

Regenerative Medicine Minnesota  
Innovators of the Future Community Based Science Programs: Red Lake  
#RMM-2016-312ED-05  
Anna Wirta Kosobuski, EdD, Project Director

### **Project Summary**

The Innovators of the Future Community-Based Science Program: Red Lake was a program designed and carried out by the Red Lake Nation. The goal of the project was to improve the science and math readiness and increase awareness of science and research careers for 3<sup>rd</sup>-6<sup>th</sup> grade Native American children. In 2016, 68 were served by this Innovators of the Future project. This exceeded the 2016 target number of 35 students. Some Red Lake activities included a total of 48 family members.

The community-based approach to learning allows access to quality education experiences for a larger number of students. Innovators of the Future Community Science Programs are built on the assumption that the most valuable resources are present in each community's people, history, and culture. Investing in the children ensures the strength of the community in the future. With the community-based approach, Red Lake had the ability to identify needs of their own children and determine the program structure and design best suited to these needs. Because it was carried out in their own community, the program was able to utilize local resources, knowledge, and talent. In applying for funding, Red Lake submitted a proposed curriculum for 3<sup>rd</sup>-6<sup>th</sup> grade youth that included requisite science, math, health and wellness, and Native American culture. The curriculum lacked research and regenerative medicine components. Dr. Wirta Kosobuski and the Red Lake Program Coordinator discussed possibilities for adding these components.

The year was launched with the "Red Lake Summer Activities Camp" in August 2016. The camp was supported in part with supplemental funds. Some examples of program activities included biofeedback sessions to help introduce physics, career discussions, physical activity, a visit to Head Water Science Center with presentations on cryogenics and combustion, and math games. Massage therapists used massages to teach anatomy. The group also learned beadwork (teaches math); the beading instructor also talked about using craft skills to create a family economy. Nurses from the tribal health facility helped teach wellness by taking weights, measurements, blood pressures of students. Parents and community members attended some sessions. Older youth were brought in and assigned tasks to develop leadership skills. The academic year included a visit by a CAIMH staff person who led a presentation on DNA, RNA transcription, and protein syntheses. The activity used different colored plastic beads to represent different introns, exons and junk DNA.

Academic enrichment projects are very needed by the Red Lake Nation. Summer programs are especially valuable in that they provide youth with positive, healthy alternatives during the summer months and assist caretakers with trusted care of children. The Minnesota Report Card (MN Dept of Education) reported that, in 2016, standardized tests indicated that Red Lake Elementary School students lagged substantially behind their white peers statewide (see Table 1).

Table 1: 2016 Minnesota Academic Standards 5<sup>th</sup> Grade Student Achievement; Percent

	Native American, Red Lake Elementary				White, Statewide			
	Exceed	Meet	Partially meet	Do not meet	Exceed	Meet	Partially meet	Do not meet
Science	5.9	17.1	29.3	52.4	16.8	55.1	18.6	9.5
Math	3.5	35.3	32.9	28.2	24.7	43.1	20.4	11.8
Reading	5.9	41.2	29.4	23.5	25.3	50.7	15.1	8.9

Without adequate instruction, resources, and investment, the gap experienced by the Red Lake’s children will only continue to grow.

The Red Lake Program Coordinator reports that the Innovators of the Future Community Based Science Program: Red Lake was a success. However, Project Director Anna Wirta Kosobuski chose not to apply for a second year of funding and is happy to discuss this further if desired by Regenerative Medicine Minnesota.

**Additional information**

No publications or other information to report.

**Responsible Spending:**

A final financial report will be submitted by the University of Minnesota.