

MILLION GIRLS MOONSHOT

This month the Million Girls Moonshot celebrates the amazing work that women engineers around the world are doing to support lives and livelihoods every day. We have included several new resources that Networks and program providers can utilize to profile the best, brightest and bravest women in engineering, the inventors and innovators who dare to be part of the solution and are helping to build towards a brighter future.



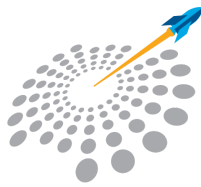
National Afterschool STEM Program survey



International Women in Engineering Day and the Great Outdoors

- [Great Women in Engineering History](#) - Long before women engineers were considered something special, some amazing women were doing great things to pave the way. Although their contributions are sometimes unrecognized, women with a little ingenuity have always had the power to do great things.





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- [Meet Nuclear Engineer Ciara Sivels](#)
- [More information on Ciara Sivels](#)



- [Meet Engineer, Writer and Educator Ritu Raman](#)
- [Profile Video](#) of Ritu Raman
- Looking for more assets featuring Ritu Raman click [here](#).



- **Video:** [All About Nuclear Engineering: What it's Really Like to be a Nuclear Engineer](#)
- **Posters and Printables:** [This is What a Scientist Looks Like](#) poster of IF/THEN Ambassador and engineer Erika Anderson. This poster can be used in your physical spaces to highlight an inspiring role model in engineering.





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These assets feature IF/THEN Ambassador and National Park Service Biologist/Educator, Sam Wynns, and can be used in marketing, presentations, social media, and for conferences presentations.

- [Ambassador Profile](#) of Sam Wynns
- [STEM Journey](#) of Sam Wynns
- [On-the-Job](#) of Sam Wynns

Don't know where to start in the IF/THEN Collection? Here are some tools to help you!

- [IF/THEN Collection Video Tour](#)
- [Collection Scavenger Hunt](#)
- [User Guide](#)

FEATURED WEBINARS

Engineering Mindsets - Math

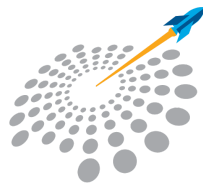
- [Webinar Recording](#): The M in STEM: Making Math Meaningful



Role Models And Mentors as an Equity Strategy

- **Role Models Matters Training for STEM Volunteers**
Ready to train volunteers and role models in your Network, school, or afterschool program?
[COMPLETE THIS REGISTRATION FORM](#) to gain access to the Role Models Matter training developed by Techbridge Girls.





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QUALITY TRAININGS

PEAR Trainings

PEAR staff provides ongoing technical assistance, quarterly data reports, and online data management support for all DoS observers for two years post-certification.



DOS Program Planning Tool Training

The DoS-PPT is a free resource for facilitators of out-of-school and in-school STEM learning programs. The planning tool provides a brief introduction to each dimension of the DoS framework, sample videos, and examples to guide the use of DoS when preparing activity plans for youth. During this training, participants will:

1. Develop high-level understanding of the DoS Framework, dimensions of quality
2. Working with the PPT learn how to plan high quality STEM learning experiences using the DoS Program Planning Tool
3. Work with the newly revised DoS Program Planning Tool to identify and plan for high-quality program and activity planning practices.

Dates and times are:

- August 2 and 4th 2:00 - 3:30pm EST (attendance required both days)

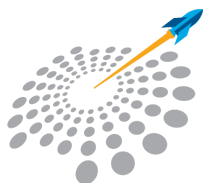
[JOIN ZOOM MEETING](#); ID: 86096341901 and Passcode: 872162; (US) +1 646-876-9923 and Passcode: 872162

DOS Certification Training

The training process involves a two-day live webinar training, completion of video calibration exercises, a one-hour live calibration session, and successful completion of two practice observations in the field. PEAR staff offer live, webinar DoS training monthly and in-person training for state networks or organizations can be arranged as needed for an additional cost. PEAR staff provides ongoing technical assistance, quarterly data reports, and online data management support for all DoS observers for two years post-certification. **Dates and times are:**

- July 13-14, 2022; 10am-4pm ET. (register by June 29)
- October 19-20; 10-4pm ET. (register by October 5)

[REGISTER HERE](#)



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Recertification Training for DOS Observers

Please note that observers that have been certified for two or more years need to complete recertification to make sure they are continuing to use the tool reliably. **Dates and times are:**

- August 9, 2022; 10-1pm ET (register by July 26)
- November 8, 2022; 10-1pm ET (register by October 25)

[REGISTER HERE](#)

[ACRES July and August Cohorts](#)

ACRES is a nationally acclaimed coaching program that builds knowledge and skills so after school educators, librarians and anyone who works with youth in out-of-school settings can confidently facilitate Science, Technology, Engineering, and Math (STEM) experiences for youth. More information found [here](#).



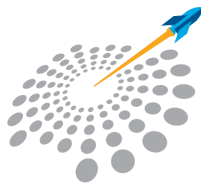
June Cohort: Asking Purposeful Questions

Questions are the beginning of a path towards discovery, imagination, and STEM exploration. How can we help youth expand and clarify their thinking and develop their reasoning through the questions we ask them? This module is a great way to train new summer staff on how to facilitate STEM learning. Experienced educators also love being part of a cohort as a way to connect with other educators across the country, to learn new lesson plans, and to reflect on practice. This is our introductory module and a prerequisite to other opportunities. *The expectation is that you will be live at all three sessions and an active member of this coaching cohort. Stipends are offered to participants who complete feedback surveys before and after a module.

Cohort dates and times are: 3:00 to 5:00PM EST on the following Wednesdays
6/15/2022, 6/29/2022, 4/20/2022; **[REGISTER HERE](#)**

June Cohort: Modeling Engineering Practices

Engineering has become a staple of STEM programming for youth. How can we confidently bring engineering into our programming and support youth as they engage in problem solving? In this module, participants gain first-hand experience with engineering by solving a design problem. They examine the components of the engineering design process and discuss ways to model the process with youth. Asking Purposeful Questions is a prerequisite to this skill. *The expectation is that you will be live at all three sessions and an active member of this coaching



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cohort. Stipends are offered to participants who complete feedback surveys before and after a module.

Cohort dates and times are: 1:00 to 3:00 EST on the following Thursdays
6/17/ 2022, 7/1/2022, 7/22/2022; [REGISTER HERE](#)

July Cohort: Asking Purposeful Questions

Questions are the beginning of a path towards discovery, imagination, and STEM exploration. How can we help youth expand and clarify their thinking and develop their reasoning through the questions we ask them? This module is a great way to train new summer staff on how to facilitate STEM learning. Experienced educators also love being part of a cohort as a way to connect with other educators across the country, to learn new lesson plans, and to reflect on practice. This is our introductory module and a prerequisite to other opportunities. *The expectation is that you will be live at all three sessions and an active member of this coaching cohort. Stipends are offered to participants who complete feedback surveys before and after a module.

Cohort dates and times are: 10:00 to 12:00 EST on the following Tuesdays
7/26/ 2022, 8/9/2022, 8/23/2022; [REGISTER HERE](#)

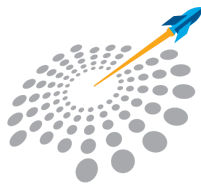
ADDITIONAL PROFESSIONAL DEVELOPMENT

- **Webinar Recording:** [NGCP Archived Webinar: Families & STEAM: Strengthening Relationships & Building Partnerships](#) - Family engagement in STEAM can come in many forms — STEAM nights, science fairs, family newsletters, etc. But how can you move into a deeper partnership with families in the service of STEAM learning? In this webinar, we'll hear from practitioners and researchers who are working to deepen engagement with youth and their families to intentionally support equity in and access to STEAM opportunities. You will hear about strategies, examples, and current research, and will have the opportunity to ask questions.

TRANSFORMATIVE PRACTICES

Equity and Inclusion

- **Article:** [We Rep STEM - STEM Profile - Joy James](#) - We've said it time and again: Representation matters. That's especially true for children, whose perceptions of the world are based, in part, on the things they see. When Joy James set out to write her



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book, 101 Brilliant Black Inventors and their Inventions, she wanted to create something that would inspire her young children. The end result – an in-depth celebration of the achievements of Black innovators.

Engineering Mindsets

- **Article:** [What is Environmental Engineering?](#) - Curious about what environmental engineering is, and what an environmental engineer does? Read on to find out! We've even got a hands-on environmental project for you—and it's delicious. (Yes, delicious!)
- **Article:** [Epic Fail! Working to Reframe the Concept of Failing](#) - Ways to make engineering and inventing accessible and exciting through celebrating failure.

Incorporating Role Models

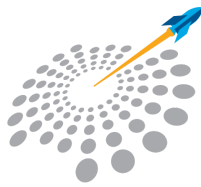
- **Article:** [Incorporating the Stories of Women, People of Color, and LGBTQ+ Scientists Into the Physics Classroom](#) - Short article from NSTA about the contributions of women, people of color, and other diverse scientists to the field of Physics. Includes a link to lesson plans for lesson plans that could be adapted for K9-12.
- **Article:** [Role Models, Mentors, and Sponsors](#) – What's in a Name? - Identify the differences between role models, mentors, and sponsors and how to utilize each.

Families



Are you looking to meaningfully engage K-8 families in STEM this summer and fall?

The Institute for the Study of Resilience in Youth (ISRY) at McLean Hospital and Harvard Medical School, in partnership with STEM Next, wants to learn more about how to support programs that are taking ideas from the [STEM Family Engagement Planning Tool](#) and putting them into action to increase equitable family engagement in STEM during the summer and fall of 2022.



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Eligible programs will receive \$1,500, consultation support, and professional development in summer and fall 2022. Read more about [participation criteria and benefits](#) and [submit an interest form](#) before June 10th, 2022.

- **Article:** [Educational Justice Starts with Equitable Family Engagement](#) by Riddhi Divanji, Ella Shahn, and Sydney Parker - Designing surveys and sharing data with a wide range of stakeholders results in a deeper understanding of the data from multiple perspectives.
- **Article:** [‘I’m not just a mom’: Parents as creators, collaborators, and learners in creative computing](#) by Ricarose Roque - Social support from parents can play an important role in engaging and sustaining young people’s participation in computing. The authors identified many supportive roles for parents, including collaborating with their children on projects, providing resources and finding new opportunities.

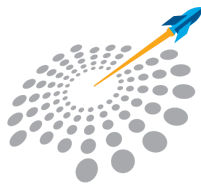


[STEM Transitions, Handoffs, and Coordination](#)

- **Toolkit:** [Brokering Youth Pathways: A Toolkit for Connecting Youth to Future Opportunity](#) from the Hive Research Network - This toolkit shares ways in which various out-of-school educators and professionals have approached the challenge of brokering. We provide a framework, practice briefs and reports that focus on a particular issue or challenge and provide concrete examples, as well as illustrate how our partners worked through designing new brokering routines in partnership with our research team.

[ACTIVITIES FOR PROGRAMS](#)

- **Activity:** [After-School Science PLUS](#) - Download *Building with Wonderful Junk* and take the challenge! Build a bridge or a platform that meets a set of requirements and test it. Challenge the kids to add to the activity (For example build a bridge that will hold a student up 6 inches from the floor).
- **Activity:** [Design Squad: Invent it, Build It: Making the world a better place](#) - Research tells us that when kids think their activity helps others it increases engagement.



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Activities encourage kids to think of themselves as inventors, discuss inventing and engineering, and dispels the stereotype that engineering is boring.

- **Activity:** [4 Great Outdoor Activities to Do With Kids This Summer](#) - These easy activities are designed to be suitable in a COVID conscious environment. Young children play outdoor games, plant a garden, make ice cream, and participate in a scavenger hunt.
- **Activity:** [Engineering Ocean Currents](#) - This is a fun and interactive **activity** that is designed to enhance student understanding of the **engineering** design process.
- **Activity:** [Engineering a Fix for the Great Pacific Garbage Patch](#) - This activity encourages youth to use engineering to take care of the planet.

Featured Activities & Playlists

- **Playlist: Helping the Planet for 3rd Grade** - This playlist allows younger students to go outside and learn about ways to help the environment.
- **Module: Helping My Community** - Communities play a unique role in our growth and development from children to adults. In this module, youth will spend time minimizing their environmental footprint and planning garden for wildlife.
- **Activity: An Inside Look at a Recycling Center** - Students will increase their understanding of how recycling affects our environment and helps save our natural resources. They will learn about the recycling process that begins after material is collected and brought to a recycling center.

MIZZEN BY MOTT MOONSHOT CONNECTION

**AUDIENCE: FOR NETWORK
STEM/MOONSHOT STAFF, PARTNERS
AND PROGRAM PROVIDERS**

The [Mizzen By Mott app](#) delivers inspiring and engaging activities that spark learning in young people. Supported by the Mott Foundation, Mizzen is available at no cost to afterschool professionals! Encourage partners to download the Mizzen By Mott app to access STEM activities at your finger-touch! You'll find it in Mizzen [here](#).

