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Rural Educator Network Newsletter

Connecting Educators and
Sharing Resources

NASA SciAct



Happy New Year!

This Newsletter is dedicated to providing:

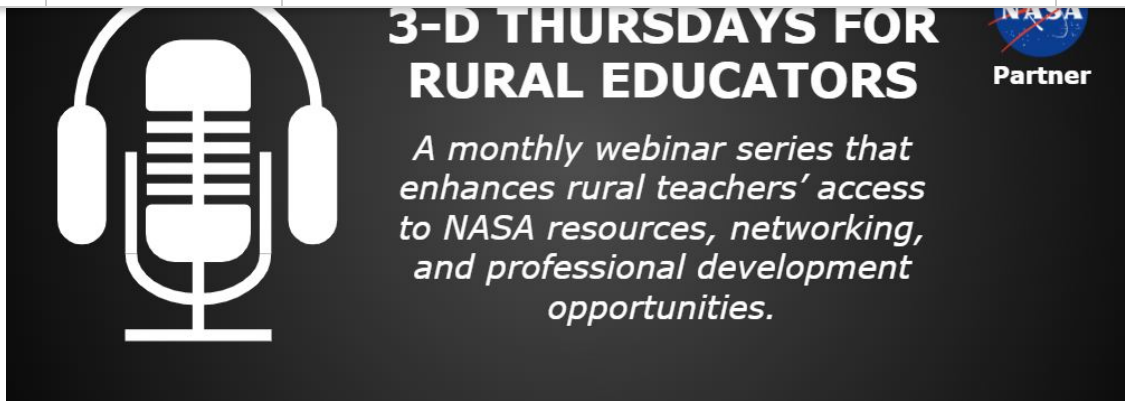
1. NASA resources modified to the needs of rural audiences
2. Upcoming NASA events, webinars, and opportunities
3. Partnership highlights
4. Expressing your current needs and successes

Opportunities to Connect and Contribute

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

Submit a Spotlight for Your Program: fill in [this form to submit a quick spotlight](#) that we can share in a future newsletter edition.

What are Your "Go-To" Resources? Help us expand by sharing resources that Rural educators would love: <https://forms.gle/SUaFnCGmAuLS5V7A6>



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

On February 2nd at 8 pm EST, learn about two NASA opportunities to help youth engage and learn with peers across the nation. **Register for the Feb. 2 webinar here:** <https://forms.gle/2NCKfgBvD599XCd76>

Image credit: NASA SMD/SciAct

Events

What does a statewide, rural STEM Learning Opportunity look like?

One example of partners collaborating to bring STEM Learning to life occurred in Arizona on January 13th and 14th. SciAct NASA Broadening Participation in partnership with Arizona Hubs Advancing Computer Science, Arizona Science Center, and SciTech hosted a Minecraft for Education workshop. In the room were K-8 teachers, STEM centers, and librarians from rural communities around Arizona, all committed to supporting STEM learning in their communities.

Connect at the National Science Teachers Association Conference in March

Matt Cass is a Physics Instructor at Southwestern Community College, and a Member of the NASA SciAct Rural Affinity Group. He will be presenting at NSTA Conference in Atlanta, GA on March 25th, 2023. Matt says "I'll be presenting at the [NSTA conference](#) on utilizing NASA content in rural settings. Feel free to attend my session or link up with me during the conference!"

The Hemlock Woolly Adelgid challenge will kick off Wednesday, February 8th, with a live virtual meeting with the project's lead scientists, Horticulturist Gary Fish and Entomologist Colleen Teerling. During the challenge, students will build background knowledge around forest hemlock ecosystems and head out into local forests to collect data. As the results come in, the GMRI team will share project updates and emerging questions. The challenge will wrap up March 8th with a virtual gathering in which students and lead scientists share observations and questions from their work in the field. Students that are not able to join the live session may contribute comments or video clips ahead of time to be shared with the community. - <https://gmri.org/events/hemlock-woolly-adelgid-challenge-winter-2023/>



Resource Spotlight: NASA eClips

NASA eClips is a NASA-supported project that brings together exciting video segments and resources with educational best practices to inspire and educate

- [Real World: Food Security - Monitoring Crops From Space](#)
- [Launchpad: Space Age Technologies Measure Soil Moisture](#). 6-8
- [Our World: Where Do Crops Grow?](#) K-5, 6-8
- [Program Director -- Dr. Inbal Becker-Reshef](#). 6-8
- [U.S. Domestic Co-Lead & AI Lead -- Dr. Hannah Kerner](#). 6-8

Check out the [eClips website](#) to learn more and access resources for free.

Image Credit: NASA eClips

Lesson Plans and Opportunities

1. Student Earth Day Presentation Opportunity with NASA eClips: The NASA eClips Team will host students presenting Earth Day-themed webinars for families and groups of learners on **Tuesday, April 18, 2023, starting at 10:00 am (ET)**. Please sign your students up to run hands-on STEM presentations to help participants learn about Earth. Register [here](#).

2. Are you looking for an educational activity for 6-8 grade? Planetary Learning that Advances the Nexus of Engineering, Technology, and Science (PLANETS) offers a unit called 'Water in Extreme Environments' with engineering and science lesson opportunities. Check out the educational resource [here](#) for educators.

3. It's winter, which means it is the perfect time to teach youth about ice! MyNASAData has several lesson plans for groups of all ages. Check them out below.

- [Activity for grades 3-5 and 6-8](#)
- [Activity for grades 6-8 and 9-12](#)

4. [NASA](#), [Texas Space Grant Consortium](#), and [The University of Texas at Austin Center for Space Research](#) are offering the STEM Enhancement in Earth Science (SEES) Summer Intern Program, a nationally competitive STEM program for high school students. The program provides exposure to Earth and space research for students. Apply at: <https://spacegrant.net/apps/sees>



Individual and Program Spotlights

Willcox Arizona is a town of 3000 in the heart of Arizona's agriculture region. In a classroom of this town's high school are the 2021 Arizona and 2022 National Rural Teacher of the Year who is also the 2023 Arizona Teacher of the Year. Mr. Ty White teaches chemistry, and as with all rural teachers, he hosts several out-of-schooltime programs including serving as the regional lead for the Chief Science Officers (SciTech Institute, Tempe, AZ), and is the co-founder of a space science design challenge ([InSiMEd](#)). Ty is a major pillar of a STEM Learning Ecosystem which encompasses S.E. AZ and northern Sonora, MX.

Image Credit: Arizona Education Foundation

Stockbridge High School (Michigan) takes project to the edge of space

Teacher Robert Richards and his students from this rural school, Stockbridge High School, MI, built a cubesat and launched it to about 70,000 feet on a high altitude balloon. The story was covered by Channel 6 from Lansing, MI. The students then presented their results at the American Geophysical Union (AGU) meeting in Chicago in December. The students hope to launch the cubesat on a high altitude balloon during the solar eclipse in 2024.

Citizen Science with the Cullowhee Kids Creek Club

Randi Neff, Project Coordinator of The Smoky Mountains STEM Collaborative, partnered with Cullowhee Valley School in Cullowhee, North Carolina to promote citizen science education and activities for fifth grade students. The group, called Creek Club, was led by Karen Kandl and met after school in February 2022 to study macroinvertebrates in their habitats and document data

contributions to stream ecology. Place-based education projects like this are important, because they promote the process of science at a local level while encouraging the development of data collection and literacy in young learners.

The Smoky Mountains STEM Collaborative is supported by NASA under cooperative agreement award number NNX16AB87A and is part of NASA's Science Activation Portfolio. Please visit <https://science.nasa.gov/science-activation-team/smsc> to learn more.

Midwest Earth System Science Collaborative in Negaunee, Michigan

Midwest Earth System Science Collaborative Virtual Science Symposium The 4th and 5th graders of North Star Montessori Academy studied how to keep the ice on their natural luge track on Lucy Hill in Negaunee, Michigan longer. The students found the ice will stay longer if the boards of the track are painted white. One student commented "We appropriated doing this research for GLOBE and NASA because it was really fun and we were able to help the luge club."

Students, Teachers, and Subject Matter Experts Collaborate for Tree Planting with GLOBE in Defiance, Ohio

This project will help lower the surface temperatures around Defiance. The planting of 112 trees will sequester 18 tons of carbon dioxide in the first year and 90 tons over 5 years. In recent activities, 18 Youth Engaged Leadership and Philanthropy (YELP) students and their families helped plant nine trees at Lily Creek Farms. The trees were Norway Spruce, Macintosh Apple and Cypress Tree. This is the first planting of a grant through NOAA (National Oceanic and Atmospheric Administration) Stewardship Grant entitled Planting Roots in our Community-Leaving a Legacy Behind! There will be more planting around the Defiance area. The next focus is working with Defiance City Schools where Ms. Houck is a teacher. After the trees were planted the students were given a tour of the farm and got to meet all the animals. It was a fantastic day! Jodi Young shared, "She is just overwhelmed and is so gracious for the work done on the farm."



Partner

"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.

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