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Santee Sioux Family Science Project: A Demonstration in Minority Outreach

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Santee Sioux Family Science Project: A Demonstration in Minority Outreach

by

NASA Langley Office of Education

NASA NE Space Grant and EPSCoR of the University of Nebraska at Omaha (UNO)

Nebraska Indian Community College (NICC)

Santee Community Schools, NE

Prepared by Hank Lehrer, Ph.D.

Background:

The NASA NE Space Grant has been engaged in minority outreach with the state’s Native American educational community for approximately 2-2 years. The main thrust of the effort has been to improve the mathematics, science, and technology skills of elementary, secondary, as well as collegiate students. Such an initiative finds its philosophical underpinnings in not only NASA’s desire to aid such indigenous populations but in the NASA NE Space Grant’s efforts to serve the same population for the same reasons. To further this effort, the NASA NE Space grant has funded faculty outreach grants, institutional enhancement grants, hosted workshops for teachers, sponsored field trips for students, as well as having engaged in numerous activities to enhance the viability of the program.

One recent activity was to send four K-12 teachers of Native American children to a two-week long workshop at NASA Ames this past summer; each of the four reservation schools in the state was represented. These projects have been extremely successful but have been aimed solely at the schools, teachers, and students.

One clearly identifiable barrier in completing future projects though is that over the past several decades, the NE Native American population on the state’s reservations has been plagued by un-employment (running as high as 75% on some reservations) and extremely dismal family situations. As a result and as might be expected, school age children have have a difficulty in meeting minimum academic standards.

The Project:

The Family Science project that is envisioned would involve selected students and teachers in the Santee Community Schools; parents and family of those children; faculty of the NASA NE Space Grant; and members of the NASA Langley Education Office. This project would be a test project that could take place as early January 2000 and would run for one semester.

Key activities if the project would be the development of family science units based on weather and climate, aeronautics, space science, and other units as determined. The paradigm would be that students and teachers would cover several appropriate parts of the unit at school, the students would complete more of the unit after school hours with the family members, and there would be monthly Family Science Night at the school. The science night would include an evening meal, 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.

Why Santee?
The selection of the Santee Sioux reservation as a model for possible future projects is based on both the tribal setting and the educational partnership and mechanism present. Specifically, the reservation is located on the northern border of NE, is made up of approximately 800 members, supports a school of about 200 students from K-12, and is somewhat isolated from distractions. In addition, the administration and staff of not only the community schools but of NICC which is located nearby have been most supportive to previous NASA NE Space Grant programs.

Staffing and Budget:

To facilitate this demonstration project, it is envisioned that the following part-time staff members would be required:

1. NASA NE Space Grant Project Leader
2. Lead NICC Instructor
3. Lead Santee Community Schools Teacher
4. NASA Langley Education Liaison

Additionally, there would be a cost for science supplies, Science Nights expenses, travel expenses for NASA Langley educators to come to NE, as well as other startup costs.

Endorsements:
The following individuals are aware of this project and have endorsed its implementation:

Dr. Samuel Massenburg  Director of NASA Langley Education Office
Dr. Thomas Pinelli  Education Officer NASA Langley
Kevin Krigsvold  Distance Learning Assistant NASA Langley
Dr. Brent Bowen  Director - NASA NE Space Grant
Michaela Schaaf  Assistant Director - NASA NE Space Grant

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