

June 2025

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NASA Aeronautics

Monthly STEM Newsletter

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National Safety Month

Flight Log and the NEW video series "59 Seconds on NASA's X-59"

AAVP, NASA 101, USRC, High School Capstones, and MORE!



Advanced Air Mobility (AAM) 2021 project poster contest winner, Lydia S from Wisconsin. Kids in grades 6-12 were challenged to create a poster of what AAM looks like and how it's being accomplished.

Credit: Lydia S. / NASA

June 2025

Let's go into summer with safety in mind, Aeronauts! This month we celebrate National Safety Month and the NASA missions working to improve safety throughout the aerospace industry. Get to know Juan Carlos Perez, a NASA Quality Assurance Specialist working on the X-59 in our Aeronautics Crew Highlight. Apply for NEW student and educator opportunities with deadlines coming up this summer! Have you seen the NEW Quesst video series, 59 Seconds on NASA's X-59? Watch the series on NASA's YouTube channel and collect the hidden codes to add endorsement stamps to your virtual flight log. Haven't signed up, yet? Head to Flight Log now to sign up and start collecting stamps, mission patches, virtual flights, and more. As we get closer to X-59's first flight there's not much time! Did you know about National Kids Day or about the Week of Making? Check out aeronautics activities to celebrate and get inspired for a future STEM workforce!

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? Share the good news. Not subscribed yourself? <u>Sign up for our monthly</u> <u>STEM newsletter</u> today! Have questions or want to be removed from the list? Send an email to <u>april.a.lanotte@nasa.gov</u> or <u>holly.o.gutierrez@nasa.gov</u>.

National Safety Month

June

Let's talk safety! NASA is dedicated to safety when testing out new aviation technology or sending humans on a space mission. From every mission, NASA teams take lessons learned to continue making improvements to keep all living things safe on the ground, in the air, or in space. <u>NASA's System-Wide Safety (SWS)</u> **project** is dedicated to safe practices in aviation.

With all of the different vehicles sharing our airspace, it's more important than ever to focus on safety. SWS focuses on exploring safety issues and solutions, discovering new innovations to improve safety, and understanding the impact of the future of aviation on safety in the air and on the ground. It's vital for students to learn the importance of safety, so the NASA Aeronautics STEM team is adding System-Wide Safety resources to the updated Smart Skies program which is scheduled to premiere later this summer.

Smart Skies uses problem solving skills and mathematical concepts to learn more about air traffic control systems. When thinking about aviation safety, NASA and others consider weather, traffic in airspace, and airport infrastructures. These concepts (and more!) will be featured in the new and improved version of Smart Skies. Stay tuned for the release, just in time for back-to-school. In the meantime, take a look at the current Smart Skies program to see what it's about.

For more on safety, check out some of these safety activities from NASA. The **Drone Safety Poster activity** allows students to learn about safety and etiquette when flying drones and other small UAVs. The **STEMonstrations: Lab Safety video** hosted by astronauts aboard the ISS talks about safe practices in the science lab and how to properly use personal protective equipment (PPE). Watch this <u>video about</u> Digitally Enabled Cooperative Operations (DECO) from the <u>Convergent Aeronautics</u> Solutions (CAS) project who is researching modern technology to understand and create solutions to improve aviation safety systems. Find more safety activities and videos at <u>NASA's</u> <u>Aeronautics STEM webpage</u> and at <u>NASA's</u> <u>Space To Learn</u>.

Aeronautics Crew Highlights Juan Carlos Perez, NASA X-59 Quality Assurance Engineer Lead



This month is National Safety Month, so who better to highlight than someone who deals with safety every day. Juan Carlos Perez is NASA's Quality Assurance Engineer Lead for the X-59.

Read his story to learn what it takes to be a safety specialist at NASA.

"I serve as the Quality Assurance Engineer Lead for NASA's X-59 project, part of the agency's Quesst mission to demonstrate quiet supersonic flight over land. In this role, I help ensure that every step of our aircraft's fabrication and assembly meets strict technical and safety standards. Over the past five years, our team has successfully closed out more than 1,000 government-mandated inspection points. These inspections represent far more than paperwork– they are a critical part of maintaining the **safety**, integrity, and reliability of the work we do.

At NASA, safety is the foundation of innovation. Every inspection I lead, every checklist we verify, and every discrepancy we resolve is done with one goal in mind: protecting people, ensuring mission success, and upholding NASA's high standards. It's a responsibility I take seriously, and one that gives deep meaning to the work I do each day.

My journey to NASA was shaped by a career in aerospace and government contracting, where I developed a passion for quality assurance, process improvement, and systems thinking. When I had the opportunity to join the X-59 team, I saw it as a chance to contribute to something historic. Supersonic flight has always been a symbol of the future, and helping NASA bring it back—this time quietly and safely—is an incredible challenge and privilege.

I hold a Bachelor of Science degree in Professional Aeronautics from Embry-Riddle Aeronautics University, and I believe learning never stops. Whether through technical training or leadership development, I constantly seek out opportunities to grow. Recently, I was asked by our program manager to expand our QA support. I coordinated with leadership to onboard new personnel, shared contract requirements, and personally trained a new team member to make sure they were ready to support the mission. That's one of the moments I'm most proud of-helping strengthen the team while staying focused on quality and accountability.

Outside of work, I live in Quartz Hill CA, with my family. My wife Annamarie is a professor at Antelope Valley College, and education is essential to our household. Our oldest daughter Katelyn earned a NASA scholarship and is pursuing a master's degree in English at the University of California, Irvine. Our second daughter is preparing to start her college journey to pursue a career in nursing, and our youngest–our son–is about to begin both high school and college courses through a dual enrollment program at SOAR High School. Watching them grow and chase their goals has been one of the greatest joys of my life.

When I'm not working, I enjoy spending time with my family, lifting weights, and going for runs when I can fit them in. I find that staying active helps me manage the demands of the job and keeps me mentally sharp.

One of my favorite NASA memories was watching the first major structural assembly of the X-59 come together. There was a unique energy in the hangar that day—a shared sense of purpose and pride. I remember thinking, "This is what it means to be part of something bigger than yourself." Every part we inspect, every system we verify, brings us closer to reshaping the future of aviation.

Professionally, my goal is to continue building as a leader and mentor–someone others can rely on for technical insight, support, and integrity. I believe leadership is about serving others, creating clarity in complex moments, and always keeping safety and mission at the forefront.

Fun facts: I previously worked on the T-38 canopy and the F-16 landing gear—both of which are incorporated into the X-59 design. Being able to contribute to legacy systems that now support this groundbreaking aircraft brings things full circle for me. My wife and I have been together since middle school, married for 27 years, and we share a love for travel and chasing waterfalls—we've actually been married in three countries, with our original wedding in the U.S., and vow renewals in Paris and Rome for our 10th and 20th anniversaries."

STEM Opportunities

Apply Today! MUREP Partnership Learning Annual Notification (MPLAN) 2025



MPLAN is a chance for minority serving institutions to work with NASA in research and development.

Explore the possibilities of opportunities addressing the needs of the public and the mission. Get your team together and check out the areas where NASA is accepting proposals. Head to the <u>MPLAN proposal page hosted by</u> <u>HeroX</u> to learn more. The application deadline is *June 9th*, 2025, so don't wait and apply today!

Fellowship Opportunity! Advanced Air Vehicles Program (AAVP) Fellowship

Fellowship proposals for a research training grant from accredited US institutions is now open! This NOFO (notice of funding opportunity) supports independently-conceived research projects by highlighly qualified graduate students in disciplines that directly contribute to NASA's mission and STEM-related areas of study. Proposals are due **June 11**th, **2025 by 5pm ET.** Two pre-proposal teleconferences will be held and details can be found on **NSPIRES**.

Funding Opportunity! Office of STEM Engagement - MUREP

NASA's MUREP ACEIR project is inviting MSIs to participate in this funding opportunity to contribute to broadening the future STEM workforce and to NASA's Advance Air Mobility work. Join the upcoming webinar to learn more on **June 10th**, **2025 at 3 pm ET**. Head to the **NSPIRES website** to get all the details. Full proposals are due **June 16th**, **2025 by 11:59pm ET**.

Learn More About NASA Aeronautics! NASA Aeronautics 101

Are you curious about NASA Aeronautics and how to use what we do to inspire students? Now you can join NASA engineer, Dave Berger, and the Aeronautics STEM team to learn how. NASA missions and activities can be used to teach about conceptual engineering, career pathways, and more. Join us on the fourth Wednesday of each month via Teams with the next session being held on *June 25th at 6pm ET/ 3pm PT*. It's easy to join--just use the information below to join the conversation. If you register in <u>NASA STEM Gateway</u> to let us know you're coming, you'll receive a copy of the presentation at the end of the session. We look forward to seeing you!

Join us June 25th!

Meeting ID: 252 856 825 018 Passcode: Hc3md7wh

Proposal Window Closes This Month! University Student Research Challenge (USRC)



The NASA Aeronautics Research Institute's (NARI) University Student Research

Challenge (USRC) for post-secondary students challenges them to think like an entrepreneur. The USRC student challenge is the place to share your ideas for new and improved aviation systems with NASA Aeronautics! Head to the **NARI website** for more information and get ready to submit your proposal by **June 26th**, **2025**.

NEW Spring 2025 Opportunities! NASA Internships

Explore **NASA Centers and Facilities** around the country to learn which locations fit your future career and find more information about



in-person internship opportunities on the **Internship webpage** in a variety of career fields. Apply by **September 12th, 2025**, to spend your spring semester with NASA experts. Students 16 years and older are eligible to apply, so don't wait and apply today!

Join the NASA Internship webinar on **Thursday**, **June 26th, 2025, 1-2 pm ET** to explore internship opportunities, learn about eligibility and application requirements, and discover how to apply. Hear from current interns about their experiences and get tips to make your application stand out. This session will guide you through everything you need to know to kickstart your NASA journey. Q&A included! Register on <u>NASA STEM Gateway</u> to join the call.

High School Students Apply Today! NASA Glenn High School Capstones



NASA Glenn Research Center is using aeronautics to study algae. You read that right! NASA scientists are using uncrewed aerial vehicles (UAVs) equipped with sensors to study harmful algal blooms. Apply for your chance to work closely with NASA experts and present your project at the culminating event. Head to the <u>Glenn High School Capstones webpage</u> to learn more. Registration ends <u>September 19th</u>, 2025, so head to <u>NASA STEM Gateway</u> to learn how to qualify and apply before time runs out.

Get Your Name on the X-59 Today! NASA Aeronautics Flight Log

Have you been keeping up with NASA's new YouTube shorts, "<u>59 Seconds on NASA's X-</u> <u>59</u>?" Check out the series to learn more about the quiet supersonic research aircraft with Nils Larson as he talks about the X-59 in 59 seconds, and don't forget to read the description to get your Flight Log code. After watching the video, head to NASA Aeronautics Flight Log, enter



the code, and start building your virtual flight log today!

Explore STEM activities, videos, and more to learn all about NASA Aeronautics, the crew, and the missions. Attend a NASA Aeronautics events and complete STEM activities to collect endorsement stamps and earn virtual mission patches. Stay in the know with new opportunities and activities when you join the **contact list**. Join today and fly with us!

More Opportunities! Are you interested in other STEM connections with NASA? Log in or create a new account to join NASA's STEM Gateway to find opportunities that interest you. Check out NASA Engages, a program that connects NASA experts with the community to share NASA missions and content to inspire students to pursue a career in STEM!

Did you know?

June 8th is National Kids Day. Many of you already celebrate kids every day, but the second Sunday in June is that special national day dedicated to celebrating kids everywhere. NASA Aeronautics celebrates kids of all ages with engaging STEM experiences and activities to learn more about aviation and how it impacts their future. Check out the Aeronautics STEM page to use NASA STEM resources with your summer classes. Explore the NASA Aeronautics Career Resources section and talk about the different careers in aerospace and at NASA! Looking for aviation opportunities for kids? Check out aviation programs from organizations such as Civil Air Patrol, the FAA, local aviation chapters, or local airports to find more aeronautics opportunities for kids.

June 17th - 23rd is National Week of Making, so let's channel your creative side to make something, ANYTHING! Make a new dish to enjoy, a card for a friend or neighbor, or make a masterpiece. Need some ideas? How about exploring weather by making a Tornado in a Bottle, or read about the X-59 and make your own X-59 Paper Desktop Model. Maybe you're more into space, so use some marshmallows to Build Your Own Mars Helicopter. Check out the Aeronautics @ Home page for more activities and take the making wherever you go. Whatever you decide to make, enjoy the process and share it with us on our NASA Aeronautics for Educators Facebook page to give others ideas about what to make this week.

Links to our Aeronautics STEM Resources:

<u>Aeronautics STEM Page</u>: (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.

<u>Aeronautics@Home</u>: (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!" "Make It!" "Explore It!" "Watch It!" "Solve It!" "Color It!" "Read It!" "Craft It!" and "En Español".

<u>Aeronautics Innovations Challenges</u>: Keeping up with our many design challenges and opportunities for both postsecondary and K-12 can be tough. In response, we created a "one-stop shop" to pull them all together in one location.

<u>Flight Log Experience:</u> (K-12, post-secondary, general public) Sign up to send your name with NASA Aeronautics on Xplanes, 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.

<u>Museum and Informal Education Alliance</u>: (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.

<u>NASA Aeronautics for Educators Facebook Page</u>: (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.

<u>NASA Connects</u>: (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.

<u>NASA Express Sign-Up</u>: (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.

<u>Space to Learn</u>: (K-12, post-secondary, educators, general public) Need more resources from a variety of contents? NASA has a page full of learning resources from all projects and programs at NASA.

National Aeronautics and Space Administration

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