



**NASA's Office of Education coordinates and leads the Agency's efforts to inspire the next generation of explorers through lessons, materials, research opportunities, and hands-on activities that draw on NASA's unique missions.**

### **NASA's Planned Investments in Education**

America has a serious shortage of young people entering the fields of mathematics and science. NASA places a high priority on its educational mandate to capture students' interest, nurture their natural curiosities and intrigue their minds with new and exciting scientific research, and provide educators with the creative tools they need to improve America's scientific literacy.

NASA's human capital, diversity, and education communities work with partners—such as Federal agencies, universities, the private sector, and nonprofit organizations—to promote education and careers in science and technology and engage students in critical-thinking activities; improve the quality of math and science teaching so American students are no longer outperformed by those in other nations; and expand science, technology, engineering, and mathematics (STEM) education and career opportunities for underrepresented and underserved groups, including women and girls.

#### **NASA works to**

- Prepare precollege students for studies in STEM and increase the number of science and engineering graduates through a program focused on educator inservice and preservice professional development. Educators can utilize NASA's unique content to help prepare students for college degrees in STEM.
- Provide opportunities for student flight projects to gain access to space. Students gain research and hands-on engineering experience on a variety of authentic flight platforms (high-altitude balloons, sounding rockets, aircraft, and space satellites).
- Provide high school students with internships with NASA scientists and engineers and provide university students with opportunities to participate in NASA research missions. Students will contribute to original research and support hardware designs that will fly on future NASA missions.
- Enhance the capabilities of the formal and informal education community to inspire the next generation of explorers by providing access to NASA staff, research, technology, information, and/or facilities.
- Prepare graduating students from both 2- and 4-year institutions with skills, knowledge, and hands-on experience to make them competitive when applying for employment with NASA, academia, or aerospace industries.



- Immerse educators and students in current NASA science and technology, using social networks and Internet collaboration. NASA will make extensive use of telepresence technology, from Web-disseminated information and remote control of science instruments to learning in virtual worlds. Additionally, through NASA's digital infrastructure, the Agency will "beam" NASA scientists, engineers, and astronauts into classrooms, museums, and science centers in the Nation for real-time videoconferences on topics related to NASA science and engineering.
- Assist minority institutions and faculty through multiyear research grants and provide scholarships, internships, mentoring, and tutoring to underserved and underrepresented students.

### **Summer of Innovation**

NASA began the Summer of Innovation (Sol) project in 2010 to engage low-income and minority students in STEM disciplines through out-of-school learning activities. State education stakeholders, NASA Centers, and other education partners offered STEM-related special events, educator professional development, and family activities. During the summer of 2010, more than 150 events led by 130 participating partners at NASA Centers across the Nation engaged over 150,000 students in NASA experiences, indicating a real public interest in NASA STEM summer and extended learning content. Of these, nearly 22,000 students met minimum content hour thresholds that academic research would indicate support student achievement gains. NASA is planning a second Sol in 2011 to build upon the strides made in the summer of 2010 and to continually pave the way for educators, students, and parents to engage in a lifetime of learning.

**For more information on the NASA Office of Education, go to <http://www.nasa.gov/education>.**