

Afterschool Programs Build STEM Strength

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The best learning often takes place when it is presented as a form of play – which is why afterschool programs are the ideal venue for engaging young minds in science, technology, engineering, and mathematics (STEM).

Nationally, many efforts are underway to encourage and support STEM programming afterschool. These efforts are being championed by organizations such as the Afterschool Alliance (www.afterschoolalliance.org) and the Coalition for Science After School (www.afterschoolscience.org) because they recognize the vital role afterschool programs can play in building STEM strength.

Afterschool programs serve more than 8.4 million K-12 students nationwide. These programs offer a unique opportunity to incorporate STEM learning because they foster fun, flexible environments and use a variety of learning methods such as hands-on activities as well as including non-traditional learning venues like museums. In addition, afterschool programs often serve underrepresented youth who benefit from additional opportunities to participate in STEM learning.

Although afterschool programs are an ideal venue for incorporating STEM learning, challenges can exist in incorporating STEM principles. Youth workers are known for their expertise in working with youth which is critical for engagement and relationship building; however, infusing academic content into afterschool programs may not fall within their area of expertise.

This challenge can be overcome with help from the National Girls Collaborative Project.

Afterschool Matters

The Spring 2013 edition of the *Afterschool Matters* journal focused on STEM learning in afterschool. Download the special STEM-focused edition here: <http://niost.org/Afterschool-Matters/afterschool-matters-spring-2013>



Partners in STEM Learning

The National Girls Collaborative Project (NGCP), a National Science Foundation funded initiative, brings together organizations throughout the United States that are committed to informing and encouraging girls to pursue careers in STEM.

The NGCP increases the quality of STEM programming and strengthens the capacity of STEM practitioners by leveraging existing resources, sharing exemplary practices, and facilitating collaboration among its constituents.

NGCP has gained traction and become more effective as it has been replicated in 40 states.

A highly-effective model, NGCP uses in-person and online professional development events, mini-grants as an incentive to build collaboration among projects and organizations, and sharing of exemplary practices to build STEM capacity nationwide.

NGCP Makes it Easy to Get STEM Afterschool

Making STEM accessible to youth workers.

Afterschool program staff often do not have the time or opportunity to find the latest research on STEM learning or to participate in targeted professional development. NGCP bridges this gap by:

- **Providing professional development opportunities both in-person and online.** NGCP Collaboratives host events throughout the country and NGCP hosts national webinars that are free and open to the public. These events highlight youth-serving STEM programs and initiatives, offering the opportunity for practitioners to share successes, challenges, and programming tips. They also present training for practitioners on a variety of topics, including effective strategies for engaging youth in STEM activities, collaboration, how to utilize mentors and role models, and how to appropriately evaluate efforts.



“The National Girls Collaborative Project has given our board confidence and enhanced our credibility in our community. We have formed new collaborations and we continue to improve the quality of our STEAM (STEM + Art) afterschool program for elementary schoolgirls by following the examples of other NGCP members. Any small, grassroots program can feel strong as part of the NGCP.”

— Mary Golden, Director, Cool Girls Science and Art Club

- **Facilitating collaboration to leverage resources and expertise.** Afterschool programs benefit significantly from collaboration by drawing on other organizations' resources and knowledge to complement what they do best. For example, an afterschool program partnered with a local group of women STEM professionals to provide their girls with role models. Afterschool program staff provided the activities and the STEM professionals led the activities with the girls and provided a unique perspective on pursuing a STEM career. Afterschool programs can utilize the NGCP Program Directory to find professional organizations to facilitate this type of collaboration.
- **Creating community to enhance support.** NGCP also provides a community – both online and in-person – for practitioners who may feel isolated in their efforts to provide science enrichment or who are part of a small staff and benefit from networking and sharing ideas with others who are involved with similar efforts, whether it is across town or across the country.

Building STEM confidence.

A significant hurdle for afterschool programs delivering science content is the level of comfort staff feel with STEM material. NGCP is able to enhance confidence in working with STEM programming by:

- **Leveraging expertise from outside afterschool programs.** By leveraging the content expertise of another organization/individual (such as classroom teachers, science museum staff, and STEM professionals) along with the youth development expertise of afterschool staff, students are exposed to exciting science, engineering, and technology content with the guidance of trusted adults with whom they have relationships.
- **Sharing effective strategies and models through webinars.** NGCP webinars highlight program examples that are relevant to afterschool staff and that are evidence-based with a track record of success thereby eliminating the need for staff to “reinvent the wheel” and helping them gain confidence in the strategies they are implementing. For afterschool staff, participation in these webinars is also a valuable form of professional development they may not have access to otherwise.

Collaboration benefits afterschool program.

An afterschool program partnered with a local museum to expose their students to the museum resources, rich in science content, but not easily available at the afterschool program site. The collaboration also involved museum staff working with the students at the exhibits so the students benefited from not only the museum experience, but having a guide with deep science knowledge discuss the material with them and answer their questions.

Helping STEM programs thrive.

Sufficient resources are critical to maintaining STEM learning in afterschool programs. NGCP assists with program sustainability by:

- **Enabling programs and organizations to find partners.** NGCP provides opportunity for programs and organizations to find potential collaborators at in-person events as well as through the NGCP Program Directory, a powerful on-line resource featuring over 3,100 programs and organizations. The Program Directory allows organizations to describe their offerings as well as enter their needs and resources thereby allowing others to search for those who can meet their needs or utilize their existing resources.
- **Providing mini-grant funding.** NGCP incentivizes collaboration by giving mini-grants to organizations that partner with at least one other organization on a STEM-focused project. Funded projects leverage the resources and expertise of partner organizations to provide opportunities each organization would not be able to provide if working alone. An overwhelming majority of partners receiving mini-grants report continuing their collaborations post-funding, whether it is to continue the project they initially started together or to develop a new project. For many mini-grant recipients, working collaboratively allows each partner to accomplish more with fewer resources.

Sharing STEM success stories.

Significant work is being done by many afterschool organizations to share how STEM learning is being incorporated in afterschool programs. NGCP lends its voice to support these efforts by leveraging its resources and national network to publicize afterschool STEM learning by:

- **Publishing a monthly e-newsletter.** The monthly e-newsletter highlights NGCP-related programs, many of which involve afterschool activities, and publicizes afterschool efforts and events. With a distribution list of over 24,000, the e-newsletter increases awareness of afterschool activities across the country and the afterschool community's commitment to STEM learning.

“NGCP has assembled a treasure trove of research-based articles as well as highly accessible webinars that help us anchor and modify our program model in practical ways, and develop better grant proposals.”

— Connie Chow, Executive Director,
Science Club for Girls





Afterschool Programs

- **Using its national presence to advocate for afterschool STEM programs.** As a national organization, NGCP is in a position to represent afterschool programs and other informal learning projects on a national stage and with STEM-related organizations and events that may not always specifically include afterschool representatives.

Conclusion

NGCP harnesses the power of national as well as local collaboration to help strengthen the capacity of youth-serving organizations to provide high-quality programming in STEM. The NGCP model represents an innovative method for developing collaborative relationships between youth-serving organizations, K-12 and higher education, professional organizations, and industry, leveraging resources to benefit afterschool programs and the youth they serve.

Enter your program or organization in the NGCP Program Directory and search for potential collaborators: www.ngcproject.org/directory.

Find connections and resources for afterschool programs at www.ngcproject.org.

- Find a Collaborative event happening near you.
- Participate in an upcoming webinar and view archived webinars.
- Sign up for the NGCP e-newsletter to receive a monthly listing of resources, events, and NGCP Collaborative news.
- Check out mini-grant project descriptions to spark an idea for a collaborative STEM-related project for your program or organization.



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