

1. Hello, I am Owen Koivisto, a Team Captain of FRC team 5653, the Iron Mosquitos. The goal of this grant was to educate and show both Boys and Girls Clubs on the Lake Vermillion and Nett Lake reservations of Bois Forte about STEM and robotics. We did this by helping the kids do all the fundamental activities of being on an FRC team such as coding, wiring, building, making buttons, and driving. We emulated all these activities on a scale that is easy to follow for young students. For code, we helped them make a simple phone app. For electrical, we wired a simple setup with a CIM motor and a rheostat to control speed. For the build, we made toothbrush robots with a coin battery and little vibrating cell phone motors for movement. Making buttons was the same as we do here on the team except they got to make their own custom buttons. For driving, they shot balls around and even played catch with the robot. By teaching these students about all these things, we hope that they will take an interest in STEM and know they are capable in order to increase the Native population in those areas.
2. BELOW is the cost tracking for both trips, how we used our funds.

Item	Cost(\$)	Camp Location	Numbers of students presenting	Students impacted at camp	Number of community adults in attendance	Mentors present
Subway for Vermillion	177.41	Vermillion	7	13	4	1
Subway for Nett Lake	177.41	Nett Lake	6	11	2	1
Glue dots	7.14	Total	13	24	6	
Bristle Bot Parts - tape, motors, decoration, toothbrush	163.5					
Batteries	32.19					
Button Making Supplies	74.85					
t-shirts	443.5					
Transportation 232.2 miles	127.71					
Team donation	-203.71					
Total	1000					

3. I believe that the outcome of the project is a good one. The kids all seemed interested and engaged which, as a former Boys and Girls Club attendee, is a little challenging. The kids were all ecstatic about doing all the activities and this will hopefully translate into them taking an interest in STEM as a future career or even joining an FRC team. Students at The Boys and Girls Club in Nett Lake are not out of luck on joining an FRC team as the Bear Bots, 7864, are now restarted at the Northwoods school and are always welcoming new members. This will hopefully also impact our school, Northeast Range, as a majority of our sports are now combined with a different school because of

not having enough students. Robotics is one that stands still triumphantly, but in order to stay that way, we're always looking for future Iron Mosquitos. With that, this project was inspired by our earlier outreach to the Tower Elementary School where we did similar activities in order to bring awareness about robotics to young students who have to transfer out of Tower after 6th grade in hopes that they will join a team in the future. There will be 12 kids from Tower Elementary that are enrolled into Northeast Range High School for the 2023-2024 school year. Community impact is a much more long-term thing as my personal hope is that those who pursue an education in STEM will come back to help the reservations better.

4. One of our future plans is to help the new Northwoods team tap into the student potential from those in Nett Lake. We have noticed students interested at recruitment sessions at the school in the past, but the 2 hour trip 1 way to Babbitt was an obstacle too big to overcome. Our plan is to help set up an activity bus for after school to bring students staying for robotics practice back home from Cook school.

In addition, interest was sparked in a more comprehensive summer camp. Conversations are ongoing with potential to tie in some cultural learnings integrated with a more advanced robotics build. The potential for a summer camp over a week, with input from student leaders as well as tribal elders is a possibility. The next step is getting key adults and students in the same room to develop appropriate plans.

We hope to maintain relationships with these students that were in the camp. It was fun to see several of them at a pow wow activity at NER school on April 28. Tower school brought the students down for the day and we were able to connect and say hi on the floor when circling the drum in a dance together. It was neat to have them recognize us as the robot people.

5. Below is a link to pictures from the two trips, and includes a few photos from outreach at Tower Elementary to bring awareness to the camps.

[FUM GRANT Submission Photos](#)