NASA Aeronautics

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Monthly STEM Newsletter

INSIDE

A low pressure (hyperbaric) chamber is shown at NASA partner KBR's facility in San Antonio, TX. A military test volunteer is helping verify the life support system for the X-59.

August 2021

As unbelievable as it may seem, we are all gearing up for Back-to-School. Here at NASA Aeronautics, we have been busy putting together as many resources as possible to help educators fly into the 2021-2022 academic year with exciting opportunities that will help make this year both fun and packed full of aeronautics and STEM. Do you know someone else who needs this monthly update? Sign Up for the Monthly STEM Newsletter. Do you have a question or want to be removed from the list? Send an email to: April.a.lanotte@nasa.gov.

August 19th: National Aviation Day

Celebrate National Aviation Day with us! We have great ways to do that, including the exciting unveiling of our newest STEM Engagement product, the "Jr. Pilot Badge Program." For our first publication, elementary students (suggested for Grades 1-5) follow along with Orville D. Squirrel to complete fun activities focused on the X-59, the science of sound, and more. You'll be able to find it on our Aeronautics@Home page on the 19th!

Do you want more ideas? Find more activities here!

New Videos and Resources:

Light-Up Paper Helicopter. Many of you have probably created a simple paper helicopter with students. But did they light up? Explore paper circuits, basic circuitry, LEDs, and flight with this engaging new activity.

X-57 Bookmarks (more bookmarks coming soon). We're not sure how well bookmarks work with eBooks and other digital media (!!), but for those of you who still work with traditional books, we have an X-57 bookmark, with more bookmark styles to come this month. Find them all at our Aeronautics@Home site.

The Quiet Crew: Episode 3. Two months ago you were introduced to our new video series that highlights some of the many people working behind the scenes on the X-59. Episode 3 will be available the first week of August! If you missed the first two in our series, take a look at Episodes 1 and 2, featuring Paul Dees and Sarah Waechter on our YouTube "The Quiet Crew" playlist (where Episode 3 will also be posted) and in our X-59 STEM Learning Module.

Professional Development:

Educator Professional Development Collaborative (EPDC): Aeronautics, Engineering Design, Digital Badges and more! Join NASA's EPDC for a month full of aeronautics-related professional development. Are you new to these offerings? There is a session on "Digital Badges for Educators and Students" on Aug. 3rd from 4:30-5:30pm ET. Other sessions such as "Explore Aeronaut-X: Explore the four forces of flight with activity Fan-tastic Forces," and the third session in our multi-part series about the X-57 Maxwell (prior attendance not necessary)--Engineering Design and the X-57 Maxwell will occur on Aug. 17th from 6-7pm ET. Sessions are free, but registration is required.

Funding Opportunities:

ARMD Solicitations: Opportunities for universities to collaborate with NASA's aeronautical innovators and/or contribute to their research are available now! Several solicitations are currently active: https://www.nasa.gov/aeroresearch/solicitations

STEM Partnership Solicitation for Formal and Informal Institutions: Paragon TEC, a support services contractor for NASA's Office of STEM Engagement, is soliciting proposals from eligible organizations to support the implementation and evaluation of the 2021-2022 NASA SPARX. More information is found in the link above. Proposals are due Aug 15, 2021. Awardees will be notified by Aug. 27th, 2021 with implementation to begin Oct. 1, 2021.

From the cover

Our X-59 aircraft is not the only part of the mission that requires the latest technology—so does our pilot! NASA is working with contractor KBR at their pilot test chamber in San Antonio, TX to ensure our X-59 pilot will be safe at high altitudes. You can read more here. Do you want to show students why our pilots need pressure to survive? The "Why Do We Really Need Pressure Suits?" activity guide has a demo and hands-on activity that's lots of fun and challenges students to build a pressure suit for a marshmallow Peep.

Coming Soon!

Stay tuned for our Back-to-School S-T-E-M resource series, which will debut on August 10th with our "S" publication, highlighting some of our best Science resources for aeronautics. A new publication will be available each following Tuesday, highlighting resources for the other letters of STEM.

Also coming soon: X-57 Digital Badges, additional aeronautics-focused bookmarks in English and in Spanish, a buildable paper X-59 model, and a 3D printable X-59.

Did you know??

- On August 14, 1919, the first airmail was delivered at sea by the Aeromarine flying boat when it dropped a bag of mail on the deck of the White Star Line's Adriatic. (find out more about exploration in August here)

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!"

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 program 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.