/publications/2012/7/researchreport-2006-1-psat-nmsqt-scores-ap-examination-grades-follow-up.pdf)