

# The Space Science Institute's Workshop Alumni Testimonials

- A. Space and Earth Scientists
- B. Managers of NASA Education Programs
- C. NASA Space Grant Professionals
- D. Educational Leadership





## **A. Space and Earth Scientists**

"The SSI Workshop was a turning point for me. It gave me a foundation for moving from being a guest presenter in classrooms or workshops to considering educational outreach as a form of scholarship. The professional contacts I made were invaluable, and I received useful tools that I have used in my work. I recommend this workshop for scientists at all stages of outreach work, from novice to expert, and I've encouraged all CIRES scientists interested in educational outreach to participate."

University of Colorado, 1997 Participant

"The workshop I attended did an excellent job clarifying how scientists need to approach outreach if they are to have any positive, meaningful impact. This story is counter-intuitive for many reasons. What students need the most is not what we can most easily or naturally give them, without insights into the teaching/learning process. Your presenters pulled together the various threads of this story in an impressive manner. Thanks for all the time and effort that went into the planning and implementation of these workshops."

University of Alabama at Birmingham

"Your workshop still stands as one of the best I have attended. It was very effective and extremely informative. Keep up the good work!"

Scientist and EPO Lead, BU

"The SSI workshop validated the practice of hands-on, inquiry-based instruction in K-12 Earth science education. I knew right away that my skills as a scientist could be used to show teachers how to do effective hands-on teaching. Also, at the workshop I made the exciting connection with Mark Sparn, principal of local elementary school, which has led me to be in on the ground floor of developing the wetland science program for a new education center being opened by the Boulder Valley School District (BVSD)."

University of Colorado, 2000 Participant

"As a Professor of Physics, professional developer in K-6 science, and the Director of Teacher Education at Middlebury College, the SSI workshop helped to both confirm and advance my own professional development work with K-6 teachers and administrators. An intensive 2-day workshop on the Professional Development of Teachers is well timed and I would make every effort to participate."

Middlebury College, 2000 Participant

"In the SSI Workshop, I got a dose of real life in K-12, by visiting classrooms, and by talking to teachers. I also got a crash course on inquiry-based instruction and how students learn. Nowhere in my professorial life has there been any opportunity [or any obvious need] to learn about alternatives to the "sage on the stage" approach to teaching. Not only did the workshop experiences improve my approach to teaching teachers in Aspen, it has also made a positive difference in the way I teach my graduate courses at Scripps."

Scripps Institution of Oceanography, 1996 Participant

"Very few scientists have any formal education training (even us Professors). Opportunities to work with professional Science Educators to help develop our expertise in Science Teacher Professional Development is a vital service to the community."

Florida Institute of Technology, 1999 Participant

"I think the SSI Education workshops are a wonderful service to the community. Very few scientists understand what it takes to translate complex scientific concepts to K-12 students, and the sessions I attended offered me deeper insight. I have found this remarkably useful, both in my own science teaching of undergraduate and graduate students, and in helping to design the new course to help graduate students become better teachers. The workshops also made me aware of valuable resources (e.g. on common misconceptions in the atmospheric sciences) that enriched the content of our new course."

University of Illinois, Aspen Participant

"I presented classroom curricula to a group of teachers at a training workshop a couple months after attending the SSI workshop. Unlike previous years, I explicitly looked for inquiry-based activities which focused less on content and more on unifying concepts. I've always had positive feedback at these workshops because I make good presentations and excite the teachers about science. However, this time the teachers were really engaged in a way I don't recall before. They were actually talking about how they would use the curricular material! The workshop has clearly had a positive impact on our teacher training, I recommend it to any scientist interested in being more effective at education and public outreach."

Johns Hopkins University, 2002 Participant

"The things I learned at the SSI workshop have helped a lot in all of my education and outreach activities. For example, the camp leader of the Science Adventures for Girls program said the first group of girls rated my activity at the top of their evaluation lists for the week, and I am sure that attending the SSI workshop helped me make this possible. Basically, the importance of hands-on vs. standing and lecturing really made a difference! Also, the workshop may actually have helped me get a position helping to develop a science charter school for underprivileged 6th-12th graders in Denver."

University of Colorado, 2003 Participant

## **B. Managers of NASA Education Programs**

“From the moment I walked out of the SSI workshop, I knew that I had to step back and completely re-think our outreach efforts. In the two years since then, we have revamped our program from one that promoted content that our scientists thought the world should learn to a program driven by what the national standards (and education experts) prescribe. We now look to the standards and the needs of the teachers first, then to where our content fits -- rather than creating programs and products and then retro-fitting them to standards.”

EPO Manager for a major NASA/OSS mission

“SSI is doing a great job in educating E/PO professionals – it is great to work with people who are indeed from both the science and the education point of view. I am absolutely enthusiastic about the experience I had during the workshop. I went back home with a much better idea of what my work is dealing with, a much better understanding of the issues in science education, and I was glad to spend time with people from all over the country that have the same passion, and the same problems that I have every day in carrying out my job. The fact that I attended the workshop brought me much more respect from both scientists and educators. Demonstrating that I prepared for my role as interface between the worlds of science and education makes my position within my institution stronger.”

MIT Center for Space Research, 2002 Participant

“The workshop was a major turning point in my own educational outreach efforts. I learned a great deal about the importance of education standards, cognitive development, how a good lesson plan includes much more than just an activity, and how to go about education reform efforts. At least partly because of my attendance at the workshop, I have become the local "education expert" among my colleagues, and am often asked to help my fellow scientists with their own educational outreach efforts ranging from talking to a classroom to the designing and writing of E&PO sections of proposals.”

EPO Lead, JPL

“I work at NASA JSC White Sands Test Facility and am responsible for Education Outreach in New Mexico. I found the SSI Workshop to be not only very informative, but the sessions were an excellent source of new ideas. The side conversations and networking with educators and other outreach people were also very productive. It was well managed and conducted in a very professional manner.”

NASA JSC, 2001 Participant

“I have been to your workshop twice, and gotten a great deal out of it both times – in terms of material, and also in terms of contacts. Perhaps those contacts are the most important things – your workshop is one of the few places I’ve been where I’ve met other people doing similar work to mine – E/PO. As well as meeting people who turned out to be local to me, I met people from as far away as Spain, and people who were working in different fields than mine (like Earth Science, and Aerospace). I would love to attend further workshops.”

EPO Manager, GSFC



### **C. NASA Space Grant Professionals**

“Attending the SSI workshop inspired me to pursue and implement professional development opportunities for educators that strive to meet their needs. More EPO managers and researchers could really benefit from this type of workshop.”

Pennsylvania Space Grant Consortium, 2001 Participant

“I plan to share this experience with my Space Grant staff and am planning to send 1 or 2 of them to next year’s workshop. I will also recommend the workshop to our Space Grant affiliates in PA.”

Pennsylvania Space Grant Consortium

“This is a terrific opportunity! I can truly recommend this workshop. Continue the good work!”

New Hampshire Space Grant, 2000 Participant

“I am not a space Scientist (although I was at one time), but as Associate Director for Education for the Florida Space Grant Consortium, I am interested in the interface between our practicing scientists and our K-12 teachers. Here in Florida we are particularly interested in providing effective professional development opportunities in science and math for K-5 teachers. Our schools will be held accountable for performance in science starting in 2003 and are presently accountable for performance in math. We know that many professional development programs are not well-designed and/or effective in changing what happens in the classroom.

Your program was a turning point in my involvement in MSTE (math, science, technology education). It finally all came together - the vocabulary and the whole concept of the reform movement. Since then I have been involved in programs such as the Higher Education Consortium for Science and Math and NASSMC/NASA's Linking Leaders for Systemic Change in MSTE. Our Linking Leaders group formed a non-profit Coalition for Improving Math and Science Education (CIMS). CIMS has been instrumental in adding science to the list of accountable subjects (the list previously included only math and language arts). We have been working very hard to develop a statewide professional development program for math and science. We have addressed issues of teacher preparation and will be looking at teacher recruitment and retention. Our group includes representatives from education, business, and government. I chaired a statewide math/science education summit in January at Kennedy Space Center. We will be holding a follow-up meeting in August. I was just recently awarded the "Explorer" award from the Florida Space Business Roundtable for my work in promoting space research and education.

While I would not say I owe it all to your program, I definitely owe a good portion of whatever I've been able to contribute to what I learned in those 4 very long days in Colorado. I have encouraged others in Florida to participate.”

Associate Director, Florida Space Grant Consortium





## **D. Educational Leadership**

“I am currently the Project Coordinator of Project ASTRO NOVA (since Jan 98), one of the eleven ASP Project ASTRO sites in the nation. We are going into our third school year. This school year we had 41 astronomers (14 professionals) and 66 teachers. Working in one or more astronomer-teacher(s) partnerships. For next school year we have 24 new astronomers who applied and almost 70 new teacher applications. I greatly benefited from your workshop three years ago to enable me run this Project ASTRO site as an astronomer who had no formal education background.”

Project ASTRO Coordinator

“The time I spent at the SSI workshop was well spent. I met scientists who I am still working with. We went to local schools and saw systemic change in action. I want to thank the SSI staff and organizers for their hard work to bring scientists and educators together. I look forward to future workshops and applaud your efforts.”

NASA Classroom of the Future, 1997 Participant

“The SSI workshop brought together many key people who would like to work together to bring their expertise to the classroom. The workshop facilitated planning, enabled networking among interested parties, and enlightened many who are novices to the classroom.”

NESTA President, 2002 Participant

“Here in Minnesota we are seeing that a large fraction if not the majority of people who are being put into the classroom to teach in the earth sciences are not "earth science" teachers by training, but rather are practicing science teachers who are being retrained and licensed in the new area. Our ability to provide the necessary support to these teachers is limited by the conflict of their need for professional development in short bursts or during the summer when we are supposed to be doing research. I have been using some of the material and insights I gained during the SSI conference back in April and it has had a profound positive influence on these practicing teachers. They are gaining practical and innovative resources that they will be able to put into use THIS YEAR as they assume new roles in their respective schools!”

Minnesota State University Mankato, 2002 Participant