



NASA Aeronautics

April 2023
No. 23

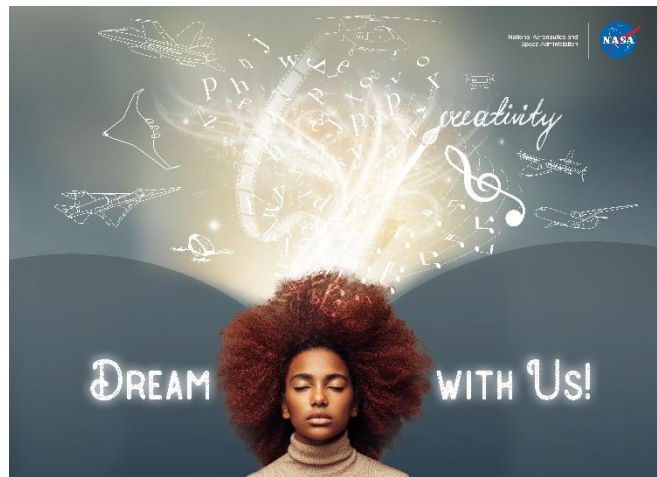
Monthly STEM Newsletter

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From 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.

April 2023

April 22nd is Earth Day, and our home planet is something we care about deeply here at NASA. In NASA Aeronautics, one of our main focus areas includes sustainable aviation and a commitment to making aviation as environmentally friendly as possible. This day is a symbol to remind us that we are stewards of Earth and must take care of and protect it from harmful effects of change. NASA Aeronautics works tirelessly to ensure a more sustainable future in aviation that will help in protecting our home planet and all life on Earth.

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!

Earth Day 2023

April 22, 2023

Earth day began in the 1970's by Wisconsin senator, Gaylord Nelson to raise awareness for the protection of Earth. Twenty million Americans from around the country rallied and protested to instill new policies and laws to protect all life on this planet. In December 1970, Congress was won over and authorized a new agency to battle environmental issues called the U.S. Environmental Protection Agency (EPA). The EPA enforces regulations, conducts studies of environmental issues, and teaches the public about the environment on their mission to protect human health and the environment.

<https://www.epa.gov/history/epa-history-earth-day>
<https://www.epa.gov/earthday>

NASA Makes Everyday Earth Day

NASA has been observing and collecting data about the Earth for decades. The satellites orbiting Earth have helped us to better understand its relationship between land, sea, air, space, and all living things.

The NASA Aeronautics team is part of the mission to protect Earth by lowering emissions, using alternative fuels, and creating equitable access to all-things flight. Join us on our mission to protect the planet and all living things on Earth by learning about different ways NASA is working towards a more sustainable future.

<https://www.nasa.gov/feature/making-every-day-earth-day>
<https://climate.nasa.gov/for-kids/earth-day-at-home-webquest/>

JPL (virtual): Earth Day Education Resources

Check out these great Earth Day resources from NASA's Jet Propulsion Laboratory for educators and students K-12.

Career Highlight: Rose Blomquist



Rose Blomquist is the Power Distribution Lead for the Quesst mission and was just featured on NASA's *The Quiet Crew*. Quesst is NASA's mission to reduce the sonic boom of the X-59 to a sonic thump reducing the noise pollution produced by supersonic aircrafts.

Her job is to oversee electrical systems on the X-59 including mounting and monitoring sensors collecting data and ensure proper power is flowing through the aircraft. Sensors monitored by Rose allow her to collect data about how the aircraft is performing. From this data, she'll be able to ensure everything is working as expected.

Rose is an adventurous person ready to take on any challenge that comes her way. She grew up in Northern Michigan on a small farm enjoying the great outdoors. She is an avid traveler with a goal to visit all the national parks in the U.S.

She recently got married in a very unique place. Congratulations Rose and thank you for your contribution to the mission!

Watch Rose Blomquist's Quiet Crew video to learn more about her adventures.
<https://youtu.be/5hHtFhZWpBI>

<https://www.jpl.nasa.gov/edu/events/2023/4/22/celebrate-earth-day-with-education-resources-from-nasa/>

Spring is in the Air!

Walk into any convenience store or many other stores and they are full of marshmallow Peeps. We have some great ideas about what to do with them, including our ["High Flying Peeps" activity](#) asking students to create a pressure suit to keep their Peep "alive" at high altitudes.



Current Opportunities

[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

Come See Us in Person (or virtual)!

[2023 White House Easter Egg Roll: April 10, 2023. Washington, DC](#)

The NASA Aeronautics team, along with Orville D. Squirrel, is egg-cited to participate in this year's White House Easter Egg roll (titled the "EGGucation Roll" this year), and if you are lucky enough to have received a ticket via the National Park Service [lottery system](#), please join us! We will be subjecting our high-altitude Peeps to a vacuum chamber to share the effects of pressure (or a lack of) in relation to human survival.

[Professional Development: Wednesday, April 12, 2023 @ 6:30 p.m. EST \(virtual\)](#)

The Dream with Us design challenge is currently under way. Join us for a mid-challenge check in professional development session to ask questions and learn more about the challenge and its requirements for a successful submission. Register [here](#) by April 11th, 2023 @ 11:59 p.m est. Having trouble registering? Feel free to join our Microsoft Teams meeting directly:

[Click here to join the meeting](#)

Meeting ID: 281 288 756 592

Passcode: ANhyDu

Call-in (audio only): [+1 256-715-9946, 467860049#](tel:+12567159946)

[ITEEA National Conference: April 12-15, 2023. Minneapolis, MN](#)

Join NASA Aeronautics for a hands-on workshop focusing on STEL Standards using NASA Aero Resources on Thu. April 13th from 11:30-12:20 local time.

[National Space Symposium: April 17-20, 2023. Colorado Springs, CO](#)

If you are a Space Foundation Teacher Liaison attending the Space Symposium, learn more

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!

Mid-Challenge [Check-In Virtual Webinar for Educators](#): April 12th, 6:30pm EST. Join us to ask questions, find out more about sustainable aviation, ask “the dumb questions,” or just let us know how it’s going. This check-in is not required but meant to be an opportunity to help you as you support your student teams.

Virtual Awards Recognition Ceremony and Sustainable Aviation Presentation: June 1, 2023 7:30pm EST (open to all participants, educators, and participants’ families). All challenge participants are welcome to join the fun, a celebration of their accomplishments, and enjoy a special Q&A with one of our NASA experts. Submit your project by May 15th, and we’ll see you at the ceremony. Happy dreaming!

Sample sustainable flight activities included:

[Name That Plane](#): Students learn about aircraft identification numbers and the phonetic alphabet through interactive activities.

[Lifecycle of Energy](#): When we say sustainable aviation, what does that mean? Where does energy come from and where does it go? Explore the answers to these questions with an activity available at elementary, middle, and high school levels.

[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!

about the X-59 and the science of sound on Monday, April 17th from 1:15-2:15pm local time.

Earth Day 2023: April 20-21, 2023. Various locations—see below!

[Union Station](#)—Washington, DC: April 20-21, 2023

Join NASA at Union Station April 20-21 to celebrate Earth Day in the Main Hall from 9:30am-4pm each day. Hands-on activities, demonstrations, an Earth at Night display, and lots more.

[Kennedy Space Center Visitor Complex](#)—FL: April 20, 2023

Join local business and conservation groups and participate in education stations with the S.T.E.A.M Team.

[Globe Program](#) (virtual):

Earth Day marks the 28th Anniversary of The GLOBE Program. Come celebrate with GLOBE! Visit this page the day before Earth Day on April 21st at 9 a.m. MDT (4 p.m. UTC) for GLOBE's annual Earth Day broadcast.

Interested in more development opportunities? Check out NASA STEM Gateway.

<https://stemgateway.nasa.gov/public/s/explore-opportunities>

Did you know??

[April:](#)

This month is Autism Awareness month. Autism spectrum disorder (ASD) affects development caused by differences in the brain. People with ASD often have difficulty with social communication and interactions, sometimes have restrictive or repetitive behaviors and may experience delayed language, movement, or cognitive skills. They also have different ways of learning and paying attention.





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.

Elementary level math activities

In connection with the ongoing middle and high school “Dream with Us” design challenge, we are creating elementary lessons to allow younger students the opportunity to tackle aviation challenges. Stay tuned for our next activity, “Using Airplane Space Efficiently” to allow students to learn more about volume and shape by packing suitcases in overhead airplane bins.

Funding Opportunities

Deadline closing soon!! 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

NASA is an inclusive environment and therefore, strives to understand diverse abilities through NASA’s Neurodiversity Network which provides a pathway to participation and employment for neurodiverse learners. Explore their site to learn more.

<https://science.nasa.gov/science-activation-team/nasa-neurodiversity-network>

April 2nd, 1915:

President Woodrow Wilson appointed the first members of the National Advisory Committee for Aeronautics (NACA), the predecessor of NASA. Dr. Charles D. Walcott of the Smithsonian Institution was elected as first chairman. 43 years later, NACA would evolve to NASA to include space exploration along with aeronautics. Read on to learn more about NASA’s journey to sky and space.

<https://www.nasa.gov/ames/the-national-advisory-committee-for-aeronautics>

April 17th:

Go Fly a Kite Day. Get outside and fly your favorite kite high in the sky. Don't have a kite? Check out this activity from NASA Aeronautics to learn about the principles of flight and make your own kite!

Grades K-4 <https://www.nasa.gov/stem-ed-resources/sled-kite.html>

Grades 5-12

https://www.nasa.gov/sites/default/files/atoms/files/kites_5-12-v2.pdf

April 19th, 2021:

NASA’s Ingenuity Mars Helicopter became the first aircraft in history to take flight on another planet. This is NASA’s aeronautics and space missions coming together to achieve a common goal, understanding the atmosphere of other planets. Ingenuity was designed to overcome the thin atmosphere and extremely cold temperatures to help it survive and fly on Mars.

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](#)

Deadline closing soon!! 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](#)



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.)

Learn more about the Ingenuity and try making one yourself with marshmallows. YUM!

<https://mars.nasa.gov/technology/helicopter/#>

<https://www.nasa.gov/stem-ed-resources/build-your-own-mars-helicopter-model.html>

Internship Opportunities

[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 and lots of others who may not see themselves as a "STEM person"? Follow the link above to find out more.

NASA Postdoctoral Program

If you're an early-career or senior scientist, apply to the NASA Postdoctoral Program to help pursue NASA's mission and experience the world's most diverse technology and expertise. Become a part of the NPP and experience this unique educational program that is preparing future leaders for NASA and the academic community.

The Summer 2023 application cycle is now open.
Current application deadline is July 1, 2023.

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- 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>

Future Forecasting: MUREP Funding Opportunities for FY2023

While we are already well underway for FY2023, the year is far from over! If you haven't taken a look at future grant forecasting, take a look at [FY2023 opportunities](#). Some dates have passed, others are quickly approaching, and other are coming.



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.