



NASA Aeronautics

Monthly STEM Newsletter

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The X-59 is lowered to the ground at Lockheed Martin's Skunk Works facility in Palmdale, California following a crane operation to remove it from the back of its transport.

Credits: NASA/Lauren Hughes

May 2022

As we gear up for summer, there is lots to do and lots to celebrate. And since it is May, NASA is celebrating Asian-American and Native Hawaiian Pacific Islander Heritage Month. Among the variety of [events and activities](#) planned, a recent NASA STEM Stars [episode](#) featured Dr. Kartik Sheth and his story about coming to NASA. Also in this newsletter, NASA has several funding and other opportunities, new and upcoming lessons and resources, as well as ways to engage with us in person and virtually.

And who can forget that the first week of May is Teacher Appreciation Week?!? A huge thank you to all who work with students or support the many programs and organizations that do. It has been a difficult past couple of years—particularly for educators—and we can only begin to share our appreciation for all you do every single day. NASA has multiple ways to celebrate, so stay tuned to our social media channels and website throughout the week. Can't wait? Take a look at a webpage [JPL](#) has for all of you, just to get started.

Do you need to see more of something or have a new idea for upcoming newsletters? Let us know! Do you know someone else who needs this monthly update? [Sign up for our monthly STEM newsletter](#). Have questions or want to be removed from the list? Send an email to April.a.lanotte@nasa.gov.

Newly Released STEM Items:

Flight Log: Sign up for our Flight Log Experience! Educators, classrooms, aviation enthusiasts—sign up to send your name with us on our X-planes, UAS flights and more while you begin to build your virtual NASA flight log. Educators—bring your entire class.

- Access STEM lessons and activities, videos, and other resources
- Earn virtual endorsement stamps and mission patches (**take a look at some of our newly added opportunities!**)
- Participate in our flights and other experiences, and hear from our [Lead Test Pilot Nils Larson](#).



- **Now open: "Dream with Us" Design Challenge:** The ["Dream with Us" challenge](#) is asking students in grades 6-12 to help NASA envision innovative solutions to three real-world aeronautical challenges by submitting an original art piece capturing their ideas. The three aeronautical challenges are drone use, future airports and vertiports, and new sustainable aircraft designs. Submissions can take the form of several mediums – including, but not limited to, digital art, models, comic books, essays, or stories – that depict their solution, along with a written explanation of how it works. Winners will earn the opportunity to have a NASA subject matter expert present to their classroom or school, as well as certificates or other materials, and could even have their work publicly displayed on NASA Aeronautics' website and social media accounts. **Challenge dates: March 1-May 31, 2022.**

**If you are participating in [Flight Log](#), this event earns you a Dream With Us endorsement code.*

Engage with Aero!

Aeronautics is everywhere! Here are some of the places you can go (some in person, others virtual) to engage with us or our partners:

June 3-5, 2022: Awesome Con 2022

[Awesome Con](#) in Washington, DC is the perfect place to show off the future of aeronautics. Join us at the NASA booth if you plan to attend! You may even be able to spot Orville D. Squirrel.

July 25-31, 2022: AirVenture 2022

If you've ever been to [AirVenture](#), you know that camping is a fun part of the experience for some. And wow, does NASA have a tent for you! Join us at AirVenture for lots of exhibits, a STEM Zone, and so much more, we can't event list it all!!! ***If you are participating in [Flight Log](#), this event earns you an AirVenture endorsement code.**

**Please note that the events are currently scheduled as in-person events, but may change due to COVID restrictions.*

Intern Highlights: Liam Brinton and Holly Garza



Spring 2022 was a success for NASA Aeronautics thanks in large part to the help of our Spring 2022 STEM interns Liam and Holly.

Holly Garza is a master's candidate in Science Curriculum and Instruction at Southeastern Oklahoma State University in Durant, OK. Along with helping us build our many STEM programs, Holly loves to camp with her husband and two boys as they try to visit all of the National Parks.

Just Published: [STEMConnector Sustainability eBook](#):

In celebration of Earth Day and sustainability, NASA Aeronautics subject matter expert Claudia Sales was highlighted in the free, downloadable eBook from STEMConnector, "Environmental Sustainability is STEM." Claudia is the Chief Engineer for our X-57.



New! [Advanced Air Mobility: Vertiports](#)

NASA's vision for Advanced Air Mobility (AAM) is to map out a safe, accessible, and affordable new air transportation system alongside industry partners and the FAA. An important aspect of AAM is the development of vertiports. Most early cases of vertiports will occur at existing airports. Down the road, AAM vehicles will use their unique performance capabilities to land on the top of buildings or other spaces in crowded urban areas. In this episode of NASA's Advanced Air Mobility Playbook, Subproject Manager of the High Density Vertiplex Project, Marcus Johnson, explains the role that vertiports will play.

<https://www.nasa.gov/centers/armstrong/features/aam-plans-for-vertiports.html>.

Activities Coming Soon:

- **Peeps and Pressure:** Have your students created and tested pressure suits for marshmallow Peeps with our "[Why Do you Really Need Pressure Suits?](#)" activity guide? We're making some additions and improvements, including adding Engineering Design components. The stand-alone activity will be released soon.
- **Updated Leveled Readers:** Our [Leveled Readers series](#), which features some of our NASA experts and the work they do, are being updated to include Lexile Levels thanks to feedback we received from some of you. Check back soon to see these added to the front covers of our series. Our story about Danielle Koch will also be available in Spanish.

Liam Brinton is studying Mechanical and Manufacturing Engineering at Oregon State University. He is a 2-time NASA intern who now works on a 3D printed X-59 model. His main hobbies include sailing and photography.

Professional Development:

[Educator Professional Development](#)

[Collaborative \(EPDC\)](#): You always work hard, and we do, too. Professional development opportunities are always available at NASA. May 3rd at 7pm EST provides a [propeller design challenge](#), May 10th at 7pm EST highlights [Bernoulli's Principle](#) activities, and May 12th shows participants how 3D printing is [shaping the future of aviation](#). Sessions are free, but registration is required.



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- **X-59 STEM Toolkit:** In partnership with our Aeronaut-X team, a new X-59 STEM Toolkit will be available soon!

Funding and Other Opportunities:

- The [NASA SG KIDS](#) solicits proposals from the 52 Space Grant Consortia that will form a regional approach to formal or informal, hands-on, and experiential learning activities that are NASA-aligned for middle and/or high school students.

REQUIRED Notices of Intent (NOIs) due Thursday May 5, 2022 at 11:59pm ET.

FULL PROPOSALS are due Tuesday May 31, 2022 at 11:59pm ET.

- **University Student Research Challenge** (solicitation [NNH21ZEA001N-USRC](#)) seeks to challenge students to propose new ideas/concepts that are relevant to NASA Aeronautics. USRC will provide students, from accredited U.S. colleges or universities, with grants for their projects and with the challenge of raising cost share funds through a crowdfunding campaign. The process of creating and implementing a crowdfunding campaign acts as a teaching accelerator - requiring students to act like entrepreneurs and raise awareness about their research among the public.

Notices of Intent (NOIs) are not required for this solicitation. Three-page proposals for the next USRC cycle are due June 23, 2022.

A USRC Q&A/Info Session and Proposal Workshop will be held on May 9, 2022 at 2PM EST. Please join us on TEAMS using the [Meeting Link](#), or call in via +1 256-715-9946,,138104955# Phone Conference ID: 138 104 955#

- **Fall Internships open:** NASA needs interns! The Fall 2022 internship [application cycle is now open](#). Please share this opportunity widely, and don't forget that it takes all types of skills and people to keep NASA up and running, so our interns join us in projects ranging from engineering to education to graphics arts and more.

Links to our Aeronautics STEM Resources:

[Aeronautics Research Resources](#): (all ages) This link takes you to a wide variety of educator resources, Aeronautics@Home, ebooks, National Academies Reports, webinars, lithographs and mini posters, the NASA Aeronautics Research Institute, and more.

[Aeronautics@Home](#): (K-12) This web page contains aeronautics-based activities, videos, games, and more that can be completed at home, in the classroom, or in any number of settings. Topic areas include: "Build It!" "Explore It!" "Watch It!" "Solve It!" "Color It!" and "Aero Educator Resources". Coming soon: "Read It!" and "Do It!"

[Aeronautics Innovations Challenges](#): Keeping up with our many design challenges and opportunities for both post-secondary and K-12 can be tough. In response, we created a "one-stop shop" to pull them all together in one location.

[Flight Log Experience](#): (K-12, post-secondary, general public) Sign up to send your name with NASA Aeronautics on X-planes, UAS flights, and more as you build your virtual NASA flight log. Earn virtual endorsement stamps and mission patches and access aeronautics STEM activities and resources. Educators can sign up their entire class.

[NASA Express Sign-Up](#): (K-12, post-secondary) Have you signed up for NASA's NASA EXPRESS weekly newsletter? This newsletter contains the latest information for educators (K-12 and post-secondary) about new resources, design challenges, internships, and workshops. It is THE go-to for the latest STEM news.

[NASA Educator Professional Development Collaborative](#): (K-12 educators) Where do you go for ongoing, free NASA educator professional development opportunities? To EPDC! Take a look at webinars, digital badging and CEU opportunities, STEM teaching tips, videos, and so much more.

[Aeronaut-X](#): (K-12) Our Next Gen STEM: Aeronaut-X team provides new and exciting STEM activities that focus on cutting-edge aeronautics education and the future of flight.

[Museum and Informal Education Alliance](#): (Informal Educators and Museums) Not in a classroom? Looking for informal education materials? Join NASA's Museum and Informal Education Alliance, where you have access to NASA resources—including aeronautics—for your program, organization, museum, science center, or library. Find out about events happening near you and in the virtual world, and let the MIE Alliance help you build your programs! Access to guest speakers, the latest announcements about grant programs, and an active community network allow you to connect with other like-minded people in a supportive, engaging, and aerospace-focused neighborhood.

[NASA Aeronautics for Educators Facebook Page](#): (K-12, post-secondary) Join our NASA Aeronautics for Educators Facebook page, where the latest aeronautics updates, professional development opportunities, lessons and ideas are freely shared.

[NASA STEM Stars](#): (students ages 13+) Webchats that connect students ages 13+ with NASA experts of all types. Each chat introduces a STEM career, addresses a STEM topic, and highlights a NASA mission. Webchats are streamed live at 2pm EST via YouTube, and students can ask questions via the chat feature in real time. Or you can choose from a growing library of archived sessions.