

### ***NASA Education Activities***

*Leveraging Technology to Involve, Inspire, and Educate the Public*

[www.nasa.gov/education](http://www.nasa.gov/education)

Transparency  Participation  Collaboration

NASA's Office of Education (OE) communicates education resources and information about NASA's missions and technological and scientific advances to numerous stakeholders. We actively engage students, educators, parents, and the general public through a variety of resources from downloadable learning guides on our Web site to engagement via a vast social networking presence. Our interactive resources include collaboration tools for access to NASA experts, virtual worlds that simulate space travel, and online remote controls to scientific instruments and that enable the students to directly take part in space missions.

#### Overview

The NASA Education Web site is the central gateway for students, teachers, parents, and the general public to access NASA mission and education information and resources. Through this Web site, which has tailored content for various educational audiences and grade levels, NASA provides more than 3000 educator resources via an interactive searchable database, with potential access to over 10,000 online education resources.

The site allows access to education multimedia, including NASA eClips and NASA TV Education File. The site also provides annual reports and mechanisms for visitors to provide feedback and ask questions. The NASA Education Web site consistently receives between 3.5 and 4.5 million page views per month, with its most popular educator guides downloaded more than 20,000 times per month.

More than just providing downloadable materials, NASA's collaborative tools facilitate peer-to-peer interactions and allow students and teachers to engage directly with NASA experts. Examples include:

- The NASA Student Ambassadors Virtual Community links current and former NASA interns and fellows.
- The Interdisciplinary Science Project Incorporating Research Experience (INSPIRE) provides an online learning community

#### **Learning Technologies Virtual Worlds**

[www.nasa.gov/offices/education/programs/national/lt/p/](http://www.nasa.gov/offices/education/programs/national/lt/p/)



*NASA eEducation Island in Second Life*

NASA Learning Technology (LT) is researching virtual worlds as platforms for learning, collaboration, networking, and event delivery. The NASA eEducation Island in Second Life is a space to facilitate NASA education projects' entry into virtual worlds. Building on prior research and development, LT's Information Accessibility Lab is also collaborating with multiple industry and academic partners on methods of making three-dimensional virtual worlds accessible to the blind and visually-impaired.

- where students to interact with their peers, NASA experts, and education specialists.
- The Endeavor Science Teacher Certificate Project is an online collaborative learning environment with online courses and “action research.”
- NASA’s Museum Alliance is an online community of practice of more than 350 informal organizations with access to resources, information, and events.

NASA’s greater Web and telecommunications activities include mechanisms for participatory exploration, real-time interaction, and virtual worlds:

- The Digital Learning Network (DLN) enables two-way audio and video conferences and live interaction between classrooms and NASA personnel.
- ISS EarthKAM enables students to remotely direct a camera on ISS to capture real time images of Earth.
- The Space Grant Internet Telescope Network (SGITN) allows students and faculty to use astronomical equipment locally and remotely.
- Amateur Radio on the International Space Station (ARISS) provides opportunities for students to use amateur radio to speak with astronauts on ISS.
- NASA’s multiplayer online science, technology, engineering, and mathematics (STEM) learning game is in development for release in 2010 and NASA manages a presence in Second Life.

Online tools help NASA communicate its activities in support of organizational improvement. These activities include:

- The Weekly Activity Report (WAR) tool (see sidebar).
- The NASATalk collaborative wiki and blog for internal and external groups.

### How This Fits into Open Government

Educators want to know how to access materials related to NASA missions, and students want to find out more about NASA and how to participate in education programs. Members of the general public are interested in learning about NASA missions and participating in challenges and activities. All

### Education Weekly Activity Report Tool education.jsc.nasa.gov/WAR



*NASA Education WAR Tool Homepage*

The Office of Education uses an electronic Weekly Activity Report (WAR) tool to capture and report significant activities and upcoming events that are taking place across the Agency. The purpose of the WAR tool is for sharing key education activities and major milestones (current and upcoming) with staff, managers, and leadership. Over the past six years 16,000 individual submissions have been received and 324 weekly reports have been generated. The tool is hosted on a public server that can be accessed by the public. It facilitates internal transparency and promotes efficiency and effectiveness by reducing redundancies between groups working towards similar goals from geographically disperse locations.

audiences need to easily and quickly access current information regarding NASA's education activities and the resources we make available contribute to transparency. As shown in examples from the previous section, the NASA education Web site facilitates online participation and collaboration. Online mechanisms for internal and external reporting of NASA Education activities further promote teamwork, transparency, collaboration, and awareness.

### Open Government Goals

- Three months
  - Fully establish online collaborative tools as part of future education events and activities with external stakeholders.
- Six months
  - Increase the functionality of the Education WAR tool to support Agency transparency by determining portions of the report to be made available on NASA's public Web site, implementing appropriate links on the NASA's public Web site for WAR information, and providing selected portions of the WAR archive to Data.gov.
- One year
  - Complete a comprehensive internal and external communications plan that will have Open Government values and the Agency Open Government plan as its foundation. This plan will identify various communications channels related to participatory exploration and types of feedback sought. OE will also strategically address competitions in support of participation, collaboration, and innovation in education.
- Two years
  - Implement the components of its communication plan using an Agency-approved interactive collaboration and idea submission tool. The plan will be related to ongoing engagement of education stakeholders and audiences nationwide and dependent on Agency agreements, resources, and policies. To complement this, a strategy for collection, analysis, actions, and related reporting will be developed.
  - Develop and implement strategies and mechanisms to provide feedback to the public regarding the results of collaborations and idea submissions, including explanation of related actions.

### Useful Links

1. NASA Office of Education: [www.nasa.gov/education](http://www.nasa.gov/education)
2. NASA Education Open Government: [www.nasa.gov/education/open](http://www.nasa.gov/education/open)
3. NASA Student Ambassadors Virtual Community: [intern.nasa.gov](http://intern.nasa.gov)
4. The Interdisciplinary Science Project Incorporating Research Experience (INSPIRE): [www.nasa.gov/education/inspire](http://www.nasa.gov/education/inspire)
5. The Endeavor Science Teacher Certificate Project:  
[www.nasa.gov/offices/education/programs/descriptions/Endeavor\\_Science\\_Teaching\\_Certificate\\_Project.html](http://www.nasa.gov/offices/education/programs/descriptions/Endeavor_Science_Teaching_Certificate_Project.html)
6. NASA's Museum Alliance: [informal.jpl.nasa.gov](http://informal.jpl.nasa.gov)
7. NASA Digital Learning Network: [dln.nasa.gov](http://dln.nasa.gov)
8. ISS EarthKAM: [lorax.earthkam.ucsd.edu/public/about](http://lorax.earthkam.ucsd.edu/public/about)

9. The Space Grant Internet Telescope Network (SGITN): [sgitn.space.edu/](http://sgitn.space.edu/)
10. Amateur Radio on the International Space Station (ARISS):  
[spaceflight.nasa.gov/station/reference/radio/](http://spaceflight.nasa.gov/station/reference/radio/)
11. Science Technology, Engineering, and Mathematics (STEM) in Second Life:  
[www.nasa.gov/audience/foreducators/virtual-education.html](http://www.nasa.gov/audience/foreducators/virtual-education.html)
12. NASA Education WAR Archives: [education.jsc.nasa.gov/WAR/archive/default.cfm](http://education.jsc.nasa.gov/WAR/archive/default.cfm)
13. The NASATalk Collaborative wiki: [www.nasatalk.com](http://www.nasatalk.com)
14. Central Operation of Resources for Educators:  
[education1.nasa.gov/edprograms/core/home/](http://education1.nasa.gov/edprograms/core/home/)