

Girls Inc. is committed to advancing the rights and opportunities of girls and young women,

with a particular focus on the needs of girls from low-income communities and girls who face multiple, intersectional challenges. Informed by the voices of girls themselves, we advocate to break through the barriers girls face and to reform systems that impede their success.

TITLE IX AND STEM

Since its passage in 1972, Title IX has opened doors for women in the U.S. to pursue many traditionally male-dominated fields. Despite Title IX requiring that women and girls be given equal access to STEM (science, technology, engineering, and math) opportunities, discrimination persists and women remain underrepresented in STEM fields, which often lead to high-paying careers. While there is a huge demand for STEM employees, only 31% of post-secondary STEM degrees go to women.¹ Women of color comprise fewer than 1 in 10 employed scientists and engineers.²



EDUCATIONAL ACCESS

One of the barriers to equal representation of women in STEM fields is the difficulty girls face accessing educational opportunities that help them see a STEM career as a possibility. This is especially true for girls of color from low-income communities whose schools often do not offer the full range of math and science courses.³ Research has shown that there is a significant difference in science proficiency levels between kids from low-income families and their more affluent peers.⁴

Many girls, especially those from low-income communities, lack opportunities to engage in STEM in the fun, safe, and hands-on environment that can be provided through afterschool and summer programs. Girls also often lack mentors who can help them identify with STEM careers and believe they are attainable. This cycle perpetuates the underrepresentation of women in STEM. Girls are frequently discouraged from pursuing careers in STEM after internalizing pervasive stereotypes that women are not fit to succeed in such fields.⁵ Additionally, girls of color are disproportionately suspended and expelled from school, often for minor offenses based on gender and racial stereotypes, or for behavior that would be an understandable manifestation of unaddressed trauma.⁶ Pushing girls out of the classroom adversely affects their ability to graduate from high school and attend college, which are stepping stones to careers in STEM.



DID YOU KNOW?

- In elementary school, about as many girls as boys have positive attitudes toward science, but by second grade when students are asked to draw a scientist, most portray a white man in a lab coat. The persistence of these stereotypes starts to turn girls off, and by the eighth grade boys are twice as likely as girls to be interested in STEM careers.⁷
- Research shows that high-quality afterschool STEM programs help youth “not only become interested and engaged in STEM, but develop tangible STEM skills and proficiencies, come to value these fields and their contributions to society, and begin to see themselves as potential contributors to the STEM enterprise.”⁸

HOSTILE ENVIRONMENTS BLOCK ACCESS

Sexual harassment remains a problem in male-dominated classes, both from fellow students and from teachers. This can create a hostile environment that is not conducive to learning. When girls do not feel safe coming to school or sitting in class, their ability to focus and succeed is hampered. Too often, young women are discouraged from entering STEM fields. University professors too often view themselves as gatekeepers, rather than offering gateways for women interested in pursuing STEM fields.⁹

Studies show that discrimination on college campuses remains common. One study found that science faculty from research-intensive universities held subtle gender-biases against women, rating male applicants higher than identically qualified female applicants and offering the men higher starting salaries and more career mentoring.¹⁰ Young women may even face harassment and assault at the hands of male faculty members and lab supervisors - people who determine the grades and career advancement opportunities they receive.



THE BIG PICTURE

The underrepresentation of women and girls in STEM has dramatic implications on women's economic security. Increasing the number of women who pursue STEM degrees and careers has the potential to help narrow the wage gap between men and women. For example, if the number of women in just the computing field tripled in the next 8 years, it would boost women's cumulative earnings by almost \$300 billion.¹¹ Encouraging girls to pursue STEM classes and activities is the first step to creating a pipeline for a diverse and competitive workforce.

WHAT WE CAN DO

Access to meaningful STEM opportunities for interested girls in underserved communities is critical in helping them overcome income inequality and helping to meet the workforce needs of tomorrow. To help all girls and young women reach their potential, we must:

- Protect current federal funding and advocate for more support for afterschool and summer programs that help girls, especially those in underserved communities, gain valuable STEM skills and exposure to career fields that are non-traditional for women.
- Match girls with mentors to fuel their imaginations about future STEM careers and counter prevailing stereotypes.
- Provide teachers with implicit bias training so they consciously encourage girls to pursue advanced STEM classes and careers in STEM fields.
- Encourage schools to adopt positive disciplinary practices and halt those that disproportionately push out girls of color and limit their opportunities.
- Push for funding and policies that provide more resources, training, and technical assistance to schools to help them comply with Title IX and eliminate sex discrimination in all areas of education.

END NOTES

1. U.S. Department of Education. National Center for Education Statistics. (2015). *Digest of Education Statistics*. Retrieved from https://nces.ed.gov/programs/digest/d15/tables/dt15_318.10.asp.
2. Ibid, see 1.
3. U.S. Department of Education Office for Civil Rights. (2014). *Civil Rights Data Collection*. Retrieved from <https://www2.ed.gov/about/offices/list/ocr/docs/crdc-college-and-career-readiness-snapshot.pdf>.
4. Child Trends. (2013). *Databank Indicator: Science Proficiency*. Retrieved from <https://www.childtrends.org/indicators/science-proficiency/>.
5. National Women's Law Center. (2012). *The Next Generation of Title IX: STEM - Science, Technology, Engineering, and Math*. Retrieved from <https://nwlrc.org/resources/next-generation-title-ix-stem-science-technology-engineering-and-math/>.
6. YWCA. (2017). *On a Mission for Girls of Color: Inequality at School*. Retrieved from <http://standagainstracism.org/public/docs/inequality-at-school.pdf>.
7. National Science Foundation. (2007). *Back To School: Five Myths About Girls and Science*. Arlington, VA: Author. Retrieved from https://www.nsf.gov/news/news_summ.jsp?cntn_id=109939.
8. Afterschool Alliance. (2016). *The Impact of Afterschool STEM: Examples From the Field*. Washington, DC. Retrieved from <http://afterschoolalliance.org/documents/AfterschoolSTEMImpacts2016.pdf>.
9. Evans, David. (May 2017). *STEM Education 101: Major Policy Issues for the 115th Congress*. Presented at Rayburn House Office Building, Washington D.C.
10. Moss-Racusin, Corinne A., Dovidio, John F., Brescoll, Victoria L., Graham, Mark J., & Handelsman, Jo. (2012). *Science Faculty's Subtle Gender Biases Favor Male Students*. Proceedings of the National Academy of Sciences, 109 (41), 16474-16479. <http://www.pnas.org/content/109/41/16474.full.pdf>.
11. Accenture. (2016). *Cracking the Gender Code*. Retrieved from https://www.accenture.com/t20161018T094638_w_us-en/_acnmedia/Accenture/next-gen-3/girls-who-code/Accenture-Cracking-The-Gender-Code-Report.pdf.

