2023-2024 Annual Report techbridge girls

Letter From Our CEO



Who belongs in STEM? Who belongs in a climate-modeling laboratory, in a software development company, in a surgery room? We know the answer. We know there's room in STEM for all people, from all backgrounds and worldviews and experiences. We also know that diverse workforces are more innovative and more productive. **But it doesn't always feel that way.**

At Techbridge Girls, we are deliberate about fostering belonging in STEM for Black, Latina, and Indigenous girls. And we start that work by making their educators feel like they belong in STEM.

My 8th grade math teacher was the one who sparked my interest and love for geometry. That spark led me to college and a career in engineering. Today, when I talk to women, especially women of color, who are working in STEM fields, almost all of them can point to an educator who encouraged them.

But when I talk to educators, many of them say that they're anxious about teaching STEM to students. They feel unprepared. They feel unsure. Educators, just like the girls they teach, feel left out of STEM.

We're here to change that. Our work at Techbridge Girls is to prepare educators to be the ones who make a difference: the ones who trust in their own abilities, the ones who are connected to a strong support system, the ones who see that spark of potential that shines in all kids. Our STEM Equity Learning Communities provide the training, tools and support for educators to do their best work. Our Role Models Matter workshops connect girls to real-life STEM role models and advocates who look like them. And our Ignite, Inspire, and Changemakers programs teach girls the critical thinking skills necessary for success in STEM and build a network that supports girls through school and beyond.

Together, we can welcome in the next generation of STEM professionals – the resilient, joyful, brilliant problem-solvers of the future. Together, we're creating rooms where everyone feels like they belong, and where that belonging translates to thriving.

Thank you for being a part of this work.

Sincerely,

Savita Raj

CEO, Techbridge Girls

Letter From Our Board Chair



As every engineer knows, iteration is a major part of the design process. At Techbridge Girls, we're embracing a growth mindset of innovation, iteration, and inspiration. We're designing an organization built for the future, and we are constantly testing and improving to see if we can find a better way to solve a given problem. Each of our offerings, from curricula to workshops, is developed, tested, and refined.

Over our long history, we've evolved from a local non-profit delivering after-school STEM programs through museums, to a National Science Foundation-fueled scale-up, to where we are today: an equity-focused nonprofit with a mission of systems change. In 2020, we made the decision to center our program offerings around equipping more educators with the tools and resources they need to effectively deliver out-of-school-time STEM offerings for girls and gender-expansive youth.

In 2024, we launched a search for a new CEO who could build on Techbridge Girls' success as an established, respected organization with a history of innovative service, and who could advance the organization's presence as a leader in equitable STEM education. I'm thrilled that we found such a person in Savita Raj as our CEO. Savita is a dynamic non-profit leader with decades of experience in the development and successful implementation of innovative and equitable STEM programs.

Our mission remains the same: to build equitable systems in STEM education so more girls of color and gender-expansive youth lead, contribute, and thrive in STEM fields. As we enter 2025 under Savita's leadership, alongside our committed board and staff, Techbridge Girls is poised to have its most impactful years yet.

We are grateful for your support.

Sincerely,

Alysia Green

Board Chair, Techbridge Girls



Techbridge Girls builds equitable systems in STEM education.



We envision a time when BIPOC girls and gender-expansive youth access STEM fields in diverse, equitable, and sustainable ways.



Evolving Educators Model

Techbridge Girls' Evolving Educators Model emphasizes the power and importance of educators, administrators, facilitators, and role models and their influence on STEM career pathways.

This model allows us to pursue two areas of impact:

- Working with STEM leaders and providers to build their capacity in culturally responsive practices and key elements for uplifting girls of color and gender-expansive youth, and
- Directly training facilitators to implement our signature curriculum within their own communities. This curriculum directly impact girls' STEM confidence, identity, critical thinking, and problem solving, which fosters increasing feelings of belonging in STEM careers and the larger STEM narrative.

We're building a classroom culture where a girl's brilliance and boundless potential are always front and center.



I was always interested in tech but never felt like I was welcome in those spaces. The equity piece of Techbridge Girls' programs is what convinced me to join, even though I was nervous about mastering and teaching the STEM parts of the program. I'm excited to create a space for youth where everyone can feel like they matter and belong.



- Educator from PlayCV

Castro Valley, CA, Pilot of Trailblazers in Summer 2024

Our Equity Framework: The Logic Behind Our Curriculum

Techbridge Girls envisions STEM classrooms as places where our "different brilliance" shines. We focus on the students, educators, and role models who have traditionally been left out of the STEM narrative, centering the experiences of Black, Indigenous, and all girls and gender-expansive youth of color.

In our fun, hands-on, inquiry-based programs, girls thrive exploring STEM concepts while also building community, developing trust, and showing up as their authentic selves.

We all have different brilliance so when we come together we can support each other and use our talents to come up with the best solution.

- Ignite Participant

Our Equity Framework Uses Three Pillars:



Here's What We've Learned:

- Our embedded equity framework builds a sense of belonging and helps girls to see themselves in STEM
- Our signature afterschool programs build confidence, identity, and problem-solving skills in girls
- Our direct-to-educators professional development model has exponentially increased the number of girls we can impact each year



BeingSTEM means fostering a sense of belonging in STEM fields through culturally relevant and gender-responsive STEM education. Techbridge Girls centers marginalized identities in STEM, fostering STEM belonging and building equitable classrooms where girls who are Black, Indigenous, and Latina can thrive. Our trainings and curricula are designed to empower and equip educators to bring out the brilliance and potential of all students. TBG's curricula highlights women of color who are major contributors to STEM fields. By presenting a richer, more diverse, and more accurate account of the many brilliant minds who have contributed to innovation in STEM, we make space for Black and brown girls to see themselves as part of this story.



DoingSTEM

DoingSTEM teaches us how to be resilient, how to solve problems, how to adapt to changing circumstances, and how to drive the change we want to see. Why is STEM education so important? It's not just about *what* we learn (even though robotics, AI, and math are all fascinating). It's about *how* we learn. Techbridge Girls utilizes the Engineering Design Process (EDP) to encourage brainstorming, collaboration, and iteration as girls design and test different STEM solutions to real-world problems. Through this process, girls learn resilience and grit. They learn that the goal isn't always about "getting it right." They learn to try again. Using the EDP, our educators createan environment where BIPOC girls can confidently innovate, experiment, make mistakes, and grow stronger.



UsingSTEM

UsingSTEM means taking the lessons from the classroom out into the real world. We especially need BIPOC girl genius. Techbridge Girls uses story-based learning to develop critical thinking skills at the intersections of STEM and social justice. By sharing the stories of BIPOC women and gender-expansive STEM professionals using STEM to create a more equitable world, our curriculum invites girls to see themselves as changemakers. Students identify areas of improvement in their own communities and design solutions to problems that they care about. Girls engage in age-appropriate conversations about social justice, ranging from discussing historic and ongoing inequities through the lens of STEM stories to developing ideas for creating a just society through STEM.



Communities Of Practice: Catalyzing Systems Change

STEM Equity Professional Development

TBG's professional development programs are designed to train and support educators to work within their systems to create more just pathways to STEM for girls. Our professional development opportunities build a cohort of educators, administrators and facilitators who are trained to see beyond cultural biases. Engaging with youth, our educators build authentic connections with personal storytelling while creating a safe, gender-inclusive space. See three of our systems change programs below: The STEM Equity Learning Collaborative, Role Models Matter[™], and our STEM curriculum facilitator trainings.

Our 2023-2024 Stem Equity Trainings 🕎 What is STEM Role Models Matter™ **Equity?** Understanding Personal Bias Belonging in STEM



STEM Equity Learning Community (SELC)

Research tells us that responsive learning environments can make all the difference in girls' sustained interest in STEM. We also know that out-of-school time (OST) program leaders - administrators, program directors, site liaisons - play a critical role in the STEM trajectory for girls because they ensure their afterschool programs' classrooms are equitable, culturally-responsive experiences. Designed as a pilot for the 2023-24 school year, the STEM Equity Learning Community (SELC) equips OST program managers, administrators, and site directors to create equitable learning spaces for Black, Indigenous, and Latina girls and gender-expansive youth. **TBG's training content is centered on our STEM Equity Framework, grounded in the most current research and best practices in creating STEM learning environments specifically for BIPOC girls.**

Over five months, our first national STEM Equity Learning Community participants developed their collective identities as equity advocates in the workplace and practiced strategies to help BIPOC students to thrive and persist in STEM careers. The program included a virtual community of practice, a curated set of asynchronous training modules, additional readings and resources hosted on TBG's training platform, and access to the TBG community message board to interact with fellow trainees and TBG staff members. Our initial cohorts attracted 80 educators and we are continuing this innovative program for the 2024-25 school year.

TBG reviewed 100 applications for participation in the two STEM Equity Learning Community cohorts. Of those applicants, we selected 32 educators to participate in the Fall 2023 cohort. The Spring 2024 had 27 participants, Fall 2024 cohort engaged 44 participants.

4 Cohorts

135 Leaders

16 States

Alaska, Alabama, California, Colorado, Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Kentucky, Massachusetts, Maryland, Michigan, Missouri, North Carolina

Leaders Working Toward Systems Change



A case study from Miami: Meet Auntaria Johnson, ChangeMaker

For Auntaria Johnson, an educator and changemaker in the Miami area and founder and director of The Dennis Project, the curricula and trainings that Techbridge Girls provides are invaluable resources for her programs.

At Techbridge Girls, we are continually inspired by the passion of educators like Auntaria. After participating in our equity training and embracing our STEM Equity

Framework, Auntaria didn't just apply what she learned in her classroom—she took those skills into her community, creating new opportunities for girls to explore STEM and catalyzing change beyond their TBG program.

As a Black woman growing up in a poverty-stricken neighborhood, I experienced inequality firsthand. Yet the STEM Equity Learning Community opened my eyes to issues I did not consider. Learning more about my own culture and other cultures' similar systematic experiences helps me serve marginalized youth through enlightened lenses.

-Auntaria Johnson,

Founder and Executive Director, The Dennis Project





Through The Dennis Project, Auntaria Johnson empowers youth to be the change they wish to see in their communities, using STEM skills to create a better world.

Not only does she provide authentic STEM experiences in her community – she has also led initiatives to engage parents and families as positive role models and implemented train-the-trainer programs focused on increasing STEM literacy of out-of-school time staff and providing the tools needed to create inclusive spaces in STEM programs.

For more inspiration, follow along on Instagram **@TechbridgeGirls** and **@DennisProject**.

97%

Understand how bias affects youth in educational settings

95%

Gained awareness of the ways girls of color and gender-expansive youth experience bias within STEM education and fields

91%

Gained strategies to inspire a sense of belonging in STEM for girls of color and gender-expansive youth



Gained strategies to develop authentic connections with youth

Role Models Matter™

Role Models Matter[™] (RMM) has been a Techbridge Girls signature program since 2012. Research shows that exposure to role models increased girls' interest in STEM and the likelihood that they persist in STEM activities. Exposure to role models involved in STEM fields has demonstrated power to increase girls' interest and likelihood to pursue a STEM career. Our curriculum highlights the lineage and heritage of scientists of color, helping girls to see themselves in STEM careers.

Additionally, by training BIPOC STEM professionals at national and global companies to serve as role models, Techbridge Girls is building a robust network of empowered mentorship. We've evolved the work to dive deeper into gender and racial equity, helping STEM professionals understand their biases, embrace their STEM identity, and share best practices to engage and encourage youth.

RMM Indicators: Most participants reported an increased understanding of how bias affects youth in educational settings and the ways in which BIPOC girls experience bias within STEM education. Participants learned strategies for developing authentic connections with youth and inspiring a sense of belonging in STEM for BIPOC girls.

I love that each lesson had a role model who was close to the students' ages for inspiration. As a result, I felt that girls' confidence was built. Girls believed they could achieve major feats.

- Educator from Seaton Elementary in Washington, DC

STEM Curriculum Facilitator Trainings

TBG's gender-responsive and culturally relevant STEM curricula, program kits, and educator training equip educators to deliver quality, research-based STEM programming in their schools and communities. Aligned with Next Generation Science Standards (NGSS), our program framework draws on girls' interests and experiences and ensures they see themselves reflected in STEM fields, past, present, and future. Using a blend of theory and application, facilitators are trained and certified in delivering the TBG curricula.

Facilitator training, centered on our STEM equity framework, provides grade-bandfocused lesson plans and materials and brings educators and facilitators into the TBG community of practice. TBG offers options for school year enrichment programs, summer enrichment programs, and one-time workshops. Facilitators receive badging by Credly for completing the training programs and Participate.

🔘 participate.

Participate is a key learning management, communication, and collaboration tool we use with all TechBridge leaders to foster and build community. Participate also acts as a knowledge repository. The entire TBG community can enhance their own knowledge, amending to reflect promising practices, or developing related understanding that can be shared and built upon by others.

Our educators on Participate can:

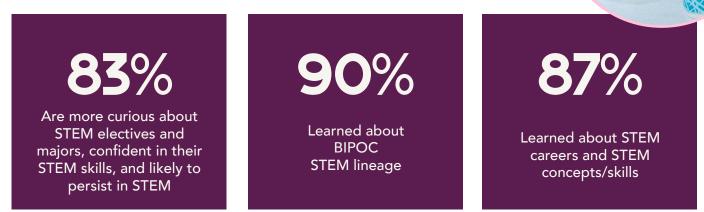
- Take trainings at their convenience
- Track their progress
- Provide iterative feedback as well as do pre- and post-surveys for their girls
- Receive badges for their milestones implementing the curriculum
- Access TBG's Community Meeting Catalog
- Dive into the Resource Hub, curated by TBG educators
- Share their challenges and successes on the Wall of Persistence





Techbridge Girls Outcomes: 2023 - 2024

Youth Impact:



Almost all youth participants reported being more curious about STEM electives and majors, confident in their STEM skills, and likely to persist in STEM. A large majority of participants learned about STEM careers, BIPOC STEM lineage, and STEM concepts and skills.

Adult Impact:

95% Understand how bias

affects youth in educational settings **97**%

Understand the engineering design process as a tool for STEM exploration 93% Understand the STEM concepts in the

ChangeMakers/Ignite/ Inspire curriculum

A majority of adult participants reported an understanding of bias in educational settings, the engineering design process as a tool for STEM exploration, and the STEM concepts in the ChangeMakers/Ignite/ Inspire curricula.

Techbridge Girls Are Becoming Women Who Change the World

Let's celebrate the trailblazers. Meet Dr. Sarah Nashat.

Dr. Sarah Neshat is a great example. She's the first in her family to graduate from high school. She's the first to graduate from college. And she's the first to earn a Ph.D. in Biomedical Engineering from Johns Hopkins.

Like countless girls around our country, Sarah grew up with boundless curiosity for science, but with limited resources and few role models. But when she became a Techbridge Girl, that changed. With support and direction for her curiosity, Sarah looked forward to her after school Techbridge sessions, where she and her peers got to work on science experiments. And those after school programs had a lasting impact.

I held that passion for years, through hard AP Classes and college exams, looking forward to the day when I could call myself a scientist engineer.

Today, first-generation graduate Sarah is a scientist working on cutting-edge mRNA therapies. We are immensely proud to be a part of her story. Trailblazers like Sarah light the way for more girls, making it easier for them to find pathways to education, careers, and other opportunities.

s* could also be scientists

We envision a world where girls like Sarah aren't the first ones, but part of a proud and strong lineage of women of color in STEM.

Watch Dr. Sarah Neshat's Video

How We Measure Impact

Techbridge Girls is measuring outcomes in both quantitative and qualitative ways, tracking participation and evaluating the change in knowledge, confidence, and behavior of program participants.

As we continue to grow our national footprint, we continue to provide programs where they're needed most.

Who We Serve

70%

are likely to be from a low-income community



of our educators are people of color themselves

Our Programs + Curriculum

To expand our impact, the Techbridge Girls team identifies Out-of-School time programs across the nation to become official TBG sites.

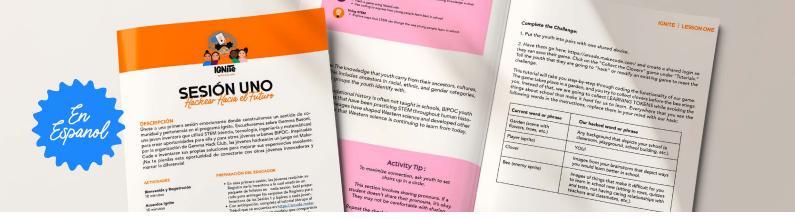
To build up programs at the core locations where they are most needed, TBG equips facilitators to implement one of our signature programs in their community.

Techbridge's work with educators facilitated STEM curriculum for 25,000 girls and genderexpansive youth directly in 2024!

Of these youth 86% identified as BIPOC.

With:

- 71% Black,
- 11% Latina
- 3% other POC
- 1% Indigenous



Ignite is designed to spark girls' interest in their STEM journeys. This set of 8 onehour lessons offers exciting STEM and social-emotional learning activities for 3rd to 8th grade girls. The curriculum offers maximum flexibility and can be delivered virtually, in person, or as a hybrid program, making it the program of choice for our OST educators this year.

Inspire encourages girls in the 3rd to 5th grades to explore various hands-on STEM disciplines. In this program, OST educators deliver 12 ninety-minute lessons that build upon each other to inspire youth to see their endless potential and harness the power of STEM.

ChangeMakers builds middle school girls' STEM joy, excitement, belonging, and agency through culturally relevant story-based learning. In this in-person, 12-session program, OST educators center the contributions of BIPOC women who have used STEM to positively impact systems, communities, and their personal lives.

New! TrailBlazers is an innovative summer STEM experience crafted to provide 6th to 8th grade youth with immersive, hands-on experiences. From coding drones to inventing assistive technology, lessons encourage curiosity, problem solving, and creativity during a summer timeline.

New! Catalyzers is a condensed summer program where high school-aged students gain STEM knowledge, build resilience and determination, and explore college access and STEM career opportunities. From building water filters to coding songs to developing personalized shampoos, lessons blend historical and contemporary perspectives to guide students in developing STEM solutions with a positive impact.



Program Kits + Resources

TBG program sites received STEM curriculum kits, a mini-grant, access to STEM and culturally responsive resources, and curriculum training. Each facilitator (and their administrators too!) become part of our community of practice, receiving ongoing coaching from TBG as well as peer support.

Techbridge Girls T-shirts and other swag help participants to share that they're part of a national movement for equity and inclusion in STEM! But we don't just provide swag: we offer consistent partnership with our program sites. Working with our standard curriculum, we provide tailored guidance to our facilitators to address the operational and logistical issues unique to their site.

Facilitators are eligible for replacement materials each semester as we equip them for spaces of rigorous STEM exploration and belonging. TBG kits contain technology, including drones, Micro:bits, solar panels, and much more.

Techbridge Girls Are Becoming Women Who Change the World

Let's celebrate the Trailblazers. Meet Aileen Iniguez.

Aileen Iniguez had plenty of reasons NOT to be a mathematician. Growing up in Oakland, California, she didn't know any mathematicians, or anyone that looked like her with a STEM degree.

Today, Aileen is thriving as a data scientist, and credits Techbridge Girls with helping her make her way there. Aileen joined TBG as a student at Roosevelt Middle School. As a result, she was prepared to apply for and be accepted into a degree program in Applied Mathematics at Berkeley. The confidence and sense of belonging in STEM she gained through her time at Techbridge were critical to her success.

It was really through the efforts of one program that I am where I am today.

Aileen was first-to-college in her family, attending UC Berkeley, and went on to become a data scientist for big corporations like Chevron.

Before Techbridge Girls, Aileen says, she never knew a woman could be an engineer. But with the help of our program, she just fell in love with engineering, so she persisted.

It's really because of Techbridge that I do what I love right now.

Link to Aileen's blog post <u>here</u> Link to Aileen's video <u>here</u> Techbridge Alumni Aileen Iniguez's Class Project Goes Viral for All the Right Reasons

July 30, 2015



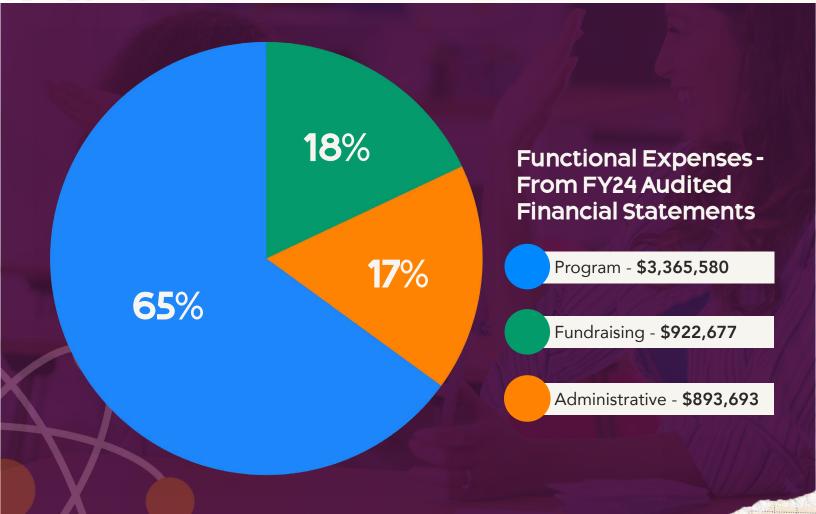
Aileen Iniguez joined Techbridge ten years ago where she learned the

undamentals of electrical and mechanical engineering, computer science, and the engineering design process. She met female role models who visited her after school e egirls.org – Private

Our Financial Health

With net assets of almost \$5M (\$4,934,786) and minimal liabilities (\$239,925), TBG is well positioned to deliver on its mission in the 2024-25 school year.

- Christopher Scarborough TBG Board Treasurer



Donors

Thank you to our corporate and community donors, as well as to the hundreds of individual donors who contribute each year. Every dollar you give to Techbridge Girls brings us closer to STEM equity. We are so grateful that you choose to invest in our mission.

Thank you!

\$1M+ Donors

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\$50K+ Donors









\$100K+ Donors

SIM NS



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We've got a lot of big things planned for 2025!

We're working with Schoolhouse Partners in Boston on our latest Strategic Plan that sets out our vision for the next five years.

And get ready to celebrate with us: Techbridge Girls is turning 25 this year!

Follow along:





Did Somebody Say Birthday?

Techbridge Girls is turning 25 in 2025, and we want to celebrate with you!

We are so proud of all we have accomplished and all to come. Join us by **signing up** for information about our events, activities, and opportunities to participate! Or simply send us an email at **happy25thanniversary@techbridgegirls.org**! This year our 5th graders from our first Cohort of Techbridge Cirls were able to help facilitate and lead the younger students. It was exciting to see them be leaders and support the newer students as they start their STEM journey.

- *Educator from Turner Elementary,* Washington DC, Spring 2024 Ignite Program

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