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Rural Educator Network Newsletter

Connecting Educators and
Sharing Resources

NASA SciAct



Hello Educators!

This Newsletter is dedicated to providing:

1. NASA resources modified to the needs of rural audiences
2. Upcoming NASA events, webinars, and opportunities
3. Partnership highlights
4. Expressing your current needs and successes

You're invited to contribute content to a future newsletter...

Tell us a story, share an activity, photo, lesson plan, or resource.

Share with Us!

Help to Grow the Network: Share this sign-up link with friends: <http://eepurl.com/h1xxQ9>

Upcoming Events and Opportunities



Join us for the 2024 Rural STEM Summit!

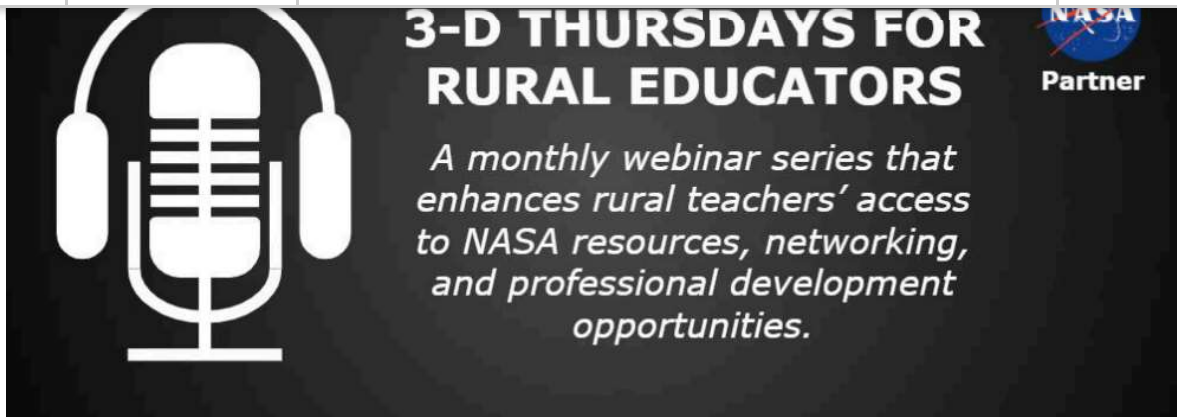
When: June 4-7, 2024

Where: Live event at the Weston La Paloma Hotel in Tucson, AZ

Who: STEM Learning Ecosystem partners - K12, Higher Ed, STEM Non-Profits, industry supports, government agencies, research centers

This second annual Rural STEM Summit continues the focus on Rural STEM Learning and the partners that make that happen. In addition to 2.5 days of amazing breakouts and networking, 2024 will see a pre-conference day with half and full day workshops. Speaker proposals are welcome through March 1, 2024.

Links to more details can be found on the event website: <https://azruralstemsummit.net/>



Join NASA's Science Mission Directorate for a monthly series that connects rural educators to resources, networking, and professional development opportunities.

Join NASA's AEROKATS and ROVER Education Network (AREN) on May 2nd at 8:00pm ET to learn how to use NASA technologies and practices in authentic, experiential learning environments. Partner with the NASA AREN Project to access kite-based "AEROKATS" and remote-controlled aquatic and land-based "ROVERS" that collect remotely sensed Earth observations. You could work with NASA scientists and learn real-life protocols and field operations conducted by NASA!

Register for the May 2nd webinar here: <https://forms.gle/T2qPHP3k9SKkNsp88>

Image credit: NASA SMD/SciAct



For Educators:

Bring to life STEM concepts you're teaching and expose students to real-world applications of what they're learning with the Society for Science's Science News Learning Program. Through this program, receive free print and digital Science News Media Group journalism, access to a digital educator portal full of NGSS-aligned lesson plans paired to articles, and professional learning opportunities centered around integrating the resources into curricula to boost student science literacy. Sponsorships for public middle and high schools won't last long! [Sign up your school today!](#)

For STEM Coordinators:

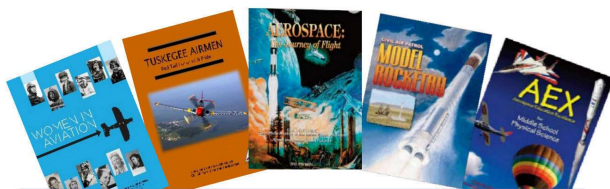
Program. Through this program, schools receive free print and digital Science News Media Group journalism, access to a digital educator portal full of NGSS-aligned lesson plans paired with articles and professional learning opportunities centered around resource integration. Districts also receive custom PD opportunities and resource curation to help support unique district goals. Sponsorships for full districts won't last long! [Sign up your district today!](#)



CIVIL AIR PATROL Aerospace Education

Teach

... ordinary subjects in extraordinary ways by becoming a special member of **Civil Air Patrol, the Auxiliary of the U.S. Air Force**—an **Aerospace Education Member (AEM)**! With help from AEMs, CAP is helping to prepare the aerospace/STEM workforce of the future.



Engage

... youth in **captivating lessons and activities** using a variety of more than 40 national standards-aligned educational materials. CAP's free resources are available both online and in print to adapt to multiple teaching and learning styles. Additional **online references** provide an abundance of extra STEM resources.

Experience

- ...hands-on learning with **FREE** programs including
- **(Gr K-12) STEM Kits** in the areas of air, space, and cyber (see back page)
 - **(Gr K-12) Aerospace Education Excellence (AEX)** six-lesson award program
 - **(Gr K-6) Aerospace Connections in Education (ACE)** grade-specific program to enrich academics, physical fitness, and character education
 - **(Gr 5-8) ACE Plus Adopt program** CAP squadrons support teachers' classrooms

Contact: ae@capnhq.gov



• Scan to see all free STEM programs >>>



Fly



...on a **FREE Teacher Orientation Program (TOP) flight** in Civil Air Patrol aircraft at your local airport. Live stream, video, and/or photograph to bring your flying adventure back to your classroom!

Join

...**TODAY as an AEM!** CAP offers this special membership for K-12 formal and informal U.S. citizen educators in classrooms, home schools, museums, libraries, or other youth organizations. A **one-time \$35 membership fee** brings **FREE educator products and programs**. Read more at GoCivilAirPatrol.com/ae.

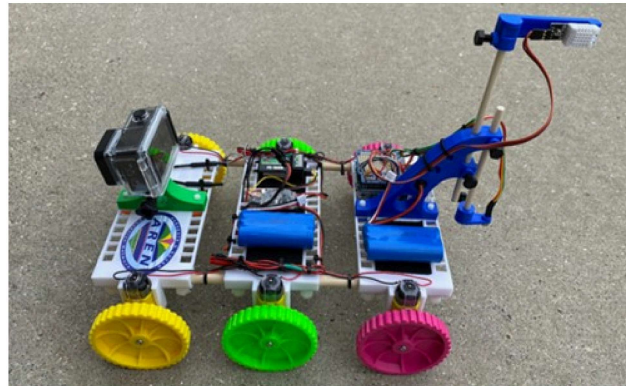
JOIN ONLINE >>>>>

GoCivilAirPatrol.com/joinaem



Civil Air Patrol Aerospace Educator

Aerospace Education Member (AEM) of Civil Air Patrol (CAP) and enjoy many free aerospace/STEM educational opportunities ranging from a variety of K-12 curriculum materials and STEM Kits to participating in a teacher orientation flight aboard one of our Cessna aircraft at your local airport. This unique membership category is designed for formal or informal educators involved in promoting aerospace/STEM education in classrooms, homeschools, museums, libraries, or other youth organizations.



Exploring Surface Temperature using a NASA AREN TerraROVER

Join the AEROKATS and ROVER Education Network for three virtual sessions in May to learn new ways your students can explore how surface materials impact local temperatures and produce phenomena such as the Urban Heat Island Effect. Use GLOBE measurement protocols, discover lessons from My NASA Data, and learn how to operate and use a NASA/AREN TerraROVER to collect and analyze your own surface temperature data.

Selected participants will receive a TerraROVER for their school and all materials necessary to complete the workshop and related activities. This workshop is most appropriate for Upper Elementary through HS.

Workshop Dates: May 14th - 16th (three sessions ONLINE)

Workshop Times: 6:00 PM - 8:30 PM ET

Training materials will be provided (including a TerraROVER - 1 per team)

Opportunity for ongoing PD with additional resources

Applications have been extended to April 23. [Apply here!](#)

"Physics in an Astronomy Context"

- Virtual gatherings of 25-50 teachers, one Saturday of each month
- Each session consists of the following:
 - Astrophysics mini-lecture
 - Small group engagement with the core activity
 - Exploration and whole group discussion time
- Sign up for individual sessions and learn more at forms.gle/jD3fZskjqzFcuXGXA

Partner

AAPT
American Association of Physics Teachers

Meet the Team:

Karen E. Lopez, University of Texas at Arlington

Reed Anderson, Grand Valley State University

Janelle M. Bailey, Temple University

Kristen M., California State University Dominguez Hills

Dana Davidson, Syracuse University

Rebecca Wiggins, University of Colorado Boulder

Shannon Wiloughby, Marquette University

February 24 1-2:30 PM ET	March 9 1-2:30 PM ET	March 16 1-2:30 PM ET	April 27 1-2:30 PM ET	May 25 1-2:30 PM ET	June 22 1-2:30 PM ET
Eclipse Geometry 	Reading Solar Eclipse Maps 	Star Spectra Science 	Exoplanet Atmospheres Science 	Habitable Zone Science 	Sunspot Science
Physics: Ratio/Proportion	Physics: Light/Shadows	Physics: Spectra, Absorption/Transmission	Physics: Spectra, Absorption/Transmission	Physics: Radiation	Physics: Period, Frequency
Astronomy: Eclipses	Astronomy: Eclipses	Astronomy: Stellar Composition	Astronomy: Planetary Atmospheres	Astronomy: Blackbody Greenhouse Effect	Astronomy: Solar Cycles

Multiple Opportunities through June: Physics in an Astronomy Context – Virtual Workshops for Physics Educators

Intended Audience: Middle and High School Educators and Professors Teaching 1st-year College Students

NASA's Heliophysics Education Activation Team (HEAT) and the American Association of Physics Teachers (AAPT) have put together a free, monthly, virtual workshop series for high school and undergraduate-level introductory physics teachers. Each workshop session will provide an astrophysics mini-lecture, a small group engagement with the core activity, and discussion time to connect with like-minded educators. These workshops began in February and will continue through June, 2024. Here are the remaining sessions:

- April 27** – Exoplanet Astrophysics Science: From the astronomy of planetary atmospheres, learn about the physics spectra, absorption, and transmission.
- May 25** – Habitable Zone Science: From the astronomy of blackbody and greenhouse effect, learn about the physics of radiation.
- June 22** – Sunspot Science: From the astronomy of solar cycles, learn about the physics of period and frequency.

Time: 1 – 2:30 p.m. ET

[Register](https://forms.gle/jD3fZskjqzFcuXGXA)

Tuesday, April 23rd, 2024: Night Sky Network Webinar – All About That Space: Science Updates with Dr. Nicolle Zellner

Join the [NASA Night Sky Network](#) on **Tuesday, April 23rd, at 9:00 p.m. EST** as Dr. Nicolle Zellner shares updates on several exciting space missions, including NASA's initiative to return to the Moon.

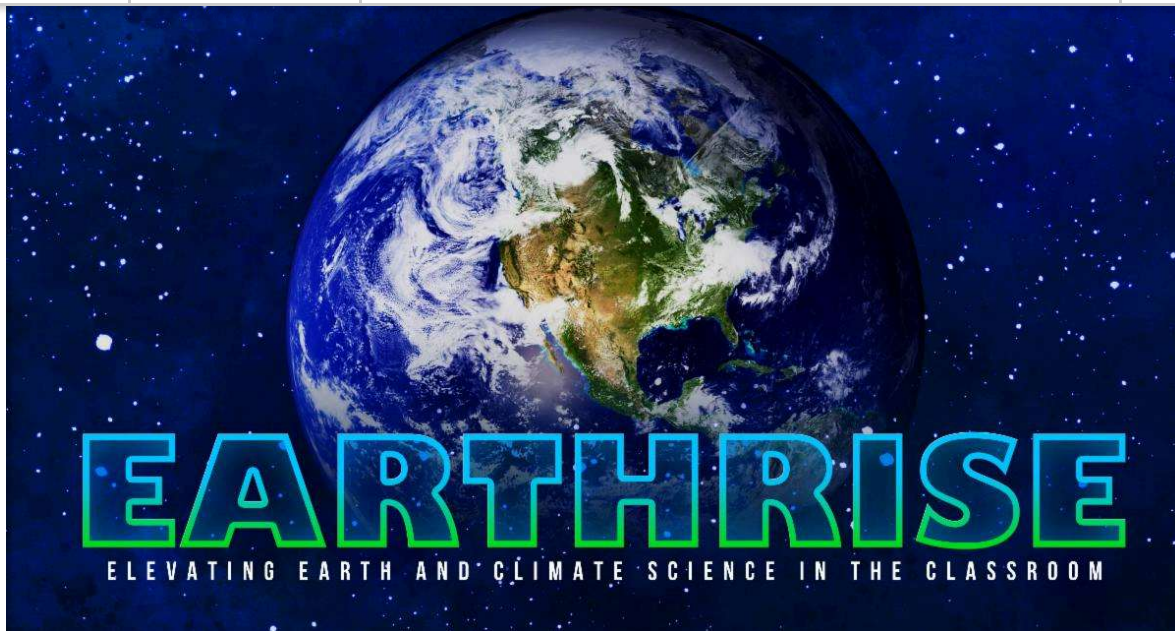
[Join the Webinar / Watch the Recording](#)

United States Department of Education: Apply for the FY 2024 Small, Rural School Achievement Grant!

The Rural Education Achievement Program (REAP) oversees two formula grant programs: the Small, Rural School Achievement (SRSA) grant and the Rural and Low-Income School (RLIS) grant. The REAP team is gearing up for its annual SRSA grant application, which is expected to be available beginning in late March. When the application becomes available, each SRSA-eligible LEA estimated to receive funding based on the allocation formula will receive an email invitation from no-reply.survey@connect.gov containing a link to access their unique SRSA application. This email will be sent to the primary contact of each eligible LEA listed on the [FY 2024 Master Eligibility Spreadsheet \(MES\)](#). Additionally, the FY 2024 MES contains estimated award amounts for SRSA- and RLIS-eligible LEAs. On average, the SRSA application takes 10 to 30 minutes to complete.

You may view the [REAP Quick Links Document](#) that contains a list of resources and webpages relating to the SRSA and RLIS grant programs or feel free to contact REAP@ed.gov directly with any questions.

Resources, Lesson Plans, and Materials



1. NASA Earthrise

Earthrise will leverage NASA's digital community of practice for educators and a broad network of learners associated with NASA's federal partners to provide K-12 educators and learners with a focused, monthly collection of Earth and climate science resources from across the federal enterprise. Educators are invited to register for this monthly engagement, with the first monthly collection of resources to be delivered in January and then monthly throughout the remainder of 2024. Our primary focus is centered around access to Earth and climate resources for the K-12 community, and we plan to set up a regular working group to inform plans for carrying this through the summer and beyond as well.

The 1st issue of the Earthrise newsletter is here to elevate Earth & climate science in your classroom! Explore "[The Importance of Earth Observation](#)" with STEM resources from NASA & our federal partners

[Register now](#) to receive future Earthrise monthly collections of resources.

2. DoD STEM Opportunities

Here you can find an interactive U.S. map with embedded links to STEM programs available both nationwide and at the state level. Each state has 40+ resources listed!

[Explore DoD STEM Opportunities here.](#)

3. STEM Learning Ecosystems

Here you can find an interactive map of the STEM Learning Ecosystem Community of Practice. There are over 110 of these nationwide. Reaching out to a local or regional SLE can help you find organizations motivated to support STEM Learning. [Check it out here.](#)

4. Gulf of Maine Research Institute, Education Division; Connected Learning Ecosystems; &

These NASA-funded ecosystems are great resources for educators in the Northeast. They have resources, place-based lessons, and communities of practice.

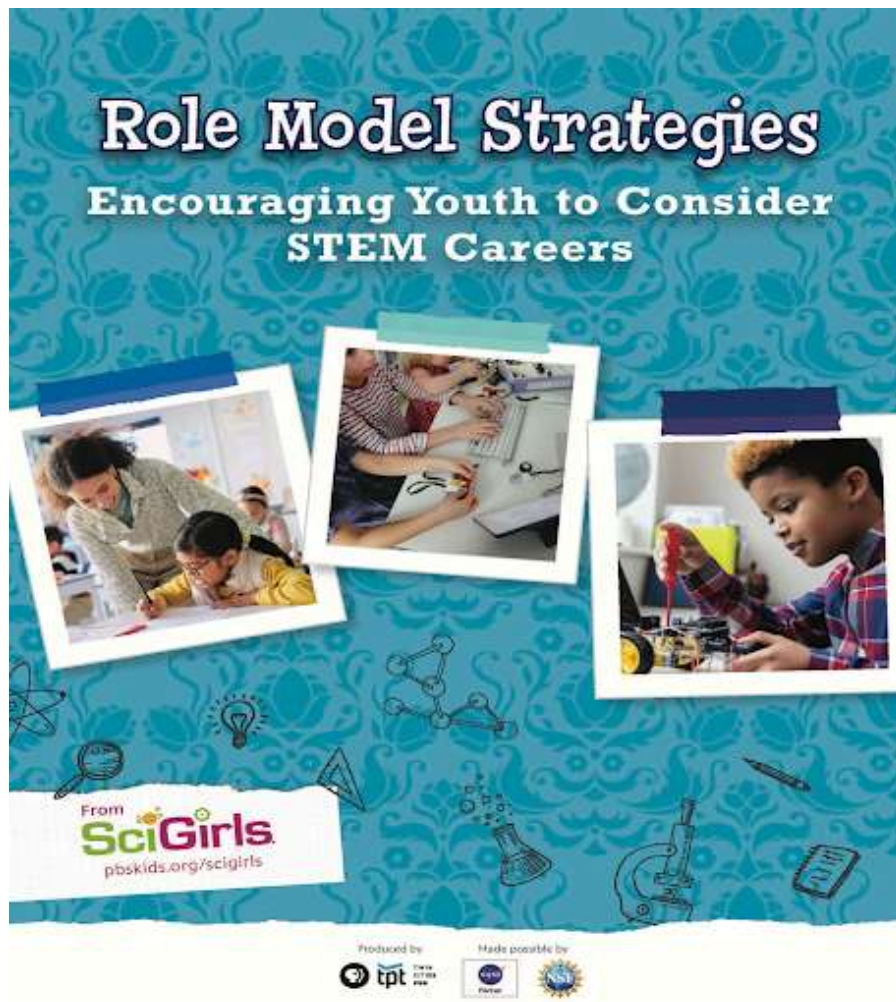
<https://www.gmri.org/commitments/education/>

<https://www.gmri.org/projects/connected-learning-ecosystems/>

<https://www.learningecosystemsnortheast.org/>

5. 8 Must-Have NASA Resources for Science Teachers in 2024

Launch your lessons to the next level with these [eight essential resources for K-12 teachers](#)



6. Role Model Strategies Guide: Encouraging Youth to Consider STEM Careers

This Role Model Strategies guide aims to change how youth think about science, technology, engineering, and math (STEM). Why are role models important? Sharing your lived experiences (your background, hobbies, and career goals) with youth can motivate them to pursue a career in STEM. Research shows that these strategies work towards breaking stereotypes. Seeing the variety of backgrounds, experiences, and perspectives of STEM professionals can help inspire and motivate youth who might not otherwise "see" themselves in STEM. This booklet offers basic training for role models, introducing you to best practices for your volunteer efforts.



7. Girls STEAM Ahead with NASA Program Cookbook

Girls STEAM Ahead with NASA is a project within NASA's Universe of Learning that empowers libraries and community-based organizations to engage girls and their families in exploring the wonders of NASA science and celebrate the contributions of women to science, technology, engineering, arts, and mathematics (STEAM).

The Girls STEAM Ahead with NASA Program Cookbook has been designed to guide educators in creating their events. It includes “recipes” about different astrophysics-related topics with sample scenarios, accessibility tips, information on how to request a subject matter expert for the events and much more!

[Access the Girls STEAM Ahead with NASA Program Cookbook](https://www.universeoflearning.org/girls)

8. NASA Earth Day

On Monday, April 22, NASA joins the worldwide [Earth Day](#) celebration with resources and events focusing on what makes our planet unique: water. Learn how NASA is studying our oceans and waterways from space and explore the complex connections between sea, air, land, and climate. Dive into the resources below to bring Earth science to the classroom and beyond.



[Earth Day Posters and Downloadables](#)

9. Explore the Moon with NASA eClips!

NASA eClips has several new resources to engage students with the moon including:

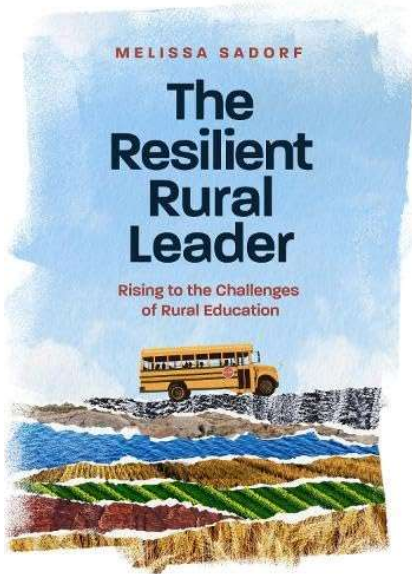
- Real World “Using Math and New Tech to Study Lunar Rocks
- Several **Ask SME videos**, including two new videos:
 - Ask SME: Ryan Zeigler – Lunar Sample Curator
 - Ask SME: Andrea Mosie – Senior Sample Process
- Several hands-on moon activities
- The **NASA Spotlight Design Challenge, Can Plants Dance?**

Access the links here: [Winter 2024 NASA eClips Newsletter](#)



10. Explore Rural Leadership

Are you an educational leader in your rural community? Make sure to check out the newly released "[The Resilient Rural Leader: Rising to the Challenges of Rural Education](#)" by Dr. Melissa Sadorf, who highlights the common hurdles faced by rural schools and offers strategies for overcoming them.





Join NASA Connects

Registered community members will have the opportunity to sign up for engagement events, view and chat with other members who are interested in similar fields, read exclusive NextGen STEM content, and access resources such as lesson plans and interactive media.

[Check out](#) our latest knowledge articles that share NASA STEM content including activities, games, videos, educator guides, teacher toolkits, and much more.



"The material contained in this document is based upon work supported by a National Aeronautics and Space Administration (NASA) grant or cooperative agreement. Any opinions, findings, conclusions, or recommendations expressed in this material are those of the author and do not necessarily reflect the views of NASA."

The Rural Education Network team serves as volunteer representatives from NASA Partner projects funded through SciAct. We are

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