



Generation STEM: What girls say about Science, Technology, Engineering, and Math

Girl Scouts has a long history of engaging girls in STEM activities and encouraging girls to pursue STEM interests both in and outside of the classroom. This research project intends to add to the body of knowledge on girls and young women and STEM as well as provide results that can be used to recommend new innovative solutions. This project consists of a literature review, as well as original qualitative and quantitative research. The literature review summarizes the current state of girls in STEM fields, while the qualitative and quantitative portions of the study examine the barriers and potential 'bright spots' from the voices of girls themselves. The qualitative portion was conducted with 140 girls across several regions of the U.S., and the quantitative portion consists of a nationwide survey of 852 teen girls.

Top Findings

- 1. Overall, a majority of girls find STEM fields interesting.**
74% of teen girls are interested in the field of STEM, and STEM subjects.*
- 2. Girls are interested in the process of learning, asking questions, and problem solving.**
 Compared to girls who are not interested in STEM, girls interested in STEM:

 - Like to understand how things work (88% vs. 65% non-STEM)
 - Like puzzles and solving problems (85% vs. 70% non-STEM)
 - Like doing hands-on science projects (83% vs. 56% non-STEM)
- 3. Girls interested in STEM are high achievers who have supportive adult networks and are exposed to STEM fields.**

 - Girls interested in STEM ("STEM girls") are significantly better students and more academically engaged overall than girls who are not interested in STEM ("non-STEM girls").
 - STEM girls have significantly higher confidence in their academic abilities and have higher academic goals and aspirations for themselves, compared to non-STEM girls.
 - STEM girls are significantly more inclined to grapple with adversity and overcome obstacles than non-STEM girls.
 - STEM girls have had significantly greater exposure to STEM fields, have stronger adult supportive networks, and have had more of a parental role in their career and future plans than non-STEM girls.

4. Although interest in STEM is high, few girls consider it their number one career choice, given competing opportunities and interests.

81% of STEM girls are interested in pursuing STEM career, but only 13% say it is their first choice.

- Girls in STEM are interested in many careers: Top four career categories: Medicine/Health Care, Arts/Design, Entertainment, Social Science.
- 30% of STEM girls (vs. 35% non-STEM girls) are interested in being a stay-at-home mom.
- Girls want a career that they love and want to help people and make a difference in the world.
- Gender barriers persist; About half of all girls feel that STEM isn't a typical career path for girls. 57% of girls say that if they went into a STEM career, they'd have to work harder than a man just to be taken seriously.

5. African American and Hispanic girls have high interest in STEM, high confidence and work ethic, but have fewer supports, less exposure, and lower academic achievement than Caucasian girls.

They also value financial motivations in career path development. In addition, they are more aware of gender barriers in STEM, and appear eager to overcome obstacles.

Summary

A high number of teen girls are interested in STEM fields and subjects, and are drawn by the creative and hands-on aspects that characterize these fields. Those who are interested in STEM have well developed internal assets, such as a high level of confidence in their abilities and the ability to overcome obstacles. Many have high levels of adult support and encouragement to pursue STEM careers and have been exposed to what STEM careers have to offer, but some do not. Many girls aspire to STEM careers, but aren't necessarily choosing STEM careers as their first choice at this time. Girls are interested in making a difference in the world and need more STEM exposure, education, and experience with the help of key adults in their lives in order to see how STEM fields can achieve their goals now and in the future.

**These data are based on a national sample of 852 girls ages 14-17. After overall STEM interest was determined (74%), groups of interested and non-interested girls were equalized for the remaining analyses.*

