NASA Aeronautics

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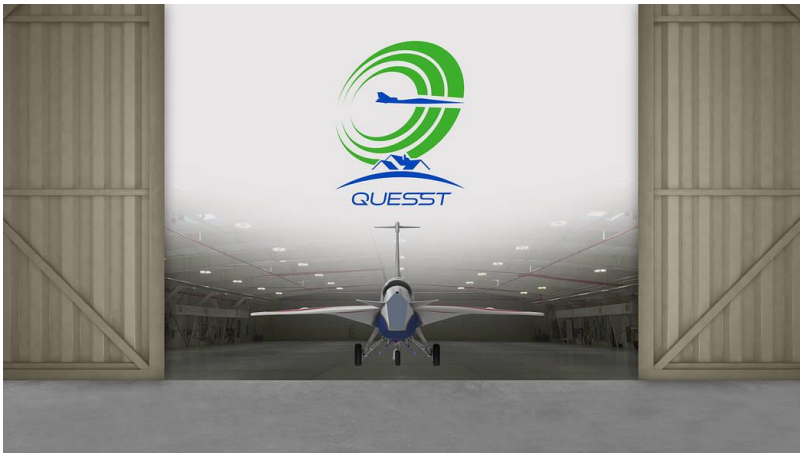
Monthly STEM Newsletter

INSIDE



NASA revealed Quesst, the new logo and image for our former Low Boom Flight Demonstration Mission. Quesst has an extra "s" to represent supersonic, and the blue and green colors represent, in part, Earth and sky. Image Credit: Maria Werries/NASA

July 2022

Summer is here, and many of you are busy with summer camps, airshows, and looking ahead to Fall. Here within NASA Aeronautics, we are buy packing and shipping exhibits to AirVenture 2022 in OshKosh, WI, prepping for Back to School (yes, already!), and following the advancements of our X-57 and X-59 aircraft as they get closer to flight. Take a look at some new and exciting STEM materials for you, a funding opportunity, and help us celebrate our "Blue Skies" design challenge awardees.

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!

Newly Released STEM Items:

New! Sustainable Aviation STEM Toolkit:

The Sustainable Aviation STEM Toolkit is a compilation of NASA STEM materials related to sustainability and flight. Hands-on activities for K-12 students, videos, games and puzzles, as well as education guides provide a better understanding of what sustainability means here at NASA Aeronautics. Includes:

- Propeller design challenge
- Design your own X-Plane activity
- Ohms Law lesson
- Circuitry activities including a light-up paper helicopter and a "Build your own Coin Cell Battery" activities.

New! NASA's Advanced Air Mobility Playbook Episode 6: Noise

NASA's vision for Advanced Air Mobility (AAM) is to map out a safe, accessible, and affordable new air transportation system alongside industry partners, community partners, and the FAA. An important aspect of AAM into the airspace is noise research. In this episode of NASA's Advanced Air Mobility Playbook, Revolutionary Vertical Lift Technology project manager Susan Gorton explains the importance of mitigating vehicle noise and how NASA's research will help inspire quiet and less disruptive vehicles.

New! NASA's "Curious Universe" podcast, *Going Supersonic*

Episode Description: When a plane flies faster than the speed of sound, you get a sonic boom! But what if we could change those physics? Join NASA test pilot Nils Larson and aerospace engineer Lori Ozoroski to hear how we're flying faster than the speed of sound, and making that supersonic flight quieter, too.

Engage with Aero!

Summer and early fall is airshow season, and NASA is busy supporting a reinvigorated flight season as some airshows are back after the pandemic. Here are two of the larger airshows we'll be a part of:

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.***

SAVE THE DATE: August 19th, National Aviation Day!

More details to come, but we always plan a great celebration for National Aviation Day. What are you planning??

Oct. 15-16, 2022: Aerospace Valley Open House, Air Show, and STEM Expo 2022

For the first time since 2009, the Edwards AFB air show is back, and larger than ever. Coinciding with the 75th anniversary of supersonic flight, the STEM Expo, USAF Thunderbirds flight demonstration, airshow, and open house will be free to the public. Join NASA, the Air Force, and others at Edwards Air Force Base in CA if you can!

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

Funding and Internship Opportunities:

The **University Leadership Initiative (ULI)** provides opportunities for university teams to exercise technical and organizational leadership in proposing unique technical challenges in aeronautics. Partners receive $1-2M for 3-5 years. Seven ULI topic areas are sought for this round. An applicant workshop will be held on **Thursday July 14th, 2022** and a short mandatory Step-A proposal is due on **Aug. 30th, 2022**.

Fall 2022 Internship applications are due by July 11th, 2022! Applications can also be submitted for Spring 2023 (Nov. 11th is the deadline for Spring internships). Fall session begins August 22nd and Spring session begins Jan. 17th, 2023. *Please note that NASA Internships has recently migrated to a new application system. Previous applicants need to renew their passwords and update profiles before applying for an opportunity.*

Kudos:

Winners: Inaugural "Gateways to Blue Skies" Aeronautics Competition

Congratulations to the Carnegie Mellon University team and their "Sustainability and Connected Autonomy: A New Era for Aviation" project for the Gateways to Blue Skies competition. They competed with eight finalist teams who each presented their ideas for future airport design updates needed to

Did you know??

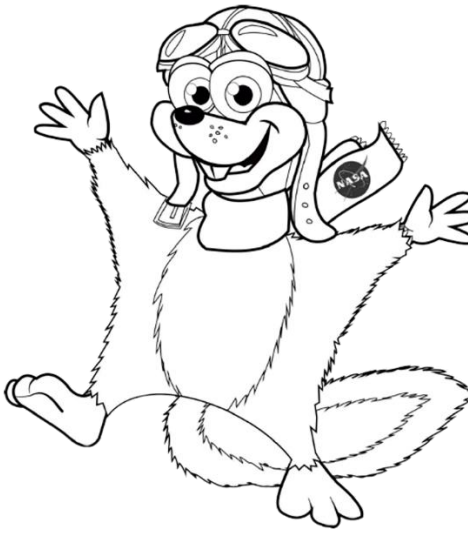
July 2, 1937: Amelia Earhart and navigator Fred Noonan are lost over the South Pacific.

July 4, 1956: A Lockheed U-2 reconnaissance aircraft makes its first operational overflight.

July 17, 1917: Ground is broken for the first building of the National Advisory Committee for Aeronautics (NACA) Langley Field laboratory.

July 1930: Graciela Cooper Godoy obtains the first license for a woman pilot in Chile.

July 1937: Willa Brown is the first African American woman to earn her pilot's license in the United States.



accommodate climate-friendly aviation advancements. Second place went to Ohio State University and their project, ECOAir.

Professional Development:

Educator Professional Development Collaborative (EPDC):
You always work hard, and we do, too. Summer is a great time to sit back and learn something new! Professional development opportunities are always available at NASA, but if you have any extra time, take advantage of our supper offerings. July virtual professional development includes: July 5th "Aeronaut-X: Shape your Flight, geometry and Aeronautics," and "Aeronaut-X: Wiring Integration, Coding, and the X-57 Maxwell Featuring the X-57 Coding Activity" session on July 18th. Sessions are free, but registration is required.

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.