

MILLION GIRLS MOONSHOT

Evaluation YEAR 1
2020-21



**For a million great reasons.
Reimagine.**

FOR A MILLION GREAT REASONS.

Together, we are reimagining who can engineer, who can build, who can design and who can indeed make the world of the future a reality.

STEM Next Opportunity Fund collaborates with a diverse set of partners to ensure all young people have equitable access to STEM learning opportunities beyond the classroom. We know firsthand that STEM learning outside of the classroom inspires young people and prepares them for the future. That is why we are committed to eliminating the systemic barriers that bar young people—particularly girls—from the social and economic benefits that come from STEM learning and careers.

As a key part of this mission, we set an ambitious goal to engage one million girls in STEM learning through afterschool and summer programs over the next five years.

Our **Million Girls Moonshot** is urgent. Women make up half of the total U.S. college-educated workforce of 58.9 million workers, but represent much lower shares in engineering (16 percent) and in computer and mathematical sciences (27 percent). Latinx and Black women have even less representation in science and engineering occupations (approximately 2 percent each).

Out-of-school programs serve girls living in communities that can benefit the most from access to high-quality STEM learning, including communities with a high number of low-income households and areas where girls and at-risk youth have historically lacked access to quality education. The Moonshot builds upon and supports the strengths in these communities. Of students served in afterschool programs nationally, 70% of students are eligible for free or reduced priced lunch programs, and 14% are limited English language proficiency. The majority (34%) are Hispanic, 30% are White, 21% are Black, and 15% represent other races/ethnicities (Afterschool Alliance, 2021).

A year and a half ago, we empowered a robust 50 State Afterschool Network to begin the important work needed to achieve this Moonshot. Given that evaluation and careful, evidence-based practices have been hallmarks of our organization, it is only natural that we are thrilled to reflect on our inaugural year and share our progress with the community. This report is both an assessment and a celebration of what we have achieved together, and what bold steps come next.

And what an inaugural year it was. Even in the middle of a global pandemic, we reached over 160,000 girls and engaged 20,990 afterschool and summer programs. In the face of unexpected challenges, the afterschool community and its champions responded with unparalleled innovation,

creativity, problem-solving and can-do mentality. This progress is indicative of our Moonshot partners' commitment to this work.

Together, we are shifting the attitudes of young people, educators, families, and future employers. Together, we are creating opportunities for girls to achieve economic prosperity by building interest in and confidence to pursue a STEM journey. Together, we are empowering them with an engineering mindset. The values, knowledge and thinking skills associated with an engineering mindset can unlock pathways to socio-economic mobility, gender equality and sustained, national economic growth. The girl living in a small mountain town, or a crowded city apartment, a farm, or wherever she calls home can imagine herself as an engineer, a creator, an inventor, and a leader, poised to solve our world's most pressing challenges. She has a community of champions who encourage her, provide fun hands-on STEM learning, and make sure that wherever she turns, she has the opportunity to continue on her STEM journey.

All girls have the amazing potential to change the world. It's up to us to ensure that every girl has access to the high-quality education and STEM skill building they need to tap into their potential. The commitment to the Moonshot's core transformative practice areas during the inaugural year was instrumental in building a successful foundation to empower one million girls with an engineering mindset over the five-year initiative. Together with our Moonshot partners, champions, and friends, we are poised to do even more in the coming years.

In gratitude,



Ron Ottinger
Executive Director, STEM Next



Teresa Drew
Deputy Director, STEM Next



In 2020-21 | Year 1
Moonshot grantees connected with

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The Million Girls Moonshot supported the development of new tools to assess young people's engineering mindset, which will be used at a larger scale in 2021-22

EXECUTIVE SUMMARY

The Million Girls Moonshot reached 160,000 girls and 20,990 afterschool and summer programs in 2020-21.

Launched in spring 2020, STEM Next Opportunity Fund's initiative (STEM Next), The Million Girls Moonshot, seeks to reimagine who can engineer,

who can build, who can make. It purports to inspire and prepare the next generation of innovators by engaging 1 million more girls in science, technology, engineering, and math (STEM) learning opportunities through afterschool and summer programs over the next five years. The Million Girls Moonshot joins the movement to close the gender gap in STEM fields, especially engineering and computer science in which the gaps are greatest.

The Moonshot provided a suite of resources, technical assistance, and catalytic grant funding to all 50 of the statewide afterschool

networks in order to reach expanded learning programs nationally.



160,000
GIRLS

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Each network initiated a complementary set of tactics to support high-quality and engaging STEM learning, including raising awareness about the Moonshot's core research-based Transformative Practice Areas (see below) through outreach and communication, creating multi-sector partnerships, and providing professional development opportunities and technical assistance.

The Million Girls Moonshot **reached** **20,990** afterschool and summer programs **in its first year.**

In its first year, Moonshot grantees made substantial progress toward their goals. Moonshot grantees connected with 20,990 afterschool and summer programs that collectively reached 160,000 girls, and 396,800 youth overall. The Moonshot grantees formed partnerships with 612 new organizations from the business, government, education, and nonprofit sectors. This achievement is even more impressive in light of the COVID-19 pandemic, which required schools and community centers to cease in-person operations for much of 2020 and the first half of 2021.





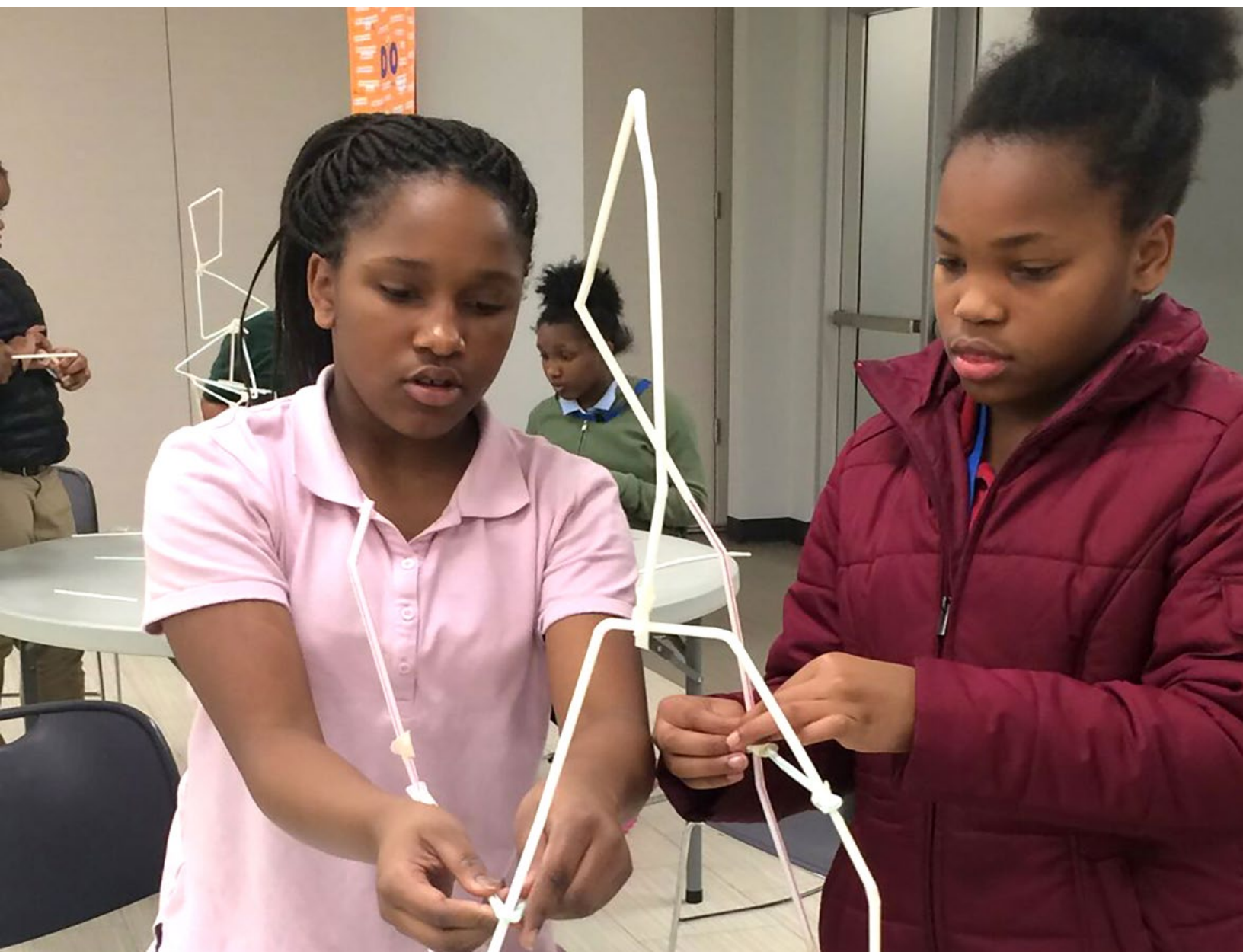
Rather than promote a particular curriculum, the Moonshot focuses on four Transformative Practice Areas, research-based strategies shown to effectively engage girls and marginalized youth in science, technology, engineering, and math:

- ▶ **Engineering mindset** – activities that engage girls in developing a set of ten skills and mindsets including using math and science, iteration, persistence, teamwork and envisioning multiple solutions.
- ▶ **Inclusive and equitable STEM** – practices that encourage girls and marginalized youth to engage in STEM, including selecting topics of interest to all genders, incorporating community issues into activities, and working in cooperative groups.
- ▶ **Role models, mentors, and families** – engaging young people with STEM professionals from underrepresented backgrounds and encouraging families to participate in STEM activities together.
- ▶ **Continuous STEM learning pathways** – working across programs and organizations to assure that young people who are interested in additional STEM-related activities experience a “warm hand-off” between experiences.

STEM Next’s Million Girls Moonshot supports grantees’ state-level efforts by distributing monthly Asset Packages, which include a listing of professional development opportunities and research connected to the four Transformative Practice Areas, and through Booster Packs, in-depth learning communities for afterschool and summer programs and statewide afterschool networks offered by the Moonshot’s implementation partners.

“ *The first year of the Million Girls Moonshot taught us to be flexible, to be adaptable and to be empathetic. Despite a world-wide pandemic, we were able to meet or make progress toward all of our identified outcomes and program goals. Additionally, our work with the MGM project has opened other doors to us including: participating in nationwide learning communities focusing on equity, diversity and inclusion and program quality; the opportunity to submit for the Booster Pack on Equity, Diversity and Inclusion; and further development of partnerships across the state.*

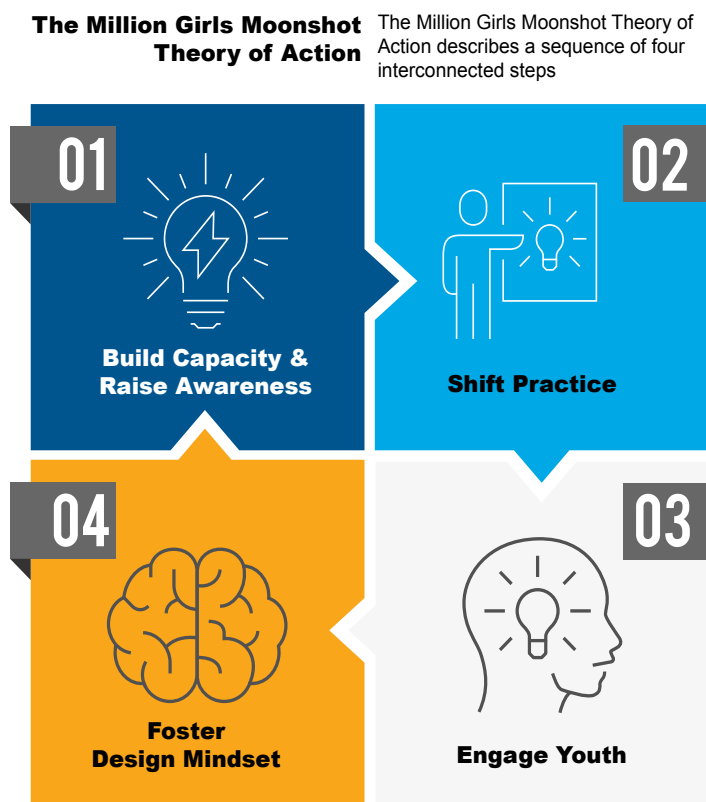
— Iowa Afterschool Alliance



Building a foundation for engaging youth — progress toward the Moonshot's Theory of Action

The Million Girls Moonshot Theory of Action describes a sequence of interconnected steps:

1) Build Capacity and Raise Awareness – state networks will communicate with and engage state partners and local program leaders about transformative practices and resources, expand partnerships, expand or broker professional development, and provide technical assistance; 2) Shift Practice – local program leaders will train staff, and transform planning, marketing, and implementation so that afterschool and summer programs are engaging for youth; 3) Engage Youth – more girls will choose to participate in STEM programs that encourage an engineering mindset, they will seek additional learning experiences, and have opportunities to sustain STEM learning over time; and 4) Engineering Mindset – girls who do participate will develop an engineering mindset.



In the first year of the Moonshot, available evidence indicates that grantees made the greatest progress toward their goals related to raising awareness about the Moonshot and in shifting practice among expanded learning professionals. This aligns with the design of the initiative: afterschool networks need the capacity to meaningfully engage with afterschool and summer program leaders before initiating outreach, and staff need to build their own skills and knowledge before shifting their practice.

In support of these efforts, Moonshot grantees expanded the reach and scale of their STEM-related partnerships in 2020-21, reporting 612 new partners ranging from workforce advisory, employers, colleges and universities, and existing STEM networks. These partnerships helped the networks raise the

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profile of expanded learning programs in new sectors, expand the reach of the Transformative Practice Areas to schools and youth service organizations, and begin establishing STEM learning pathways.





Engaging volunteers as role models and mentors is a vital component of the Million Girls Moonshot movement. Beginning in September 2020, the Intel Foundation engaged Intel employees and retirees in volunteering projects to support both the afterschool networks and the implementation partners. To date, nearly 200 volunteers have contributed over 1,800 hours of service to support the Million Girls Moonshot across the nation including sharing their STEM journeys, speakerships, participating in the Intel Future Skills Educator Academy, virtual competitions, and events.

“ *To successfully implement the Million Girls Moonshot has required collaboration from many departments across our organization...We have had more regular contact with our training and professional development team and our communications team than ever before. The relationships and processes that have been created to carry out this grant will allow us to be more successful at any project we take on in the future.*
— *School's Out Washington*

Afterschool networks and partners embraced Engineering Mindset and Equitable STEM as priority areas of focus in Year One.

Grantees reported the greatest emphasis on Engineering Mindset and Inclusive & Equitable STEM in 2020-21, mirroring the emphasis of Moonshot-provided support. They raised awareness of Transformative Practice Areas through ongoing communications with expanded learning professionals, offering professional development through workshops and conference sessions, and hosting communities of practice.

Two hundred fifty-eight (258) leaders of organizations that offer afterschool and summer programs shared information about their current STEM practices and connection with the Moonshot. When asked about which of the Transformative Practice Areas they weren't yet using, but wanted to know about, survey respondents were most likely to select Culturally Responsive STEM Practices (34% of responses) and Applying STEM to Community Issues (32%), core elements of Engineering Mindset.

Two Transformative Practice Areas, Engineering Mindset and Inclusive & Equitable STEM, were especially resonant with expanded learning professionals.





Moonshot grantees adapted to COVID-19 in multiple ways; the cascading effects of the pandemic posed a substantial challenge to expanded learning programs.

The Moonshot launched just as schools and community centers were closing due to the health risks posed by COVID-19. Afterschool and summer programs were hit hard by the pandemic, experiencing budget and staff shortfalls, rapidly adapting activities to virtual platforms, and supporting youth and families experiencing sustained and widespread trauma.



To keep afterschool and summer program staff engaged while responding to the rapidly changing operational context, Moonshot grantees shifted their professional development offerings to virtual settings, postponed in-person events, and shared information about virtual programming and supported the well being of youth, families and staff. Concurrently, the Asset Packages and Booster Packs evolved to account for the new reality, such as by sharing tips for at-home learning opportunities for families and providing high quality STEM activities virtually.

The pandemic posed multiple challenges to grantees' capacity and awareness-building activities, noting that organizations offering afterschool and summer programs had limited capacity to engage in new initiatives during this period, that many program leaders struggled to transition to virtual and blended learning, and the networks themselves had to pivot their own offerings to account for COVID-19 related restrictions.

“As a network, we are thankful that these resources, support and structure have been laid out for us. Now that we have found our footing with the pandemic, we are very excited about using Million Girls Moonshot as a jumping off point to drive STEM and Equity-based work with our community.

— Virginia Partnership for Out of School Time



In Year 2 of the Initiative (2021-22), Moonshot grantees will build on their efforts to date to continue to expand the reach of the initiative and to deepen their infrastructure-building efforts.

The Million Girls Moonshot experienced strong success in its first year, especially in light of the challenges that COVID-19 posed for communities across the country. Grantees made particularly strong progress toward the first two components of the Theory of Action – Build Capacity and Raise Awareness and Support Shifts in Practice.

There is promising initial evidence about the initiative’s ability to engage girls in STEM activities. Moonshot grantees connected with 20,990 after-school and summer programs that collectively reached 160,000 girls, and 396,800 youth overall. The Million Girls Moonshot supported the development of new tools to assess young people’s engineering mindset, which will be used at a larger scale in 2021-22.

Grantees reported less focus on infrastructure-building activities in 2020-21, such as establishing STEM learning pathways and providing technical assistance to expanded learning programs. This is to be expected in the first year of such a complex initiative, particularly during a worldwide pandemic. For the Moonshot to fully mature, grantees will need to sustain these foundational efforts and focus on additional infrastructure-building





activities. This will require sustained support from the Moonshot through technical assistance and grant dollars.

Moonshot grantees reported that afterschool and summer programs had limited capacity to engage in new initiatives in 2020-21, attributable to the impacts of the COVID-19 pandemic. The expanded learning field has faced endemic issues that hamper efforts to enhance staff practice, which is unlikely to change immediately. Moonshot grantees will need to continue to find ways to engage expanded learning programs in this context in order to continue its strong progress toward the ambitious scale of the initiative.

“ *The brightest spots feel like the interest that is sparked when we mention the Million Girls Moonshot in our conversations. The project elicits an immediate response. Even virtually, it feels like people lean in a little closer to learn more.*

— Montana Afterschool Alliance

SPECIAL THANKS TO OUR PARTNERS

FUNDING



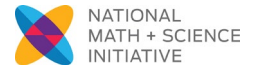
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IMPLEMENTATION



COALITION



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The 50 State Afterschool Networks

Organizations in all 50 states dedicated to expanding access to high quality afterschool and summer opportunities for all youth.
Photos courtesy of the 50 State Afterschool Network

Authors

Public Profit, an independent evaluation consultancy with expertise in expanded learning programs, is leading the evaluation of the Million Girls Moonshot that explores network wide progress toward the Theory of Action and highlights particularly innovative practices at the grantee and STEM program level. They are the authors of this report.