

Changing the Game for Girls in STEM

Findings on High Impact Programs and System-Building Strategies

Techbridge Girls White Paper on best practices and learnings from leaders in the field.



STEM has a diversity and inclusion problem.

Women represent:

- 12% of the U.S. engineering workforce
- 24% of the STEM workforce
- 26% of the computing workforce, but less than 5% are women of color

We have solutions.

Techbridge Girls offers effective and promising strategies for promoting girls of color in STEM, such as:

1. Design & evaluate girl-centric and culturally-responsive programs
2. Address and engage systems, industry and supports within the girl's ecosystem
3. Shift the funding model for STEM programs



Program Tips

- **Define population.** Be explicit about serving racially diverse girls (e.g. Latina, African-American) from underserved and under-recruited communities. And, don't assume all girls are alike.
- **Market for impact.** Create programs that show girls how STEM can make a difference in the world. When STEM programs are connected to real world challenges – contextual and relevant to every day experience – we can INSPIRE and EMPOWER girls in STEM.
- **Create girl-friendly or girl-only spaces.** Spaces that are intentionally designed to be inclusive of girls creates a sense of belonging.
- **Evaluate effectiveness and adjust.** High quality evaluation and research increase knowledge of evidence-based practices and inform continuous program improvement and impact.

Strategy #1

Girl-Centric and Culturally-Responsive Programs

To promote equity and increase gender and racial diversity in STEM, the approach to designing solutions must be girl-centric and culturally responsive. It's not just doing more STEM, it's doing STEM with girls of color in mind from the beginning!

Strategy #2

Address and Engage Systems and Supports Within the Girl's Ecosystem

We believe in the STEM ecosystem approach (rather than "pipeline") because an ecosystem will not thrive if only some of us do our part. An ecosystem approach works to identify components of the system that we can leverage for change, connecting all of us to the success of girls and emphasizing the need for equity.



Strategy #3

Shift the STEM program funding model

Engineering design principles—design, prototype, test, fail and reiterate—that work so well for industry leaders would benefit the creation of out-of-school programming. But non-profits often can't afford to walk-the-talk we teach our girls to embrace and pursue.

Funding Recommendations

- Support specific strategies to recruit and retain girls of color from low-income communities.
- Develop flexible funding to engineer the design process (unknown outcomes, experimentation, failure, and iteration, leading to best practices).
- Fund the long-term. Start early and invest in multiple year funding. Correlate strategies to impact the individual, STEM fields, and industry.

The End Game

- Diverse and inclusive STEM fields where women of color are represented at every level.
- Greater innovation to solve the most pressing issues in our world.
- Economic well-being for women, families and communities.

Program Tips

- **Engage families.** Girls are twice as likely as boys to look to their parents for college and career advice. Programs successful in engaging families connect with parents in ways parents feel comfortable.
- **Expose to role models and industry.** Exposure to industry careers and effective role models can help shape girls' life choices. Connecting people and career possibilities for girls of color is a game changer. Role models can spark an interest, help a girl imagine her possibilities, and transform a girl's life.
- **Share learnings.** Utilize program data and research to influence systems, shift social norms, and change policies and practices. Build partnerships with community, educators, industry, policy makers, and philanthropy to elevate solutions that will change the game for girls in STEM.