



JANUARY 2024 ENCOURAGING EXCELLENCE ISSUE 32

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SEPA PROGRAM 2023
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SEPA Program Co-Directors

Newsletter Committee
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- SEPA MAJOR OUTREACH ACTIVITIES IN FALL 2023:**
- 1) **Wagner Middle School** students visit to UNMC
 - 2) **SEPA Lab Program** for high school alliance students at UNMC
 - 3) **Marty Indian School Visit** by SEPA Team members Dr. Godfrey, Dr. Kumar, & Mrs. Kim Soper in December 2023.
 - 4) **Family Science Night** at Umó'ho'ho' Nation Public School in Macy

As we embark on a new year, we are mindful of the myriad of changes and challenges the past few years have brought. To that end, we plan to set up in-person visits with all of you, our partner schools, to re-introduce ourselves and see where we can help engage teachers, students, and communities in health and science programs. Please let us know if you have particular times or dates that would work best as the spring semester commences (sepa@unmc.edu).

This newsletter is filled with images of students doing science in many settings. Working with all of your students has always been very enjoyable over the years. As noted in the last newsletter, NIH program officials attended one of our summer activities. They were most impressed and excited about the activities and the students' engagement. Of course, these are your students and we are delighted each and every time we can interact with them.

As we noted last time, we plan to join the Youth Enjoy Science (YES) program at the University of Oklahoma for our 2024 SEPA Health and Science Fun Camp. While we work out the details, we do have some general information. We will depart from Omaha on Sunday, June 2nd by private motor coach (not a school bus). Given the number of seats on the bus, we are limiting this opportunity to 40 students plus chaperones. Given the University of Oklahoma rules, we may be required to have student and chaperone names somewhat earlier than usual. We will keep everyone apprised of the final dates and requirements before our April board meeting.

In the meantime, please let us know what we can do for you and your students. We look forward to spring visits with our school and community partners.

WAGNER MIDDLE SCHOOL STUDENTS VISIT UNMC



SEPA has actively participated in diverse science activities and workshops, covering a range of subjects such as biology, chemistry, genetics, physics, forensic science, and earth science. The selection of these topics was based on a needs assessment survey conducted with our partner schools, with the aim of delivering information and fostering enthusiasm for science.

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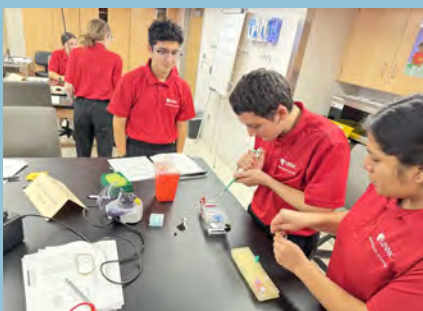
WAGNER MIDDLE SCHOOL STUDENTS VISIT UNMC

Throughout the year, numerous similar activities were coordinated by our team members. As depicted in various photos, 38 students from Wagner Middle School in South Dakota visited the University of Nebraska Medical Center (UNMC). They engaged in Mind and Brain Health Labs, utilizing and learning about advanced cognitive assessment tools, high-fidelity simulation, sensor-based measures of behavior and physiology, and innovative data analysis tools. This experience proved to be an invaluable exposure for them, generating enthusiasm for science and sparking interest in potential future careers.



SEPA PROGRAM FOR HIGH SCHOOL STUDENTS AT UNMC:

Dr. Kumar, a member of the SEPA team, engaged with high school alliance students enrolled at UNMC. The objective was to instill excitement about science and initiate discussions about the diverse opportunities within the scientific field. Dr. Kumar led a five-day genetics workshop and science lab activities in October and November, 2023. As depicted in the accompanying pictures, 23 students from seven different schools in the Omaha area actively participated in various stimulating science activities which included, DNA fingerprinting, cancer, genetic diseases, population genetics, gel electrophoresis, restriction digestion of DNA etc. The students demonstrated significant enthusiasm and interest in science, prompting Dr. Kumar to extend ongoing support through the SEPA program to assist them in choosing their future careers.





SEPA TEAM VISITS MARTY INDIAN SCHOOL IN DECEMBER 2023

Our SEPA program has a significant impact on K-12 students, particularly those from traditionally underrepresented backgrounds in science. Through a multitude of science activities, we aim to encourage, guide, and inspire students, providing them with direct interactions with SEPA scientists. This engagement fosters an understanding of basic science and includes exciting chemistry lab experiments. As depicted in the accompanying pictures, approximately 46 middle and high school students, along with 55 elementary school students, participated in a range of enjoyable science activities related to careers in health and science. High school and middle school students delved into topics like transforming pennies into gold using zinc sulfate, creating excitement in the learning process. They also explored basic chemistry principles, polymers, and engaged in gummy worm experiments using safe chemicals such as Sodium alginate and Calcium chloride. Elementary school students were captivated by the Dr. Seuss-inspired science experiment, Oobleck. The pictures showcase their enthusiastic exploration of the characteristics of solids and liquids in a fun and engaging manner, generating great excitement among the young learners.





Family Science Night at Umó'ho' Nation Public School: In September 2023, the school organized a Family Science Night as an excellent avenue to introduce students to the world of science and familiarize them with various research tools and laboratory equipment. This event provided students with a comprehensive experience and skills that enhance their confidence in a scientific laboratory setting, offering direct exposure and interaction with scientists. It effectively dispelled any negative attitudes that students might harbor towards science. Dr. Kumar, a member of SEPA and a scientist, visited the school to conduct engaging chemistry experiments. The accompanying pictures capture the students' awe as they witnessed these incredible science demonstrations. Over 65 students and parents actively participated in the Family Science Night, fostering a positive and interactive environment for science exploration.



ANNOUNCEMENTS & UPCOMING EVENTS

UPCOMING 2024 SEPA Board Meetings (SAVE THE DATE)

Dates: Friday, January 19 — April 19 — September 20

Time: 10 AM - 2 PM

Email us with your questions: sepa@unmc.edu

SEPA HEALTH & SCIENCE FUN CAMP

Tentative Dates: June 2 - June 6, 2024

The 2024 activities will take place at the University of Oklahoma, Norman Campus. This FREE four-day science and health summer program is designed to stimulate interest in science & health careers. Provides direct interaction with scientists and researchers. Spots are limited to 40 students and chaperones. Schools must provide chaperones and transportation to motor coach in Omaha.

I-SPARK

(Indigenous Student Program for Advancing Research Knowledge)

A High School Student Summer Program for Exploring Research & Careers in the Health Sciences

Tentative Dates: June 16 - July 12, 2024

The I-SPARK program encourages, guides, and inspires high school students from traditionally underrepresented populations in science. The program gives underserved students the opportunity to gain an understanding of basic laboratory procedures, techniques, and science research experience to compete with their peers for summer research internship programs when they become undergraduate students.

FIND YOUR FUTURE

CAREER SHADOWING EXPLORATION FOR HIGH SCHOOL STUDENTS

Tentative Date: June 17 - June 21, 2024

This weeklong upcoming opportunity will help students explore careers that provide services for children and adults with developmental disabilities or movement dysfunctions. Students will get shadowing experience and learn about a "day in the life" of some of the following professions: Speech Language Therapy, Physical and Recreation Therapy, Genetics, Psychology, Pediatric Feeding Disorders, Neurodevelopmental Related Disorders, Developmental Disabilities, Motion Analysis & Virtual Lab.