

Defining Youth Outcomes of STEM in Afterschool:

Webinar Links and Resources

As webinar participants began to think about the learning outcomes that afterschool STEM can provide, many questions arose about the implications of the outcomes framework. Below, we offer our resources to help answer those questions about assessment tools, partnerships, libraries and the Next Generation Science Standards.

Assessment Tools

In narrowing down the types of youth learning outcomes that are appropriate and feasible for afterschool STEM to provide, it is important to ensure that the assessment tools programs use are suited to capturing those outcomes, indicators and sub-indicators discussed in the report. One of the three major recommendations outlined in [*Defining Youth Outcomes for STEM Learning in Afterschool*](#) is directed at evaluation and assessment experts, recommending there be a discussion about the current availability of appropriate tools. The report also recommends that tools developed in the future be informed by the results of this study.

Helpful resources for finding assessment tools include:

- The [Assessment Tools in Informal Science](#) (ATIS) website, which provides a searchable database of different types of tools for various ages and focus areas.
 - This site is maintained by the [Program in Education, Afterschool and Resiliency](#) (PEAR), a research group that has developed [several assessment tools](#) including the [Dimensions of Success](#) (DoS).
- Another tool, specifically for high school programs, is a [quality self assessment](#) rubric from the [California AfterSchool Network](#).
- Also mentioned in the webinar was the list of [assessment and planning tools](#) from the [Power of Discovery](#) website.

The Next Generation Science Standards

The upcoming release of the [Next Generation Science Standards](#) (NGSS) presents an opportunity for afterschool and out-of-school-time programs to think strategically about the field's potential to play a significant role in their implementation and to become a strong partner to K-12. The learning outcomes detailed in the report can also help the afterschool field understand and articulate its role in broader STEM education goals. Look out for more on this topic from us in the future!

"With the Next Generation Science Standards stressing practices as well as content knowledge, informal ed[ucation] is going to have a real opportunity to reinforce the science and engineering skills, practices and disciplinary ways of thinking."

Jonathan Hertel

Engineering is Elementary
Museum of Science, Boston



Anita Krishnamurthi, our Director of STEM Policy, says "NGSS will be a game changer when it is released and especially if it is adopted. We still have to see how informal science will fit into it, but it will be very difficult for schools to implement the standards on their own". She recommends that afterschool programs start having conversations with schools and other educational leaders about how they can work together once the standards roll out. Jonathan Hertel, a researcher with Engineering is Elementary, adds that "with the NGSS stressing practices as well as content knowledge, informal ed[ucation] is going to have a real opportunity to reinforce the science and engineering skills, practices and disciplinary ways of thinking".

Partnerships

There are many models of partnerships between afterschool programs and science-rich organizations like science centers or museums, universities, government labs and STEM businesses. The nature of what science-rich organizations can contribute to afterschool programs varies greatly and can include curriculum, staffing or volunteers, professional development, facilities use, materials or tools.

If you're looking for tips on how to **develop and maintain partnerships**, check out the following resources:

- The [Promising Practices Guide for 4-H Science in Urban Communities](#) includes a section with great advice on [partnerships](#).
- The Research Center on Informal Science Education (RISE) has developed a [guide to museum-university partnerships](#) which provides insights into both types of organizations.
- The new book, *Expanding Minds and Opportunities: Leveraging the Power of Afterschool and Summer Learning for Student Success*, contains [several chapters](#) with examples of partnerships with libraries, universities and museums.

[East End House](#), a community center in Cambridge, MA, uses a variety of partners to meet the needs of their afterschool STEM program. Read [their profile](#) in our STEM Afterschool Storybook.

To **find potential partners** in your area, we recommend:

- Contacting your [State Afterschool Network](#) to learn about the STEM initiatives happening locally.
- The [National Girls Collaborative Project](#) supports [regional and local collaboratives](#) who partner with a variety of community organizations.
- The [Coalition for Science AfterSchool](#) also maintains the [National After School Science Directory](#), containing over a thousand STEM opportunities from youth-serving organizations across the country.
- Visit the [Association for Science-Technology Center's](#) (ASTC) website to find your local science center.



The Afterschool Alliance will be launching the Afterschool STEM Impact Awards, sponsored by the Noyce Foundation, in the next few weeks. Programs are invited to apply for a chance to win one of two \$10,000 awards! One of our application categories will be specific to partnerships and we will also be producing an issue brief on partnerships to further delve into this topic. Stay tuned for details!

Libraries and Out-of-School-Time Programs

Several participants brought up the idea that libraries may have an increasingly important role in out-of-school-time (OST) programs and the potential for STEM learning. Some great resources to explore include:

- A recent Afterschool Alliance webinar, [The New Normal: Libraries as Partners in 21st Century Learning](#), covered this phenomena in-depth.
- The [Institute for Museum and Library Sciences](#) (IMLS) has several resources for more information on what kinds of projects are happening in the OST space. As mentioned in the webinar, there are a couple of initiatives aligned with STEM learning – [Maker Spaces](#) and [Learning Labs](#), which are focused on teens learning digital media and modeled after the [YOUmedia](#) project at the Chicago Public Library. You can also browse [recently funded grant projects](#) to afterschool and OST programs.
- [School and Public Libraries: Enriching Student Learning and Empowering Student Voices Through Expanded Learning Opportunities](#), a chapter in the recent book, *Expanding Minds and Opportunities: Leveraging the Power of Afterschool and Summer Learning for Student Success*, specifically addresses library partnerships and gives several examples of successful programs.
- The Afterschool Alliance has written a few times about the potential in afterschool-library partnerships on our Afterschool Snack blog:
 - [Libraries and museums as afterschool allies](#)
 - [The important role of libraries in the hours after school](#)
 - [Libraries and afterschool: creating exciting opportunities for kids](#)

If you have additional questions,
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