Delaware's Afterschool Programs Step Up as Key Partners in STEM Education

In Delaware, unmet demand for afterschool programs has reached an all-time high, with more than 62,000 children who would be enrolled in a program if one were available to them. Demand for afterschool in Delaware surges as parents see key benefits from afterschool, including keeping kids safe, helping them learn and grow, and providing peace of mind for working families. As families face barriers to participation, such as cost and accessibility, there is strong support behind public funding for afterschool programs in the state.

Delaware afterschool and summer programs provide hands-on STEM learning for students to explore, learn, and grow. But too many young people are missing out.

Getting more young people engaged in STEM, especially girls and BIPOC, is essential because STEM jobs continue to grow at rates double those of non-STEM professions. The United States Bureau of Labor Statistics expects STEM occupations to grow by 8 percent between 2019 and 2029, compared to 3.4 percent for nonSTEM occupations. Wages for STEM occupations are also much higher than for non-STEM occupations. They provide financial security to individuals from all backgrounds and a pathway to financial independence for students from low-income communities.

Providing more significant opportunities for STEM learning isn't just about preparing the future workforce. As our world continues to rely more and more on technology, we all require a greater level of STEM literacy and fluency to understand how science and technology play a role. Greater STEM literacy also helps prepare students to understand better challenges and issues that affect them and their communities.

In Delaware, afterschool programs play a significant role in providing meaningful science, technology, engineering, and math (STEM) learning experiences to diverse youth groups. We know that these subjects help students succeed in school and prepare them for careers driving global economic growth.

Young people need sustained opportunities to engage with STEM learning, develop an interest in and comfort with STEM subjects, and understand the career pathways to pursue STEM interests. Research shows that what happens outside of school can be equally as important as what happens inside a school to activate students' interest in STEM or other school subjects. Students need opportunities to engage in hands-on learning to connect what they learn in their classrooms to potential careers. An informal learning environment that provides encouragement and the chance to struggle through different problems—and even embrace the learning from failing—is also essential. Experiencing the joys of solving problems through project-based activities can spark interest in STEM for many learners and help them develop skills that lead to careers in STEM fields.

Perhaps most importantly, access to STEM opportunities must be expanded to the young people who are typically underrepresented in STEM careers. All students need opportunities to engage in quality STEM learning experiences. These can take place across different informal environments. Still, over the

last decade, afterschool programs have become a cornerstone in providing STEM learning for students. Research conducted on the role that afterschool programs play in supporting STEM learning for students has established the field as a key player in helping students develop their science identity and belief that they can succeed in STEM careers.

Afterschool programs have demonstrated that they can be strong partners in STEM education improvement efforts. Yet, there is much more work to increase the number of afterschool STEM opportunities and improve their quality. To help all students access high-quality STEM programs in their afterschool setting, afterschool program providers, parents, community partners, the broader STEM education community, and policymakers will have to work together.

The following key recommendations will help significantly to fully realize the potential of the afterschool space as an integral partner in STEM education.

- Engage and educate parents about the important role that afterschool programs can play in supporting STEM learning. It is essential to educate all parents about the role of STEM knowledge and skills to prepare their children for the future. It is equally important to describe the proven importance of STEM learning in various settings and frequent exposure to such learning for children to become fluent in these subjects.
- Increase the technology and engineering programming available in afterschool. Afterschool programs provide an ideal environment to engage in hands-on design, building, coding, and programming by providing a venue where students can apply science and math principles to design and implement solutions to real-world problems.
- Increase partnerships between the larger STEM education community and afterschool programs to advance practice and policy. STEM serves as an excellent vehicle to support social-emotional learning and 21st-century skills in addition to developing STEM-specific knowledge and skills in afterschool programs. Therefore, the impacts of afterschool STEM programs must be measured by their contribution to a broad set of skills rather than focusing narrowly on school achievement data.
- Increase investment in afterschool programs. While the number of children attending afterschool programs has increased over the past decade, so has the demand for programs. In Delaware, for every child in a program, four more are waiting to get in. To increase and improve STEM programming in afterschool, parents need to have a choice of afterschool programs where they can send their children to access these learning opportunities.

Working together with schools, businesses, community organizations, and informal science institutions, afterschool programs can help equip all young people to play a role in addressing our most pressing issues. By fully utilizing the hours outside of school and taking an all-hands-on-deck approach to maximize collective impact, we can ensure that our students are prepared for the future.

We thank our national and local STEM influencers, partners, champions, and funders for investing in our programs, young people and the adults who are walking the STEM journey with them.

Sources: 2014 America After 3PM: Afterschool Programs in Demand, 2020 America After 3PM STEM Reports and Afterschool Alliance.