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## Family Science Demonstration Project Expansion

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## **Family Science Demonstration Project**

The Families United in the Discovery (FUN) of Science, Family Science, project that is currently operating 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 in the school. Santee Community Schools served as a demonstration stage and the project included the parents and family of those children; faculty and staff the school and the NASA Nebraska Space Grant; and members of the NASA Langley Education Office. The primary focus of this initial endeavor as to engage Native American upper elementary school children and assist their teachers in enhancing the classroom teaching of mathematics and science knowledge and concepts using aeronautics.

## **Family Science Enhancement Initiative**

With the Family Science project at the Santee Sioux Schools underway, this program will now be duplicated with students in the Winnebago and Omaha Sioux Nation school districts.

**Timeline:** The planning and curriculum development phase will be completed during the summer of 2000. The demonstration project will occur during Fall 2000 and the Spring 2001. The educational summit, referred to below, will be called for Spring 2001.

Key activities will be the development of instructional discovery units (family science units) based possibly on weather and climate, aeronautics, space science, and other scientific units.

The paradigm will be that students and teachers will 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 will include 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.

**Systemic Educational Change:** This endeavor 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 will be exported to the non-Native American schools in subsequent years. It would be extremely difficult to make state-wide educational change in Nebraska due to the large area of the state and the small population density but 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.

The benefits of involving parents in education are not confined solely to the early school years. Significant gains at all ages and grade levels can be achieved when parents share in their children's education. Junior high and high school 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.

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