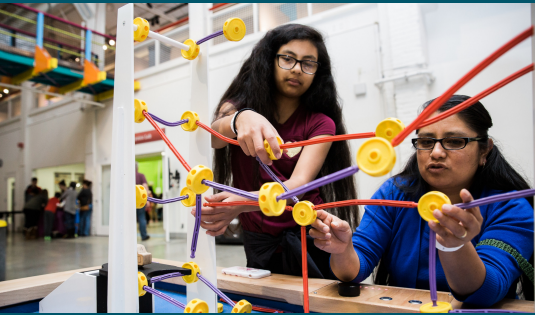


Changing the Game in STEM with Family Engagement

EXECUTIVE SUMMARY



STEM Next Opportunity Fund is committed to ensuring that every child – including girls, youth of color, kids in low-income communities, and youth with disabilities – has equitable access to STEM opportunities and the social capital that lead to greater opportunities in academics and careers. Family engagement is fundamental to achieving this goal.

Research going back 50+ years shows that parents have a profound impact on children's learning, interests and aspirations, and educational and career outcomes. Parents want to nurture their children's academic and career interests. Yet, when it comes to STEM, many parents feel anxious and unqualified to do so. While parents may think that it's their expertise, experience, or knowledge that makes for their child's success in STEM, research shows it's their encouragement that matters most.

PROMISING PRACTICES

Leaders of innovative STEM programs are advancing the field by bringing parents to the table as key stakeholders, bridging research and practice, and implementing family engagement. Here are the promising practices of these innovative parent champions.



Practice 1 *Listen and learn with families*

Family engagement is most effective when it starts with listening to families. Program leaders who listen before designing and piloting solutions can better understand what parents need. They will also likely learn about potential barriers to parents' engagement before scaling new offerings. A powerful approach for family engagement raises up families' voices and builds relationships between families and program providers.



Practice 2 *Empower parents with research and resources*

Parents don't need to be the experts or have the answers to STEM problems; it's their encouragement that matters. This is an important message to communicate to parents. Just as important is empowering parents with resources like summer opportunities and ideas for engaging in STEM at home.



Practice 3 *Prioritize access and inclusion*

By engaging in research and practice with families, we can develop programs that build from families' knowledge, experiences, and priorities. It's important that factors including cost, transportation, and accommodations for disabilities are considered so that programs are accessible to all families.



Practice 4 *Provide professional development*

Staff may bring strong STEM knowledge but need support to effectively engage with parents. To create effective professional development, administrators should ask staff about their needs first, and then involve them in developing training plans.



Practice 5 *Evaluate impact*

Evaluation means more than counting the number of people impacted. It is about collecting feedback from families and youth to find out how family engagement activities impact youth outcomes. Parent feedback provides rich information so that program leaders can learn and revise programs quickly. This work does not have to be expensive or complicated. Instead, it can be as simple as asking families, "What was the most valuable thing you learned today? And, how can we improve our program to serve you better?"



By listening to families, the **New York Hall of Science** heard parents express interest in programs for the entire family, in opportunities to interact with others in their native language, and for a safe learning environment where they could feel comfortable. They responded with workshops where youth and their families learn about academic coursework, internship opportunities, paid summer programs, and career options in STEM in New York City. Exposing families to different fields within STEM and making connections to design-based learning makes STEM opportunities more explicit and less of a mystery.

By partnering with the Somali Youth and Family Club, **Techbridge Girls** developed a workshop series with STEM content that was culturally meaningful for recently-immigrated Somali families that also addressed barriers to participation. Techbridge Girls validated the families' knowledge, enabled Somali mothers to develop a positive STEM identity, and improved their confidence in being STEM advocates for their girls' futures in engineering and technology. In partnership, they iterated program content and delivery based on feedback from parents about what was interesting and helpful.

CALL TO ACTION

All families deserve support to access STEM opportunities for their children, regardless of their knowledge or experience in STEM. Here are six action-based strategies every organization can take to empower families and unleash the untapped STEM talent of their children. We urge you to commit to taking at least one action over the next year that is aligned with your local context, organizational goals, and available resources.

Put parents at the center; listen and learn from families.

Create authentic opportunities for parents to inform decision making, exercise leadership, and provide feedback on programs and resources.

Make equity and inclusion primary considerations, not afterthoughts in family engagement.

This means starting with the needs of families with the greatest need. This includes families from under-resourced communities, in rural settings, and those with children who are disabled. Make equity and inclusion primary considerations, not afterthoughts in family engagement.

Build a STEM ecosystem that centers on the needs of families.

Every player in the STEM ecosystem – including philanthropic and corporate funders, policymakers, and practitioners – needs to support a pathway for anytime, anywhere STEM engagement of families.

Commit resources to support staff, particularly those working in under-resourced communities.

Prioritize funding for professional development not just to enhance STEM expertise but also promote family engagement.

Evaluate impact on youth and parents to advance STEM4All.

Measure the impact of family engagement. Build the field with innovative research-practice partnerships and longitudinal studies.

Go bold and big.

Scale programs that have successful track records in supporting innovative approaches, particularly with families that have been underrepresented in STEM. Support efforts that push the envelope and take risks to develop new kinds of family engagement.

For the full paper please visit:

<https://bit.ly/2J7Eqba>

We welcome your feedback. Send us your comments and questions to familyengagement@stemnext.org