CALIFORNIA STEM EDUCATION: BY THE NUMBERS
California’s students, particularly Black, Latino, and low-income students, face opportunity and achievement gaps in math and science.

IN ELEMENTARY SCHOOL...
Most California students have limited exposure to science education.

4 in 10 elementary teachers in California say they spend less than one hour per week on science.¹

On average, California’s fourth graders get just 27 minutes per day of science instruction.²

1/3 of elementary teachers in high-poverty schools say facilities are a challenge to science instruction, compared with 13 percent of teachers in low-poverty schools. And, principals in more affluent schools are twice as likely to say they have launched science initiatives in their schools.⁴

STEM ACHIEVEMENT GAPS ARE ALREADY EVIDENT IN ELEMENTARY SCHOOL.

In 3RD GRADE MATH AND 5TH GRADE SCIENCE, White and Asian students are much more likely to score Proficient or Advanced on the 2013 California Standards Tests (CST) than their Black and Latino peers.

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4TH GRADE MATH

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California’s students perform below the national average in 4TH GRADE MATH AND SCIENCE, as measured by the National Assessment of Educational Progress (NAEP). And, proficiency rates for Black, Latino, and low-income students are 3-6 times lower than they are for White and Asian students.
IN MIDDLE SCHOOL...

Limited access to science opportunities continues to be an obstacle to STEM learning.

More than 70% of teachers report that limited funds for equipment and supplies are a major or moderate challenge to science instruction.5

14% of middle schoolers regularly engage in “practices of science.”6

GAPS IN ACHIEVEMENT CONTINUE INTO MIDDLE SCHOOL.

In 8TH GRADE ALGEBRA I, just 33% of Black students are proficient compared to 78% of Asian students, as measured by the 2013 California Standards Tests (CST). Disparities also exist in 8TH GRADE SCIENCE, with low-income, Black, and Latino proficiency rates about 30% lower than those of White and Asian students.

On national tests, California’s 8th graders perform below the national average in 8TH GRADE MATH AND SCIENCE, with large achievement gaps separating low-income, Black, and Latino students from their White and Asian peers.


In High School...

Access to rigorous college preparatory STEM coursework varies dramatically across student subgroups.

Fewer than half of California’s 12th graders completed (with a “C” or better) the 15 A-G COURSES required for admission into the UC/CSU college systems.

![Percentage of 12th Graders Completing A-G Sequence](image)


Achievement gaps are persistent in High School.

LaTo and African American students are underrepresented in ADVANCED PLACEMENT and other rigorous STEM COURSES.

![Enrollment in STEM Courses by Subgroup](image)

Source: Education Trust-West analysis of Office for Civil Rights Data, 2011.

Few African American, Latino, and low-income students are proficient in High School STEM Courses.

![Achievement Gaps Are Persistent in High School](image)

Source: California Department of Education, 2013. Proficiency rates are for end-of-course exams.
OUR MISSION

The Education Trust–West works for the high academic achievement of all students at all levels, pre-k through college. We expose opportunity and achievement gaps that separate students of color and low-income students from other youth, and we identify and advocate for the strategies that will forever close those gaps.

END NOTES


3 Renata Dorph et al., “High hopes–few opportunities.”

4 Ibid.


6 Ibid.