

K-12 Education

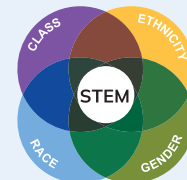
Girls/young women and boys/young men do not significantly differ in their abilities in mathematics and science, but do differ in their interest, confidence, and sense of belonging in science, technology, engineering, and mathematics (STEM).

Girls' and young women's achievement in mathematics and science is **on par with that of boys and young men.**



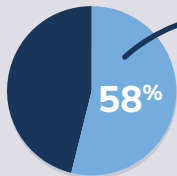
An **OVERWHELMING MAJORITY** of **YOUNG WOMEN** earn credits in **ADVANCED SCIENCE** and **MATHEMATICS COURSES** but **participate less** in **advanced physics** and **computer science courses.**

For girls/young women of color and girls/young women from lower socioeconomic status, **the impacts of the intersectional inequalities of gender, race, ethnicity, and class** can hinder identification with and long-term participation in STEM.

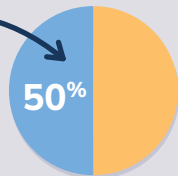


Higher Education

The rates of science and engineering coursetaking for women shift at the undergraduate level and gender disparities begin to emerge.



Women earn 58% of bachelor's degrees in all fields

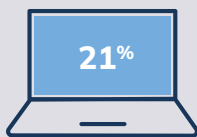


Women earn 50% of bachelor's degrees in S&E

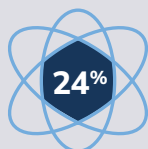
Women earn a majority of bachelor's degrees in psychology, biological sciences, and social sciences, but they earn only



in Engineering

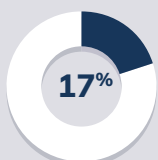


in Computer Science

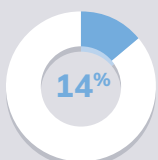


in Physics

Latina, Black, and Indigenous women continue to be underrepresented in STEM, but are gradually increasing their share of STEM degrees.



17%



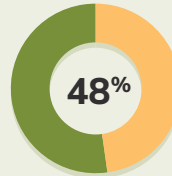
14%

Latina, Black, and Indigenous women:

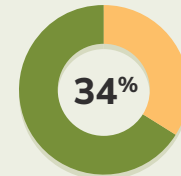
- make up 17% of the total U.S. population
- earn 14% of bachelor's degrees in STEM fields

STEM Workforce

Women remain underrepresented in the science and engineering workforce, with the greatest disparities occurring in engineering and computer sciences.



Women constitute 48% of the total workforce.



Women constitute 34% of the STEM workforce.

Women STEM professionals are concentrated in different fields that men, with relatively high shares of women in

SOCIAL SCIENCES

65%

LIFE SCIENCES

48%

and relatively low shares of women in

COMPUTER AND MATHEMATICAL SCIENCES

26%

ENGINEERING

16%

Latina, Black, and Indigenous women represent less than 10% of the STEM workforce.



References

- Archer, L., DeWitt, J., Osborne, J., Dillon, J., Willis, B., & Wong, B. (2012). Balancing acts: Elementary school girls' negotiations of femininity, achievement, and science. *Science Education*, 96(6), 967–989. https://www.academia.edu/17164597/Balancing_acts_Elementary_school_girls_negotiations_of_femininity_achievement_and_science
- Archer, L., DeWitt, J., Osborne, J., Dillon, J., Willis, B., & Wong, B. (2013). "Not girly, not sexy, not glamorous": Primary school girls' and parents' constructions of science aspirations 1. *Pedagogy*, 21. <https://www.tandfonline.com/doi/abs/10.1080/14681366.2012.748676>
- Calabrese Barton, A., Kang, H., Tan, E., O'Neill, T. B., Bautista-Guerra, J., & Brecklin, C. (2013). Crafting a Future in Science: Tracing Middle School Girls' Identity Work Over Time and Space. *American Educational Research Journal*, 50(1), 37–75. <https://doi.org/10.3102/0002831212458142>
- Carlone, H. B., Johnson, A., & Scott, C. M. (2015). Agency amidst formidable structures: How girls perform gender in science class. *Journal of Research in Science Teaching*, 52(4), 474–488. <https://doi.org/10.1002/tea.21224>
- Farland-Smith, D. (2015). Struggles of Underrepresented Girls as They Become Women: Understanding How Race & Gender that Impact Personal Science Identity Construction. *Journal of Educational Issues*, 1(1), 114. <http://www.macrothink.org/journal/index.php/jei/article/view/7501>
- Kang, H., Calabrese, Barton, A., Tan, E., Simpkins, S. D., Rhee, H., & Turner, C. (2019). How do middle school girls of color develop STEM identities? Middle school girls' participate in science and identification in STEM careers. *Science Education*, 103(2), 418–439. <https://doi.org/10.1002/sce.21492>
- King, N. S., & Pringle, R. M. (2019). Black girls speak STEM: Counterstories of informal and formal learning experiences. *Journal of Research in Science Teaching*, 56(5), 539–569. <https://doi.org/10.1002/tea.21513>
- Ladson-Billings, G. (2006). From the Achievement Gap to the Education Debt: Understanding Achievement in U.S. Schools. *Educational Researcher*, 35(7), 3–12. <https://doi.org/10.3102/0013189X035007003>
- National Center for Education Statistics. (2022). Undergraduate Degree Fields. *Condition of Education*. U.S. Department of Education, Institute of Education Sciences. <https://nces.ed.gov/programs/coe/indicator/cta>
- National Center for Science and Engineering Statistics. (2021). *Women, Minorities, and Persons with Disabilities in Science and Engineering: 2021* (Special Report NSF 21-321). <https://nces.nsf.gov/wmpd>
- National Center for Science and Engineering Statistics (NCSES). 2023. *Diversity and STEM: Women, Minorities, and Persons with Disabilities 2023*. Special Report NSF 23-315. Alexandria, VA: National Science Foundation. <https://nces.nsf.gov/wmpd>
- National Science Board. (2022). *Science and Engineering Indicators 2022: The State of U.S. Science and Engineering* (NSB-2022-1). National Science Foundation. <https://nces.nsf.gov/pubs/nsb20221>
- Tan, E., Calabrese Barton, A., Kang, H., & O'Neill, T. (2013). Desiring a career in STEM-related fields: How middle school girls articulate and negotiate identities-in-practice in science. *Journal of Research in Science Teaching*, 50(10), 1143–1179. <https://doi.org/10.1002/tea.21123>
- U.S. Census Bureau. (2020). *National Population by Characteristics: 2010-2019*. Annual Estimates of the Resident Population by Sex, Race, and Hispanic Origin for the United States, States, and Counties: April 1, 2010 to July 1, 2019 [Table 4]. <https://www.census.gov/data/tables/time-series/demo/popest/2010s-national-detail.html>
- U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP) High School Transcript Study, 2019. <https://www.nationsreportcard.gov/>
- Wing, A. K. (1997). *Critical Race Feminism: A Reader*. NYU Press.