

SEPTEMBER 2021 **ENCOURAGING EXCELLENCE** ISSUE 26

KAYLA MEINS
Math Teacher
Sioux City, IA



Featured Role Model

SEPA PROGRAM 2021

Dr. Maurice Godfrey, Professor and Ms. Liliana Bronner, Asst. Professor
SEPA Program Co-Directors

What a year and a half! Is it over? When are we going to be normal again? Are we going to be normal again?

Welcome to a new SEPA year and our fourth NIH SEPA. We are happy to be able to continue and expand our programs to all of you, our partner schools in Nebraska and South Dakota. The new SEPA will continue some of our long-standing programs such as our middle school Health and Science Fun Camp and the Teacher Professional Development Workshop. In fact, as you will see elsewhere in this issue, we already had a Teacher Workshop and have done a couple of days of summer fun engagement at the Wagner Community School.

In conjunction with this new SEPA we had a new program (mostly virtual in year 1) funded by the National Institute of Neurological Diseases and Stroke. This program, I-SPARK (also described in this issue) provides a more in-depth research and academic enrichment experience for high school students. It is our hope that we will have this as a four-week residential program during the summer of 2022. Kim Soper has been on the road visiting many of your schools. We hope to visit all of you soon and begin some in-person programs whenever you are ready for visitors.

We wish you a happy, healthy, and productive 2021-2022 academic year.

Learn more about our programs:
Visit our website - www.unmc.edu/sepa

Newsletter Committee
Shrawan (Sam) Kumar
Maurice Godfrey
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SEPA - CAREER EXPLORATION FOR HIGH SCHOOL STUDENTS (Two Weeks Program)



SEPA provided a great platform to learn science in a fun way geared towards career opportunities in STEM.

The activities included skill-building games, outdoor activities, fun-science engaging projects and summer shadowing programs.

We organized two weeks of career exploration through a shadowing experience for high school students at the Munroe-Meyer Institute from June 14-18 and 21-26, 2021.



(Left) Group picture of the students who took part in the first week of this program. (Right) Group picture of the students who took part in the second week of this program.

(story continued on the next page ...)

SEPA CAREER EXPLORATION

Each week, 6 students took part in various activities learning about a “day in the life” of some of the following professions: Speech Language Therapy, Physical Therapy, Recreation Therapy, Genetics, Psychology, Pediatric Feeding Disorders, Neurodevelopmental & Related Disorders, Developmental Disabilities.



(Pictured Above) Dr. Karoly Mirnics, MMI Director, delivered the inaugural address to the students

Below are comments by students describing their experience about this program:

Student #1: *“This week has been very eventful. I enjoyed each day of this program, I learned a lot about potential careers that I feel compelled to learn more about. The look into LEND (Leadership Education in Neurodevelopmental and Related Disorders) and Summer program was fun, I hope to participate in the future.*

Student #2: *“I really enjoyed today because it was very intriguing and I got to learn lot about how psychologists people kids with disabilities and I really had a change of heart to my career path and now I see my self as a psychologist. The young medical students really helped me talked about college and they really changed my view of college. I’m very excited to attend next year! LEND was very interesting to me it taught me a lot about college preparation and financial services.”*



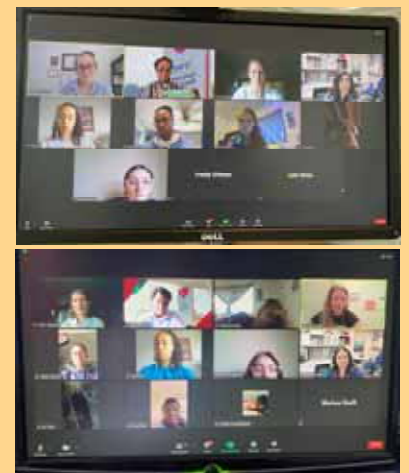
The students comments give a glimpse that the program provided a better understanding of professions that help people living with disabilities. Students also expressed desire to work here in the summer to continue their journey to a career in a health science related field.

Virtual Summer Program Explores Research & Careers in the Health Sciences for High School Students

June 28 - July 23, 2021

I-SPARK is a new program offered by SEPA. It stands for Indigenous Summer Program Advancing Research Knowledge. Ten high school students participated in this four-week summer program. program that provided an understanding basic laboratory procedures and techniques. The program aims to make participating students competitive applicants for college and other summer research internship programs offered by NIH and other institutions. In addition, time was spend one day per week in personal, career, and academic development.

This program was virtual via Zoom and many faculty members from UNMC, UNO and Creighton University took part. The following topics were covered:



- **Ethics in Genetics Research**
- **Neuroscience Clinical and Lab Research**
- **Professional and Personal Development**
- **Engineering for Healthy Communities**
- **Computational Biology**
- **Indigenous Chemistry**

Overall, this four weeks program was very informative as students learned various branches of science which they will be able to effectively apply in their future career in health related areas. In the end, Mr. Channing Bunch, Director, UNMC Student Life Inclusion and Diversity office, provided very helpful information to students about writing personal statements, completing effective college applications and provided resources to find scholarships. All the students loved this program and expressed a desire to take part in this program next year.

SEPA Teacher Workshop, July 26-28, 2021

The pandemic provided many challenges. Among them were the inability to provide in-person professional development and training for teachers in 2020. In 2021, we organized a summer event to reconnect with our teachers and partner schools. We offered a potpourri of topics both old and new. The workshop gave teachers some basic knowledge of how overarching essential questions are a great basis for Next Generation Science Standards (NGSS) cross-cutting concepts for the classroom, no matter the STEM topic they were teaching.

Ms. Kim Soper had two long-time partners help facilitate the program. Ms. Julie Dahl, from Black Hills State University and the Sanford Deep Underground Mine, led participants through understanding “Big Questions” and 3D Learning and Instruction. Ms. Terri Gulick, from the UNMC High School Alliance, gave refresher lessons and ideas on teaching photosynthesis and the states of matter. She also assisted Ms. Kim Soper with the presentation on the new Aquaponics Curriculum.

This year, we had a small cohort of teachers representing, Mary Indian School, St. Francis Indian School, Umo^{ho} Nation School and Winnebago Public School. A good time was had by all and valuable ideas and resources were taken home by the teachers ready to start a new school year. We look forward to 2022 and having more teachers participate.



Wagner Summer School Visit

SEPA team members, Dr. Kumar, Dr. Godfrey and Ms. Kim Soper visited Wagner Community School on July 13 and 14, 2021.

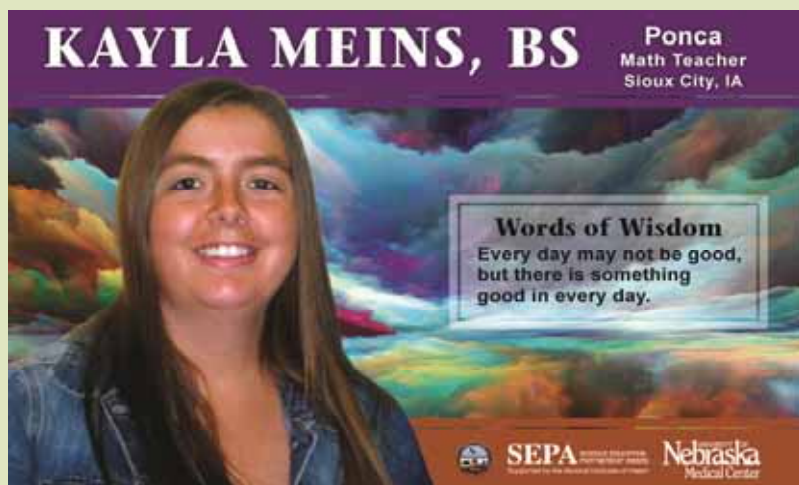
In this pandemic times, the focus of the trip was to provide health education talks to students. We encouraged them to maintain good health, prevent the spread of infections such as COVID, and reduce risky behaviors. Students learned about concepts in health promotion such as making positive lifestyle changes to decrease in mortality rates. We also covered topics about how one’s emotional state can also impact their quality of life.

With primary and middle school students, we organized socially distanced sports activities which included various exercises (stretching, yoga, meditation, etc.) and introduced golf to the students. These activities took place in the large playground at Wagner School.

About 85 students took part in the two days of planned activities. Students loved this program and teachers were so welcoming that they invited us to join them again for next year!



Role Model Poster Project



The Role Model Poster Project features Native Americans in many health and science professions. Each poster includes the name, photograph, and tribal affiliation of the person featured. Additional information for teachers include: education, benefits, motivation, special job skills, and words of wisdom. These posters proved to be a great source of inspiration and motivation to the students and teachers. There are currently ten sets of posters and each set features five tribal members.

ANNOUNCEMENTS / UPCOMING EVENTS / NEWS

- 1. Board Meeting:**
Marriott Riverfront Hotel, South Sioux City
Date: Friday, September 17, 2021
Time: 10 AM - 1 PM
- 2. Nebraska Tribal STEM Career Fair**
Marriott Riverfront Hotel, South Sioux City
Date: Friday, October 8, 2021
Time: 1 PM - 3 PM
- 3. ISPARK Fall Session:**
Modeling the Molecular World
UNMC Campus, Omaha, NE
Date: Friday, October 8, 2021
Time: 10 AM - 3 PM
- 4. ISPARK Spring Session:**
Science Laboratory Techniques 101
UNMC Campus, Omaha, NE
Date: Friday, February 18, 2022
Time: 10 AM - 3 PM
- 5. Board Meeting:**
Marriott Riverfront Hotel, South Sioux City
Date: Friday, January 21, 2022
Time: 10 AM - 1 PM

Email us with your questions at sepa@unmc.edu

UPCOMING IN-PERSON PROGRAMS AT UNMC in October and February *High School Student Program for Advancing Research Knowledge*

The Fall and Spring Programs are geared to keeping students engaged in Science the Fall and Spring terms. The one-day programs are designed for high school students (American Indian/Alaska Native) and from populations traditionally underrepresented in science to pursue higher education. The program goal is to give students an understanding basic laboratory procedures and techniques to be competitive applicants for college and other summer research internship programs.

There are only 10 spots available per session so be sure to register early!

October 8, 2021 Modeling the Molecular World – Students will connect the macroscopic world in which students live with the invisible world of molecules – using 3-Dimensional models like water, proteins, enzymes, antibodies), and nucleic acids. This will be held at a lab, in person, at the UNMC campus.
(Deadline Sep. 27)

February 18, 2022 Basic Biology and Laboratory Techniques – Students will take part in a wide array of laboratory research experiences. Students will be provided a book that will have an overview of what to expect in a laboratory. This will be held at a lab, in person, at the UNMC campus. **(Deadline Feb. 4)**

To confirm participation, students must register at <http://bit.ly/ispark-fast> by the deadline.

Participation Perks

NO COST TO ATTEND

- Get fun experience in learning about various scientific research areas and careers
- Receive \$50 for participation.
- Mileage reimbursement is available for students from rural communities.

Questions?

Email: sepa@unmc.edu
Phone: (402) 559-6689

