

# Archived Information

## Universities Space Research Association

### Secretary's Summit on Mathematics – Improving Teacher Knowledge

#### **Middle School Aerospace Scholars (MAS)**

This unique professional development opportunity gives math and science teachers in Texas an opportunity to integrate NASA instructional resources into their own middle school curriculum, emphasizing real-world applications. Eighty middle school teachers attend a one-week summer workshop at Johnson Space Center developing an “action plan” focusing on teaching math and science concepts from a different perspective. Using the space program as a motivator, these educators introduce their students to the role that math and science plays in many career opportunities. Along with the summer workshop, this program also provides a series of distance learning events throughout the following school year. Students interact with experts in the space program without ever having to leave their schools!

#### **Quotes from the Teachers**

##### *The most valuable aspects of the Middle School Aerospace Scholars Program:*

- Relevancy of curriculum
- Instruction and practice creating an interdisciplinary unit
- We were given the flexibility to create our own “plan” that will benefit our students
- This program is one of the best teacher workshops I have ever attended. Every teacher should have the opportunity to experience this kind of learning that connects the classroom with technology!

Using the **MAS model for professional development**, USRA hopes to offer teacher workshops nationwide utilizing the vast resources of the 90 universities that are currently in the consortia. Specifically, the MAS model could incorporate USRA's **SOFIA – Stratospheric Observatory for Infrared Astronomy Program** to engage and excite teachers and students. This program gives educators an unprecedented opportunity to fly aboard a converted 747 carrying a 2.5 meter-diameter telescope at an altitude of 41,000 feet, studying the infrared spectrum of the universe! Beginning in 2006, approximately 200 teachers will be selected each year to participate in one or more research flights. The teachers will be partnered with and trained by SOFIA scientists and engineers before their flights. They will also receive training in hands-on activities for their own classrooms promoting excellence in math, science, and technology education. Once selected, these teachers become **Airborne Ambassadors** and part of a national network of master educators who will present workshops, teacher in-service training, and other programs in their local school districts, science centers, and communities.

Potential topics for these workshops include **earth science, microgravity research, and advanced concepts of space flight**, related to the middle school curriculum. This combination of current successful teacher programs coupled with the USRA resources will undoubtedly yield a valuable educational program.