Rural Educator Network Newsletter

Connecting Educators and Sharing Resources

NASA SciAct

NAU NORTHERN ARIZONA UNIVERSITY

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

Update Your Information

Vote for the Spookiest NASA Image from the Universe!

👻

“Howling Wolf”

Westerlund 2

NASA/ESA and the Hubble Heritage Team (STScI/AURA)/ A. Nota (ESA/STScI)/Westerlund 2 Science Team

Witch Head Nebula

NASA/STScI Digitized Sky Survey/Noel Carboni

“Ghost of Cassiopeia”

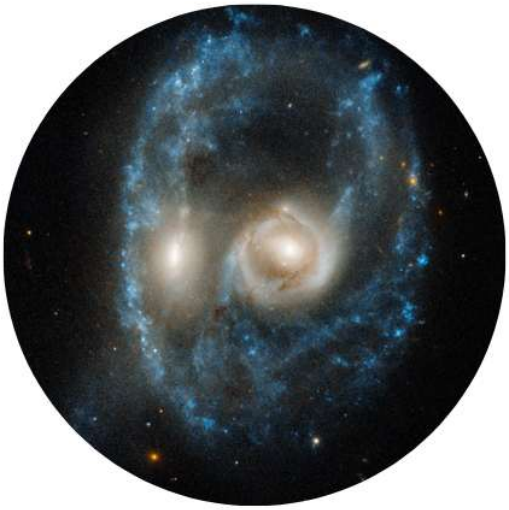
Ghost Nebula

NASA/ESA/STScI

“Tarantula Nebula”

30 Doradus

NASA, ESA, CSA, STScI, Webb ERO Production Team



“Menacing Face”

Arp-Madore 2026-424 (AM 2026-424)

“Eye in the Hourglass”

MyCn18

Vote for the Spookiest Image!

Upcoming Events and Opportunities

GLOBE North American Phenology Campaign: Fall Green-Down

The GLOBE Program's North American Phenology Campaign is gearing up again for fall. The North American Phenology Campaign is focused on monitoring and reporting plant phenology data to help validate the timing of the plant growing season. In this campaign, students will observe and report plant green-down, have opportunities to meet scientists, and collaborate with other students.

Registration is now open. All the details and resources can be found on the Phenology Campaign webpage.

Register

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

On November 7th at 8 pm EST, learn from Mike Taylor from the NASA STELLA Team to learn how to build low-cost spectrophotometers and 3-D printed housings to introduce Earth observation technologies.

Image credit: NASA SMD/SciAct

Register Here

AMTA Webinar: MS Earth Science Updates with Supplemental Resources

The AMTA is the American Modeling Teachers Assn. Modeling Instruction is guided inquiry centered on student development of scientific models. All middle school teachers are invited to the AMTA Webinar: MS Earth Science Updates with Supplemental Resources

Date: WEDNESDAY, November 6, 2024
Time: 5:00 pm MST/Arizona time

Plate Tectonics & Rock Cycle
Oceans, Climate, Weather & Storms

You'll gain insights, tools, and strategies to bring these units to life, including:
--Hands-on simulations & lab instructions --Tips for addressing common student misconceptions --Scaffolding tools & discourse resources for effective student engagement

Whether you're new to Modeling Instruction or an experienced educator, this session will give you practical methods to enhance conceptual understanding in your classroom.

Register Now

PLANETS is hosting a working session in Denver!

The PLANETS Team is currently accepting applications from OST leaders interested in contributing to the growing field of OST STEM education. Please share with anyone who may be interested. Thank you!

You can apply here.

PLANETS

In-Person December 12, 2024 & Online December 4

Would you like to contribute YOUR expertise to the design of professional development for OST STEM educators?

Planetary Learning that Advances the Nexus of Engineering, Technology, and Science (PLANETS) is a NASA-funded collaboration between Museum of Science, Boston, the Center for STEM Teaching & Learning at Northern Arizona University, U.S. Geological Survey Astrogeology Science Center, and WestEd Making Sense of Science.

Our team is seeking experienced and dedicated OST leaders interested in contributing to the growing field of OST STEM education professional learning.

<u>As a STEM Education partner, you will:</u>

- **Grow as an OST leaders through engagement with other diverse leaders and new curriculum.**
- **Explore and develop materials for a planetary science and engineering curriculum for grades 3-8.**
- **Work with us to co-create relevant and useable educator support materials for this curriculum.**
- **Provide valuable feedback before, during and after the working session.**

<u>To receive the $400 stipend, you must agree to:</u>

- **Review curriculum and supplementary materials before December 12**
- **Attend the full session on December 12**
- **Complete any post-session tasks**

Make a difference & join our team to develop high quality STEM educator support materials!

—

Wednesday, December 4 ONLINE
10 AM - 11 AM
&
Thursday, December 12
IN-PERSON
9 AM - 2 PM
Includes lunch!

—

Jack A Vickers Boys and Girls Club
Community Room
3333 Holly St, Denver, CO 80207

—

$400 stipend for full participation

Apply Now!

https://tinyurl.com/PLANETS-December-12-Denver

QUESTIONS?
Claire.Gibson@nau.edu

NAU NORTHERN ARIZONA UNIVERSITY
Center for STEM Teaching and Learning

CENTER FOR COLLABORATIVE HEAT MONITORING
A NIHHIS CENTER OF EXCELLENCE

Collaborative Community Science on Extreme Heat!

The Project Team of the Center for Collaborative Heat Monitoring (CCHM) is announcing an exciting new collaborative opportunity to develop community science projects focused on collecting and analyzing data related to extreme heat.

Earlier this year, the National Integrated Heat and Health Information System (NIHHIS) announced two Centers of Excellence to support communities who want to address the challenge of extreme heat. The CCHM will provide communities with technical assistance and a $10,000 stipend for the co-development of a community-based heat data collection campaign. Applications for our first round of heat campaigns open on November 1, 2024.

If you are interested in learning more about this opportunity, we invite you to fill out an "Expression of Interest" form at this link. Please note that the Expression of Interest is not the application form. Instead, the Expression of Interest is a chance to opt in to further communications about the application process and to be paired with a "mentor" community that has completed a heat data collection campaign and can provide help and guidance based on their experience.

Presidential Awards for Excellence in Mathematics and Science Teaching

The Nation's Highest Honors for Teachers of Science, Technology, Engineering, and Mathematics (STEM, including Computer Science)

Applications for 7-12th grade teachers are now open! Applications must be completed by February 6, 2025. Nominate a STEM teacher for this prestigious award.

The Rural Summit for Cradle to Career Success

Do you have a passion for empowering rural children and youth? Are you eager to collaborate with others on how rural communities can support pathways for success from cradle to career? Do you have proven practices that move the needle on outcomes for rural young people?

If so, we invite you to be part of an inspiring gathering: The Rural Summit for Cradle to Career Success in breathtaking Anchorage, Alaska! We will gather April 27-30, 2025 at the Dena'ina Civic and Convention Center in Anchorage, Alaska, for three impactful days of learning, networking and inspiration.

Register Here

Lesson Plans, Resources, and Materials

Igniting Dreams and Launching Futures for All!

The Virginia Space Flight Academy (VASFA) is a non-profit educational organization based in Wallops Island, VA. It offers innovative programming to empower all students to see themselves as future STEM leaders: Space Adventure Camp and the STEM Academy.

Space Adventure Camp is an annual week-long camp featuring aerospace, coding, and robotics held at Wallops Island, Virginia. Campers come from around the country for this unique experience, the only residential space camp that provides access and behind-the-scenes tours of a working NASA Facility and the surrounding aerospace cluster! It is for students ages 11-16. Beginner and Advanced camp options are available.

The STEM Academy provides year-round, high-quality learning experiences. It features live & on-demand instruction, a specialized materials kit, and ongoing access to STEM professionals, careers, and mentorship. Various modules (topics) are offered to students ages 8-14. It is adaptable to all learning environments, including in-school, after-school, and even homeschools. Scholarships are available.

Learn more

NASA eClips Newsletter: Your Ultimate Fall Resource

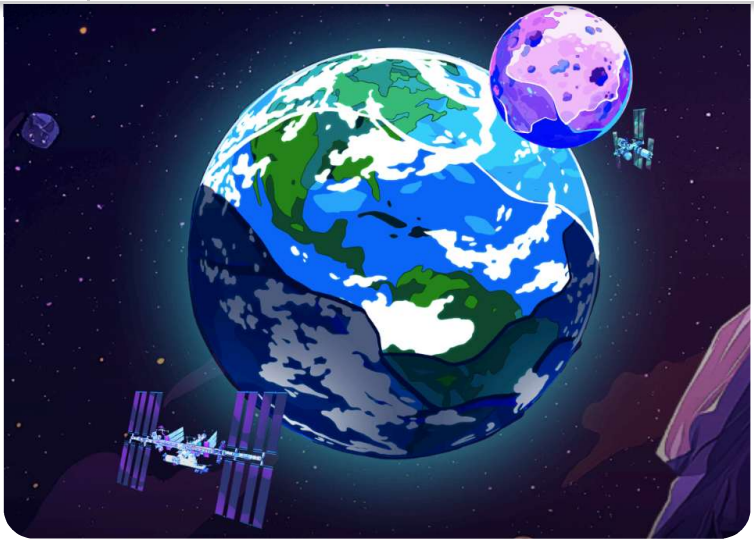
Audience: Educators of grades K-12

Help learners STEMify their Fall through hands-on and engaging activities curated by the NASA eClips team.

Learners can also explore the following resources.

Guide Lites: Comparing Science and Engineering Practices Using Black Box Models -- https://nasaeclips.arc.nasa.gov/resources/download/119

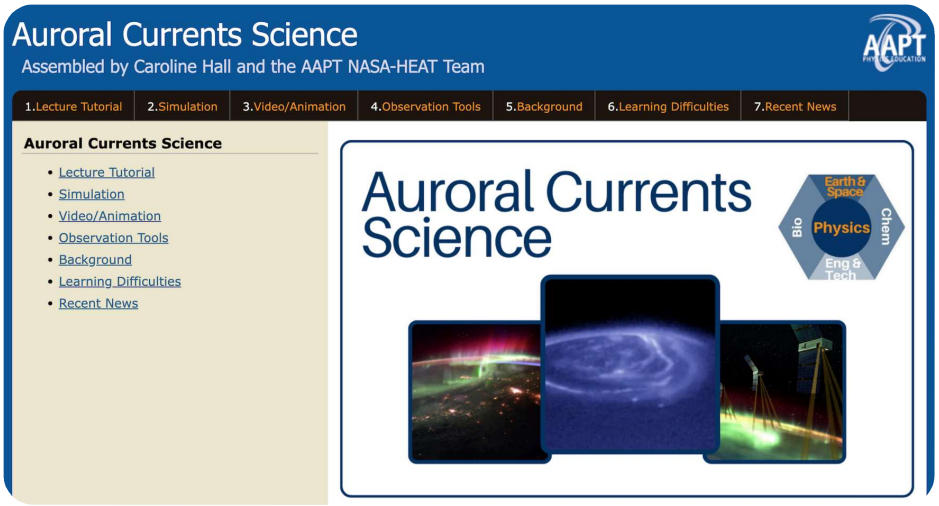
Primary Engineering Design Packet -- https://nasaeclips.arc.nasa.gov/resources/download/120



LunaSustain

LunaSustain brings the power of sustainable space travel to classrooms globally through free, interactive activities. Learners will become “solutionaries” as they explore ways to protect our planet’s future and share personal Sustainability Pledges that encourage others to do the same.

- What to Expect:
  - Interactive Learning: Hands-on activities designed for middle-school age learners
  - Sustainability Focus: Sustainability topics investigated through the lens of space exploration.
  - Classroom-Ready Resources: Free and accessible materials to integrate into your curriculum. **Register here** to receive an online Educator Implementation Guide filled with additional activities, in-depth background information, and classroom certificates.



Astronomy Teachers

For nearly a decade, the American Association of Physics Teachers (AAPT) has been working to bring together resources through its DigiKits–multimedia collections of vetted high-quality resources for teachers and their students. As a partner in the NASA Heliophysics Education Activation Team (HEAT), this work has directly supported the bundling of digital content around heliophysics lessons. Explore the DigiKits to gain access to fun resources for modeling planetary magnetism, energy in a magnetic field and solar flares, and auroral currents.

Are you an educator curious to learn more? Register for AAPT's monthly mini webinar series, with the next event on November 9, 2024, featuring the Auroral Currents DigiKit core activity.

Earthrise: Monthly e-Newsletter With Earth and Climate Science Resources

Explore the October Earthrise Newsletter!

Learn More

SCI-Jinks Introduction to GOES-R Series Satellites

SciJinks has a collection of videos, posters, comic books, activity books and more that introduce and explain key concepts of GOES-R Series Satellite's mission. Geostationary Operational Environmental Satellites (GOES) is a collaborative NOAA and NASA program providing continuous imagery and data on atmospheric conditions and solar activity.

Learn more

Year with Free Heliophysics and Math Webinars from NASA HEAT

Register for the next free webinar on November 19, 2024.

Register here

NASA Psyche Mission Innovation Toolkit

The NASA Psyche Mission Innovation Toolkit includes a series of free online courses based on the real-world challenges and skills associated with the Psyche mission's science, engineering, technology, and teamwork. Courses will be developed throughout the life of the mission.

Learn more

Host an Hour of Code on the Moon With NASA and Tynker

Step-by-step instructions and sample code allow users of any experience level to participate. Beginners may use Tynker Blocks, and more experienced coders may use JavaScript to complete the examples. Standards-aligned lesson guides and additional NASA resources are included for teachers. Hour of Code activities from Tynker are free.

Learn more

Mars Student Imaging Project

The Mars Student Imaging Project is seeking educator applicants to participate in a virtual experiential opportunity. Students will have the opportunity to ask a research question about Mars, use real Mars data to answer the question, interact with Mars scientists and target a brand new image of Mars using a special camera on the Mars Odyssey Spacecraft. Applications are being accepted now.

Learn more

Describe Rocks Like a NASA Scientist

In this activity, you'll learn how NASA studies rocks on Earth and other planets. Then, play the role of NASA scientist to match images of "rocks" made of candy bars with their correct descriptions.

Learn more

11/20 Virtual Classroom Connection: Astro-Not-Yets! Explore Energy

11/20 Virtual Classroom Connection: Astro-Not-Yets! Explore Energy
Event Date: November 20, 2024, at 1 p.m. ET (Wednesday)
Registration Deadline: November 6, 2024, at 11:59 p.m. ET (Wednesday)

Introducing the Astro-Not-Yets! The Astro-Not-Yets are a series of short stories to help young students learn about NASA's Commercial Crew Program. Each month a scientist or engineer whose job relates to the story will read the book to students and answer their questions live.

11/14 Surprisingly STEM Live Q&A: Exploration Geologist

Next Gen STEM Virtual SME Engagements give students and educators the opportunity to connect with subject matter experts at NASA.

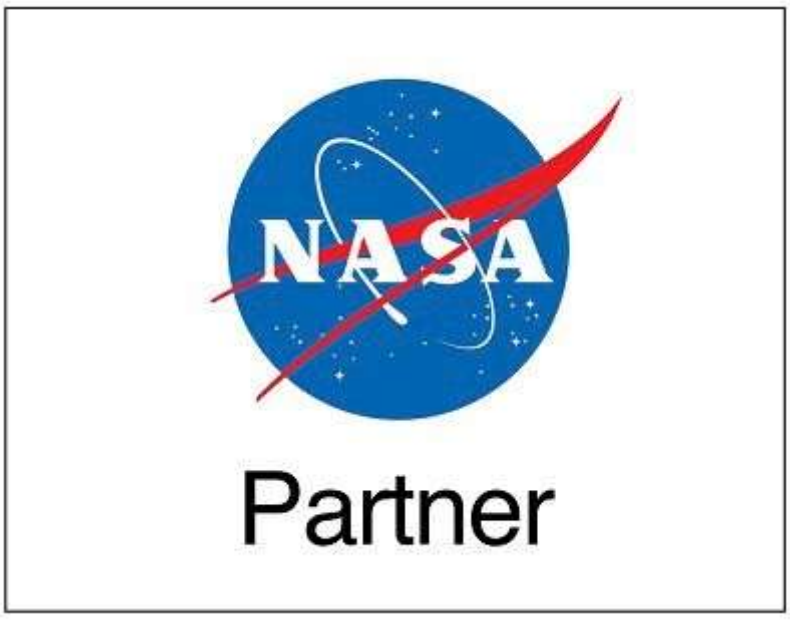
Surprisingly STEM Live Q&A: Exploration Geologist
Event Date: November 14, 2024, at 5 p.m. ET (Thursday)
Registration Deadline: November 7, 2024, at 11:59 p.m. ET (Thursday)

Surprisingly STEM is a video series that highlights exciting and unexpected careers at NASA. This series is designed to inform students about the broad range of career opportunities at NASA – outside of the typical associations of rocket scientists and astronauts – and to break down perceived barriers for working at the agency.

Register here

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.



“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 aiming to amplify and elevate the voice of rural educators while providing access to resources that support educators in engaging youth in planetary science and STEM.