

Sharing Science and Technology

The NASA Space Science Education Consortium (NSSEC) capitalizes on NASA's rich history of exploration and scientific discovery through compelling and innovative space science education programs. The NSSEC continues the Science Mission Directorate's work at the forefront of NASA's educational achievements by linking exciting mission discoveries directly to the American public and partnering with the NASA education community, as well as people and groups outside of NASA.

The NSSEC brings a variety of products, programs, and tools to space science education.

- Large-scale events
- Eclipse 2017
- Sun-Earth Days
- Data-intensive tools
- Helioviewer
- Informal programs
- Planetarium shows
- Educational events at libraries, museums, and national parks
- Citizen science
- Aurorasaurus
- Radio JOVE
- Out-of-school-time resources
- NASA Family Science Night
- Afterschool Universe
- Crosscutting infrastructure
- Space Math
- STEM Innovation Lab
- Virtual Reality
- 3D printing

National Aeronautics and Space Administration



NSSEC NASA SPACE SCIENCE EDUCATION CONSORTIUM

Reach the team here: steminnovationlab.org/about

Get Involved!

Are you

interested in

collaborating or

sharing your

thoughts

with NSSEC?

Follow Us: @NASASpaceSciEdu

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Educational Technology

New Education Programs

NSSEC continually incorporates novel technologies into science education programming, while focusing on educator needs. They are comprised of industry leaders in IT and data services, who provide insight into innovative education tactics for a variety of populations.

One way that NSSEC utilizes educational technology is through their STEM Innovation Lab, a space sicence application think tank. This lab:

- Brings together NASA scientists, engineers, and educators.
- Explores and develops new ideas related to the infusion of educational technology into STEM activities.
- Includes more than a dozen exploration stations that dive into 2D and 3D printing, coding and electronics, virtual reality, and more.
- Blends together different technologies for greater impact on learners and integration into NASA education programs.

Science

Based primarily out of the NASA Goddard Space Flight Center, NSSEC is located at a preeminent space science research hub that encompasses all space science disciplines.

NSSEC scientists:

- Stay abreast of the latest mission events and discoveries in astrobiology, heliophysics, astrophysics, and planetary science.
- Provide expertise to translate research into content that's accessible to the public.
- Focus on educating communities in space science and supporting disciplines.

Citizen Science

Through smart phones and publicly accessible platforms, more and more people are able to engage with scientific projects. NSSEC is finding ways to involve scientists with citizen science projects by encouraging them to conduct research with communities. These projects benefit those communities and develop scientific skills and thinking for the people who participate. Some projects are more formal:

- Aurorasaurus calls upon citizen scientists to report aurora sightings to help experts confirm the mathematical modeling of where the aurora should be spotted.
- Radio JOVE allows students and amateur scientists to build their own telescopes to observe and analyze natural radio emissions of Jupiter, the Sun, and our galaxy.

NSSEC also engages the general public in the scientific method through citizen explorer projects, such as:

 Freshwater mapping in Native American communities, where people photograph still water in their areas.

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Community Outreach

NSSEC engages the general public in STEM through a variety of programs and events.

- Out-of-school-time resources
- Afterschool Universe and NASA Family Science Night.
- Educational events at National Parks.
- Partnerships with:
- Libraries, museums, and science centers to reach both children and adults.
- Amateur astronomy organizations such as the Night Sky Network and the Astronomical League engage the science interested public through star parties and observing challenges.
- Conferences like AwesomeCon, Escape Velocity, and ISTE to engage with Lifelong Learners.
- Partners located nationally work with NSSEC to connect with specialized groups, like Native Americans and Alaskan Natives, to encourage effective STEM education.

Accessibility

Central to NSSEC is the concept of One Accessible Universe or 1AU. Through 1AU, NSSEC emphasizes the necessity of making NASA space science education accessible to the country, reaching diverse populations through focused communications and facilitating access and usability for people with all ability levels.

This involves:

- Reaching out to unique segments of the country with specialized, culturally appropriate approaches to learning.
- Providing communication training for professional and amateur scientists and informal educators so they become better ambassadors of content.
- Integrating elements of universal design and user experience (UX) with 508 Compliance.