



NASA Aeronautics

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Monthly STEM Newsletter

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*NASA Artifacts are available for transfer to schools and qualifying organizations.
The next prescreening period ends Oct. 7th. Photo credit: NASA.*

October 2024

It's fall, Aeronauts! The weather is cooling, but NASA is burning with student and educator deadlines this month. This includes your chance to bring a NASA artifact to your classroom, school, or organization (some held especially for educators)—or signing up to invite a NASA expert to your classroom--don't miss out. As we continue to celebrate Hispanic Heritage month we also celebrate Italian American Heritage month and Indigenous People's Day. NASA internships has two events this month supporting students in their application process and a chance to hear from NASA interns about their experiences. Spring Internship applications are closed but get students ready for Summer 2025 with NEW projects to apply for. Our Aero Crew Highlight, Zoe Graham, is our Aeronautics STEM intern who has a passion for STEM and is on her way to becoming a pilot. She is bringing us new Flight Log content and speaking of Flight Log, as we continue to get ever-closer to the first flight of the X-59, don't forget to sign yourself and your students up for Flight Log to save your spot!!

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 and [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 or holly.o.gutierrez@nasa.gov.

Italian American Heritage & Culture Month

October

In 1989 President Ronald Reagan signed a proclamation declaring the celebration of Italian American Heritage and Culture during the month of October. Italians began immigrating to the United States in the 1800's to find a safer and more prosperous home. Since then, Italian Americans have made many contributions and achievements in areas such as science, the arts, and more.

NASA celebrates members of our Italian American family with recognition of the achievements in explorations past, present, and future. [Sandra Irish](#), an Aerospace Engineer, wanted to be a pilot but obstacles kept her from her dream. Not stopping at one dream, Sandra persisted forward and pursued her degree in engineering. She is celebrated for her work at Goddard Space Flight Center with the James Webb Telescope and more.

Indigenous People's Day / Columbus Day

October 14

We commemorate and honor the Indigenous American people, their histories, cultures, and the care they gave to this continent before it was inhabited by others coming from across the oceans. Signed into proclamation by President Joe Biden in 2021, the second Monday in October will honor America's first peoples.

We also celebrate Italian Americans and the explorers, past and present, who help us understand and learn about the world we live. Columbus Day is named after the explorer, Christopher Columbus, who landed in the New World in 1492. Born in Italy, Columbus sailed to explore the world from Spain. This day celebrates Italian American Heritage and exploration of the world and beyond.

Learn more about the significance of these commemorative days at your local library. You can also visit the [Library of Congress](#) for more research.

Aeronautics Crew Highlight

Zoe Graham, NASA Aeronautics Fall STEM Intern



Zoe (Bundy) Graham is our Aero STEM Intern, collaborating with ARMD to promote youth STEM activities. Last summer she was a Knowledge Management Intern with Langley Research Center (LaRC) and is thrilled to be interning again!

“Hi! My name is Zoe Graham (Bundy), and I am the Aeronautics STEM Engagement Intern. My job is focused on collaborating with the ARMD to develop new STEM resources and improve current aeronautics programming.

I have always been passionate about teaching students STEM, so my work with Flight Log, Smart Skies, and classroom activities has been a great fit! In middle school, I started a business, Brainy Ladies, to educate girls about pursuing STEM careers, as only 24% of the workforce is made up of women, and even less in aviation. Through Brainy Ladies, I interviewed women leading Fortune 500 companies, an astronaut, the CEO of Pepsi, and many others, sharing their stories to inspire the next generation. Brainy Ladies gave me tons of experience with interviewing professionals, leading student workshops, keynote speaking, and moderating panel discussions.

My interest in aviation was sparked after serving on mission trips in Honduras and then returning to learn about mission aviation, where airplanes fly missions to help people. Flying supplies, medical teams, and hope to people in need, quickly became my dream job, and has already been exciting to pursue. In high school, I got involved my local Experimental Aircraft Association (EAA) Chapter. The Chapter offered a scholarship for a high school student to obtain their private pilot certificate - and I was selected! I completed ground school and flight lessons in high school and

Student Opportunities

Deadline Approaching Soon—Oct. 7th! University Leadership Initiative (ULI)



ULI is a team challenge giving university students the opportunity to show their technical and organizational skills to lead and propose new strategies to for solving

Aeronautics challenges. There are six topic areas to choose from: (1) Safe, Efficient Growth in Global Operations, (2) Innovation in Commercial High-Speed Aircraft, (3) Ultra-Efficient Subsonic Transports, (4) Safe, Quiet, and Affordable Vertical Lift Air Vehicles, (5) In-Time System-Wide Safety Assurance, and (6) Assured Autonomy for Aviation Transformation. Proposals are due **October 7, 2024**. Head to the [NSPIRES website](#) for more information.

Apply Now! MITTIC

Share your entrepreneurial skills with NASA through MITTIC, the NASA MUREP Innovation and Tech Transfer Idea Competition. Students create a proposal for new and innovative solutions that will benefit your community and the world! Submit your proposal by **October 16, 2024**, to get the chance to compete in the Space2Pitch Competition and earn cash prizes. Learn more about MITTIC and how to submit your proposal [HERE](#).



NOI Due this Month! Gateways to BlueSkies



Collegiate student teams don't miss The 2025 Gateways to BlueSkies competition deadline. This year's theme is: *AgAir - Aviation Solutions for Agriculture*. Collegiate student teams are tasked to create

aviation-related systems that can be applied to the agriculture industry by 2035 or sooner with the goal of improving production, efficiency, environmental impact, and extreme weather/climate resilience. Get your team together and submit your Notice of Intent by **October 22, 2024**! Find more information [HERE](#).

became a private pilot in August of 2023. The flight training experience led me to pursuing a degree in Commercial Aviation at the University of North Dakota, where I am in my sophomore year.

This past summer, I had the privilege to intern in Knowledge Management with Langley Research Center, where I coordinated a hybrid LEGACY Fellowship Celebration & Panel Event. My team shared the story of Bruce Fisher, a long-time pilot and flight engineer with LaRC. I enjoyed learning more about how NASA utilizes aircraft for tons of different purposes, with a large emphasis on research.

Since then, I have stayed connected with my EAA Chapter, managing their marketing and assisting with youth events. I also serve on the North Dakota Aviation Association (NDAA) Board, where I provide insight on aviation education and help make decisions that impact aviation across the state. Through the NDAA, we also host events like annual high school career expos, with the mission to educate students and share valuable resources with them that they can use to pursue aviation education/careers.

My husband Josh and I love living in Fargo, North Dakota! We are involved in our church music team, we serve with a local food pantry, and volunteer in the jail. Josh and I enjoy fishing, cooking, and flying together; and he is super supportive of my passion for aviation.

I joined NASA after learning about the ND Space Grant Consortium (NDSGC), and their collegiate opportunities in aerospace, internships being one of them. Working at NASA has opened my eyes to the abundance of opportunities in aviation, beyond what I could have imagined. There are many wonderful people working at NASA HQ to make wonderful things happen, and I am so grateful to be a part of this team!"

Zoe Graham, you have had an amazing journey! We wish you all the luck in your future endeavors. Thank you for joining us this fall. Happy Flying!

Don't Miss a Summer with NASA! NASA

Internships

Don't miss the deadline on

October 25, 2024,

for early decision.

Students 16 years and older are eligible to apply.

Encourage your students not to wait! Join the internship team for a virtual webinar

on **October 17,**

2024, at 4:00 pm EST to learn more about available

opportunities and how to apply. Check out [NASA STEM Gateway](#) for more information.



In celebration of National Disability Employment Awareness Month, NASA internships is hosting an event about awareness, resources, and NASA initiatives.

Register [HERE](#) for **Celebrating National Disability Employment Awareness Month with NASA**

Internships on Thursday, October 24, 2024, at 4:00 pm EST. Register [HERE](#) to join the celebration!

Deadline Approaching Nov. 1st! NASA TechRise Student Challenge



The NASA TechRise Student Challenge is for students in grades 6-12. Student teams are challenged with submitting their ideas for high altitude experiments with exposure to Earth's atmosphere and views of our planet. Entries are due by **November 1st, 2024**, and selected teams will start building their projects in January 2025. Head to the [TechRise webpage](#) to learn more about this student challenge.

Professional Development

Oct. 2 - 5, 2024: [American Indian Science & Engineering Society \(AISES\) National Conference](#)

Find the NASA family at the AISES conference in San Antonio, TX. We will be doing STEM activities and talking about careers, internships, and the different pathways to NASA.

[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.

Virtual Opportunities

Sign-up Your Classroom Today! Flight Log

School is in session and teachers we have something for you. Flight Log is an interactive



program to sign your name to fly virtually with our NASA pilots on NASA research planes. Enjoy videos about the pilots and crew, STEM activities for all ages, and collect endorsement stamps when you attend NASA events either virtual or in-person. Sign up with [Flight Log](#) today! Add your email to our [contact list](#) to stay up to date on upcoming flights and other opportunities. By the time you know it, we'll be flying on the X-59!

Virtual PD with NASA Experts! NASA SPARX: Next Gen STEM SPARX (Sparking Participation and Real-world eXperiences) in STEM emphasizes engineering to connect students to STEM in a way only NASA can! SPARX is a virtual opportunity for K-12 teachers to connect their students with NASA missions through standards-aligned content and live virtual classroom connections with NASA scientists and engineers.

NASA in Your Classroom

Apply for Your Artifact Today! NASA Artifacts Screening

Now that school is underway, do you know what would be great to have in your classroom? A genuine authentic NASA artifact. The NASA Artifacts office gives educators an opportunity to have real items from NASA missions in their classrooms, schools, or qualified organization locations. Apply for astronaut training clothing or hardware, a real space shuttle tile, and more. The screening period for applications will be open from **August 26 to October 7, 2024**. Get your application in now to inspire students with an artifact. Check out the [NASA Artifacts webpage](#) to learn more.

Register Today! NASA STEM Opportunity for Middle School Classrooms

NQuest (NASA Quest) offers no-cost STEM (Science, Technology, Engineering, and Mathematics) engagements to Title I middle schools. Through hands-on workshops, immersive planetarium shows, and interactive exhibits, NQuest sparks a lifelong interest in STEM for middle school students.



NQuest is available in-person at the Chabot Space and Science Center as well as virtually nationwide. Apply [HERE](#) to receive more information about NQuest's 2024-2025 school year program. Deadline for applications is **October 11, 2024**.

COMING SOON! NEW Aero STEM Activities

New aeronautics products coming soon. Stay tuned for November's edition to see what NASA STEM has in store for you!



NASA is now accepting submissions for those interested in bringing SPARX to their classroom during the 2024-2025 school year. Participation is limited to the first 240 teachers, so registration will be open until Feb 1 or that cap is met. Email us at SPARX@mail.nasa.gov to express interest.

Did you know?

October is LGBTQ+ History Month. Celebrated to recognize the achievements of those that identify with the LGBTQ+ community and the history of the gay rights movement. Join NASA in celebrating the diversity of our work family because [Together We Rise](#).

October 1st is Balloons Around the World Day. Balloons have been around for hundreds of years in various forms made from different materials like cloth, canvas, and as you know it, a rubber latex. Many use them for celebrations, but at NASA we found a fun science use for them. Try our NASA Aeronautics [Nuty Balloon Noisemaker](#) to use balloons to learn about soundwaves.

October 11th celebrates the First Presidential Flight. President Theodore Roosevelt was the first president to fly in an airplane. He flew with Hoxsey's Wright on October 11, 1910. in St. Louis, Missouri. What was your flight? Or what will your first flight be if you've never flown before? Start a [travel log book](#) to keep track of all your flights.

October 20th is International Air Traffic Controllers Day. With so many new aircraft in the sky, air traffic controllers have a big job on their hands. Try [NASA's Smart Skies](#) program to learn distance-rate-time calculations for controlling air traffic.

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.

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