If we want to win the future—if we want innovation to produce jobs in America and not overseas—then we also have to win the race to educate our kids.

- President Barack Obama

State of the Union
January 25, 2011
US Global Rank on Science

1. Shanghai-China
2. Finland
3. Hong Kong China
4. Singapore
5. Japan
6. Korea
10. Australia
13. Germany
16. United Kingdom
17. Slovenia
21. Belgium
22. Hungary
23. United States

NASA Education Overview

Federal Investment in STEM Education

FY 2009 STEM Funding

- Corporation for National and Community Service: 0%
- Agriculture: 1%
- Commerce: 1%
- Defense: 6%
- Education: 24%
- Energy: 1%
- Health & Human Services: 24%
- Homeland Security: 3%
- Interior: 1%
- NASA: 5%
- EPA: 0%
- Transportation: 4%
- Labor: 0%

*Source: Executive Office of the President, Office of Science and Technology Policy, Preparing Our Children for the 21st Century Economy: Science, Technology, Engineering, and Mathematics Education in the 2010 Budget (May 2009)
NASA’s Earth Science Missions

- OSTM/Jason 2
- Jason
- QuikSCAT
- ACRIMSAT
- Landsat-7
- EO-1
- TRMM
- ICESat
- CALIPSO
- CloudSat
- Aqua
- Terra
- GRACE
- SORCE

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NASA Education Overview

STEM Education Framework

**Elementary/Secondary Education**

**Outcome:** Attract and retain students in STEM disciplines along the full length of the education pipeline.

**Educate**

**Engage**

**Inspire**

**Higher Education**

**Outcome:** Identify, cultivate, and sustain a diverse workforce and inclusive work environment that is needed to conduct NASA missions.

**Informal Education**

**Outcome:** Engage the public in NASA’s missions by providing new pathways for participation.

**Outcome:** Inform, engage, and inspire the public by sharing NASA’s mission, challenges, and results.

**Strategic Partnerships**

**Outcome:** Build strategic partnerships that promote STEM literacy through formal and informal means.

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* Science, Technology, Engineering and Mathematics (STEM)
46% of Higher Education students are employed by NASA, aerospace contractors & education institutions.
45% of undergraduate students move on to advanced education.
93% of educators in NASA training use resources in the classroom
450+ Museums/Science Centers in major NASA events
553,589  K-12 students engaged
Great Moonbuggy Race
Space Grant – Rock On!
NASA’s support of the President’s Educate to Innovate Campaign

Work with partners during multi-week programs to engage students in stimulating math and science-based education programs.

NASA's goal is to increase the number of future scientists, mathematicians, and engineers, with an emphasis on broadening participation of low-income, minority students.
To reach for new heights and reveal the unknown so that what we do and learn will benefit all humankind.

- The NASA Vision
Questions or Comments

James L. Stofan
Deputy Associate Administrator for Education

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STEM Education and Accountability

- Formal & Informal Education
- Minority University Research & Education Project (MUREP)
- Innovation in Education
- Evaluation, Performance Monitoring and Accountability

Aerospace Research & Career Development

- Space Grant College and Fellowship Program
- Experimental Program to Stimulate Competitive Research (EPSCoR)
Formal and Informal Education Project

- Supports educators and students in settings within and outside the classroom.
- Partners with professional, non-profit, industry, and informal and formal education organizations to provide teachers, faculty, and volunteers with NASA experiences.
- Invests in educator professional development, post-secondary STEM degrees, school-based resources, and multiple on-line learning activities.
STEM Education And Accountability Program

Minority University Research and Education Project (MUREP)

- Dedicated to the support and advancement of underrepresented students and faculty in STEM.
- Strengthens STEM content through faculty grants and institutional awards to minority institutions.
- Provides scholarships, internships, mentoring and tutoring to underserved and underrepresented students.
Innovation in Education Project

a. Cooperative agreements and partnerships using NASA resources to support improvement in STEM teaching and learning.

d. Innovative strategies to reach educators and students, improve STEM retention, and engage community colleges and minority-serving institutions.

b. Support NASA-related research and launch vehicle/payload development activities.

c. Engage students in hands-on learning through internships, design challenges, competitions, and the Summer of Innovation.

http://www.nasa.gov/soi
Evaluation, Performance Monitoring and Accountability Project

• Assist education managers in setting specific outcome-focused performance goals, measuring progress toward meeting the goals, and tracking completion of key milestones.

• Continue to work with OMB and stakeholders to develop and address short-term, intermediate, and longer-term data and public reporting requirements.

• http://www.nasa.gov/offices/education/performance/index.html
National Space Grant College and Fellowship Program

• Expands opportunities for students, educators, and faculty to understand and participate in NASA missions.

• 52 consortia in 50 states, DC, and Puerto Rico. 950 affiliates from universities, colleges, industry, museums, science centers, & state/local agencies.

• Supports STEM education and research in higher education, K-12, and informal education. NASA establishes training grants with consortia, aligning activities with Agency priorities performance goals.
Experimental Program to Stimulate Competitive Research (EPSCoR)

- Develops academic research enterprises by supporting states so that they become more competitive in attracting non-EPSCoR funding.
- Funding awarded to lead academic institutions to foster research and technology development opportunities for faculty and research teams.
- NASA will integrate EPSCoR research with Agency priorities to an appropriate office that can provide sufficient oversight (e.g. the Office of the Chief Technologist) in coordination with OMB and Congress.