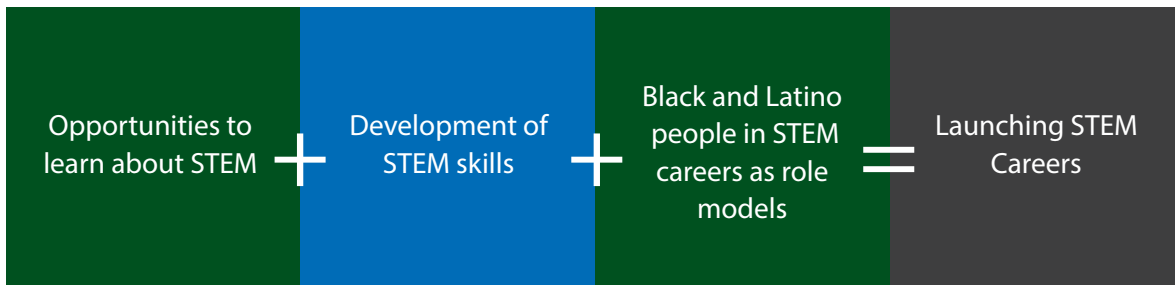


# the Sillerman Center

FOR THE ADVANCEMENT OF PHILANTHROPY

## STEM FOR BLACK AND LATINO STUDENTS:

### A Guide to High Impact Investments



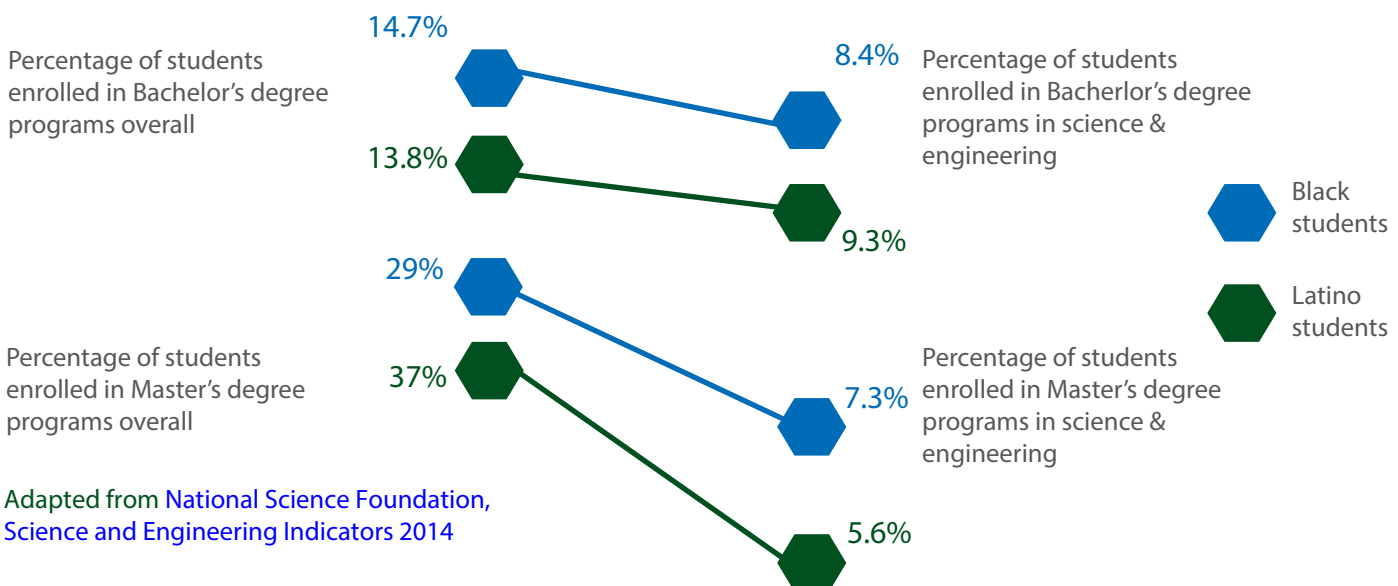
Science, technology, engineering, and math (STEM) are growing sectors in our workforce. In recent years, several high-profile reports have warned that not enough high school graduates are prepared to pursue STEM in college and beyond. This is particularly true among Black and Latino students. Many Black and Latino students attend schools that do not offer or require high-level STEM courses. Also, curricular “tracking” often excludes Black and Latino students from these courses. Black and Latino students report a desire to pursue STEM after high school at the same rate as their White peers, but are far less likely to complete STEM degrees.

This trend continues in the STEM workforce:

- In 2011, 6% of the STEM workforce were Black and 7% were Latino, despite overall representation in the workforce at 11% and 15%, respectively
- The STEM sector offers some of the highest-paying jobs in the US, but Blacks and Latinos have been consistently underrepresented in this opportunity-rich field. In 1970, Blacks represented 2% of the STEM workforce, indicating minimal growth over the past 4.5 decades.
- With careful investment, STEM careers could become a route to diminish pay and wealth gaps between White people and Black and Latino people

Colleges and graduate schools also find an underrepresentation of Black and Latino students in the STEM fields.

There is a marked decrease in the percentage of Black and Latino students enrolled in Bachelor’s and Master’s degree programs in science and engineering, compared to their overall enrollment in Bachelor’s and Master’s programs.



Adapted from [National Science Foundation, Science and Engineering Indicators 2014](#)

For more information please see: [AP Courses Not Available for Black Students](#), [Expanding Underrepresented Minority Participation](#), [Disparities in STEM Employment by Sex, Race, and Hispanic Origin](#), [Income, Poverty, and Health Insurance Coverage in the United States: 2011](#), [The Urban Institute's Less Than Equal report](#) on racial disparities in wealth accumulation, [A Review of Evaluations of Federally-Funded Programs and Projects in STEM Education](#), [Examining the impact of afterschool STEM programs](#), and [The Study of Promising After School Programs](#), a report to the C.S. Mott Foundation in 2006.

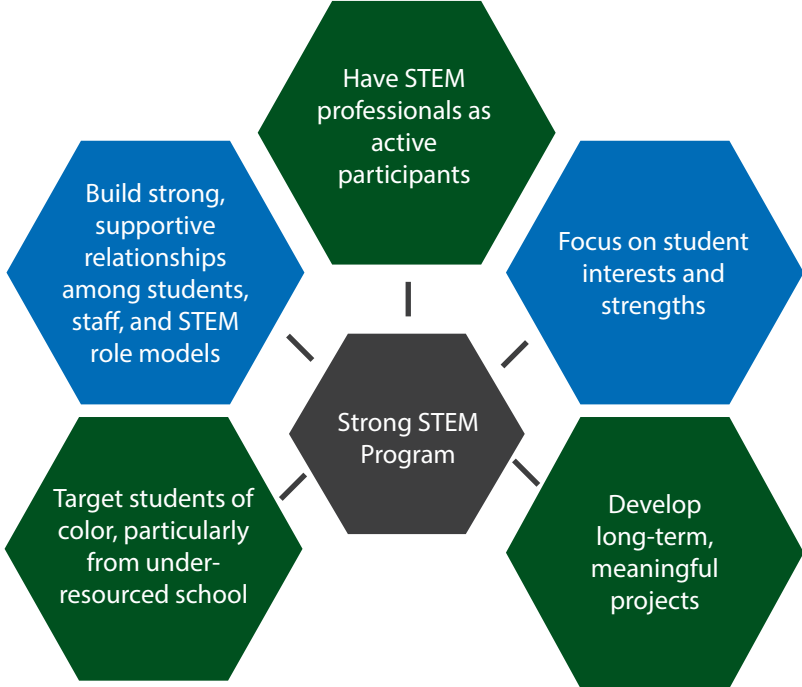
# A Strong STEM Program for Black and Latino Students:

- EXPOSES students to STEM as early as primary school
- PROVIDES students with role models through high quality teachers, biographies, guest speakers, and tutoring by older students
- BUILDS long-term relationships between students, staff, and mentors
- BREAKS racial stereotypes in the STEM field
- SPARKS students' curiosity about STEM content and careers, and CONNECTS math and science activities to future careers

Strong in-school and out-of-school STEM programs contain these vital components to promote the development of students' capacities and competencies in social, emotional, and cognitive skills

Programs must be sustainable, to nurture both long-term student growth and foster a school community supportive of STEM

Programs must be focused on problem-solving and grounded in familiar contexts



Adapted from [Project Exploration](#).

## Rationale for Investment

There is an abundance of resources guiding the development of in-school STEM curricula, but there is little evidence that demonstrates the impact or effectiveness of participating in such programs. However, participation in high quality afterschool STEM programs is linked to:

- Growth in student interest in STEM careers
- Improved STEM achievement for students with strong math skills
- Improved test scores among 4th, 8th, and 12th graders
- Improved critical thinking, teamwork, collaborating, and presentation skills
- Improved academic performance, including GPA, high school graduation rates, and college aspirations
- Greater preparation for STEM degree programs

Funders who invest in STEM programs for Black and Latino students increase the potential for young people to find careers in an opportunity-rich, high-paying sector of the economy, which could reduce racial wealth inequality and diversify a field that has remained disproportionately White for several decades.

For more information please visit:

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