



# NASA Aeronautics

## Monthly STEM Newsletter

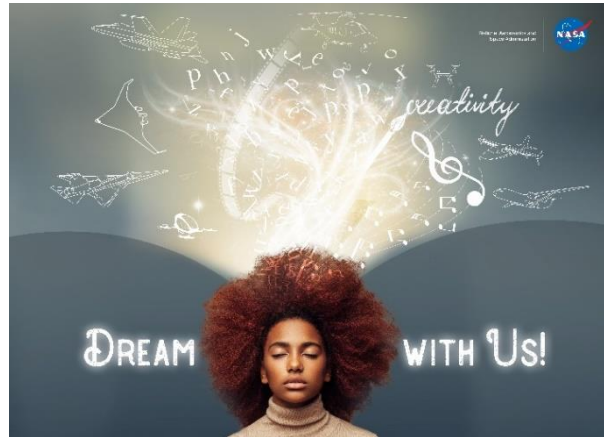
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*NASA Aeronautics’ “Dream With Us” design challenge asks students in grades 6-12 to share their ideas of the future of aviation with us. A STEAM-based challenge, students are encouraged to let their creativity shine while developing ideas for airports and vertiports of the future, drone technology to help society, or changes to aircraft or aircraft systems to make them more sustainable. Challenge link can be found later in this newsletter. Image Credit: NASA*

## March 2022

During this busy time of year, with so much going on in the world, we invite to take a few moments, grab a cup of coffee or tea, and take a look at the many resources and opportunities NASA Aeronautics has for you to engage students, reinvigorate creativity, and “Dream with Us.”

As we all slowly begin to stretch our wings and start to travel once more and see one another face-to-face at times, you have the chance to interact with us at events around the country. Can’t travel? Don’t worry; we have lots of virtual events to participate in as well.

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](mailto:April.a.lanotte@nasa.gov).

Let’s Fly!

## Newly Released STEM Items:

### New!

**Flight Log:** Newly released Flight Log Experience! Educators, classrooms, aviation enthusiasts—sign up to send your name with us on our X-planes, UAS flights and more while you begin to build your virtual NASA flight log. Educators—bring your entire class!

- Access STEM lessons and activities, videos, and other resources
- Earn virtual endorsement stamps and mission patches
- Participate in our flights and other experiences, and hear from our [Lead Test Pilot Nils Larson](#).



### **Aeronautics Innovations Challenges** page:

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. This currently includes:

- **“Dream with Us” design challenge:** The “Dream with Us” challenge is asking students in grades 6-12 to help NASA envision innovative solutions to three real-world aeronautical challenges by submitting an original art piece capturing their ideas. The three aeronautical challenges are drone use, future airports and vertiports, and new sustainable aircraft designs. Submissions can take the form of several mediums - including, but not limited to, digital art, models, comic books, essays, or stories - that depict their solution, along with a written explanation of how it works. Winners will earn the opportunity to have a NASA subject matter expert present to their classroom or school, as well as

## Engage with Aero!

Aeronautics is everywhere! Here are some of the places you can go (some in person, others virtual) to engage with us or our partners:

### **ImaginAviation: (It's not too late!) March 1-3: ImaginAviation Registration !**



Take a glimpse into the technologies of the future at our **imaginAviation** event taking place **March 1-3, 2022**. This all-virtual event celebrates the inspiration - that drives the opportunities being worked on today for infusion into the market tomorrow. Engage in real-time with Industry leaders, University students, and Pioneers transforming the future of aviation. **New this year: K-12 materials, including the rollout of our “Dream with Us” design challenge for students ages 13-18. First access to “Dream with Us” via ImaginAviation (design challenge opens to others March 4<sup>th</sup>).**

certificates or other materials, and could even have their work publicly displayed on NASA Aeronautics' website and social media accounts. **First access via [ImaginAviation March 1-3](#), then open on the [Aeronautics Innovations Challenges page starting on March 4<sup>th</sup>, 2022](#). **Challenge dates: March 1-May 31, 2022. Submission portal opens March 15<sup>th</sup>.****

- **[ATM-X Digital Information Platform University Challenge](#)**: The National Airspace System (NAS) is investing in new ways to bring vast amounts of data together with state-of-the-art machine learning to improve air travel for everyone. An important part of this equation is *airport configuration*, the combination of runways used for arrivals and departures and the flow direction on those runways. **The goal of this challenge is to automatically predict airport configuration changes from real-time data sources including air traffic and weather. Submissions are due April 15<sup>th</sup>, 2022.**

**[Newest Advanced Air Mobility Playbook video: Healthcare](#)** NASA's vision for Advanced Air Mobility (AAM) is to map out a safe, accessible, and affordable new air transportation system alongside industry partners and the FAA. AAM could aid in healthcare operations by offering solutions for faster transport of patients, doctors, medical supplies, vaccines, organs, and other emergency medical transport needs. In this episode of NASA's Advanced Air Mobility Playbook, AAM Mission Integration Manager Davis Hackenberg explains the value and feasibility of this exciting public good use case.

## Coming Soon:

**[The Quiet Crew: Matthew Kamlet \(coming Thursday March 3\)](#)**: The latest "The Quiet Crew" episode will feature Matthew Kamlet, who will share his communications and public engagement expertise, along with what he loves about being a part of NASA and aeronautics. If you missed last month's "The Quiet Crew" episode, find out more about meteorological engineer [Tegan French](#).

## Internship Opportunity:

### [Summer Internships](#)

As a NASA intern, you will be part of an amazing team that is dedicated to NASA's missions. You will work with leading experts and gain valuable experience as you participate in research and mission projects. Come dream with us and change the future. Applicants for this internship must be U.S. citizens. The deadline

**[March 31-April 2: National Science Teaching Association Conference, Houston, TX](#)**. Join us for a wide variety of aeronautics sessions and workshops.

## **April 22-24, 2022: NASA in Your (TX) Neighborhood!**

Join NASA Aeronautics in Texas April 22-24, 2022 for a series of educator, student, and public events focused on our X-59 aircraft, career and workforce development, and the science of sound. Hear from NASA researchers, pilots, STEM experts, and other experts in Texas as we share the story of the X-59.

- April 22-23: UT Arlington (Students, professors, K-12 educators: space is limited, [registration](#) is required.)
- April 24: [Frontiers of Flight Museum](#) (Open to everyone! No registration needed.)

*\*Please note that the events are currently scheduled as in-person events, but may change due to COVID restrictions.*

## **Advanced Air Mobility Academy (AAM Academy):**



The [Advanced Air Academy \(AAM Academy\)](#) is a year-long series devoted to ongoing student and educator opportunities to learn more about AAM and how it will change the airspace above us. Join these live events (or participate in them via recorded videos) and **apply to be an "AAM Academy Classroom of the Quarter"** to work directly with one of our AAM experts. Participation is free but you need to register!

**[Access archived recording and presentation materials here.](#)** These include:

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for applications is March 4<sup>th</sup>. If you have Spanish-speaking students, encourage them to watch [NASA STEM Stars: Internships \(Español\)](#) to see how they can join us, too.

- "Package Delivery Drone Simulation"
- "The Science Behind Quadcopters"
- "AAM Academy Live"

## Professional Development:

### [Educator Professional Development Collaborative \(EPDC\):](#)

You always work hard, and we do, too. Professional development opportunities are always available at NASA. In addition to the in-person professional development sessions at the NSTA National Conference in Houston, TX this month and involvement in the Choctaw Nation of Oklahoma "Emerging Technologies..." conference at the beginning of April, the month of March allows educators to participate in the March 7<sup>th</sup> [Aeronaut-X: Senses of Sound](#) session in English and a [Spanish version](#) on March 22<sup>nd</sup> among others. Sessions are free, but registration is required.

## Did you know??

March-April, 1928: Mary Bailey of England is the first woman to fly solo from England to South Africa.

March 30, 1933: The Boeing 247, the first modern airliner, went into service with United Airlines. This all-metal aircraft was a twin-engine, low-wing monoplane.

March 19, 1941: the U.S. War Department established the 99th Pursuit Squadron, which, along with a few other squadrons formed later, became better known as the Tuskegee Airmen.

March 2, 1969: The first Concorde aircraft took its initial test flight.

### [Upcoming Sessions: \(Live virtual events from 9-10am PT\)](#)

- Date TBD: "Air Taxi Design Challenge"
- May 11, 2022 (9-11am PT) AAM Middle and High School Career Day
- May 18, 2022 (time coming soon) AAM Future Workforce Seminar for post-secondary students.



### 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!"

[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 STEM Stars](#): (students ages 13+) Webchats that connect students ages 13+ with NASA experts of all types. Each chat introduces a STEM career, addresses a STEM topic, and highlights a NASA mission. Webchats are streamed live at 2pm EST via YouTube, and students can ask questions via the chat feature in real time. Or you can choose from a growing library of archived sessions.

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