



AIAA Tucson Section - Free NASA STEM Webinar

AIAA Tucson Section Announces for Educators

*Join the **NASA** STEM Engagement & Educator Professional Development Collaborative at Texas State University for FREE 60-minute webinars.*

Earn 1-hour of professional development credit by attending.

See below the titles, dates, and registration links for each event.

Explore Moon to Mars: Planning the Mission

Audience: Educators, Parents, Caregivers

Event Date: July 13 at noon EDT

<https://na.eventscloud.com/555868>

As you may well imagine, planning missions to space is a difficult and important job. Getting our astronauts into Low Earth Orbit (LEO) is hard enough. Preparing to go to the Moon and then on to Mars presents challenges for which we are still working on solutions. In this webinar we will have discussions about those challenges and share some hands-on activities you can do at home to simulate making those plans yourself.

Explore Moon to Mars: Artemis, Mars 2020

Resources, and Digital Badges Audience: Educators, Parents, Caregivers

Event Date: July 13 at 6 p.m. EDT

<https://na.eventscloud.com/557284>

NASA is expanding human exploration by visiting the Moon and then Mars. The new Lunar Exploration program that will land the first woman and the next man on the surface of the moon is called the Artemis Program. NASA's upcoming mission to Mars is called Mars 2020. This webinar will provide an overview of Artemis Program and Mars 2020 and explore educational resources to engage students in STEM concepts that drive these missions. Also included is

Quick Links

[AIAA National](#)

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Upcoming Events:

Monthly Meetings

July 13, 2020

6:30pm

A Day in Space

July 16, 2020

Historical Events

Apollo Soyuz Mission

July 15, 1975 US

Launched

Apollo 11

July 16, 1969

Launched

Apollo 15

July 26, 1971

Launched

a quick walkthrough of a Digital Badge (micro-credential) for students and educators that provides an in-depth exploration of the Artemis program and related hands-on activities for students.

Explore Moon to Mars: BEST Lunar Rover, Viper

Audience: Educators, Parents, Caregivers

Event Date: July 14 at 1 p.m. EDT

<https://na.eventscloud.com/556326>

Participants will learn about the Mars Rover and the Lunar Rover "VIPER". Participants will learn about the Beginning Engineering Science & Technology (BEST) curriculum and use the Engineering Design Process to create a Rover and to test it. This webinar is aligned with the Next Generation Science Standards.

Explore Moon to Mars: Lunar Reconnaissance Orbiter Camera + QuickMap

Audience: Educators, Parents, Caregivers

Event Date: July 14 at 4:30 p.m. EDT

<https://na.eventscloud.com/557706>

Participants will learn about science discoveries made possible with the Lunar Reconnaissance Orbiter Camera (LROC), a high-resolution camera onboard NASA's Lunar Reconnaissance Orbiter (LRO). Educators will also learn about QuickMap, a visualization tool for browsing lunar data from NASA/LRO and other missions in 2D and 3D, and ways to incorporate this tool into the classroom while aligning to the Next Generation Science Standards.

Explore Space Tech: ECLSS, Water Filtration and the Engineering Design Process

Audience: Educators, Parents, Caregivers

Event Date: July 15 at 1 p.m. EDT

<https://na.eventscloud.com/557135>

NASA's fleet of satellites, its airborne missions and researchers address some of the critical challenges facing our planet today and in the future: climate change, sea level rise, freshwater resources, and extreme weather events. Come learn about the Environmental Control and Life Support System onboard the International Space Station that reclaims wastewater. Learn about hands-on experiments and physical demonstrations that can be used within the classroom to create, build, and test a water filtration device using commonly available materials.

Small Steps to Giant Leaps: 3...2...1...Takeoff!

Audience: Educators, Parents, Caregivers

Event Date: July 15 at 6 p.m. EDT

<https://na.eventscloud.com/557174>

Participants will get an overview of the

3...2...1...Takeoff Activity. Learn about the four forces of flight and Newton's third law of motion by constructing a small paper airplane. Take a look back at the history of X-Planes and NASA Aeronautical Research while also looking forward to the future of NASA Aeronautics Innovation. For decades NASA has been studying aircraft noise in order to reduce noise emissions. Come learn about NASA's newest X-plane, the X-59 QueSST, and the research on Quiet Supersonic Flight.

STEM Teaching Tips for Parents and Caregivers

Audience: Educators, Parents, Caregivers

Event Date: July 15 at 7:30 p.m. EDT

<https://na.eventscloud.com/557827>

In this webinar, parents and caregivers will receive an overview of how to best guide STEM student learning in a home setting using teacher expert tips and strategies. The Next Generation Science Standards (NGSS), the Mathematics Common Core, and the Texas Essential Knowledge and Skills (TEKS) for science and math will be reviewed so that you are comfortable in locating more information about what students are expected to learn at each grade level. We will wrap up by sharing many exciting NASA resources to supplement the distance learning programs your child may be using during this time of "stay-in-place" teaching and learning.

Explore Moon to Mars: Imagine Mars

Audience: Educators, Parents, Caregivers

Event Date: July 16 at noon EDT

<https://na.eventscloud.com/557307>

Participants will go through educational materials that will cover building a sustainable community on Mars, considering criteria and constraints in an engineering and design process, and learning Earth science concepts along the way.

Explore Moon to Mars: Human Factors - Part II

Audience: Educators, Parents, Caregivers

Event Date: July 16 at 6 p.m. EDT

<https://na.eventscloud.com/556361>

In this second chapter of Explore Moon to Mars: Human Factors, we'll take an in-depth look at muscle physiology and the effects of long-duration spaceflight on astronauts' muscles, as revealed by the SpaceLab and ISS experiments (including the NASA Twins Study). As NASA looks to establish a permanent base on our Moon (and eventually undertake a three-year mission to Mars), it is imperative to understand the health consequences of reduced and micro-gravity as NASA seeks to develop the protective measures that will ensure astronauts

are able to live and work to their fullest potential at these deep-space destinations. Implications for Earth-based medicine, and relevant instructional resources, will be included.

If you have any questions, please send an email to Michelle Rouch, AIAA Tucson Section Chair
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