NASA Aeronautics

August 2023
No. 27

Monthly STEM Newsletter

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New STEM Activities

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Dream with Us Design Challenge 2023 and 2024

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USRC Solicitation Open

The X-59 aircraft has been moved to the flight line-- the space between the hangar and the runway – at Lockheed Martin Skunk Works in Palmdale, California. This milestone kicks off a series of ground tests to ensure the X-59 is safe and ready to fly. Credit: Lockheed Martin.

August 2023

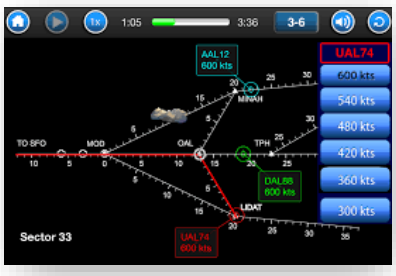
As summer comes to a close, many of you are preparing for the school year ahead (and for those of you who held summer programs for younger students, you are probably cleaning up bits of paper and other supplies you didn't even know could make the messes they did!). NASA's aeronautics STEM team has just returned from AirVenture 2023 and we're now setting our sites on the year ahead. Stay tuned for NASA's back to school push, along with emerging opportunities to visit our NASA centers as several of them open up once more for tours and open houses. And it wouldn't be fall if there weren't new design challenges, funding solicitations and other ways to connect NASA with your students.

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.

Let's Fly!

New STEM Items

Smart Skies



Have you used Smart Skies in the past to excite students about aviation and air traffic control while sneaking in math skills "vegetables"? It's been a while since the interactive math program has had an update AND NOW IT'S BACK BETTER THAN EVER. If you're new to Smart Skies, take a look and have some fun with students this summer and beyond.

Fly with Advanced Air Mobility and build your flight log!

Have you signed yourself or your students up for the NASA Aeronautics virtual flight log? Sign up now for our latest flight opportunity on our PC-12 that will be flying in September, with more opportunities coming throughout the fall.

Add your email to our contact list to stay up to date on upcoming flights and other opportunities. update is now live, allowing for more interaction, additional STEM content, and new opportunities to engage with us. For new and returning participants alike, you can now sign up to receive email updates, so take a look at our new content. We have multiple flights that will be coming up in 2023 so it's a great time to fly with us!

Professional Development:

Virtual Opportunities:

Explore Aeronaut-X: 3,2,1…¡Almuerzo!: August 23, 2023 at 7pm ET. *This webinar will be presented in Spanish.* webinar we will explore the NASA STEM activity "3, 2, 1… Lunch!" to use block programming to navigate a UAV through or around obstacles. This session will share NASA STEM resources, background information, and teaching strategies to bring Aeronaut-X to your classroom.

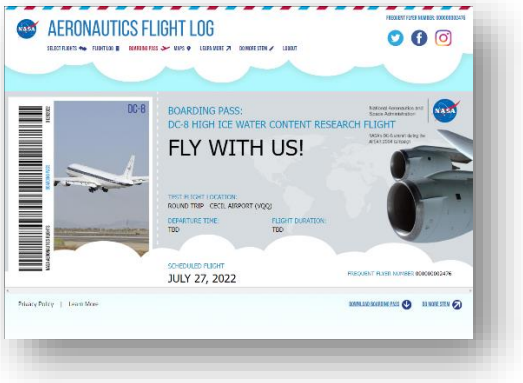
Explore Aeronaut-X: Senses of Sound and Sound Effects Webinar: August 28, 2023 at 7pm ET. Sound is one of the most important ways we have of sensing our surroundings and communicating with others. NASA investigates ways to reduce noise pollution and has produced a variety of technology solutions for their X-planes. In this webinar for educators, learn about activities for students to learn about motion, forces, transfer of energy, and interactions of energy and matter, all while finding solutions to reduce and amplify sound volume.

NASA CONNECTS: Are you interested in other professional development opportunities? Create a new account or log into NASA's STEM Gateway to find a session that interests you.

Come See Us in Person!

Energy and Mobility Technology Conferenece and Expo: September 12-15, 2023. Cleveland, OH. Free public opportunities during the conference.

NASA Langley Research Center Open House: Saturday October 21st, 2023: Join NASA's Langley Research Center for a chance to look at our state-of-the-art technologies, labs, and facilities that help us get to the moon, advance the latest aeronautics research, and help us understand more about our own planet.



Name that Plane: It's More Than Just Details

NASA and our industry partners have been busy working on new paint schemes and the "livery" for several aircraft in development. Why is paint and identification so important? Because it's part of our identity! Enjoy the images below highlighting three new aircraft paint and logo designs, and let your students work on their own designs with elementary level and middle/high school level activities that bring the practicality and the creative sides of aeronautics alive.

Name that Plane: Elementary Level

Name that Plane: Middle/High School Level

Gateways to Blue Skies winners selected: 2023

Grant Proposals and Design Challenges

USRC
UNIVERSITY STUDENT RESEARCH CHALLENGE

The newest solicitation window is now open! Join the **NASA University Student Research Challenge** family and collaborate with peers to contribute to the evolving field of aeronautics! NASA is seeking creative ideas and concepts relevant to NASA Aeronautics from interdisciplinary student teams.

- Receive up to $80,000 to pursue your ideas
- Gain technical and entrepreneurial experience
- Open to all majors and interdisciplinary teams (engineering, business, etc.)
- Interface with NASA experts and receive exposure to the aerospace industry

Proposals for the next round are due ***November 9, 2023.***

2024 Gateways to Blue Skies Challenge Now Open!!

As climate change increases the frequency and intensity of many natural disasters, NASA Aeronautics asks collegiate teams to conceptualize aviation-related system(s) that can be onboarded to improve aerial disaster management efforts immediately and into the next ~10 years.

The second annual Gateways to Blue Skies competition concluded recently, with this year's winners announced this summer. Students from Boston University's team took home top honors, with subject matter experts from NASA and industry judging eight finalist teams. Students worked throughout the academic year on ideas for potential clean aviation energy sources of the future. Link on the story above to find out more about their project and others.

Based on a review of proposal and video submissions, up to 8 finalist teams will be selected to receive an **$8,000 stipend** to develop a final technical paper, an infographic, and to present at the 2024 Gateways to Blue Skies Competition Forum at NASA's Ames Research Center in Mountain View, CA, May 30-31, 2024.

But wait...there's more! As the competition prize, **NASA is offering 6 internship opportunities within its Aeronautics Research Mission Directorate!**

Submit a non-binding Notice of Intent (NOI) by October 16, 2023 to let us know you're interested in participating in this year's Blue Skies Competition - and get regular communication updates from the Blue Skies Team!

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.

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 Connects: (K-12, post-secondary) NASA Connects is a network of educators who come together to collaborate, share NASA resources, and create personal collections of materials that can then be shared with others. Members can join groups tailored to their specific interests.