

NASA Aeronautics

March 2025

No. 46

Monthly STEM Newsletter

INSIDE

—
**NACA 110th
Anniversary**

—
**NASA Academy at
Langley Research
Center**

—
**NASA Internships,
USRC Awardees, HAS
for Middle School &
More!**



The NACA Muroc Flight Test Unit received permanent status from Hugh L. Dryden, the NACA's Director of Research. The unit at Muroc now numbered 27 people, with Walt Williams as chief.

March 2025

Spring is flying in, Aeronauts! This month, as we approach our 4th anniversary edition of the monthly aeronautics STEM newsletter, we celebrate 110 years of Aeronautics research! We started with NASA's predecessor, NACA, the National Advisory Committee for Aeronautics in March 1915. Read our Aeronautics Crew Highlight, Lillian Gipson, NASA Aeronautics Multimedia Producer. Deadlines are coming this month for student opportunities and check out a new opportunity for middle school educators through the High School Aerospace Scholars program to help prepare your students for state exams (oh yes, they're coming!). The weather is warming up and so are the engines of the X-59--sign up for Flight Log today so you don't miss the first flight or other new upcoming NASA opportunities.

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? [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.

110 Years of Aeronautics Research

March 1915 - NACA Anniversary

Founded on March 3, 1915, the National Advisory Committee for Aeronautics (NACA) celebrates 110 years of Aeronautics Research. NACA was established with a 12-person advisory committee, created to identify aeronautical problems and develop strategies to solve them. NACA created four major subcommittees led by subject matter experts to conduct research in aerodynamics, propulsion, aircraft structures, and aircraft operating problems.

With difficulty finding facilities fit for aeronautical research, NACA began construction on its first research facility - The Langley Memorial Aeronautical Laboratory (now known as the Langley Research Center). It opened in June 1920 with a small group of engineers and technicians but grew to over 100 employees working with the world's first pressurized wind tunnel by 1925. Over the next decade, NACA members worked with and toured European aeronautical research facilities to learn about other aviation technologies. NACA quickly became a leading research organization in aeronautics and pushed boundaries of flight.

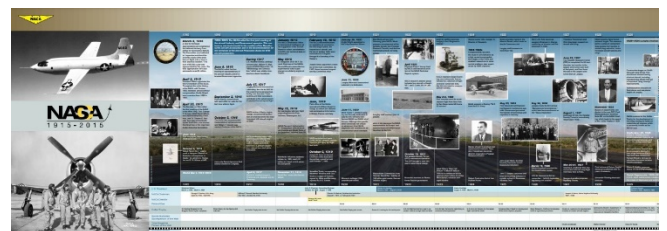
In 1939, they broke ground on the second facility - Ames Aeronautical Laboratory (today known as Ames Research Center) based in Sunnyvale, California, then again in 1941 for the third research facility—the Aircraft Engine Research Laboratory (now known as the Glenn Research Center) in Cleveland, Ohio. Due to involvement in World War II, NACA focused its research on the performance of military aircraft testing every type of U.S. military aircraft flown during the war.

Post-war, NACA constructed other research facilities to continue exploring the fundamentals of flight including pioneering the swept-wing and "coke" bottle shape which protected the aircraft from shockwaves and improved efficiency and performance when traveling at supersonic speeds. In 1946, NACA partnered with Bell Aircraft and the U.S. Airforce to develop the X-1, a high-speed research aircraft. On October 14, 1947 the Bell X-1 became

the first aircraft to fly faster than the speed of sound. Creating new inventions and techniques for the advancement of aviation, NACA made groundbreaking achievements that contributed to the safety, reliability, and efficiency of flight.

NACA continued their aviation-focused research until 1957 when the Soviet Union launched Sputnik and the race to space was on! NACA officially transitioned to NASA, the National Aeronautics and Space Administration in October 1958, adding space exploration to its challenges.

Honor and celebrate the groundbreaking achievements of NACA's aviation research. Stay tuned to the [NASA webpage](#), NASA Aeronautics social channels on [Facebook](#), [X](#), and [Instagram](#) for a special feature about NACA's 110th Anniversary on **March 3rd, 2025!** [NASA YouTube](#) will debut a photo animation featuring photographic stills that have been brought to life to share NACA's history in aeronautics research. Learn about some of NASA's research contributions that have enhanced the advancements of aviation through the decades with [NASA Aerotech Mini Posters](#). Head to the [NACA webpage](#) to learn even more about the origins of NACA's aviation history before incorporating space and becoming NASA. Don't forget to check out our [NACA/NASA timeline poster](#) or use it in your classroom.



Fun facts about NACA: early members of NACA included Orville Wright and Charles Lindbergh. Pearl Young was the first female hired by the NACA in 1922. Another fun fact is that unlike NASA, which is pronounced as a word, NACA is pronounced as individual letters—which is also how NASA was pronounced in its early years.

Aeronautics Crew Highlight

Lillian Gipson, NASA Aeronautics Research Mission Directorate Multimedia Producer



Lillian Gipson is a multimedia producer for NASA Aeronautics. She supports NASA and the aeronautics team with various projects from high-level presentations to STEM products and web design. Read on to learn about Lilly's journey to NASA.

"My name is Lillian Gipson, and I am a graphic designer for NASA's Aeronautics Mission Directorate. I am excited to share a little about myself and my journey to NASA! When I was in 3rd grade, I had an assignment to write a report on the sun. I remember writing a letter to NASA asking them for information I could include in my report. Shortly after that, NASA sent me a huge packet of information about the sun. Since that day, I was, and still am amazed with NASA and everything we do.

Years later, I was attending Northern Virginia Community College obtaining my Liberal Arts degree. I was also working for the Peace Corps in their accounting department processing travel orders. During a work learning session, I was discussing the topic of art with the software instructor and mentioned I always wanted to go into the art field but wasn't sure if I could make a steady career with it. She mentioned to me that she was hiring graphic designers for NASA Headquarters and that I should put in an application.

Without anything to lose, I applied for the job. My portfolio was slim, showcasing my artwork from 7th grade, so I didn't hold much hope of getting the position, but low and behold, I was hired! I was thrilled and so excited for this new opportunity!

My new career path helped me decide what I wanted to major in. While starting my new position, I also continued my education and graduated Magna Cum Laude from George Mason University with a Bachelor of Arts in Studio Art. Since then, I have also received my master's degree in graphic design from the Savannah College of Art and Design.

My first job with NASA began in our Printing and Design department as a junior graphic designer. I learned so much from my co-workers, talented designers, and editors. To this day, many of my co-workers are lifelong friends of mine. From there, I became interested in web design and soon found another role with NASA incorporating my new interest.

I now work with the Aeronautics Research Mission Directorate and have been with this team for about 19 years. My current role allows me to work in both web and print design projects. It's the ideal position for me and I feel so fulfilled in the work I do. Most importantly, I truly enjoy my team, the people I get to work with every day. They are my work family and make doing my job fun, I love what I do! I truly enjoy helping tell the NASA Aeronautics story visually! I've received a few design awards: Communicator Awards, American Inhouse Design, and a Telly Award for the work I've done with NASA.

My faith in Jesus, family, co-workers, and career are the most important parts of my life. I love to hang out with my friends and family and having precious one-on-one time with them. They keep me grounded and inspired!"

Fun fact about Lilly here at NASA—she is so good at what she does that none of our products are official until they have been "Lilly-fied"!

Student & Educator Opportunities

Don't Miss This Opportunity!

NASA Academy at Langley Research Center



Spend a summer with NASA's Langley Research Center working on research projects alongside NASA aerospace professionals. Join lectures, have discussions with the pros, and work with NASA's advanced research facilities. Get your application in by **March 10th, 2025**. Learn more about the is summer program [HERE](#).

Proposals Due Soon! University Student Research Challenge (USRC)

The NASA
Aeronautics
Research
Institute's



(NARI) University Student Research Challenge for post-secondary students challenges them to think like an entrepreneur and contribute to new and improved aviation systems. Head to the [NARI website](#) for more information and submit your proposal by **March 13, 2025**.

Congratulations to the current awardees of the University Student Research Challenge (USRC)! Cerritos Community College aims to mitigate wildfires with their "Project F.I.R.E (Fire Intervention Retardant Expeller)" and Colorado School of Mines will develop a prototype for an electric turbofan for supersonic aircraft. Read more about these amazing student projects [HERE](#). Whether you're in a 2-year or 4-year college, don't miss your opportunity to work with NASA professionals on a project you believe will change the world of Aeronautics. Apply today!

Educators--Check Out this New Program for Middle School through the High School Aerospace Scholars (HAS) Program

The HAS team has added a new program to their online offerings – Middle School Math with High School Aerospace Scholars! Educators have the opportunity to gain access to activities that target frequently missed skills on the 6-8 grade math STAAR tests. These 45-90-minute STEM lessons are easy to incorporate into your regular learning rotations. Check out this opportunity in [NASA STEM Gateway](#) to learn more and register before the deadline on **April 1, 2025**.



Fall Opportunities NOW Open! NASA Internships

Did you miss the summer deadline? Well, get ready for a fall internship with NASA. New opportunities are now available for fall 2025 with more added all the time. Explore them [HERE](#) and apply by **May 16th, 2025**. Students 16 years and older are eligible to apply. There are also educator internships, so don't



wait and get your application in today!

Sign-up Today! NASA Aeronautics Flight Log

2025 is the year of the X-59! Passing milestones and getting ready for her first flight, head to [Flight Log](#) to learn all about the X-59 quiet supersonic research aircraft, other



NASA Aeronautics missions, pilots, and the crew. Sign up individually or as a group, complete activities or attend a NASA Aeronautics event to collect endorsement stamps and earn virtual mission patches. Don't miss new upcoming flights when you join the [contact list](#). We can't wait to fly with you!

Professional Development

[South by Southwest \(SXSW\) Conference](#): **March 7-15, 2025, Austin, TX**

NASA is heading to Texas for SXSW. Check out [NASA House March 8-9th](#) at the Austin Central Public Library to learn about NASA missions, explore supersonic flight with the X-59 simulator, STEM activities, and more! Be a part of the audience for ["NASA's Quesst to Change The Supersonic Speed Limit" panel](#) on **March 11th** as experts working on the X-59 supersonic research aircraft discuss what they are working on.

[National Science Teaching Association \(NSTA\) National Conference](#): **March 26-29, 2025, Philadelphia, PA**

Join NASA at the 2025 NSTA National Conference to engage in a STEM session that you can take back to the classroom. Find the NASA Aeronautics STEM on Mar. 29th to discover "More than Slinkies and Rubber Bands: Teaching Sound Through NASA's Quesst Mission".

Are you interested in other professional development opportunities? Create a new account to join [NASA CONNECTS](#) or log into [NASA's STEM Gateway](#) to find a session that interests you. Check out [NASA Engages](#), a program that connects NASA experts with community engagements to share NASA missions and content.

Did you know?

March 9th, 1971, NASA research pilot Thomas McMurtry flew the F-8A with modified wings called the supercritical airfoil. NASA conducts research on different aircraft designs to collect data on aviation sustainability.

NASA's Sustainable Flight Demonstrator project is working to build the X-66 featuring a unique transonic truss-braced wing design that will be studied for its ability to reduce fuel consumption, creating a more efficient aircraft. Learn more about the X-66 and sustainable aviation with the [NASA Aeronautics Sustainable Aviation STEM Toolkit](#).

March 10th, 1948, Herbert H. Hoover became the first civilian and first NACA pilot to fly faster than the speed of sound when he reached Mach 1.065 with the Bell X-1. Hoover was a graduate of the University of Tennessee with a degree in Mechanical Engineering working with NASA to conduct research for the future of aviation. Today, NASA is doing research on supersonic flight with a quieter sound. The X-59 quiet supersonic research aircraft will break barriers and change the way we fly. Check out [NASA Aeronautics Flight Log](#) to learn more about the X-59 and lead test pilot Nils Larson.

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.

[Space to Learn](#): (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.

[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.

National Aeronautics and Space Administration

Headquarters
300 E. Street, SW
Washington, DC 20546

www.nasa.gov/aeroresearch