EPSCoR Year 4 and Year 5

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Family Science Demonstration Project

During the past funding period, the Native American Outreach and Enhancement Initiative has continued to be actively involved with the Winnebago, Santee Sioux, and Omaha Nation school districts and both the Nebraska Indian Community College (NICC) and Little Priest Tribal College. In its 4th year, the Aeronautics Day at the Sioux City, IA Airport has now reached over 450 elementary youth of the Omaha Nation, Walthill, Winnebago, and Santee schools. The Families United in the Discovery (FUN) of Science, Family Science, project that is currently underway at the Santee Community Schools in Niobrara, NE has involved selected students and their teachers. The initial target group was upper elementary children approximately 11-12 years of age. This school is a demonstration project and includes the parents and families of those children; faculty and staff the school, faculty and students at NICC, UNO NASA faculty and staff; and members of the NASA Langley Education Office.

The primary focus of this initial endeavor is that students and teachers cover several appropriate aeronautics units during school hours, the students complete more of the unit after school hours with the family members, and there are monthly Family Science Nights at the school. The science night includes an evening meal plus a combination of science demonstrations by NICC and UNO faculty, directed group activities, visits by NASA Langley educators, and fellowship. The underlying goal is the continued improvement of mathematics and science skills among these Native American youngsters through involvement of the family unit. With many months of planning already invested, the Family Science project was implemented during August 2000.

In a linking of this program and current NASA Nebraska research, the SATS program is a key component to all units of study. The benefits of involving parents in education are not confined solely to the early school years as significant gains at all ages and grade levels can be achieved when parents share in their children’s education. Students whose parents remain involved make better transitions, maintain the quality of their work, and develop more realistic plans for their future. Children from diverse cultural backgrounds tend to do better when parents and professionals collaborate to bridge the gap between the culture at home and the learning institution. NASA science and funding is making this possible in Nebraska.

Publications:
It is the intent of the current NASA Nebraska researchers and staff involved with the Native American Outreach and Enhancement Initiative to continue activities for another year. Specifically, the Aeronautics Day for 5th grade reservation schools is still a flagship activity for the program. The founding sponsoring partners, the 185th Fighter Wing of the Iowa Air Guard and Jetsun Aviation have again pledged their support. With the Family Science project at the Santee Sioux Schools underway, this program should now be duplicated with students in the Winnebago and Omaha Sioux Nation school districts. Initial meetings have occurred between administration and staff at the two tribal colleges and the reservation schools about furthering this project.

The Santee Family Science program should be continued to include 2001 funding and eventual outright supervision by the school. New key activities will be the development of instructional discovery units based on weather and climate, space science, and other scientific units. These endeavors will, in the long term, focus on systemic change for the entire Nebraska Native American reservation school network through the implementation of family science. Then programs could even be exported to the non-Native American schools in subsequent years. While it is difficult to make state-wide educational change in Nebraska due to the large area of the state and the small population density, perhaps a more reachable short term goal will be to focus on change within a minority population that is in desperate need of NASA/ASA assistance.

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