



North Dakota Governor's School

NDSU OFFICE OF TEACHING  
AND LEARNING

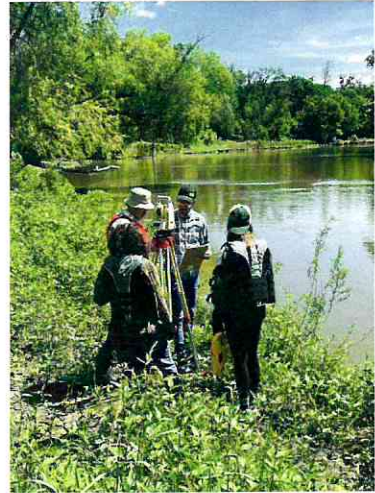


# North Dakota Governor's School 2024-NDSU



## A Scholar's Day

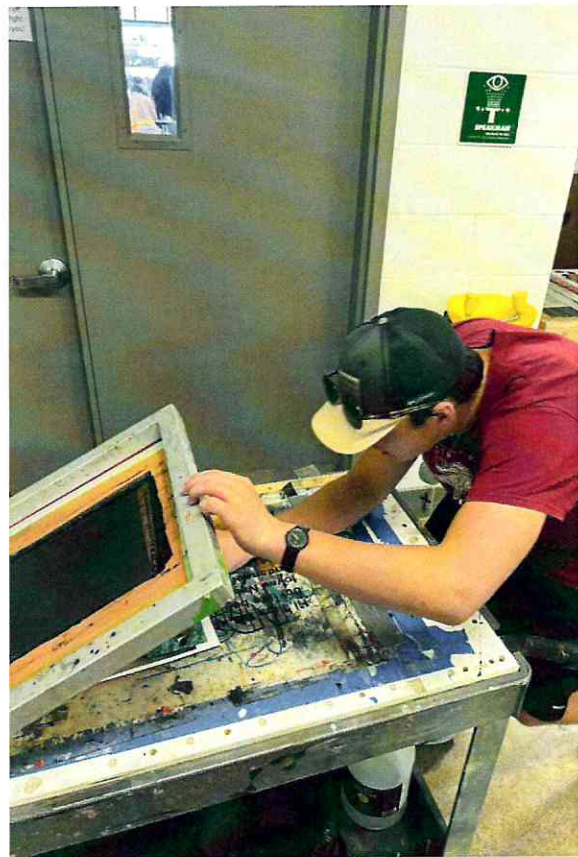
*The mission of the North Dakota Governor's Schools is to serve academically talented high school students of North Dakota through programs of college-level instruction in an environment of academic excellence.*



### Exploring, Learning, & Building Curiosity

The scholars began their days with breakfast at West Dining followed by the morning learning session with their pathway instructors in science, technology, engineering, and math. After lunch, the scholars continued with their pathways but worked in labs and on projects. Scholars designed and coded video games, engaged in cutting-edge research with NDSU scientists, and discovered how STEM applies in everyday life. See p. 6 for a listing of the NDGS-NDSU scholars' accomplishments.

At the end of each day, scholars had the opportunity to explore and have fun during Bison Time from 3:00-5:00 weekdays, learning about animal sciences, photography, philosophy, theater, health sciences, and more.



### Quick Facts

38	Scholars stayed in Cater Hall
29	Schools Represented
17	Counties Represented
4	Learning Pathways
37	Bison Time Activities
27	Evening & Weekend Group Activities
40+	Instructors and Researchers
15	Full and Part-Time Staff



### Budget at a Glance

Instructional Faculty and Staff	\$56,400
Supervisory Staff (Coordinator and Assistants)	\$59,600
<b>Subtotal Salary and Benefits</b>	<b>\$116,000</b>
Room & Board (Resident Assistants and Scholars)	\$66,000
Learning Experience Related Costs	\$16,600
<b>Subtotal Operating Costs</b>	<b>\$82,600</b>
<b>Total Academic Expenditures</b>	<b>\$198,600</b>

### What the Scholars Said

My learning pathway allowed me to learn more than I knew before.	3.67*
NDGS allowed me to learn more than I could learn at my high school.	3.81*
See appendices for additional statements from the scholars	

\*On a 4-point scale

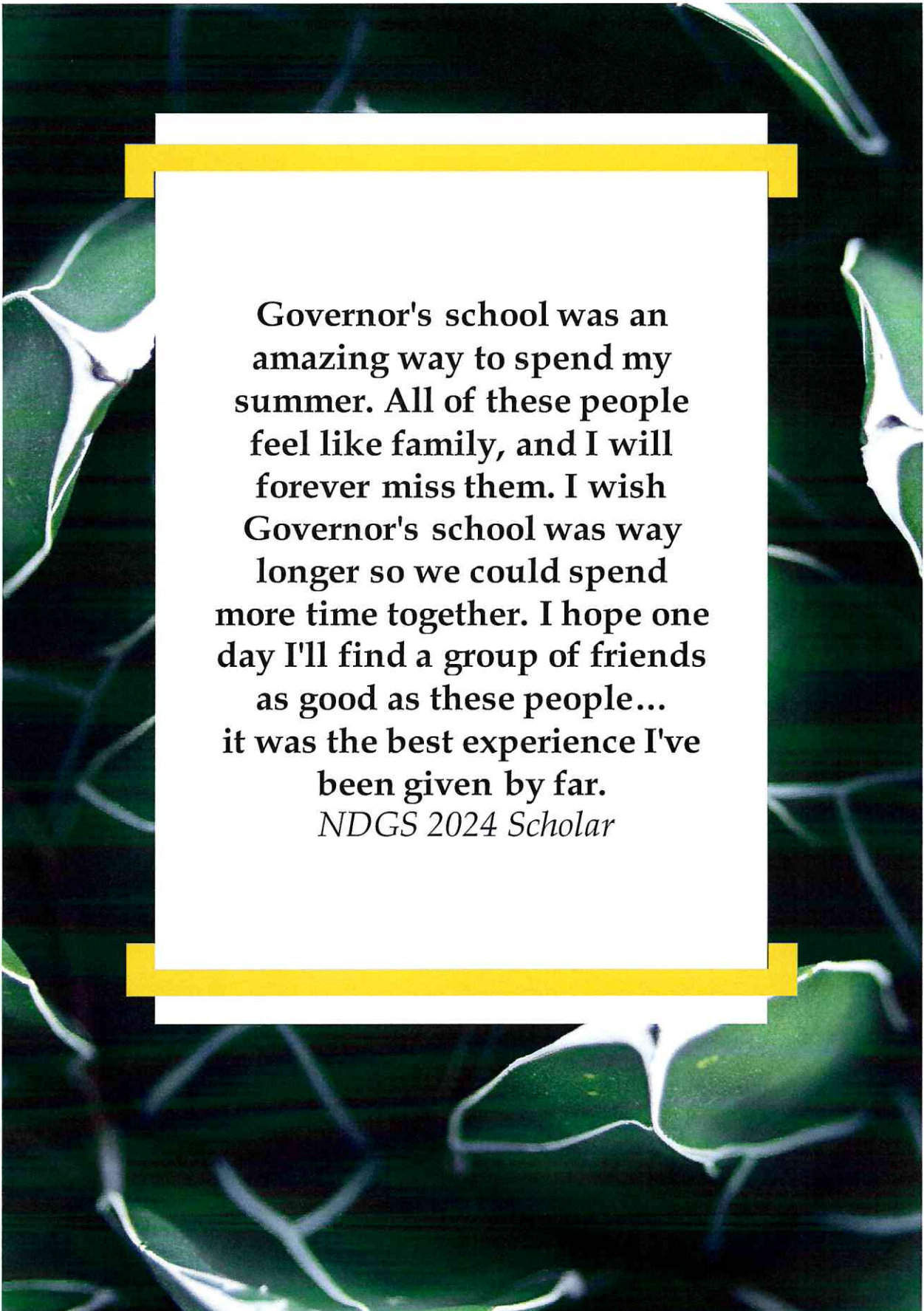




## Time for Fun

Evenings and weekends were time for fun and building life-long friendships. The scholars canoed the Crow Wing, hiked Maplewood, cheered on the Red Hawks and much more. (Legislated funds were not used for non-academic activities.)





Governor's school was an amazing way to spend my summer. All of these people feel like family, and I will forever miss them. I wish Governor's school was way longer so we could spend more time together. I hope one day I'll find a group of friends as good as these people... it was the best experience I've been given by far.

*NDGS 2024 Scholar*



## Scholar Project and Research Titles

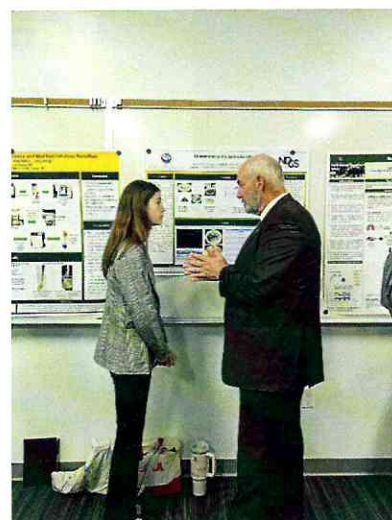
### Science

- Addison Grayson - Metal Organic Framework (MOF) Time Dependent Co-Crystallization Synthesis
- Alecia Jorud - Successful Improvement of Multiplex Genotyping by Polymerase Chain Reaction
- Ashley Ellis - Characterizing the Saline Soil Microbiome
- Elizabeth Nelson - The Visual Ecology of Minecraft
- Elizabeth Voss - Executive Function Measures in College Students
- Hannah Hanson - Role of Estrogen and Its By-Product in Asthma
- Harleigh Higdem - Colloidal 2D- Layered SiC Quantum Dots from a Liquid Precursor
- Justin Jiang - Generating Prostate Cancer 2D Model System (with David Ha)
- Lydia Hestdalen - Injectable Hydrogels Made by Soy Protein Isolates and Modified Cellulose Nanofiber



### Technology

- Aidan Zacher, Bobby Shaik - Husk
- Alexia Schaible, Annyka Armstrong, Briley Zhang - Simon Game
- Anna Armstrong, Park Narkhede - Wordle
- Cole Carpenter, Damien Haisley - Portal 3
- Jack Hoberg, Kartheek Chapra - Sword and Scale

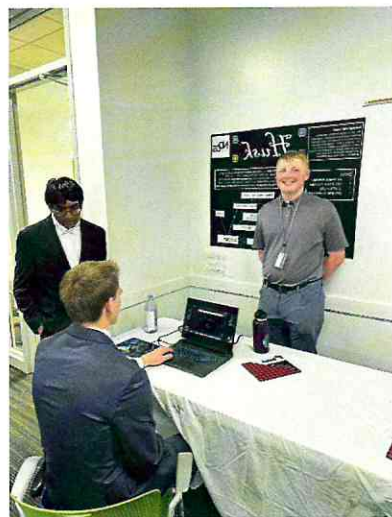


### Engineering

- Elizabeth Mahli, Savannah McKay - Flood Mapping the Red River of the North
- Caiden Quinlivan, Memphis Hanson - Power Analysis of Digital Combinational Circuits & Implementation of Traffic Light System using FPGA
- David Ha- Generating Prostate Cancer 2D Model System (with Justin Jiang)
- Keaton Sauvageau, Trapper Smith - 3D Printing with Ultrasound
- Keegan Nelson, Michael Nwaigwe - Hardware and Machine Learning

### Math Demonstrations

- Alessandra Simmons
- Alisha Twogood
- Braden Li
- Erube Asogwa
- Emily Helsper
- Jacob Logan
- Sam Simons
- Signe Nagle
- Tambrey Brossart



## Submitted Testimony from Scholars

I truly appreciate the experience governor's school gave me this previous summer, something I could have got nowhere else. Being sponsored by the state opened the door for me to attend. Throughout my academic career I have been dedicated to the sciences and Governor's school showed me a new perspective of science in psychology. This gave me a new academic challenge to conquer never previously studying the psychological sciences. Living at NDSU made me contemplate my college decisions further knowing what I truly wanted in a college. Governor's school was a free place to be yourself and being supported by likeminded individuals who always had others best interest in mind. I am ever grateful to those who support this program as it will forever stay at the most beneficial and memorable summer of my high school years.

Blessings,

Elizabeth Voss

My name is Damien Haisley. I attended Governor's School in the summer of 2024 and was the leader of the technology pathway. When I first applied for Governor's School, I thought it was going to be a good learning opportunity, and it was, but what I didn't expect was the lifelong memories and friends I would create. Some of the people I met there, I still talk to every day. Going into this program I had a vague idea of what career path I wanted to go into, but no idea what to look for in colleges. Coming out of it, I gained a real appreciation for what I got to do but also had some college ideas set out for myself. I believe programs like this are important because students can get an experience similar to college while building relationships, camaraderie, and confidence that will last them a lifetime.

My name is Lydia Hestdalen. I was one of the participants in the 2024 North Dakota Governor's School. I was in the Science pathway. The experience last summer was something I will never forget. We had fun with different breakout sessions everyday, it was called Bison Time. On the weekends we were able to participate in bond forming activities with each other, for example we went canoeing and we even got to go play capture the flag.

Overall, I think being able to be in this program was highly beneficial to my learning. Not only did I get to further my education, I got to further it one on one with an undergraduate student. We worked in a lab together for weeks. I got to work in a college level lab which is beneficial because I am going to major in Forensic Science at UND starting the fall of 2025. The professor I worked with was even talking to me about how I should switch it so I could continue working in his lab.

This program is important to me because of the next level of understanding I got in my pathway. It was cool to find out that not all of the professors that wanted a student got one. That shows that not only is it beneficial to the students, the



professors also really liked having us around. Governor's School really prepared me for college life by living in the dorms, I think others would benefit from the same.

I am saying this with a grateful heart. I am highly recommending this program to be funded again.

Thank you for your time,  
Lydia Hestdalen  
Senior at Fargo South

My name is Keaton Sauvageau, and I attended North Dakota Governor's School in June of 2024 and I am currently a junior at Kindred High School. My discipline was engineering and I worked on the project where we used ultrasound to make 3D printing stronger. Governor's school gave me the opportunity to experience what it is like to be an engineering student at NDSU that was much more in depth than any other camps I have been to. At NDSU I had a chance to meet some of the faculty working in the engineering department and got to work with many of them in different ways. I had the opportunity to be part of an actual project where I was able to see how it works and I got to test the products we made. After completing the project, we were able to make a presentation on it and present it in front of many people.

After talking to some of the faculty members working there, I got a lot better of an understanding on what engineering careers were like, and what the different engineering fields are. The group I was part of focused mostly on mechanical engineering, but I was still exposed to many of the other fields while I was there. I was told by one of our group leaders that I should really consider industrial engineering as a possible career. Before Governor's School I didn't know about industrial engineering and I don't think I would have considered it as an option if it weren't for their feedback. And now that I have had hands on experience, I have a much better understanding of what career I want to go into.

Overall, North Dakota Governor's School has been a very useful and engaging experience that I am extremely glad I was able to participate in. It has given me a much better and deeper understanding of the field I want to go into, and has greatly impacted me as a student in a way that no other club or event has before. I also made many new friends while I was there that I still keep in touch with now. Governor's School was definitely the best decision I have made for my education. And I am so thankful that the experience was provided without any costs. If there was a big cost upfront, I don't think I would have decided to go, and I would have missed out on so much.

Sincerely,  
Keaton Sauvageau

Governor's School was a once in a lifetime experience for me, literally as I was a junior when I joined, which meant unfortunately that it was my first and last time to be able to take part in Governor's School. During my time at the School, I had the opportunity to network and connect with people relating to the major I wanted to go into, I learned numerous things about my own abilities. I was able to realize that my



anxiety would not hold me back in college, as being away from home for so long I thought I would be a wreck. This program changed my perspective on myself and my goals, it allowed me to see what college would be like and whether I was up for it. It strengthened my goal for the future, I know what I want to do even more now than before. This program is enormously important especially to sophomores and juniors because it can help them decide what they genuinely want to do and even show them new opportunities for the future. By allowing programs like this to grow, it paves the way for new generations to come to reach this level of success.

Sincerely,  
Hannah Hanson

When I first signed up for Governor's School, I did not know what to expect. I was filled with feelings of both excitement and worry because I had heard many wonderful things about the program, but I was worried since I did not think I personally would measure up to the other people that signed up. I was excited when I heard that I had been accepted into the Technology path, so my past worry was lessened to a degree. I was not expecting at all what would become one of the greatest experiences of my entire lifetime. When I arrived on campus with my parents at Cater Hall (the dormitory at which I would stay for the month), I was greeted by many polite faces who seemed eager to welcome all that entered the door. After I moved into my dorm, I met all my suitemates: Jack, Sam, and Memphis. These three became my close friends throughout the month-long program, as well as many others who were among the 48 students. All the residential assistants were cool people I also became friends with. Awkwardly, one of them was my sister, whom I had a good relationship with simply fine during the program. During the month I stayed at the NDSU campus, I learned many skills that I may never forget including how to live better independently, how to ask for help more often when I need it, how to use coding and other various IT skills, and many other traits that define me as a person today. Not only that, but Governor's School gave me a fine taste of college life and reassured me that when I go to college, I am more than capable of handling myself and prospering as an individual. Along with lots of learning opportunities, we did many entertaining activities and learning experiences as a group. The RAs would take us out to many fun places and let us participate in very entertaining activities that I will personally never forget. Some of these fun activities include canoe trips, sports games, hiking trails, and even visiting one of our teacher's homes and getting to play soccer with the local children. For fun learning experiences outside of classes, we had Bison Times, which provided fun activities that taught me about assorted topics including service dogs, creative writing, e-sports, electron microscopes, and many more that would take a whole page to list the details. To make a long story short, Governor's School was one of the best experiences I have ever had and taught me that I can succeed, and that I can have fun while doing so.

The specific field I chose, the Technology pathway, has helped me in using my skills in practice as a digital designer and programmer. In this pathway, I got to learn about the programming language known as "Python," which is a particularly useful language to learn since many companies utilize it in diverse ways. At the end of the class, near the end of the program, I got to design a videogame with my partner, whose name is Bobby (nickname). I was the main artistic designer for the game and



got to utilize my designing skills to the maximum, which turned out fantastically. Our final game, dubbed "Husk," was a simple platformer game about collecting artifacts and reaching the end with all of them collected. I may not have access to this game anymore, but the memories of it being my first full game are permanently etched into my brain. The skills I learned through this class and Governor's school as a whole helped me complete my first college class and a coding with Python class with great success. These skills I have acquired through this program will last a lifetime.

The Governor's school program is a must-have for every single state in the country. Not only do you gain many skills that will help you overcome many obstacles not only if you pursue higher education through college, but life. Also, the program gave me fond memories that will stick with me until I die. Leaving the campus after Governor's school ended was like leaving a family that I may never see again, and this feeling makes me want to relive that month increasingly as time goes on. I am not alone in the belief that Governor's school is a program worth investing in, because the experiences you will have will alter your life for the better, guaranteed.

Aidan Zacher

Governor's School was an amazing experience, combined with high school and college life, this program pushed me to experience so much in such a short time. It consisted of activities, which all allowed me to get to know people much better than a traditional school assembly, and also included classes that promoted my general knowledge and helped me to dive deeper into a specific topic, where a high school class might not. This program guided my education to a much higher level, seeing that now I can teach Computer Science as I used to simply learn it. This has also helped me to network with many people easily and retain those important relationships due to the simple reality of putting people in one area and letting them figure out how to be friends with each other. This meant you could try out new ideas with one's communication skills and thus could continue to learn how to communicate properly. This also meant furthering my adaptability skills as well as my communication skills due to the new environment and entirely new people. My future goals are to continue my education and then pursue a career in Technology and this program, which focused on STEM during the summer of 2024, directed and pushed me to dig deeper into this topic. I am also glad that I went through this program as it helped me to get a better understanding of Computer Science in general and got me to get farther with what I already knew. These programs that push students to try new things and meet new people are what I believe is the best solution for those who are doing well in their schools. It allows students to work on their networking skills and also get a much better education than what a high school might provide, as well as the choice to pick what they want to work on for a month or so.

Thank you,  
Cole Carpenter