

Science girls: A toolkit

The @Work Toolkit is a collection of additional resources and tips that might be useful when discussing the topic with your team.

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Definitions

STEM vs. STEAM: Science, technology, engineering and math. Another acronym STEAM stands for science, technology, engineering, arts and math. It includes the humanities, language arts, dance, drama, music, visual arts, and design.

Major occupations in STEM include positions in: computing (including computer and information systems managers); mathematical fields; engineering (including architectural and engineering managers and sales engineers); life science, physical science and social science (including natural sciences managers, excluding occupational health and safety specialists and technicians). STEM-related occupations include architects and health care and technical practitioners (including medical and health services managers).

(Source: [Census.gov](https://www.census.gov))

Did You Know

“In elementary, middle, and high school, girls and boys take math and science courses in roughly equal numbers, and about as many girls as boys leave high school prepared to pursue science and engineering majors in college. Yet fewer women than men pursue these majors. Among first-year college students, women are much less likely than men to say that they intend to major in science, technology, engineering, or math (STEM). By graduation, men outnumber women in nearly every science and engineering field, and in some, such as physics, engineering, and computer science, the difference is dramatic, with women earning only 20 percent of bachelor’s degrees. Women’s representation in science and engineering declines further at the graduate level and yet again in the transition to the workplace.”

Source: American Association of University Women (AAUW): “Why So Few?: Women in Science, Technology, Engineering and Mathematics” Report

How to have conversations about girls in STEM

First do some reflection on your own education. What were the powerful learning experiences in your formal education? Was there one teacher who shaped your professional life trajectory? Make a list of all characteristics of a powerful learning environment. You might list the social or emotional supports, such as kind and encouraging teachers or safe spaces for dialogue. You might also reflect on how powerful teaching and learning happens, such as in small groups or in manageable sections. Finally, reflect on what it is that all children need in order to pursue new knowledge and cultivate their interests. These are some considerations that can prepare you for discussing needed interventions for girls in the STEM field.