



NASA Aeronautics

Monthly STEM Newsletter

INSIDE

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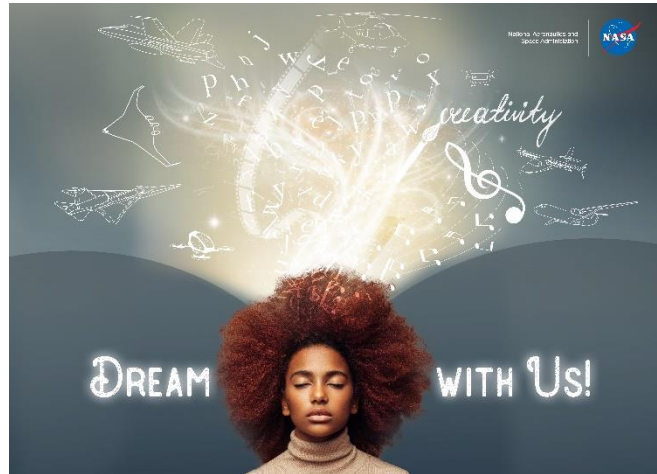
Women in Aviation

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**Dream with Us Design
Challenge 2023**

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Funding Opportunities



Open March 1-May 15, 2023, the NASA Aeronautics Dream with Us Design Challenge is open to students in grades 6-12. Students are tasked with creating a sustainable aircraft and marketing plan for that aircraft. More info in the newsletter.

March 2023

This month we celebrate women’s accomplishments here at NASA for National Women’s HERstory Month. Their perseverance, their triumph, and their ability to break barriers contributed to our missions and programs in aeronautics. Learn about women in aviation history inspiring others to soar to new heights and follow their dreams. Meet women of NASA who inspire today’s generation of female aviators. Not only pilots and engineers, but teachers like our intern, Holly Gutierrez, are also pioneers in aviation. Hear about her journey to education and how she has embraced change during unprecedented times. In addition, take a look at the new Dream with Us Design Challenge and STEM materials. Check out other news you may have missed, and upcoming opportunities for everyone from elementary through post-secondary education.

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!

Women of Aviation

Bessie Coleman (1892 - 1926)

Elizabeth "Bessie" Coleman was born in Texas in 1892. She became enamored with becoming a pilot after hearing stories from her brothers about the war and about French women allowed to fly airplanes in France. After being denied admission into flight school in the United States, Bessie moved to France and earned her international pilot's license in 1921. The next year, Bessie became the first woman of African American descent to perform a public flight. Bessie was a great advocate publicly speaking about equality and dreaming of an African American flight school. On April 30, 1926, Bessie Coleman perished in a crash during a test run before her air show. Today, she is still remembered for her advocacy, courage, and determination to follow her dreams. In 1928, the Bessie Coleman Aero Club and School was set up to inspire and offer African Americans the chance to follow in her footsteps. Read more about Bessie Coleman to learn how her passion became inspiration for others.

https://www.nasa.gov/sites/default/files/atoms/files/women_of_color.pdf
<https://history.nasa.gov/sp4112.pdf>

Amelia Earhart (1897 - 1939)

Amelia Mary Earhart was born in Kansas in 1897. Since she was a child, Amelia dreamed of being a pilot and on October 22, 1922, Amelia flew her first plane, "The Canary", to an altitude of 14,000 feet setting a world record for female pilots. During her time in aviation, she set many records joining other female aviators with the courage to follow their dreams. On July 2, 1937, Amelia and her co-pilot disappeared without a trace over the Pacific Ocean on their trip around the world after experiencing communication issues. Their disappearance remains a mystery to this day making Amelia Earhart one of the most famous female pilots in aviation history. Read more about Amelia Earhart and her inspiration to become a pilot.

<https://www.nasa.gov/sites/default/files/atoms/files/amelia-earhart-hs-view.pdf>
<https://www.nasa.gov/aeroresearch/resources/leveled-readers>

Today's Women of NASA

Join us as we celebrate the women of NASA that have become the inspiration for the new generation of aviators and explorers.

<https://www.nasa.gov/feature/nasa-armstrong-showcases-women-in-aviation>
<https://www.nasa.gov/image-gallery/womens-history-month>

Intern Highlight: Holly Gutierrez



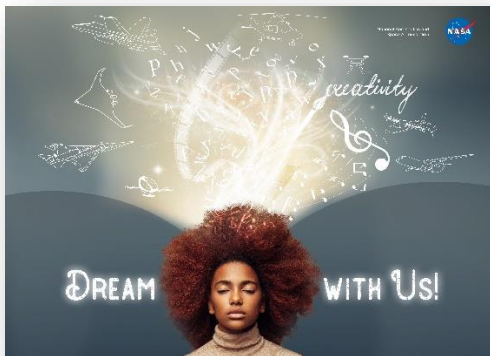
Holly Gutierrez has been in education for over 10 years. She started teaching in early childhood moving to elementary school and now writing educational content and sharing STEM activities with students of all ages. Although Holly has always been a lifelong learner, she wasn't always a teacher.

Holly grew up in Texas and, like many young adults, didn't know what she wanted to be when she grew up. After graduating she entered the workforce and continued her education at Austin Community College where she earned her associates degree in communications for Radio, Television, and Film. She worked in radio marketing for many years before starting a family and looking at the joys of learning through a new lens.

Wanting to continue this new joy, Holly enrolled in school and earned a bachelor's degree in education from Huston-Tillotson University. Using her knowledge to educate the next generation gave Holly the passion she was looking for in her professional career. She loved being in the classroom and watching her students get their "AHA" moments and lighting up at their accomplishments.

Newly Released Items

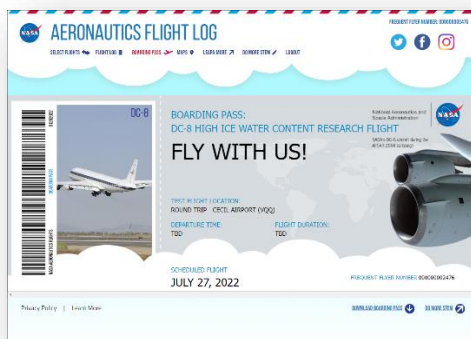
[2023 Dream with Us Design Challenge](#)



NASA Aeronautics and Aeronaut-X present this year's "Dream with Us" design challenge for students in grades 6-12. This year the challenge focuses on sustainable aviation. Teams of 2-4 students will work together to create a marketing plan detailing a sustainable aircraft of their own design. Students will think like a NASA engineer and imagine a new aircraft with a new sustainable design beneficial to all. Are you passionate about sustainability? Do you have ideas for the future of aeronautics? The challenge is open March 1, 2023 to May 15, 2023. Get your team together and sign up for the 2023 Dream with Us Design Challenge [here](#). Come fly with us!

[Flight Log version 2.0](#)

Have you signed yourself or your students up for the NASA Aeronautics virtual flight log? Our latest 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!



When the pandemic came on, life changed for Holly forcing her to find a new path in education. She gained the courage to homeschool her own children and return to school herself. Enrolling in a graduate program and continuing her lifelong learning mission, Holly found a NASA internship that opened her eyes to a new way of educating people. It has given her opportunities to educate learners of all ages from the littlest student to the adult that never stops learning, Holly has been able to engage with them all. She has the privilege of conversing with aeronautic professionals that are passionate about education, too. This new path has sparked new life for Holly and she can't wait to greet all those eager to learn along with her.

Professional Development:

If you are like many other educators, you look forward to NASA's many educator professional development opportunities including opportunities both in-person and virtual. Our virtual sessions are currently undergoing a transition and we'll be back better than ever! New EPD sessions are expected to return soon, so stay tuned!

Come See Us in Person!

[Wisconsin Society of Science Teachers \(WSST\) Mar. 9-11, 2023:](#)

Join NASA for fun, engaging, hands-on STEM at the WSST conference. Join other educators from around the capitol to get reinvigorated and have a great time doing so. Our aeronautics team will present a session on aeronautics on Sat. Mar. 11th at 10 am.

In Case You Missed It

NASA Aeronautics en Español

NASA has launched the NEW Aeronautics en Español. It's the debut of NASA Aeronautics' Spanish-language web page filled with NASA news and resources en Español. Are you an educator looking for STEM materials in Spanish? NASA Aeronautics has translated many of their STEM activities and resources to benefit the bilingual community. Take a look at what we have today and come back later for new content coming soon. If you haven't toured the new site, check it out at <https://www.nasa.gov/aeroes>.

Winter Break STEM Activities (in English and Spanish)



Not just for the winter break, have some fun with craft-stick aircraft, X-59 snowflakes, personalized travel logbooks and more! Activities can also be found on [Aeronautics@Home](#).

Wingin' It: Also available in English and in Spanish, this set of activities and accompanying video encourages students to explore the impact of aircraft design, weight, and weight distribution on flight distance by testing paper airplane designs.

Sensor Solutions

Designed for grade levels 5-8 and 9-12 shares activities for students to gain a better understanding of the types of sensors installed on drones, how sensors work, advantages and limitations, and more. Available in both English and Spanish.

Coming Soon

Jr. Pilot Book: X-57 (in English and Spanish)

Our [first Jr. Pilot Book](#) focused on the X-59 and the science of sound. Coming soon—our X-57 book which will allow elementary-aged students to have fun while learning about the X-57 and electricity.

National Science Teaching Association (NSTA) Mar. 22-25, 2023:

Join NASA and educators from all backgrounds and experience levels to explore new ideas, best practices, and get inspired to give the next generation a future full of confidence and the inspiration to explore. NASA Aeronautics will present a session on using aviation to engage students on Thursday March 23 from 2:20-3:20pm.

Did you know??

[March 9th](#) is National Meatball Day. Although it's not the same meatball, the NASA meatball insignia was officially created in 1959 by Mr. James Modarelli, the head of Lewis (now Glenn) Research Center. The round design represents a planet, the stars represent space, the red v-shaped wing represents aeronautics, and the circular orbit represents space travel. This insignia became known as the "meatball" when NASA created the "worm" as an attempt to modernize the NASA logo. The "worm" logo was retired in 1992 and the "meatball" has been the official logo ever since.

[March 17, 1937:](#) Amelia Earhart started the first leg of her world record flight around the world. Amelia, along with her navigator, Fred Noonan flew more than 2,400 miles from Oakland, California to Honolulu, Hawaii. Due to technical issues with her aircraft, a Lockheed Electra 10E, Amelia was forced to abandon her voyage. Three months later, Earhart and Noonan make their second attempt to fly around the world but during one of the last legs of the trip, they disappear over the Pacific Ocean.

Current Funding and Internship Opportunities

STEM Collaboration Solicitation with NASA's Glenn Research Center

As part of the *Engineering Design Challenge* line of STEM activities, NASA Glenn's Office of STEM Engagement has developed an EDC activity titled *Sound Off*. In this activity, student teams design, test, and improve acoustic liners to reduce the sound volume produced by a speaker. Apply now to receive professional development and support to implement this activity in your facility. **Act soon—Proposals are due March 6, 2023!**



NASA's education support contractor Guardians of Honor is soliciting proposals from youth-serving organizations and formal/informal institutions to receive professional development and implement NASA STEM content. Each organization is asked to submit a brief proposal with a request for up to \$2,000 in funding for materials to help implement content with students.



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 **June 24, 2023**.

To learn more, visit our website: <https://nari.arc.nasa.gov/usrc>

NASA MUREP Women's Colleges and Universities Grant- new for 2023!

The NASA MUREP WCU Activity is a new initiative seeking to address the significant gender gap and disparate experiences of women in STEM in the United States, both in higher education and the workforce. WCUs, as identified by Department of Education data, are called to leverage their women-centered expertise and experience to address barriers to women seeking, retaining, and remaining in STEM degrees and

employment. MUREP WCU awardees will create academic, personal, and professional programs, student outreach, and support services through an intersectional (Crenshaw, 1989) lens, taking into consideration the experiences of women and their various identities such as race, sexual orientation, and socio-economic status.

Open to Women's Colleges & Universities

Release date: January 17, 2023

Proposal Due Date: April 17, 2023

Solicitation website: [MUREP WCU - NSPIRES](#)

NASA MUREP Curriculum Awards (MCA) - new for FY2023!

Open to all Minority Serving Institutions (MSIs), the MCA solicits proposals from 2-year/community college and 4-year/college or universities to strengthen the research capacity of MSIs, and enable students' capacity for research in areas of priority to NASA Mission Directorates, while engaging diverse students in authentic learning experiences through curriculum improvement and development and culturally relevant and responsive teaching, learning and support.

Release Date: January 30, 2023

Proposal Due Date: May 1, 2023

Solicitation website: [MCA - NSPIRES](#)

2023 NASA Internships



Don't miss this opportunity! The application window closed March 1st for Summer 2023 NASA Internships but students can start planning for Fall internships. Did you know there are internships for educators, too? Follow the link above to find out 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 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.