
Meeting the Cyber Demand through Advanced Placement

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AP & Instruction

AP[®]

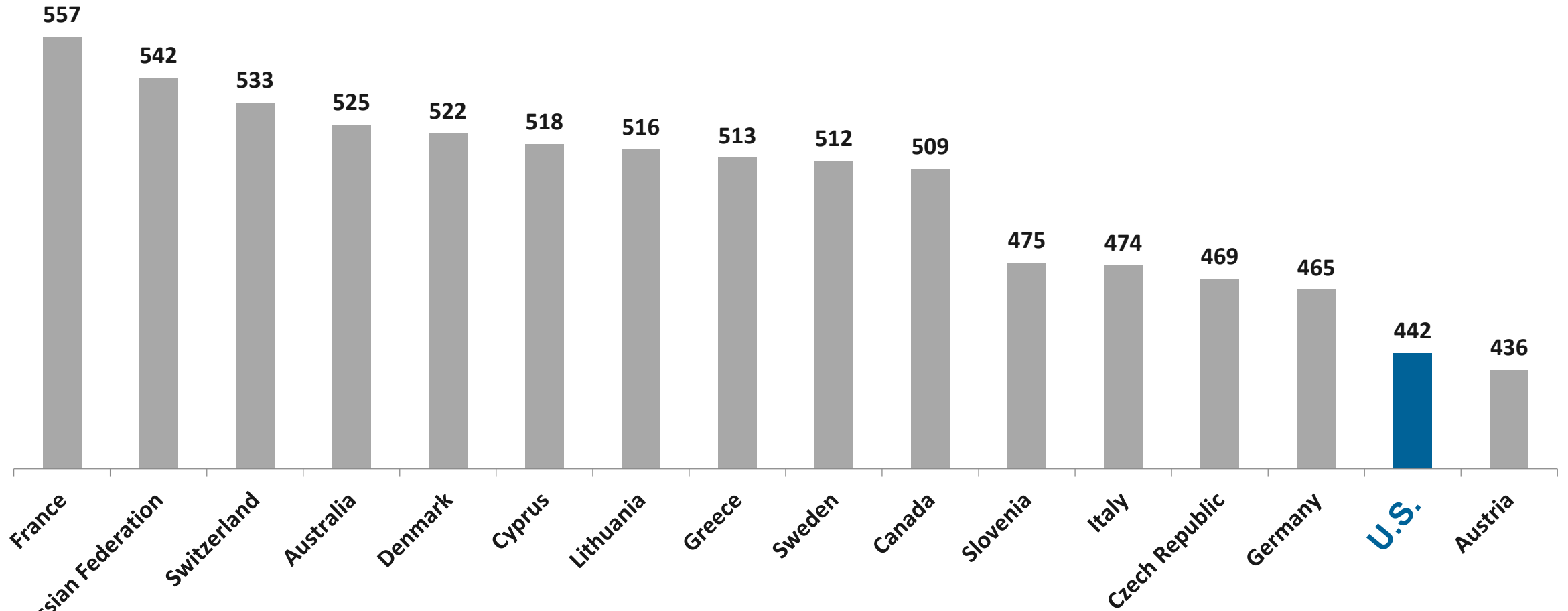
CollegeBoard

State Senator Scott Amendment

New Mexico Senate Bill, 1995

“When a psychologist or psychiatrist testifies during a defendant's competency hearing, the psychologist or psychiatrist shall wear a **cone-shaped hat** that is not less than two feet tall. The surface of the hat shall be imprinted with **stars and lightning bolts** . Additionally, a psychologist or psychiatrist shall be required to don a **white beard** that is not less than 18 inches in length, and shall punctuate crucial elements of his testimony by **stabbing the air with a wand.**”

TIMSS Report: International calculus scores by country

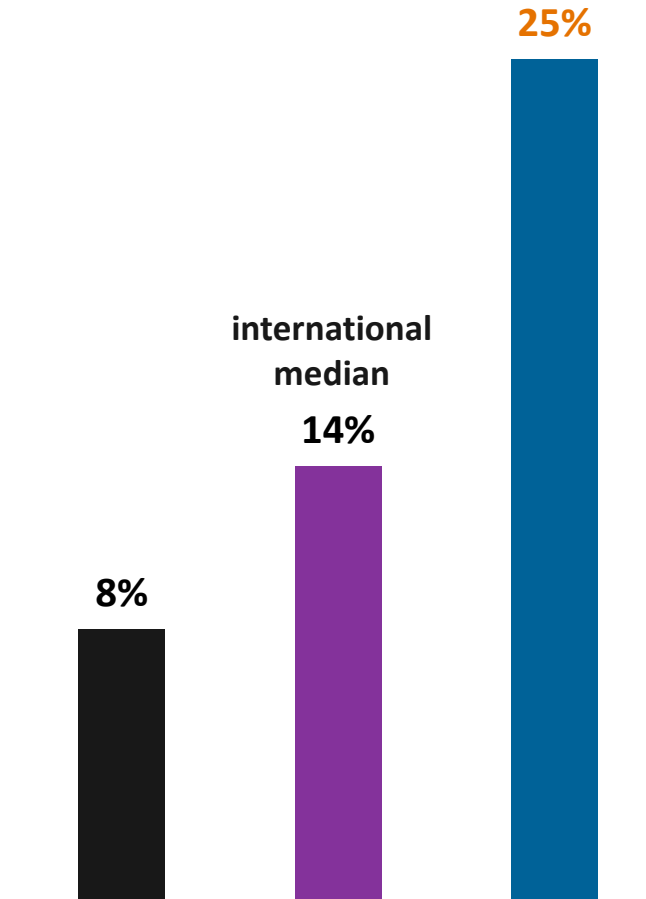


Other U.S. Calculus Students

- More parents with a college degree
- More books at home
- More experienced teachers
- More technology resources

AP Calculus AB Students

- More parents without a HS diploma
- Fewer books at home
- More ELL/ESOL
- More Hispanic/Latinx students
- More African Americans
- **2 more hours of math per week**



College admission

What percentage consider AP course participation when deciding?

U.S. public colleges and universities

- More selective: 100%
- Less selective: 86%

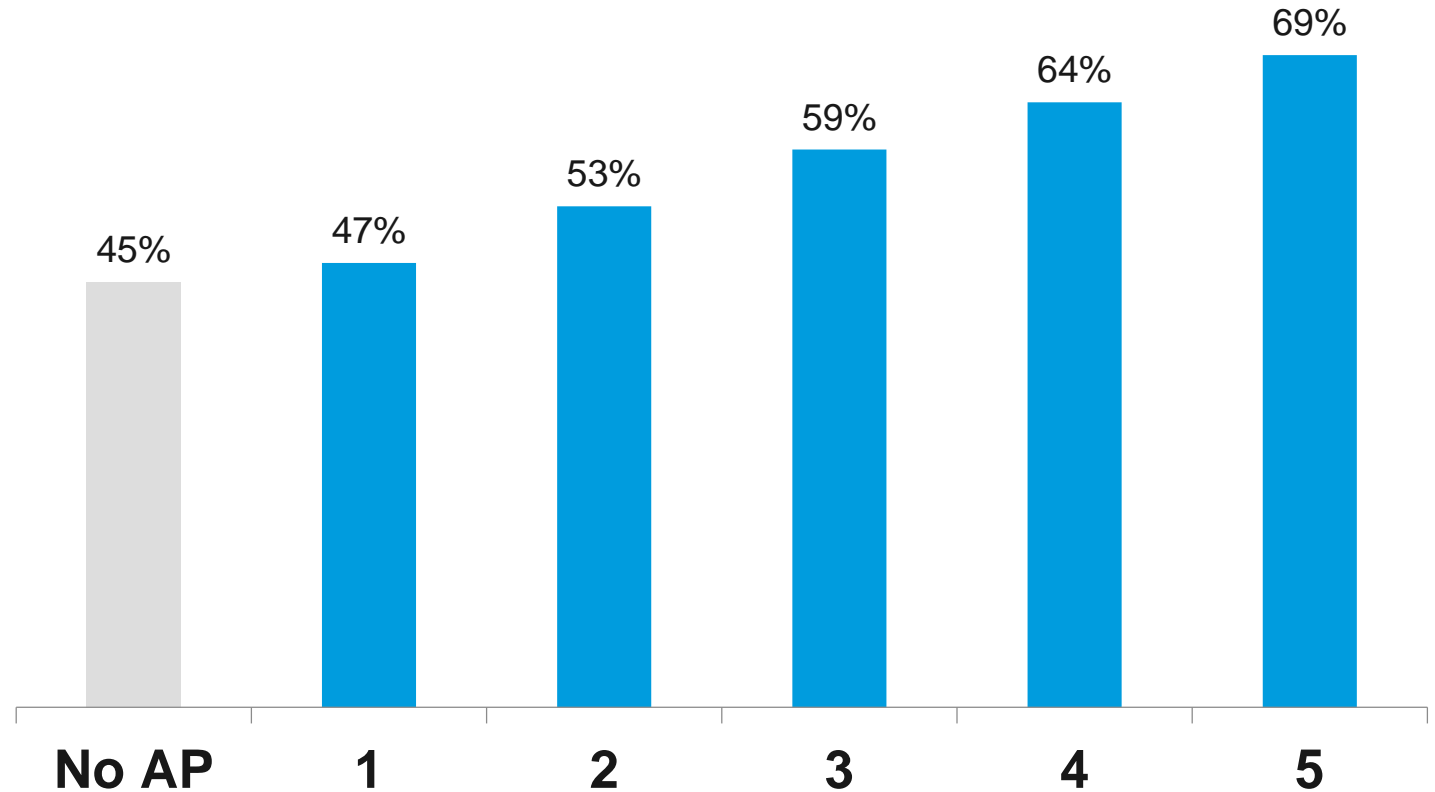
U.S. private colleges and universities

- More selective: 89%
- Less selective: 94%

Graduating from college

★ Even AP students who earn a 1 have higher college graduation rates than non-AP students.

Expected four-year graduation rate by AP participation and performance

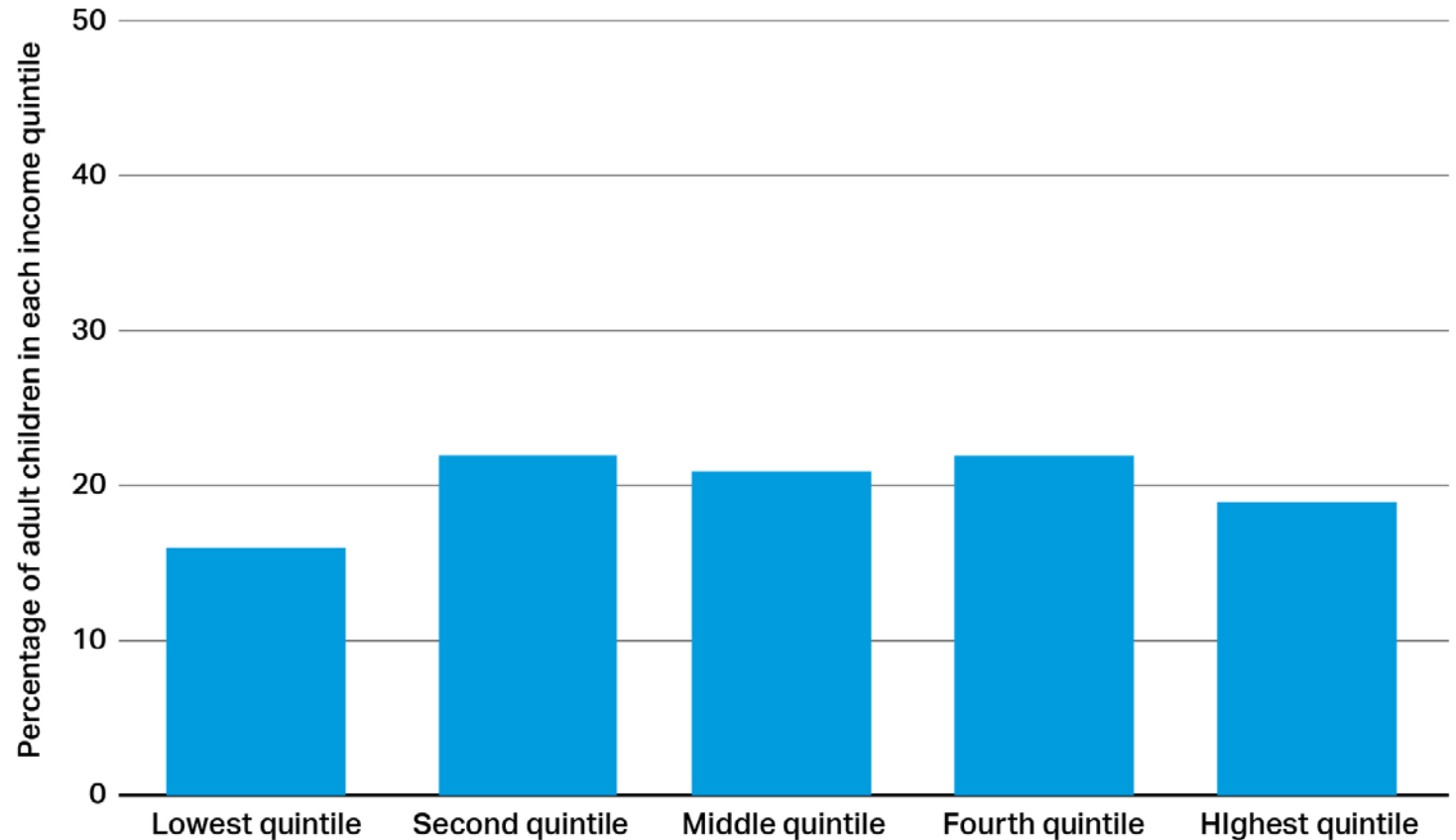


Note: Expected graduation rates were computed based on parameter estimates for Model 5 for AP participation and Model 10 for AP performance. These values are associated with a white or Asian non-first-generation-status female with an average PSAT/NMSQT® score attending a public institution of average selectivity.

Escaping poverty

★ If you are born into a low-income family, but earn a college degree, you're more likely to end up in the highest socioeconomic quintile than the lowest.

Adults with a College Degree



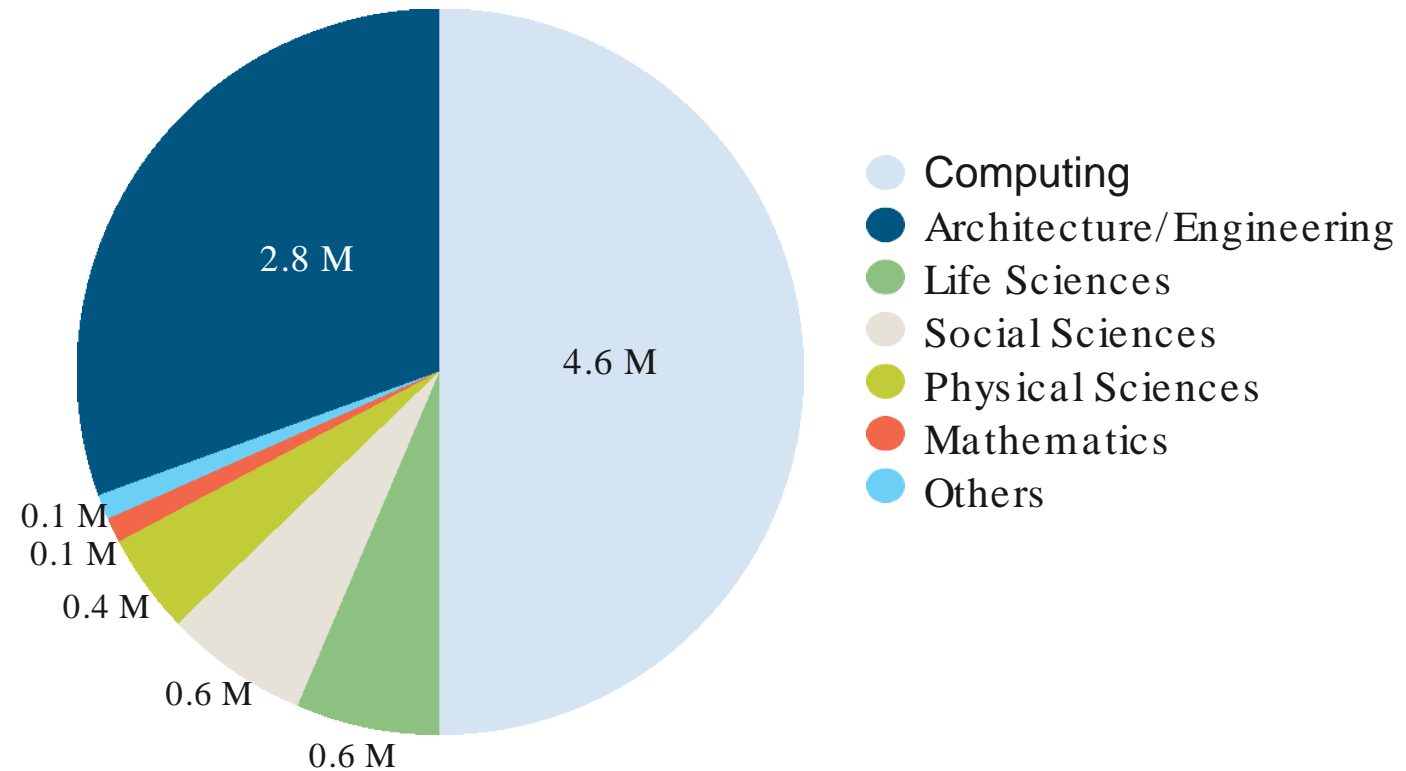
Source: *Education and Economic Mobility* (Haskins 2008).

Note: Calculations are based on the PSID, which compares children's adult income at roughly age 40 with that of their parents at about the same age.

Why AP CSP?

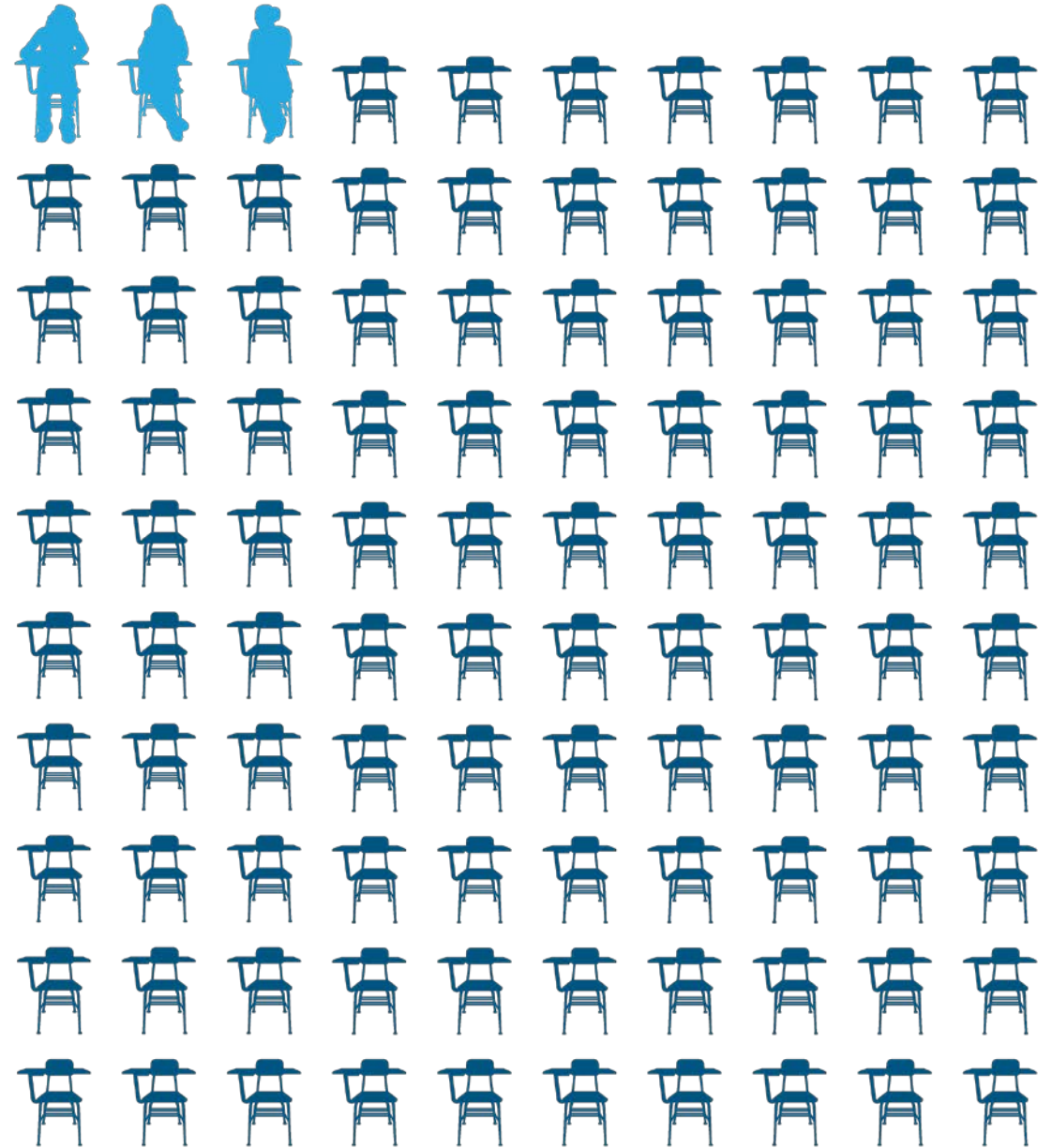
- Of the more than 9 million STEM jobs available in the next decade, half will require computing experience.
- Computer science experience is fast becoming an imperative for today's students and the workforce of tomorrow.

STEM Careers in 2020 (projected)



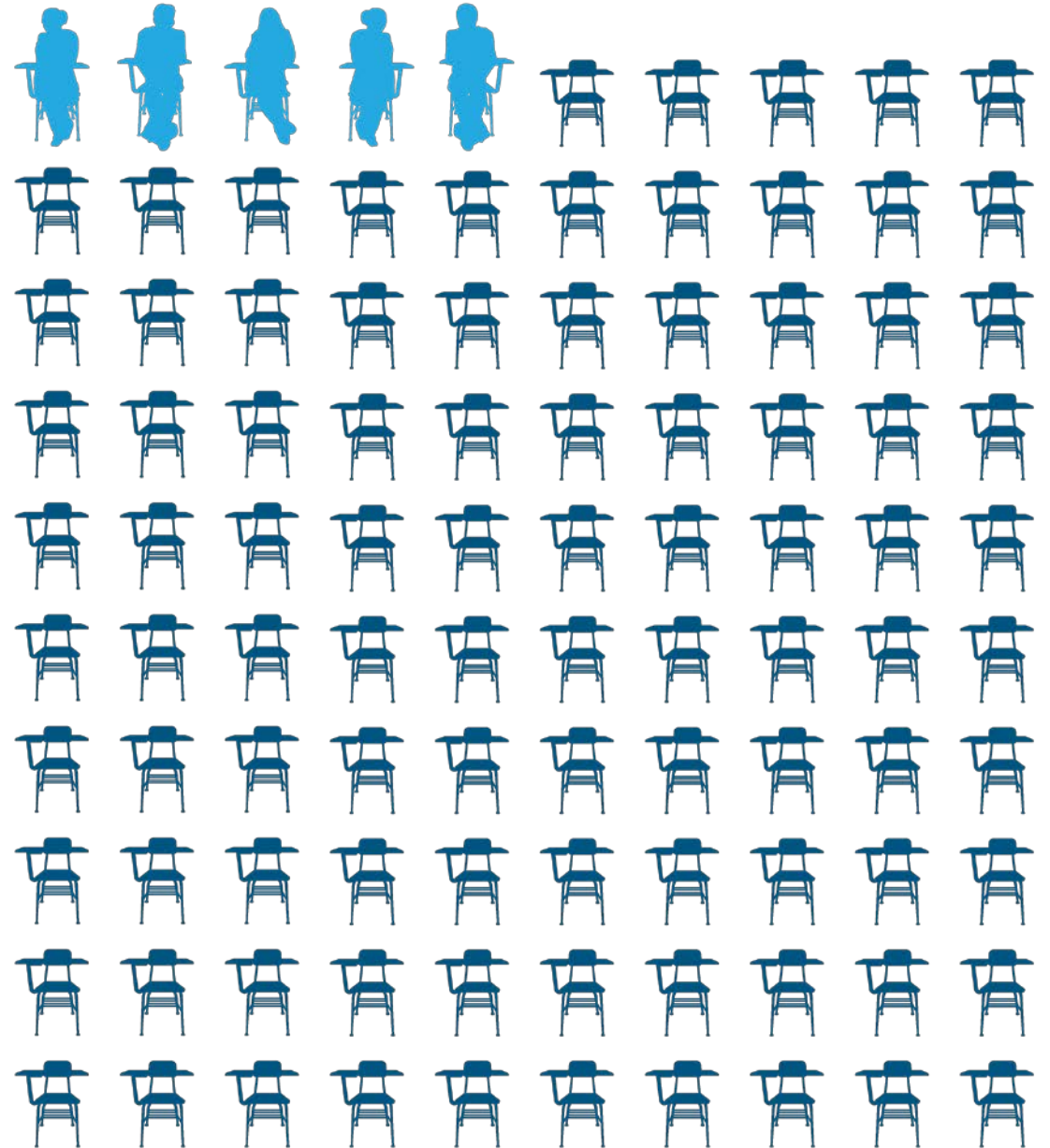
For every 100 female students whose PSAT scores show they're ready for AP Computer Science A, only 3 typically enroll.

Source: Data are for class of 2015 and represent the percent of female students who took the PSAT/NMSQT® and earned a threshold composite score, thus demonstrating at least a 60% likelihood of earning a 3 or higher on an AP Computer Science A Exam, and who went on to take an AP computer science exam.



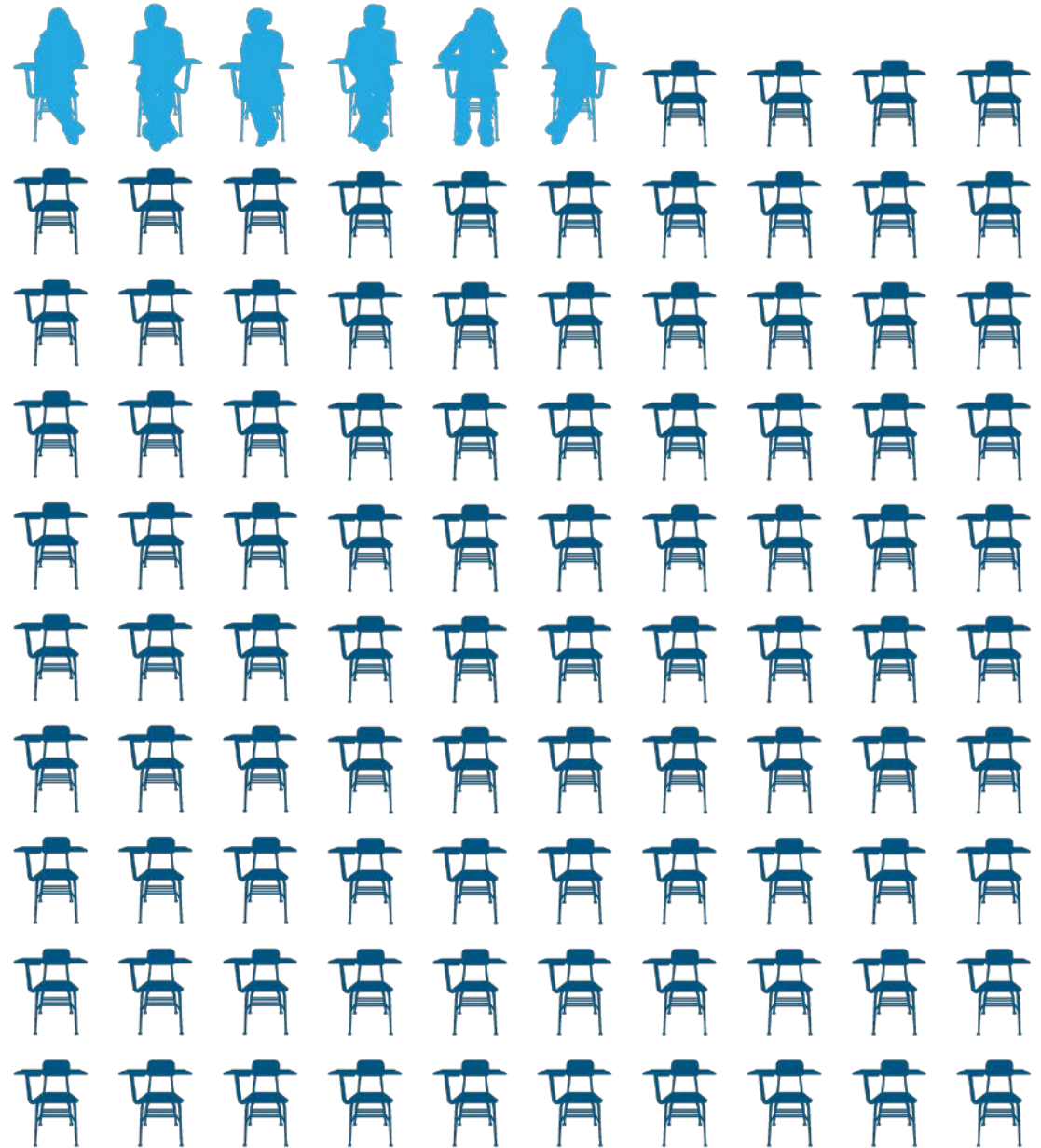
**For every 100
Black/African
American students
whose PSAT
scores show
they're ready for
AP Computer
Science A, only 5
typically enroll .**

Source: Data are for class of 2015 and represent the percent of Black/African American students who took the PSAT/NMSQT® and earned a threshold composite score, thus demonstrating at least a 60% likelihood of earning a 3 or higher on an AP Computer Science A Exam, and who went on to take an AP computer science exam.



For every 100
Hispanic/Latino
students whose
PSAT scores show
they're ready for
AP Computer
Science A, only 6
typically enroll.

Source: Data are for class of 2015 and represent the percent of Hispanic/Latino students who took the PSAT/NMSQT® and earned a threshold composite score, thus demonstrating at least a 60% likelihood of earning a 3 or higher on an AP Computer Science A Exam, and who went on to take an AP computer science exam.



3 Goals for AP Computer Science Principles

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1. Make computer science more engaging and accessible
 2. Reach students underrepresented in computer science, especially women and minorities
 3. Better prepare students for the job market of today and tomorrow





Low barrier
to entry and an
invitation to all



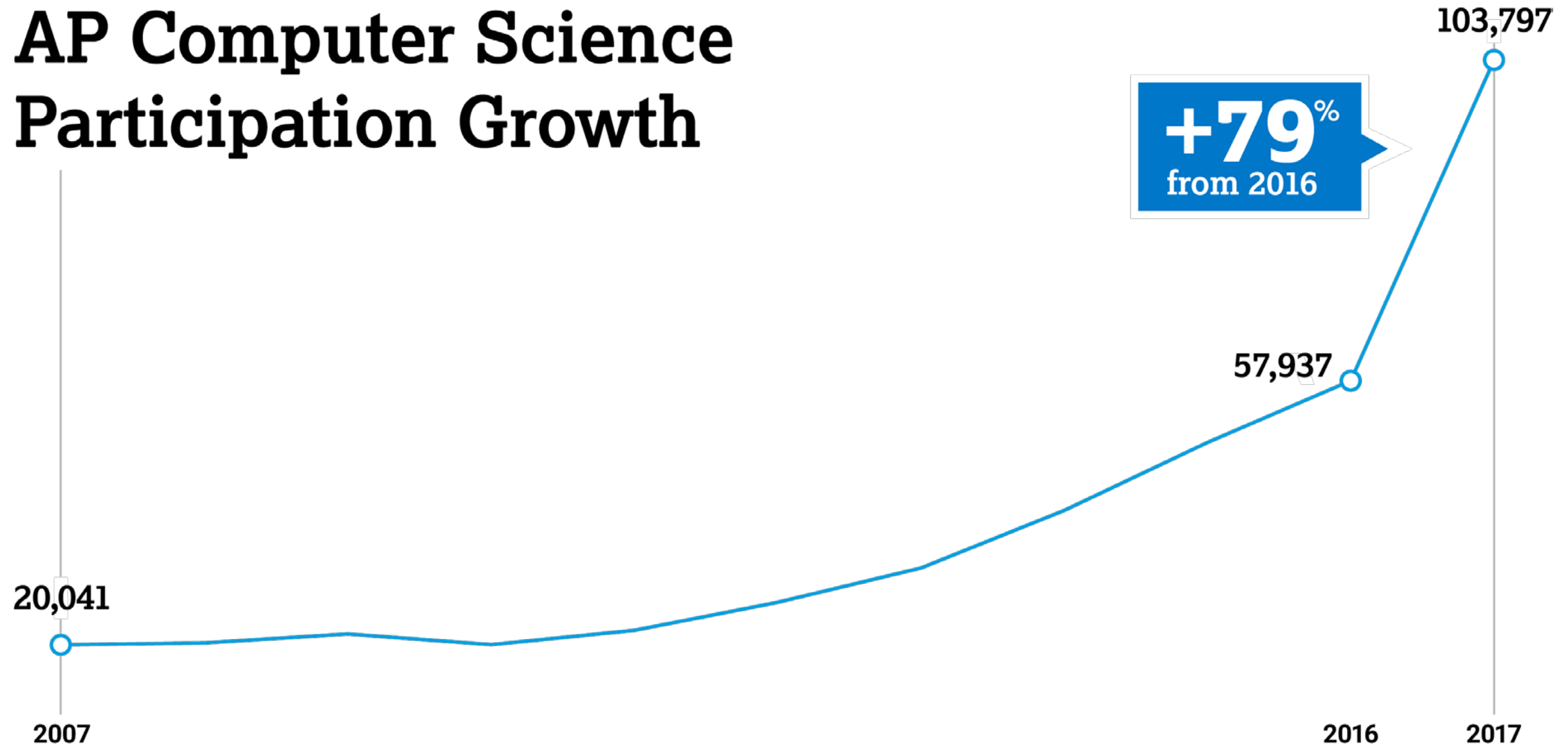
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- No prior computer science experience needed
 - Algebra I recommended prerequisite
 - Student choice for projects
 - Real-world applications to variety of majors or professions

AP Computer Science Principles

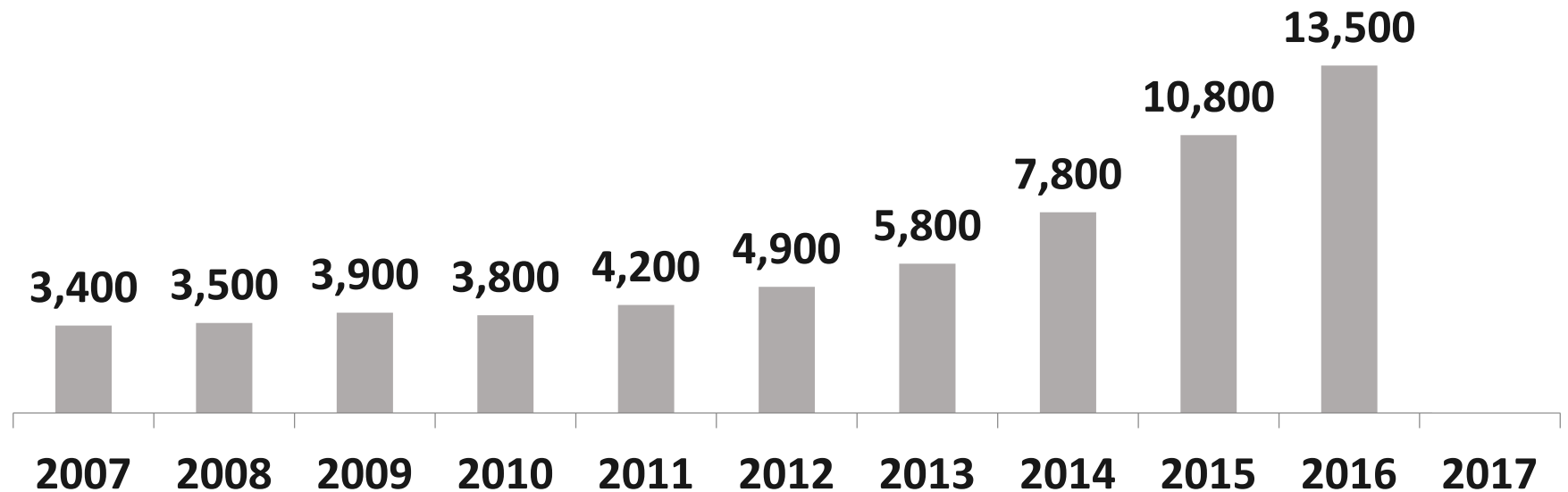
Most successful launch of
any course in AP history

-
-  50 states
 -  3,700 schools
 -  76,000 students
 -  3,200 teachers trained

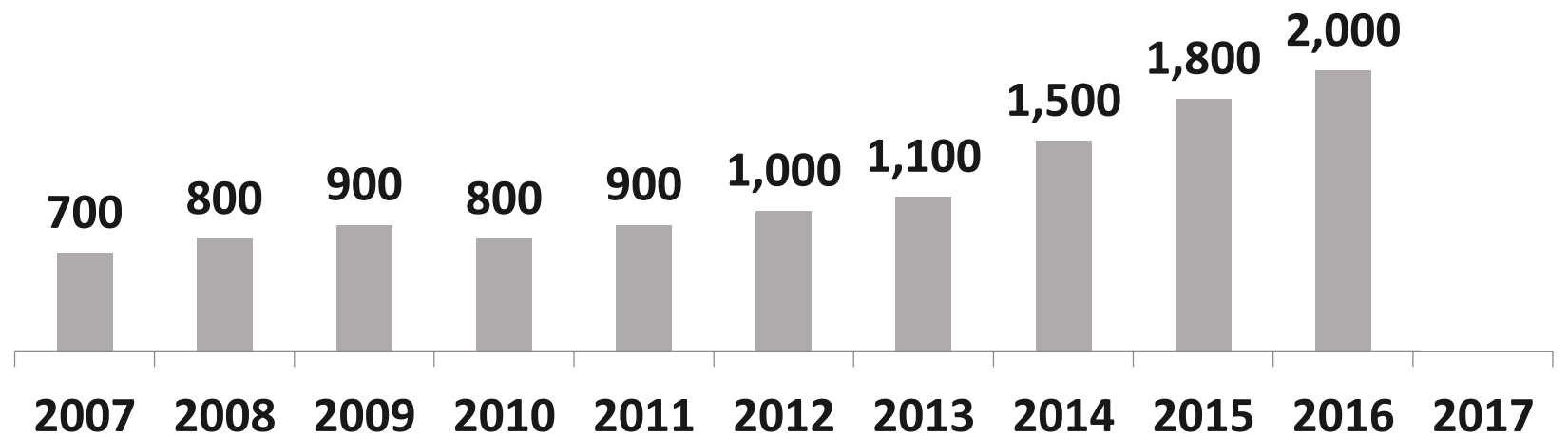
AP Computer Science Participation Growth



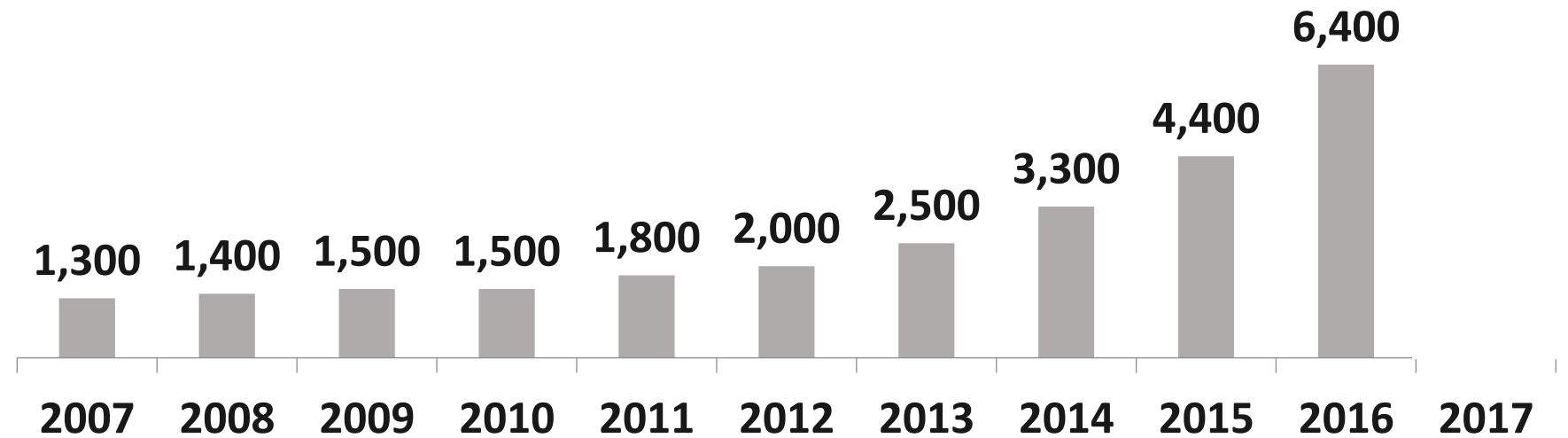
Number of
female students
taking an AP
Computer Science
exam



Number of African American students taking an AP Computer Science exam

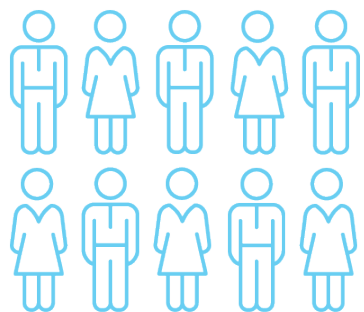


Number of
Latinx students
taking an AP
Computer Science
exam




Number of rural students taking an AP Computer Science exam

4,898



2016

 = 500

Preparing for an Advanced Placement Exam



Preparing for
an Advanced
Placement
Exam





“Ced-rick! Ced-rick! ... 1 of 12”





President Obama 

@POTUS

 Follow

Cedrick; way to go on your perfect score! How about you come by the next White House Science Fair?



“I am done teaching.
You need to get to work now.”

- All 21 of Mr. Yom’s AP® Calculus students who took the exam in 2016 passed.
- 17 got a 5—the highest score.





“Yom ... treats his students like a sports team. They’d stay after school, practicing problem solving for 3 or 4 extra hours, and they’d come on weekends.”

—Hailey Branson-Potts, 2016, *Los Angeles Times*

Thank you.

