THE NASA OFFICE OF SPACE SCIENCE EDUCATION AND PUBLIC OUTREACH PROGRAM

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NASA OSS E/PO Program
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TAUP 2003
NASA’s Space Science Enterprise

- How did the universe begin and evolve?
- How did we get here?
- Where are we going?
- Are we alone?
Why Get Involved In Education?

- Space science is exciting and can motivate students to learn science, math, and technology.
- The public expects more than just scientific results.
- Education can be fulfilling for scientists and compliment their research.
- Scientists can make contributions in education that nobody else can.

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OSS Education Philosophy and Focus

- Focus on K-14 education and the public understanding of science
- Central role of scientists and science (education is embedded in every flight mission and research program)
- Multiplier effect
  - Tie into existing programs
  - Support science, math, and technology education reform efforts
- Engage communities and groups that have not traditionally participated in space science
Goal: 1%-2% of the total OSS budget ($35M in 2001)

- Funding
- Outside evaluation
- Support network of broker/facilitators and education forums
- Projects
- A few high-profile programs and research grants
- Small E/PO grants (independent of research grants)
- E/PO components of flight missions and programs

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OSS Education Support Network

**Broker/Facilitators**

- Focus on a specific geographical region
- Create and nurture partnerships between space scientists and educators to carry out E/PO activities with high multiplier effect
- Facilitate the development and dissemination of space science E/PO products and programs

**Education Forums**

- Focus on one of the four OSS science themes
- Coordinate the E/PO efforts of individual OSS space science missions within their theme area
- Help make mission discoveries, results, and associated E/PO efforts accessible and readily available to the education community

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A few Examples of OSS Education and Outreach Programs and Projects

- **Space Science Education Resource Directory**
  *Allows educators to locate and download classroom materials.*

- **Invisible Universe: The Electromagnetic Spectrum from Radio Waves to Gamma Rays Educator Guide**
  *Contains activities that deepen student understanding of the electromagnetic spectrum.*
A few Examples of OSS Education and Outreach Programs and Projects (continued)

- Cosmic Questions: Our Place in Space and Time
  *Traveling Exhibition that addresses questions about the origin and evolution of the universe, and our place within it.*

- Touch the Universe: A NASA Braille Book of Astronomy
  *Makes Hubble Space Telescope images accessible to people who are blind or visually impaired.*

- Minority University & College Education and Research Partnership Initiative in Space Science
  *Grant program designed to broaden the participation in the space science by minority institutions.*
Assessment and Evaluation

- Program Evaluation and Research Group at Lesley University
  Has been conducting an evaluation of the OSS E/PO program since 1998.

- E/PO task force
  Established in 2002 to assess progress in implementing the OSS E/PO program, identify issues and examine possible directions for program evolution.
http://spacescience.nasa.gov/education
E/PO
Vital Statistics for 2002

- 330 Enterprise-funded E/PO activities
- 3600 E/PO events in all 50 states, D.C. Puerto Rico
- 350,000 students, teachers and public direct participation
- 1.7 million visitors to museum programs, exhibition, etc.
- 7 million participated through web-based activities
- More than 1000 NASA space scientists, technologies and support staff involved
- 131 space science missions and programs
- Over 500 major institutional partnerships and 1500 additional participating institutions
- 15 minority institutions funded to develop space science capabilities. Have 30 working partnerships with space science.

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