



The Million Girls Moonshot compiles quarterly asset packages to help meet the needs of **program providers and staff in your state**. Please share these assets widely with your partners and programs! The fourth quarter Asset Package will be released mid-September. To promote these opportunities, find access the [MEDIA ASSETS](#) below.

## How to Use this Asset Package:

↩ Use the table of contents to the left to find the month, topic, or resource you need. Click to move to the resource of your choice. OR click the hyperlinks in the table below.

In the document's body, you can minimize the copy by clicking the > to the left of the opportunity title. [Share with us!](#) We welcome feedback on the format and want to hear your impact stories.

## What's Happening? The Quarter at A Glance

### [Special Opportunities](#)

[Media Assets for Special Opportunities](#)

### [July: Moon Day/ World Brain Day](#)

[Trainings for July 2024](#)

[Transformative Practices for July 2024](#)

[Activities for July 2024](#)

[Media Assets for July 2024](#)

### [August: Back to School Month](#)

[Trainings for August 2024](#)

[Transformative Practices for August 2024](#)

[Activities for August 2024](#)

[Media Assets for August 2024](#)

### [September: Hispanic Heritage Month](#)

[Trainings for September 2024](#)

[Transformative Practices for September 2024](#)

[Activities for September 2024](#)

[Media Assets for September 2024](#)

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# Special Opportunities

On-going and time-sensitive opportunities to engage in STEM learning, media campaigns and professional development opportunities with stipends.

## STEM Next Opportunity Fund presents: Verizon Academy

STEM Next Opportunity Fund is now accepting applications through October 1st for Verizon Academy, an in-depth training for up to 25 out-of-school-time program providers. Learn how to implement Verizon's new learning journeys designed to engage youth in building technical and social/emotional skills through hands-on experiential learning.

### Apply by Oct. 1.

Verizon Academy participants will:

- Participate in three virtual trainings with STEM Next experts to be held Oct. 17, 24 & 31 at 2-3 p.m. EST/11 a.m.-Noon PST
- Implement five 60-minute lessons using high-quality curriculum on ocean conservation, coding, design thinking, and entrepreneurship by Nov. 29
- Access ongoing virtual support and coaching
- Provide feedback to STEM Next about the experience by Dec. 13 to help optimize learning journeys for OST programs
- Receive \$2,500 stipend

### Eligibility

- Programs should serve at least 45 youth in grades 5-8.

### Contact

- Direct questions to Sabrina Gomez at [ms.sabrina.gomez@gmail.com](mailto:ms.sabrina.gomez@gmail.com) and Andria Parrott at [aparrott@stemnext.org](mailto:aparrott@stemnext.org).

# Join Verizon Academy!

Cohort of up to 25 OST programs will learn how to implement Verizon's new learning journeys designed to engage youth in building technical and social/emotional skills through hands-on experiential learning.

Apply by  
Oct. 1!

- Virtual trainings with STEM Next experts
- High-quality curriculum on ocean conservation, coding, design thinking, and entrepreneurship
- Ongoing virtual support and coaching
- Help optimize learning journeys for OST
- \$2,500 stipend

## Eligibility & Application

Programs should serve at least 45 youth in grades 5-8.

Apply by Oct. 1 at [milliongirlsmoonshot.org](http://milliongirlsmoonshot.org)



## Free Rockin' Rockets Design Challenge Activity Kits

Are you looking for no cost kits targeted at 5-8th grade youth in afterschool? Look no further than Rockin' Rockets Design Challenge Activity Kit!

This kit includes a lesson plan and materials for 20 youth. In the lesson, youth will make paper rocket models and launch them by blowing through a straw. Youth will experiment with changing the rocket then observe and record the effect on its distance traveled. Finally, youth share their designs and discoveries with the group. Youth will explore the concepts of gravity, thrust, lift, drag and see Newton's Three Laws of Motion come to life.

Interested in receiving the free student kits and lessons? [SIGN UP HERE!](#)

# Free Rockin' Rockets Design Challenge Activity Kits



MILLION GIRLS MOONSHOT  
A STEM NEXT INITIATIVE

No cost kits for 5-8th  
grade youth in  
afterschool

SIGN UP



milliongirlsmoonshot.org



## Flight Crew in New Engineering Series

**Transform a student's future!**

**Access new resources to explore engineering!**

Unlock the potential of future engineers with Discover Engineering's new challenge video series. Million Girls Moonshot's very own [Miranda from Austin, TX](#), and [Star from Lithia Springs, GA](#), teamed up to co-host the new series, presenting exciting new videos designed to ignite the engineering spark in middle school students.

Dive into the world of innovation and problem-solving with our first two challenges:

- Puff Mobiles: Harness the power of wind to create a sleek, straw-powered car using everyday materials like tape, paper, and lifesavers!
- Build a Bridge: Put your engineering skills to the test by constructing sturdy bridges using just paper and aluminum foil. How many pennies can your bridge support?

These captivating videos introduce the Engineering Design Process in a fun and accessible manner, inspiring budding engineers to think critically and creatively. Plus, each activity is designed with easily accessible, low-cost materials, making them perfect for home, classroom or after school program exploration.

Don't miss the premiere of these innovative challenges on Monday, June 24 at the Girls Solutions Conference in San Diego, CA. Afterward, these free resources will be available on DiscoverE's website, complete with detailed leader notes and student instructions, at <https://discovere.org/engineering-activities/>

Stay tuned for even more excitement as five additional challenge videos are set to be released in Fall 2024, offering new avenues for exploration and discovery.

**NEW**

Engineering Activity Videos

**Puff Mobiles**  
Make a vehicle that runs on wind power!

**Build a Bridge**  
Put paper and aluminum foil to the test!

**Hosts**

**Star**  
Georgia Flight Crew

**Miranda**  
Texas Flight Crew

DISCOVER ENGINEERING

## Share STEM Role Models with Verizon Career Profiles

Introduce your students to Data Scientists, Engineers and Connectivity Experts today!

Career profiles, featuring Verizon STEM Professionals, are now available for educators and students to explore any time.

From starting salaries to recommended courses and activities to engage in early, students will get a better understanding of the many types of careers available at an American multinational telecommunications conglomerate. Thanks to Verizon, access to real STEM Mentors is just a click away!

[Find Career Profiles Here!](#)

Let us know how these were helpful in your work. [Completing this brief survey](#) helps us make resources better for you! Thank you in advance.

# MEET AN ENGINEER



Do not give up, study hard, do not settle for less.

Anything is possible and sky is the limit.”

Joanne Rodriguez, Principal Engineer, Technical Project Management, Verizon



[www.milliongirlsmoonshot.org](http://www.milliongirlsmoonshot.org)

## illumina Career Exploration Resources

Illumina offers a number of free resources for educators and families to introduce genomics and life sciences to young people. From [DIY DNA Extraction Kits](#) to short career profile videos and study guides, ready-to-implement resources are available at [www.dnaday.org](http://www.dnaday.org)

As the school year winds down, the summer approaches, and even in preparation for the next afterschool season, introduce students to careers as Biotechnicians, Genetic Counselors, and AI/Deep Learning Engineering.



[Meet Illumina STEM Professionals Here!](#)

Did you know that  
**85%** of jobs that  
will exist in **2030**  
haven't even  
been invented  
yet?



MILLION GIRLS MOONSHOT  
A STEM NEXT INITIATIVE

Career  
Exploration  
with Illumina



## Media Assets for Special Opportunities

### Free Rockin' Rockets Design Challenge Activity Kits

Looking for no-cost kits for 5th-8th graders? Check out the **Rockin' Rockets Design Challenge Activity Kit!** 🌟

This free kit includes everything you need to engage 20 youth in a hands-on STEM lesson where they'll design, launch, and experiment with paper rockets. As they explore gravity, thrust, lift, drag, and Newton's Three Laws of Motion, they'll have a blast while learning key science concepts.

Interested in receiving the free kits and lessons? Don't miss out—grab yours today!

👉 **Learn More & Request Your Kit:** [https://stemnext.tfaforms.net/f/Rockin\\_Rockets\\_Design\\_Challenge](https://stemnext.tfaforms.net/f/Rockin_Rockets_Design_Challenge)

#AfterschoolSTEM #STEMEducation #RockinRockets

🚀 Looking for free STEM kits for 5-8th graders in afterschool? Check out the Rockin' Rockets Design Challenge Kit! ☀️ Engage youth in hands-on learning with rocket launches & explore key science concepts. Interested? 👉 [https://stemnext.tfaforms.net/f/Rockin\\_Rockets\\_Design\\_Challenge](https://stemnext.tfaforms.net/f/Rockin_Rockets_Design_Challenge) #AfterschoolSTEM #STEMEducation

## Flight Crew in New Engineering Series

-Unlock the potential of future engineers with Discover Engineering's new challenge video series! Join Miranda and Star as they ignite the engineering spark in middle school students with fun, low-cost activities. Premiering June 24 at the Girls Solutions Conference. More info:

<https://discovere.org/engineering-activities/> #STEMEducation #Engineering

-Discover Engineering is excited to launch a new challenge video series, co-hosted by Million Girls Moonshot's Miranda from Austin, TX, and Star from Lithia Springs, GA. These videos are designed to ignite the engineering spark in middle school students with fun, low-cost activities.

Explore our first two challenges:

- Puff Mobiles: Create a straw-powered car using everyday materials.
- Build a Bridge: Construct sturdy bridges with paper and aluminum foil.

Premiering June 24 at the Girls Solutions Conference in San Diego, CA, these resources will be available on DiscoverE's website, complete with leader notes and student instructions:

<https://discovere.org/engineering-activities/>

## Share STEM Role Models with Verizon Career Profiles

-Introduce your students to inspiring STEM role models with Verizon Career Profiles! Explore profiles of Data Scientists, Engineers, and Connectivity Experts, and learn about career paths, starting salaries, and recommended courses. Access now: <https://www.milliongirlsmoonshot.org/find-a-stem-model>

#STEMEducation #CareerProfiles #Verizon

-We are excited to announce the availability of Verizon Career Profiles, designed to introduce your students to inspiring STEM role models. Educators and students can now explore profiles of Data Scientists, Engineers, and Connectivity Experts at their convenience.



-These profiles provide valuable insights into various career paths, including starting salaries and recommended courses and activities to engage in early. Thanks to Verizon, access to real STEM mentors is just a click away! Explore the Career Profiles here:  
<https://www.milliongirlsmoonshot.org/find-a-stem-model> #STEMEducation #CareerProfiles #Verizon

## illumina Career Exploration Resources

-Did you know that 85% of jobs that will exist in 2030 haven't even been invented yet? Educators! Explore the future of genomics and DNA with Illumina! Check these video resources designed to integrate genomics into student experiences, spark new interests, and deepen learning.  
<https://dnaday.org/careers-in-genomics/>

-Whether you're an educator sharing career possibilities in genomics or a student wondering if this path is right for you, discover endless opportunities with Illumina! #TheFutureisBright #Genomics4All #CareerExploration <https://dnaday.org/careers-in-genomics/>

## July: Moon Day & World Brain Day

### Trainings for July 2024

ACRES Coaching: Asking Purposeful Questions

Mondays: 7/8, 7/22, and 8/5/2024 2:00- 4:00 pm EST / 11:00 am- 1:00 pm PST

Questions begin a path toward 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 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. Recordings are not available if you are unable to attend. [REGISTER HERE](#) **AC357PQ (Coach Becky T)**



ACRES COACHING

# Asking Purposeful Questions


**Mondays: 7/8, 7/22, and 8/5/2024 2:00-4:00 pm EST / 11:00 am- 1:00 pm PST**

[www.milliongirlsmoonshot.org](http://www.milliongirlsmoonshot.org)

ACRES Coaching: Elevating Youth Voice and Choice (For OST professionals who have completed Asking Purposeful Questions)

Wednesdays: 7/10, 7/24, 8/7/2024 noon - 2:00 pm EST / 9:00 am - 11:00 am PST

How often do youth in your program get to choose what they're investigating or designing, the materials they might use and/or how they engage with the work? In this module, participants try out strategies for elevating youth voice and choice and apply the ideas as they redesign a STEM activity to incorporate a greater variety of youth input. \*The expectation is that you will be live at all three sessions and an active member of this coaching cohort. Recordings are not available if you are unable to attend. [REGISTER HERE](#) Code: **AC356VC (Coach Becky T)**



**ACRES Coaching**

# Elevating Youth Voice & Choice

Wednesdays: 7/10, 7/24,  
8/7/2024 noon - 2:00 pm EST /  
9:00 am - 11:00 am PST

[www.milliongirlsmoonshot.org](http://www.milliongirlsmoonshot.org)

ACRES: Info Session about Micro-credentials and Digital Badging  
Tuesday, July 23rd 2:00 - 3:00 pm EST / 11:00 am- Noon PST

ACRES (Afterschool Coaching for Reflective Educators in STEM) is excited to offer additional Information Sessions about STEM micro-credentials, which are competency-based, digital badges for afterschool and out-of-school professionals offered through the National Afterschool Association. These sessions are free, live, interactive, and one hour in length. You will learn about what Micro-credentials are and how to apply for them. [PLEASE FILL OUT THIS FORM](#), choose the date that works best for you, and we'll reach out to you with the Zoom link. FMI contact [acres@mmsa.org](mailto:acres@mmsa.org) (Note: It isn't necessary to attend more than one informational session as the content is consistent.)



ACRES: Info Session

# Micro-Credentials & Digital Badging

Learn more about STEM micro-credentials

**TUESDAY, JULY 23RD 2:00 - 3:00 PM EST /  
11:00 AM- NOON PST**

[www.milliongirlsmoonshot.org](http://www.milliongirlsmoonshot.org)

MILLION GIRLS MOONSHOT  
A STEM NEXT INITIATIVE

## Transformative Practices for July 2024

The Million Girls Moonshot aims to raise awareness of the following four research-based practices — Equity and Inclusion, Engineering Mindsets, Role Model, Mentors, and Families, and STEM Pathways and Transition — proven to remove barriers to access and quality STEM learning experiences. Resources, toolkits, blogs, and activities that elevate these four Transformative Practices can be found below and on the [Million Girls Moonshot Toolkit](#)

- [Access to STEM Framework](#): To improve the overall quality of out-of-school STEM programs, we need to address how program providers design and implement programming to increase access in STEM for youth who have been underrepresented in the STEM fields. Partnering with the National Girls Collaborative Project (NGCP) and national experts, we have developed an Access to STEM Framework — a guide for supporting program providers in this transformation. [Download the Framework](#).

- [Equity in Education: Evidence Based Strategies](#): Equity in education has become a common goal and guiding principle for modern school improvement and education reform efforts in the United States. But what does equity in education truly mean and how can it be achieved? This resource center is a one stop shop to help leaders and practitioners define exactly what is meant by “equity in education” vs. equality and materials to support youth and families.
- [Women at NASA](#): Women have always played a critical role in NASA’s history. From the first black female engineer to the first female astronaut—many of our female pioneers have been the “first” to achieve something monumental in their fields. Today, the women of NASA continue to lead and inspire in science, technology, engineering and mathematics (STEM) and truly make an impact on society. As we look ahead, we know it will take a diverse workforce to achieve our ambitious goals—like putting the first woman and first person of color on the Moon. NASA is committed to recruiting and retaining women in STEM to help the agency continue to push boundaries to achieve the impossible.
- [Partnering with Multilingual Families](#): Engaging with families of students who are learning English is a powerful lever for fostering academic success and overall student well-being. The Ohio Afterschool Network has outlined effective strategies for engaging with families of english language learners in STEM.

## STEM Learning Pathways & Career Awareness

Research tells us that continuous engagement and exposure rather than limited one-time opportunities are needed to nurture the interest and motivation necessary for children to pursue STEM pathways long term. The Moonshot aims to understand and support transitions and handoffs that remove barriers for youth by connecting STEM learning across ages and settings, ensuring youth interest and motivation persists.

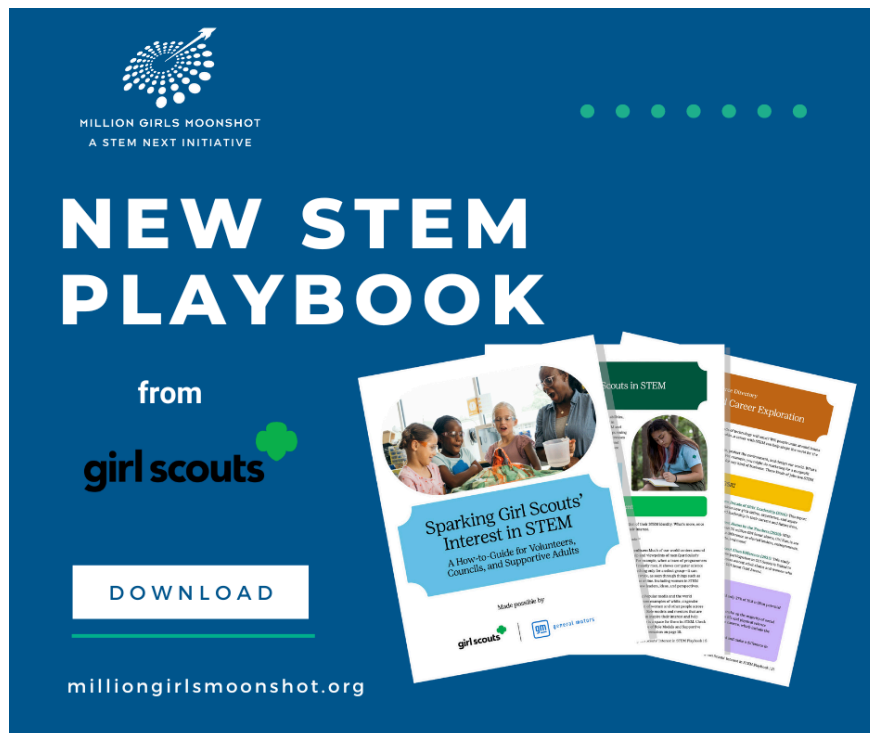
- [Maryland Out of School Time College and Career Readiness Toolkit](#): This is a comprehensive guide to help middle and high school out-of-school-time programs get laser focused on building 21st century skills and supporting young people as they navigate through the complex world of planning for their advanced education and careers. We will be adding free and low cost professional development resources including videos, online courses and opportunities for live virtual training. Want to help MOST spread the word? Use the [Social Media Sharing Resources](#) to spread the word.
  - [College and Career Readiness Middle School Playlist](#): This playlist is designed for middle school audiences focused on the College & Career Readiness Toolkit developed by the Maryland Out of School Time Network. This playlist distills the CCR Toolkit information into an actionable sequence for out-of-school time practitioners to implement with youth in their program. The Playlist consists of eight (8) 60-90 minute sessions aimed at middle school youth and one (1) session of pre-work for practitioners and organizational leaders only. [Check out the accompanying CCR Middle School Playlist Youth Workbook.](#)
- [Building the STEM Workforce: Quickstart Toolkit](#): This Quickstart Toolkit outlines strategies for short-term changes that can help libraries accelerate their progress as STEM equity leaders — no matter how far they’ve already progressed in that journey.
- [The Strategic Imperative of STEM Education in Workforce Development](#): In the ever-evolving landscape of workforce development, professionals are faced with the critical task of preparing individuals for success in an increasingly complex and competitive job market. This article explores the profound impact of STEM education on workforce development and provides real-world examples that underscore its transformative potential.

## Activities for July 2024

- **[Landing Humans on the Moon](#)**: Over half a century ago, on July 20, 1969, humans walked on the Moon for the first time. Take a look back at the legacy of our first small steps on the Moon and look forward to the next giant leap with the following playlist for program providers, facilitators and families.
  - [Introductory Pages](#)
  - [Activity One: Choose Your Landing Site](#)
  - [Activity Two: Sculpting Lunar Geology](#)
  - [Activity Three: Priority Packing for the Moon](#)
  - [Activity Four: Safe Landing on the Lunar Surface](#)
  - [Video of first moon landing](#)
- **[Lunar Roving Vehicle Activity](#)**: In this activity, students compare lunar rovers to family cars, and then design and build a rover model that may be used to explore the moon. Special considerations for the vehicle include the type of terrain the rover will traverse.
- **[Rocket Races](#)**: In this fun activity students construct balloon-powered racing cars using a foam tray and drinking straws. They test the cars along a measured track on the floor. After measuring trials they report on their racer design and how it performed.
- **[Can Humans Recognize AI-Generated Images?](#)**: (this one requires a printer and a camera/smartphone) Artificial intelligence (AI) generated images have exploded in popularity, bringing plenty of controversy along with them. An AI-generated image of a tiger or a flower might seem harmless, but artificial images of people or events can contribute to "fake news." In this science project youth investigate whether people can tell the difference between real pictures and pictures generated by AI.
- **[Girl Scouts STEM Playbook](#)**: The world of STEM is filled with endless opportunities to make a difference. From exploring computer coding and space exploration to building robots and solutions to problems such as climate change, girls are using STEM as a tool to change our world.

And you can help them make it all possible! Girl Scouts' new STEM Playbook is designed for anyone looking to encourage a love of STEM in girls of all ages. Whether you're involved with Girl Scouts or simply a supportive adult, the new STEM Playbook offers ideas, guidance, and access to resources and tools to grow girls' interest and skills in the field. Download the new STEM Playbook and discover new ideas to help girls build the future with STEM. [Download Girl Scouts' New STEM Playbook Here](#)









## Media Assets for July 2024

### Trainings

ACRES Coaching presents an exciting opportunity to sharpen your questioning skills and enhance STEM exploration for youth. Join us for three dynamic sessions on Mondays: 7/8, 7/22, and 8/5/2024. Engage with experienced educators, connect with peers, and unlock new strategies for facilitating STEM learning. Register now with code **AC357PQ (Coach Becky T)** <https://acrescoaching.org/modules/asking-purposeful-questions/> #STEMcoaching #YouthDevelopment #ACRES

 Elevate your STEM facilitation with ACRES Coaching!  Explore the art of asking purposeful questions in three engaging sessions on Mondays: 7/8, 7/22, and 8/5/2024. Connect with experienced educators, unlock new lesson plans, and deepen your practice. Register today with code **AC357PQ (Coach Becky T)** and let's empower youth through STEM together! <https://acrescoaching.org/modules/asking-purposeful-questions/> #STEMcohort #YouthEmpowerment #ACRES

Calling all OST professionals passionate about youth engagement! Don't miss ACRES Coaching: Elevating Youth Voice and Choice!  Learn strategies for empowering youth to shape their STEM experiences. Sessions on Wednesdays: 7/10, 7/24, 8/7/2024. Register today with code **Code: AC356VC** and let's create meaningful opportunities for youth voice and choice in STEM! <https://acrescoaching.org/modules/elevating-youth-voice-and-choice/> #YouthEmpowerment #OSTprograms #ACREScoaching

Ready to boost youth engagement in STEM? Join ACRES Coaching: Elevating Youth Voice and Choice!  Designed for OST professionals who've completed Asking Purposeful Questions, this module explores strategies for amplifying youth input. Sessions on Wednesdays: 7/10, 7/24, 8/7/2024. Register now with **Code: AC356VC**

and let's empower youth voices in STEM! <https://acrescoaching.org/modules/elevating-youth-voice-and-choice/>  
#YouthEmpowerment #OSTprogramming #ACREScoaching

Elevate your career in afterschool education! ✨ Join this Information Session about Micro-credentials and Digital Badging on Tuesday, July 23rd 2:00 - 3:00 pm EST. ACRES will guide you through the world of STEM micro-credentials offered by the National Afterschool Association. Discover how these competency-based badges can boost your professional development and expand your opportunities. 🔗 Fill out this form to reserve your spot and receive the Zoom link: <https://forms.gle/AErfHcwt6P5zUG1SA>

Join this Information Session about Micro-credentials and Digital Badging on Tuesday, July 23rd 2:00 - 3:00 pm EST. ACRES will guide you through the world of STEM micro-credentials offered by the National Afterschool Association. 🔗 Fill out this form to reserve your spot and receive the Zoom link: <https://forms.gle/AErfHcwt6P5zUG1SA>

## Transformative Practices

In partnership with @ngcproject (NGCP) and national experts, we developed the Access to STEM Framework. 📖 This guide is designed to help increase access to STEM for underrepresented youth. If you're an educator, youth program coordinator, or advocate, this Framework is a valuable resource for improving the quality of out-of-school STEM programs. Download your copy: [https://static1.squarespace.com/static/63ddd4d3686ac83bfa8c608d/t/642b771b77255b06727e7e58/1680570141172/Access-to-Stem-A-Framework\\_Final-11-%C3%97-8.5-in+%281%29.pdf](https://static1.squarespace.com/static/63ddd4d3686ac83bfa8c608d/t/642b771b77255b06727e7e58/1680570141172/Access-to-Stem-A-Framework_Final-11-%C3%97-8.5-in+%281%29.pdf) #STEMEducation #AccessToSTEM #NGCP

We're excited to share the Access to STEM Framework, a collaborative effort with the National Girls Collaborative Project (NGCP) and national experts. ✨ This Framework is your go-to guide for designing and implementing inclusive out-of-school STEM programs that empower underrepresented youth. Download the Framework now and let's work together to create equitable opportunities for all! [https://static1.squarespace.com/static/63ddd4d3686ac83bfa8c608d/t/642b771b77255b06727e7e58/1680570141172/Access-to-Stem-A-Framework\\_Final-11-%C3%97-8.5-in+%281%29.pdf](https://static1.squarespace.com/static/63ddd4d3686ac83bfa8c608d/t/642b771b77255b06727e7e58/1680570141172/Access-to-Stem-A-Framework_Final-11-%C3%97-8.5-in+%281%29.pdf) #STEMforall #InclusiveSTEM #NGCP

Equity in Education: Evidence-Based Strategies. Discover what equity truly means in education and how to achieve it with this comprehensive resource center. A must-have for STEM educators and teachers! Explore now: <https://parentpowered.com/equity-in-education/> #STEMEducation #EquityInEducation

Equity in education has become a common goal and guiding principle for modern school improvement and education reform efforts. But what does equity in education truly mean and how can it be achieved? This new resource center is your one-stop shop to help leaders and practitioners define "equity in education" vs. equality, and provide materials to support youth and families.


STEM educators and teachers, explore this comprehensive resource designed to help you foster an inclusive and equitable learning environment. <https://parentpowered.com/equity-in-education/>  
#STEMEducation #EquityInEducation

Women have always played a crucial role at #NASA. From pioneers to current leaders in STEM, they inspire and impact society every day. Discover their stories and NASA's commitment to a diverse future.

 #WomenInSTEM #NASA #Inspiration <https://www.nasa.gov/women-at-nasa/>

Women have always played a critical role in NASA's history. From the first black female engineer to the first female astronaut—many of our female pioneers have been the “first” to achieve something monumental in their fields. Today, the women of NASA continue to lead and inspire in science, technology, engineering, and mathematics (STEM) and truly make an impact on society.

Learn more about these incredible women and NASA's commitment to diversity in STEM: <https://www.nasa.gov/women-at-nasa/> #WomenInSTEM #NASA #Inspiration #DiversityInTech

Engaging with multilingual families is key to student success in STEM. The Ohio Afterschool Network shares effective strategies to support English language learners and their families. Explore these resources now!  #STEMEducation <https://mailchi.mp/c0cc8d1f6ee1/partnering-with-el-families>

Partnering with Multilingual Families of students who are learning English is a powerful lever for fostering academic success and overall student well-being. The Ohio Afterschool Network has outlined effective strategies for engaging with families of English language learners in STEM.

<https://mailchi.mp/c0cc8d1f6ee1/partnering-with-el-families>

## **STEM Learning Pathways & Career Awareness**

Want to learn more about how to support Career and College Readiness in your afterschool or summer program? Check out the new @MOSTNetwork #CCRTToolkit by visiting [bit.ly/MOSTCCR](http://bit.ly/MOSTCCR).

#OutofSchoolTime programs are great allies in helping young people build 21st Century skills and navigate the pathways toward future careers. Learn more about the @MOSTNetwork #CCRTToolkit by visiting [bit.ly/MOSTCCR](http://bit.ly/MOSTCCR).

Accelerate your progress as STEM equity leaders with the Quickstart Toolkit! Libraries can implement short-term changes to build a stronger STEM workforce. Discover strategies here:

<https://www.urbanlibraries.org/initiatives/education/building-the-stem-workforce-quickstart-toolkit>

#STEMEducation #LibraryLeaders #EquityInSTEM

Libraries play a crucial role in shaping the future of STEM. This Quickstart Toolkit outlines strategies for short-term changes that can help libraries accelerate their progress as STEM equity leaders – no matter how far they've already progressed in that journey.

Whether you are just starting out or looking to enhance your existing efforts, this toolkit provides actionable steps to support and build a more inclusive STEM workforce. Explore the toolkit

<https://www.urbanlibraries.org/initiatives/education/building-the-stem-workforce-quickstart-toolkit>

Explore the transformative power of STEM education in workforce development! Learn how STEM prepares individuals for success in a complex job market with real-world examples. 🌟 #STEMEducation #WorkforceDevelopment [The Strategic Imperative of STEM Education in Workforce Development - IAWP](#).

In the ever-evolving landscape of workforce development, professionals are faced with the critical task of preparing individuals for success in an increasingly complex and competitive job market. This article explores the profound impact of STEM education on workforce development and provides real-world examples that underscore its transformative potential. [The Strategic Imperative of STEM Education in Workforce Development - IAWP](#)

## Activities

Celebrate Moon Day on July 20th with NASA's exciting activities! From choosing your landing site to building a lunar rover, explore the legacy of our first Moon landing and look forward to the next giant leap. 🌕🚀 <https://www.nasa.gov/stem-content/landing-humans-on-the-moon/> #MoonDay #NASA #STEMEducation

In honor of Moon Day on July 20th, let's celebrate NASA's incredible legacy and look forward to the next giant leap with these engaging activities! 🌕🚀 <https://www.nasa.gov/stem-content/landing-humans-on-the-moon/>

Over half a century ago, on July 20, 1969, humans walked on the Moon for the first time. Take a look back at the legacy of our first small steps on the Moon and get excited for what's next!

Learn more and participate in these fun activities here

### [Introductory Pages](#)

- [Activity One: Choose Your Landing Site](#)
- [Activity Two: Sculpting Lunar Geology](#)
- [Activity Three: Priority Packing for the Moon](#)
- [Activity Four: Safe Landing on the Lunar Surface](#)

#MoonDay #NASA #STEMEducation #SpaceExploration

Can Humans Recognize AI-Generated Images? Artificial intelligence (AI) generated images have exploded in popularity, bringing plenty of controversy along with them. In this science project youth investigate whether people can tell the difference between real pictures and pictures generated by AI. [https://www.sciencebuddies.org/science-fair-projects/project-ideas/ArtificialIntelligence\\_p011/artificial-intelligence/AI-generated-images](https://www.sciencebuddies.org/science-fair-projects/project-ideas/ArtificialIntelligence_p011/artificial-intelligence/AI-generated-images)

## Girl Scouts STEM Playbook

Now the @GirlScouts are making it easier than ever to find the resources you need to spark a love of STEM. Find inspiration and the tools you need to build the future with STEM right here!

🔧 <https://www.milliongirlsmoonshot.org/partner/girl-scouts>

New resources alert! 🖋️💻❤️ We are excited to have teamed up with @GirlScouts for tools that spark a love for STEM and more inside the new playbook. Now it's easier than ever to get excited about STEM! Check it out here: <https://www.milliongirlsmoonshot.org/partner/girl-scouts>

We have teamed up with @GirlScouts for the ultimate playbook to make sparking a love for STEM easier than ever. Learn more about the STEM playbook today! 📖🌟  
<https://www.milliongirlsmoonshot.org/partner/girl-scouts>

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## August: Back to School Month

### Trainings for August 2024

ACRES Coaching: Making Math Engaging

Thursdays: 8/22, 9/5, 9/19/2024 1:00 - 3:00 pm EST / 10:00 am- Noon PST

Are you looking for fun ways to help youth build number sense and problem-solving skills? Math can take on new meaning when it is integrated into daily routines in our afterschool programs. In this module, afterschool educators will explore and practice strategies for making math engaging and accessible.\*The expectation is that you will be live at all three sessions and an active member of this coaching cohort. Recordings are not available if you are unable to attend. Completion of the Asking Purposeful Questions module is a prerequisite for this module.

[REGISTER HERE](#) Code: **AC358MP (Coach Becky T)**





## Transformative Practices for August 2024

The Million Girls Moonshot aims to raise awareness of the following four research-based practices — Equity and Inclusion, Engineering Mindsets, Role Model, Mentors, and Families, and STEM Pathways and Transition — proven to remove barriers to access and quality STEM learning experiences. Resources, toolkits, blogs, and activities that elevate these four Transformative Practices can be found below and on the [Million Girls Moonshot Toolkit](#)

- [Access to STEM Framework](#): To improve the overall quality of out-of-school STEM programs, we need to address how program providers design and implement programming to increase access in STEM for youth who have been underrepresented in the STEM fields. Partnering with the National Girls Collaborative Project (NGCP) and national experts, we have developed an Access to STEM Framework — a guide for supporting program providers in this transformation. [Download the Framework](#).
- [Afterschool Math Plus - FHI 360](#): Afterschool Math Plus is an evidence-based program that provides fun, real-world mathematics activities for students in grades three through eight. Materials include a culturally relevant curriculum designed around four thematic units that engage children. Each unit emphasizes identity development, careers, role models, strategies for family involvement, and inclusion of students with disabilities through an equity lens. **Includes career connections.**



- [5 Ways to Get Parents More Involved in Schools](#): When schools figure out how to truly partner and work with parents, caregivers, and families, it can be game-changing for students' academic achievement and social-emotional skills. Check out five principles behind effective family and community engagement.
- [Seven Ways to Promote Positive Communications With Families](#): One of the most meaningful and effective ways to improve rapport with families is by contacting them with positive news about their child. Together, positive communication systems are one of a handful of high-leverage practices that can help us build more cohesive and trusting school communities. Read about seven ways to promote positive communication with families, teachers, and afterschool programs.

## STEM Learning Pathways & Career Awareness

Research also tells us that continuous engagement and exposure rather than limited one-time opportunities are needed to nurture the interest and motivation necessary for children to pursue STEM pathways long term. The Moonshot aims to understand and support transitions and handoffs that remove barriers for youth by connecting STEM learning across ages and settings, ensuring youth interest and motivation persists, especially for underrepresented groups like girls, youth of color, and youth from low-income families.



- [Maryland Out of School Time College and Career Readiness Toolkit](#): This is a comprehensive guide to help middle and high school out-of-school-time programs get laser focused on building 21st century skills and supporting young people as they navigate through the complex world of planning for their advanced education and careers. We will be adding free and low cost professional development resources including videos, online courses and opportunities for live virtual training. Want to help MOST spread the word? Use the [Social Media Sharing Resources](#) to spread the word.
  - [College and Career Readiness Middle School Playlist](#): This playlist is designed for middle school audiences focused on the College & Career Readiness Toolkit developed by the Maryland Out of School Time Network. This playlist distills the CCR Toolkit information into an actionable sequence for out-of-school time practitioners to implement with youth in their program. The Playlist consists of eight (8) 60-90 minute sessions aimed at middle school youth and one (1) session of pre-work for practitioners and organizational leaders only. [Check out the accompanying CCR Middle School Playlist Youth Workbook.](#)
- [Career-Conncted-Learning-Contiuum-Framework](#): Framework highlights the “Career Connected Learning” as a continuum of awareness, exploration, preparation, and work experiences developed through strong public and private partnerships. Participants develop, apply, and are assessed on academic, technical, trade, and entrepreneurial skills that support their future career success
- [Improving workforce development and STEM education to preserve America’s innovation edge](#): New advances in robotics, artificial intelligence, and advanced manufacturing are automating jobs, displacing workers, and requiring new skills from Americans. In this article, the author connects the need for STEM education, especially technology, in all aspects of life to workforce development and the future of the American economy.
- [Career Exploration and Skill Development](#): This article from the US Dept of Education highlights key strategies for youth exploration of careers.

## Activities for August 2024

- **[Statistical Science](#)**: In this activity kids learn about probability to determine the frequency of different colored M&M's in a package of M&M candies. M&Ms normally come in six different colors: red, green, yellow, blue, orange, and brown.
- **[Turn Milk into Plastic](#)**: Is it possible to make plastic out of milk? In the early 1900s until about 1945, milk was commonly used to make many different things from plastic. Milk plastic (usually called casein plastic) can be made easily. In this activity youth make their own casein plastic out of hot milk and vinegar.
- **[Cyberchase Biancas-Body-Math](#)**: In this Cyberchase activity, learners use math to explore how parts of the body are proportional. Learners make a measuring device out of string and then use it to measure the length of their forearms, the circumference of their fist, the circumference of their forehead, and the distance from their head to their toes.
- **[Cool It!](#)**: In this fun hands-on activity, learners use simple materials to investigate evaporation. How can the evaporation of water on a hot day be used to cool an object? Find out the experimental way! The activity is based on an episode of Cyberchase called "Digit's B-Day Surprise" and was developed to capture kids' interest in math
- **[Reverse Engineering: Ball Bounce Experiment](#)**: In this activity, learners investigate the properties of different types of balls. Learners conduct experiments on four different balls to see which can bounce the highest and which continues bouncing for the longest period of time. Use this activity to talk about how each ball's properties are appropriate for their respective sport. This activity also coincides well with math graphing practice.

## Media Assets for August 2024

### Trainings

Join this ACRES Coaching: Making Math Engaging sessions!   Explore fun ways to help youth build number sense and problem-solving skills in afterschool programs. Live attendance required. Register now with Code: AC358MP (Coach Becky T) <https://acrescoaching.org/modules/facilitating-mathematics-practices/> #AfterschoolMath #STEMEducation

Are you looking for fun ways to help youth build number sense and problem-solving skills? Join this ACRES Coaching: Making Math Engaging sessions on Thursdays: 8/22, 9/5, 9/19/2024 from 1:00 - 3:00 pm EST / 10:00 am - Noon PST. #STEMEducation #MathEngagement

  <https://acrescoaching.org/modules/facilitating-mathematics-practices/>

Math can take on new meaning when it is integrated into daily routines in afterschool programs. In this ACRES module, afterschool educators will explore and practice strategies for making math engaging and accessible. REGISTER HERE with Code: AC358MP (Coach Becky T) <https://acrescoaching.org/modules/facilitating-mathematics-practices/> #AfterschoolMath #STEMEducation #MathEngagement

### Transformative Practices

We partnered with @ngcproject (NGCP) and national experts, to develop the Access to STEM Framework. This guide is designed to help increase access to STEM for underrepresented youth and

improving the quality of out-of-school STEM programs. Download your copy:

[https://static1.squarespace.com/static/63ddd4d3686ac83bfa8c608d/t/642b771b77255b06727e7e58/1680570141172/Access-to-Stem-A-Framework\\_Final-11-%C3%97-8.5-in+%281%29.pdf](https://static1.squarespace.com/static/63ddd4d3686ac83bfa8c608d/t/642b771b77255b06727e7e58/1680570141172/Access-to-Stem-A-Framework_Final-11-%C3%97-8.5-in+%281%29.pdf) #STEMeducation #AccessToSTEM #NGCP

We're excited to share the Access to STEM Framework, a collaborative effort with the National Girls Collaborative Project (NGCP) and national experts. ✨ This Framework is your go-to guide for designing and implementing inclusive out-of-school STEM programs that empower underrepresented youth.

Download the Framework now:

[https://static1.squarespace.com/static/63ddd4d3686ac83bfa8c608d/t/642b771b77255b06727e7e58/1680570141172/Access-to-Stem-A-Framework\\_Final-11-%C3%97-8.5-in+%281%29.pdf](https://static1.squarespace.com/static/63ddd4d3686ac83bfa8c608d/t/642b771b77255b06727e7e58/1680570141172/Access-to-Stem-A-Framework_Final-11-%C3%97-8.5-in+%281%29.pdf) #STEMforall #InclusiveSTEM #NGCP

Check the Afterschool Math Plus resource which offers fun, real-world math activities for grades 3-8! With a culturally relevant curriculum, it emphasizes identity, careers, role models, family involvement, and inclusion through an equity lens. #MathEducation #AfterschoolPrograms

<https://www.fhi360.org/resources/after-school-math-plus/>

Discover Afterschool Math Plus, an evidence-based program providing fun, real-world mathematics activities for students in grades 3-8! 📐 ✨ This culturally relevant curriculum is designed around four thematic units that engage children and emphasize:

- Identity development
- Careers and role models
- Strategies for family involvement
- Inclusion of students with disabilities through an equity lens

Learn more about Afterschool Math Plus and how it can benefit your program:

<https://www.fhi360.org/resources/after-school-math-plus/> #MathEducation #AfterschoolWorks #EquityInSTEM

Boost student success by partnering with parents and families! Discover 5 ways to enhance family and community engagement for better academic and social-emotional outcomes. #FamilyEngagement

<https://www.edweek.org/leadership/5-ways-to-get-parents-more-involved-in-schools/2024/04>

When schools figure out how to truly partner and work with parents, caregivers, and families, it can be game-changing for students' academic achievement and social-emotional skills. Check out 5 principles behind effective family and community engagement and learn how you can make a difference in your school community.

Explore these strategies and start building stronger partnerships

today: <https://www.edweek.org/leadership/5-ways-to-get-parents-more-involved-in-schools/2024/04>

#FamilyEngagement

Build stronger school communities with positive communication! Read about seven ways to promote positive communication with families, teachers, and afterschool programs, and start building stronger relationships today: #FamilyEngagement [7 Ways to Promote Positive Communication With Families](#)

One of the most meaningful and effective ways to improve rapport with families is by contacting them with positive news about their child. Positive communication systems are one of a handful of high-leverage practices that can help us build more cohesive and trusting school communities. Read about seven ways to promote positive communication with families, teachers, and afterschool programs, and start building stronger relationships today: [7 Ways to Promote Positive Communication With Families](#) #FamilyEngagement #AfterschoolPrograms

### **STEM Learning Pathways and Career Awareness**

Want to learn more about how to support Career and College Readiness in your afterschool or summer program? Check out the new @MOSTNetwork #CCRTToolkit by visiting [bit.ly/MOSTCCR](http://bit.ly/MOSTCCR).

#OutofSchoolTime programs are great allies in helping young people build 21st Century skills and navigate the pathways toward future careers. Learn more about the @MOSTNetwork #CCRTToolkit by visiting [bit.ly/MOSTCCR](http://bit.ly/MOSTCCR).

Prepare middle schoolers for success with the College & Career Readiness Playlist! 🎓📚 Developed by @MOSTNetwork, this toolkit offers 8 actionable sessions for out-of-school time programs. Explore now! #CollegeCareerReady #AfterschoolWorks

[https://drive.google.com/file/d/15kbO4XXBN\\_sAmQDeZZcMVblhUzbCoCzP/view](https://drive.google.com/file/d/15kbO4XXBN_sAmQDeZZcMVblhUzbCoCzP/view)

Get your middle schoolers on the path to success with the College & Career Readiness Playlist! 🎓📚 Developed by the @MOSTNetwork (Maryland Out of School Time Network), this playlist consists of eight (8) 60-90 minute sessions aimed at middle school youth and one (1) session of pre-work for practitioners and organizational leaders. Learn more and get started today:

[https://drive.google.com/file/d/15kbO4XXBN\\_sAmQDeZZcMVblhUzbCoCzP/view](https://drive.google.com/file/d/15kbO4XXBN_sAmQDeZZcMVblhUzbCoCzP/view) #CollegeCareerReady #YouthPrograms

Explore the Career-Connected Learning Continuum Framework! This framework highlights awareness, exploration, preparation, and work experiences through strong partnerships. Empower future career success! #CareerConnectedLearning #FutureSkills

<https://www.washingtonstem.org/wp-content/uploads/2018/05/Career-Conneted-Learning-Contiuum-Framework.pdf>

Discover the Career-Connected Learning Continuum Framework, which highlights a comprehensive approach to career readiness through awareness, exploration, preparation, and work experiences. Developed through strong public and private partnerships, this framework ensures participants develop, apply, and are assessed on academic, technical, trade, and entrepreneurial skills that support their future career success.

Empower your students with the skills they need for a successful future. Learn more about the framework and its benefits:

<https://www.washingtonstem.org/wp-content/uploads/2018/05/Career-Conneted-Learning-Contiuum-Framework.pdf> #CareerConnectedLearning #FutureSkills #CareerReadiness

Explore how improving #workforcedevelopment and #STEMeducation can preserve America's innovation edge! 🚀 Discover the connection between STEM, technology, and the future of our economy. #STEMEducation #WorkforceDevelopment #Innovation <https://www.brookings.edu/articles/improving-workforce-development-and-stem-education-to-preserve-americas-innovation-edge/>

New advances in robotics, AI, and advanced manufacturing are automating jobs, and requiring new skills from Americans. In this insightful article, the author connects the need for #STEMeducation, especially in technology, to workforce development and the future of the American economy. Discover how enhancing STEM education and #workforcedevelopment can help preserve America's innovation edge and ensure a prosperous future for all. Read the full article here:

<https://www.brookings.edu/articles/improving-workforce-development-and-stem-education-to-preserve-americas-innovation-edge/>

Finding a job can be challenging for youth. Discover key strategies for career exploration and skill development in this article from the US Dept of Education! @usedgov 🔍 👩 👨 #CareerExploration #SkillDevelopment

<https://youth.gov/youth-topics/youth-employment/career-exploration-and-skill-development>

Finding a job can be a challenge for youth as they navigate career options, interests, and necessary skills. The @usedgov US Department of Education's article on Career Exploration and Skill Development highlights key strategies to help youth explore career paths and develop essential skills.

Empower the youth in your community with the knowledge and tools they need for a successful future. Read the article:

<https://youth.gov/youth-topics/youth-employment/career-exploration-and-skill-development>

#CareerExploration #SkillDevelopment

## Activities

Get into the world of statistical science with this fun #STEM activity! 🎲 📊 Learn about probability by determining the frequency of different colored M&M's in a package. Perfect for young scientists! #STEMEducation #Probability

<https://www.sciencebuddies.org/stem-activities/statistical-science-mm-math>

Explore the exciting world of statistical science with this engaging #STEM activity! 🎲 📊 In this activity, kids will learn about probability by determining the frequency of different colored M&M's in a package. This hands-on experiment is perfect for young scientists eager to explore and learn. Check out the activity here: <https://www.sciencebuddies.org/stem-activities/statistical-science-mm-math> #STEMEducation

Explore the fascinating world of casein plastic with the Turn Milk into Plastic #STEM Activity.

<https://www.sciencebuddies.org/stem-activities/milk-into-plastic> #STEMexperiment

#EngineeringDiscovery

Did you know milk can be turned into plastic? Explore the fascinating world of casein plastic with the Turn Milk into Plastic #STEM Activity. Create your own casein plastic using hot milk and vinegar and uncover the science behind this historical material:

<https://www.sciencebuddies.org/stem-activities/milk-into-plastic> #STEMexperiment

#EngineeringDiscovery

Explore body proportions with Cyberchase! 📏🧠 In this activity, kids use math to measure different body parts with a homemade device. A fun way to learn about ratios and proportions! #STEMeducation #MathFun

[https://cms-tc.pbskids.org/global/Cyberchase\\_Biancas-Body-Math.pdf?mtime=20180710152718](https://cms-tc.pbskids.org/global/Cyberchase_Biancas-Body-Math.pdf?mtime=20180710152718)

Discover the fascinating world of body proportions with Cyberchase! 📏🧠 In this engaging #STEM activity, learners use math to explore how parts of the body are proportional. Kids can make a measuring device out of string and use it to measure their forearms, the circumference of their fists, their forehead, and the distance from head to toe. Check out the activity

here: [https://cms-tc.pbskids.org/global/Cyberchase\\_Biancas-Body-Math.pdf?mtime=20180710152718](https://cms-tc.pbskids.org/global/Cyberchase_Biancas-Body-Math.pdf?mtime=20180710152718)

#STEMeducation #MathFun

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## September: Hispanic Heritage Month

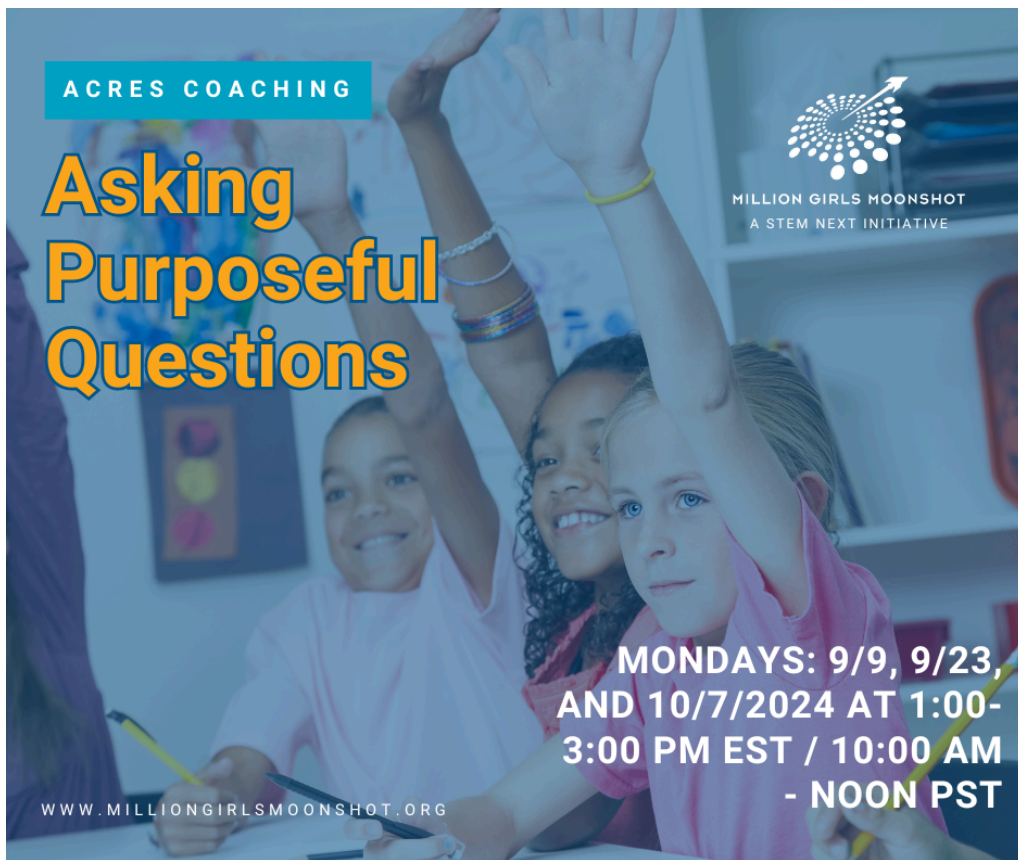
### Trainings for September 2024

ACRES Coaching: Asking Purposeful Questions

Mondays: 9/9, 9/23, and 10/7/2024 at 1:00- 3:00 PM EST / 10:00 AM - Noon PST

Questions begin a path toward 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 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. Recordings are not available if you are unable to attend. [REGISTER HERE](#) Code: AC441PQ (Coach Becky T)





### ACRES: Facilitating Engineering Practices

Tuesdays: 9/24, 10/8, and 10/22/2024 at 3:00 PM- 5:00 PM EST / Noon - 2:00 PM PST

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.

\*The expectation is that you will be live at all three sessions and an active member of this coaching cohort.

Recordings are not available if you are unable to attend. [REGISTER HERE](#) Code: **AC423EP (Coach Emma C)**

ACRES COACHING

# Facilitating Engineering Practices

TUESDAYS: 9/24, 10/8,  
AND 10/22/2024 AT 3:00  
PM- 5:00 PM EST /  
NOON - 2:00 PM PST



## Transformative Practices for September 2024

The Million Girls Moonshot aims to raise awareness of the following four research-based practices — Equity and Inclusion, Engineering Mindsets, Role Model, Mentors, and Families, and STEM Pathways and Transition — proven to remove barriers to access and quality STEM learning experiences. Resources, toolkits, blogs, and activities that elevate these four Transformative Practices can be found below and on the [Million Girls Moonshot Toolkit](#)

- [Hispanic Scientists and Engineers](#): Celebrate Hispanic Heritage Month by learning more about some of the many Hispanic and Latinx scientists and engineers who have made important contributions to science history.
- [5 Hispanic Scientists That Made Amazing Contributions To Science](#): Hispanic scientists that made amazing contributions to science.
- [Mexican virologist Susana López Charretón uncovered rotaviruses' secrets](#): Susana López Charretón is among Mexico's leading virologists. She has been awarded the UNESCO–Carlos J. Finlay Prize for Microbiology and the L'Oréal-UNESCO For Women in Science award.
- [The Role of Informal Learning Environments in STEM Education](#): This article highlights the benefits of STEM education in informal spaces including museums and libraries, and lists some assessment techniques to be used in informal spaces.

- **[Strategies and Resources to Support Effective Family Engagement](#)**: The U.S. Department of Education, in partnership with Carnegie Corporation of New York and Overdeck Family Foundation, hosted a six-month webinar series designed to boost family engagement practices. The conversations brought together education leaders and practitioners from across the United States to share resources and evidence-based strategies that bridge the gap between home and school. Check out the video recordings [here](#).

## STEM Learning Pathways & Career Awareness

Research tells us that continuous engagement and exposure rather than limited one-time opportunities are needed to nurture the interest and motivation necessary for children to pursue STEM pathways long term. The Moonshot aims to understand and support transitions and handoffs that remove barriers for youth by connecting STEM learning across ages and settings, ensuring youth interest and motivation persists.

- **[Maryland Out of School Time College and Career Readiness Toolkit](#)**: This is a comprehensive guide to help middle and high school out-of-school-time programs get laser focused on building 21st century skills and supporting young people as they navigate through the complex world of planning for their advanced education and careers. We will be adding free and low cost professional development resources including videos, online courses and opportunities for live virtual training. Want to help MOST spread the word? Use the [Social Media Sharing Resources](#) to spread the word.
  - **[College and Career Readiness Middle School Playlist](#)**: This playlist is designed for middle school audiences focused on the College & Career Readiness Toolkit developed by the Maryland Out of School Time Network. This playlist distills the CCR Toolkit information into an actionable sequence for out-of-school time practitioners to implement with youth in their program. The Playlist consists of eight (8) 60-90 minute sessions aimed at middle school youth and one (1) session of pre-work for practitioners and organizational leaders only. [Check out the accompanying CCR Middle School Playlist Youth Workbook](#).
- **[The Impact of In- and Out-of-School Learning Experiences in the Development of Students' STEM Self-Efficacies and Career Intentions](#)**: Highlights in-school and out-of-school experiences impact on STEM education . Includes ideas on how the experience is enhanced.
- **[STEM Career Awareness](#)**: This paper lists (and expands on) four major and effective strategies to support youth STEM career awareness.

## Activities for September 2024

- **[Small Moon Big Sun](#)**: In this activity, learners explore how distance can affect the way we perceive the size of an object. It also introduces learners to solar eclipses as well as the Sun and Moon's sizes and distances from Earth. This is a very simple activity using balls as models, making it accessible even for young learners. This resource also contains hints on how to use familiar objects to help learners visualize the sizes and distances of the Sun, Moon and Earth.
- **[Straining out the Dirt](#)**: Learners take on the role of environmental engineers as they design water filters. Learners see how polluted water (water with chocolate powder mix) can become clearer when passed through their filter of sand, marbles, granulated activated carbon, and cotton balls. Resource contains suggestions for assessment, extensions, and scaling for different levels of learners.
- **[Ancient Observatories: Chichén Itzá](#)**: This is a lesson plan for an activity in which learners, playing the role of archeologists, use math concepts about number bases to decipher the Dresden Codex, an ancient

Mayan document. The lesson provides learners with historical background and exposure to how archeologists figure out what ancient documents mean. It also helps learners compare Mayan number systems (base 5) and modern number systems (base 10). It then leads them step-by-step through a series of activities to help break the code, with stopping points to discuss and investigate different ideas. In order to do this activity, learners should understand place value and number bases. Recommended for grade 5 and up.

- [Apple Science: Comparing Apples and Onions](#): Students will explore heredity concepts by comparing observable traits of apples and onions, collecting data on the traits of different apple varieties, and learning about apple production. Additional activities include hands-on methods for testing apple ripeness.
- [Leaf Me Alone](#): This activity includes a Dragonfly video as background. In this activity, learners explore the structure of plant leaves. Learners find out what happens when they coat either the top or bottom sides of leaves with petroleum jelly. Use this activity to investigate the structure of plants and discuss photosynthesis/respiration.

## Media Assets for September 2024

### Hispanic Heritage Month

For Hispanic Heritage Month, we want to highlight the women in STEM who are making a big difference in the world - check out these 10 Latinas making their mark: <https://bit.ly/44fBNK5>

“The world needs more science and science needs women and girls.” Meet these seven Latin American women who inspire new generations of girls and women in science: <https://bit.ly/44fBNK5>

### Trainings

How can we help youth expand and clarify their thinking and develop their reasoning through the questions we ask them? Join ACRES for a module cohort this fall on “Asking Purposeful Questions.” Mondays: 9/9, 9/23, and 10/7/2024 at 1:00- 3:00 PM EST. Register here: <https://acrescoaching.org/modules/asking-purposeful-questions/>

Elevate your STEM facilitation with ACRES Coaching! Explore the art of asking purposeful questions in three engaging sessions on Mondays: 9/9, 9/23, and 10/7/2024 at 1:00- 3:00 PM EST. Connect with experienced educators, unlock new lesson plans, and deepen your practice. Register today with code **AC357PQ (Coach Becky T)** <https://acrescoaching.org/modules/asking-purposeful-questions/> #STEMcohort #YouthEmpowerment #ACRES

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? Learn more by joining this ACRES session on Tuesdays: 9/24, 10/8, and 10/22/2024 at 3:00 PM- 5:00 PM EST. Register here: <https://acrescoaching.org/modules/facilitating-mathematics-practices/>

Join ACRES and gain first-hand experience with engineering by solving a design problem, and examine the components of the engineering design process and discuss ways to model the process with youth. Sessions on Tuesdays: 9/24, 10/8, and 10/22/2024 at 3:00 PM- 5:00 PM EST. Register here:


<https://acrescoaching.org/modules/facilitating-mathematics-practices/>

## Transformative Practices


It's Hispanic Heritage Month! Celebrate by learning more about some of the many Hispanic and Latinx scientists and engineers who have made important contributions to science history.

<https://www.sciencebuddies.org/blog/hispanic-scientists-engineers>

Learn more and explore the incredible achievements of 5 Hispanic scientists who made groundbreaking contributions to science! #STEM

<https://www.discovermagazine.com/the-sciences/5-hispanic-scientists-that-made-amazing-contributions-to-science> #HispanicHeritageMonth #ScienceHeroes 

Meet Susana López Charretón, a pioneering Mexican virologist who has uncovered the secrets of rotaviruses. Winner of the UNESCO–Carlos J. Finlay Prize for Microbiology & L'Oréal-UNESCO For Women in Science award! <https://www.sciencenews.org/article/mexican-virologist-susana-lopez-charreton-rotaviruses-rna> #WomenInScience

 Discover how museums, libraries, and other informal spaces play a crucial role in STEM education! Explore assessment techniques and the benefits of learning beyond the classroom.

<https://stemeducationguide.com/informal-learning-environments/#:~:text=Key%20Takeaways%3A%20Informal%20learning%20environments%20are%20key,examples%20and%20hands-on%20activities%20related%20to%20STEM%20concepts>. #STEMEducation #InformalLearning

Boost family engagement in education with strategies and resources shared in a six-month webinar series by @usedgov, @CarnegieCorp, and @OverdeckFdn. Watch the recordings to bridge the home-school gap! #FamilyEngagement

<https://www.carnegie.org/our-work/article/strategies-and-resources-support-effective-family-engagement/>

#Education 

## STEM Learning Pathways & Career Awareness

Looking for Career and College Readiness resources? Learn more about how to support Career and College Readiness in your afterschool or summer program with the new @MOSTNetwork #CCRTToolkit by visiting [bit.ly/MOSTCCR](http://bit.ly/MOSTCCR).

#OutOfSchoolTime programs are great allies in helping young people build 21st Century skills and navigate the pathways toward future careers. Learn more about the @MOSTNetwork #CCRTToolkit by visiting [bit.ly/MOSTCCR](http://bit.ly/MOSTCCR).

Accelerate your progress as STEM equity leaders with the Quickstart Toolkit! Libraries can implement short-term changes to build a stronger STEM workforce. Learn more and find strategies here:

<https://www.urbanlibraries.org/initiatives/education/building-the-stem-workforce-quickstart-toolkit>

#STEMEducation #LibraryLeaders #EquityInSTEM

The experiences students have in and out of school can influence the way they think about STEM and the career decisions they make. Take a look at these highlights in-school and out-of-school experiences and how they have an impact on STEM education . Includes ideas on how the experience is enhanced.

<https://link.springer.com/article/10.1007/s41979-023-00090-0?fromPaywallRec=true>

What role high school science teachers can play in fostering STEM career interest and awareness? Check out this study and learn effective strategies to support youth STEM career awareness.

<https://www.nwabr.org/sites/default/files/pagefiles/PDK%20STEM%20Career%20Awareness.pdf>

Understanding how high school students become aware of STEM career options is crucial in ensuring the future of our STEM workforce. In this new study you can learn effective strategies to support youth STEM career awareness. <https://www.nwabr.org/sites/default/files/pagefiles/PDK%20STEM%20Career%20Awareness.pdf>

## Activities

Explore the wonders of the universe with the "Small Moon Big Sun" activity! Perfect for young learners, this simple exercise uses balls to show how distance affects our perception of size. Get into the fascinating world of solar eclipses and the sizes and distances of the Sun, Moon, and Earth. Fun and educational for the whole family!

[https://sunearthday.nasa.gov/2007/materials/eclipse\\_smallmoon\\_bigsun.pdf](https://sunearthday.nasa.gov/2007/materials/eclipse_smallmoon_bigsun.pdf) #STEM #Space #Education

Become an environmental engineer with the "Straining out the Dirt" activity! Create your own water filter using everyday materials like sand, marbles, and cotton balls. Watch as polluted water becomes clear and learn about the importance of clean water. Great for all ages with adaptable levels of difficulty!

[https://www.teachengineering.org/activities/view/cub\\_enveng\\_lesson06\\_activity1](https://www.teachengineering.org/activities/view/cub_enveng_lesson06_activity1) #STEM

#EnvironmentalScience #WaterConservation #DIY

Step into the shoes of an archeologist with "Ancient Observatories: Chichén Itzá"! Decode the Dresden Codex using math concepts and compare Mayan and modern number systems. This activity is perfect for learners grade 5 and up, offering a fascinating look into ancient civilizations and number

bases. <https://annex.exploratorium.edu/ancientobs/chichen/HTML/TG-math.html> #STEM #History #Archeology #Math

Uncover the secrets of heredity with "Apple Science: Comparing Apples and Onions"! Compare traits, collect data, and learn about apple production. Hands-on activities include testing apple ripeness. A fun and educational way to explore genetics and agriculture!

<https://www.sciencebuddies.org/teacher-resources/lesson-plans/apple-traits-variation> #STEM #Biology

#Heredity #Agriculture

Learn all things plant science with "Leaf Me Alone"! Watch a Dragonfly video, coat leaves with petroleum jelly, and discover the structure and functions of plant leaves. Perfect for exploring photosynthesis and respiration.

Engaging and educational for all ages! <https://www.howtosmile.org/resource/leaf-me-alone> #STEM #Botany