



Aberdeen Area Tribal
Chairmen's Health Board

SEPA SCIENCE EDUCATION
PARTNERSHIP AWARD
Supported by the National Center for Research Resources, a part of the National Institutes of Health

UNIVERSITY OF
Nebraska
Medical Center

BUILDING BRIDGES

September 15, 2011, NEWS LETTER

ISSUE 1



OUR MISSION –

CONTRIBUTED BY DR. MAURICE GODFREY, PROGRAM DIRECTOR

I would like to welcome you to this first edition of our newsletter Building Bridges. The fact that we are publishing this newsletter is good news as the UNMC-SEPA program has been funded for an additional five years. SEPA (Science Education Partnership Award) is a national program funded by the National Center for Research Resources, an institute of the National Institutes of Health (NIH). The program is designed to encourage partnerships between biomedical scientists, science educators, and community leaders that improve K-12 student and public understanding of the health sciences. Our main objectives are : 1. stimulate student interest in science and to increase the number of college science majors 2. develop higher science/technology competency in the workforce and 3. improve society's science and health research literacy. This makes possible a myriad of benefits for students, teachers, and the public.

The newsletter will be published to coincide with our Board meetings. We will feature regular columns about the program and upcoming events. We also welcome submissions of any relevant news pertaining to our program from our partners, you. The success of our SEPA program over the past six years has been due to an exceptional team and wonderful partner schools and communities. Thanks to all the board members, teachers, and administrators from all the schools. Our fundamental mission, to increase awareness and appreciation for science and health science and their respective career opportunities remains the same. With this new grant we now extend our outreach to the high schools. We want the middle school students who enjoyed their summer camp or other SEPA experiences to continue to benefit from exposure to scientific disciplines. I also welcome three new Co-Investigators to our SEPA team: Andy Jameton, Teri Hartman, and Randy Toothaker. As always we welcome your feedback and suggestions to improve our program to help you to fulfill some of the science and math needs in your schools.

Finally, I have been blessed to have worked with a most extraordinary and dedicated team of professionals since the inception of the UNMC-SEPA program. My unending thanks go to Liliana Bronner, Kim Soper and Molly Stuhlsatz.

LEARNING FROM LILIANA BY LILIANA BRONNER

SOME OF OUR WORK WITH STUDENTS & TEACHERS

The first UNMC-SEPA summer teacher workshop was held in June 2006. Since then we have held annual workshops covering topics in biology, chemistry, physics, and earth science. Topics were chosen from the needs assessment survey that was distributed at the start of the UNMC-SEPA program. A new survey will be distributed to our partner schools. Please encourage your teachers and administrators to provide as much feedback as possible. The success of the program hinges on all the partners working together.



2007 Teacher Workshop



2007 Camp in Omaha

LEARN MORE ABOUT OUR PROGRAMS:
Visit our website-www.unmc-sepa.org

News Letter Committee

Maurice Godfrey
Kim Soper
Liliana Bronner
Shrawan Kumar



Larry Wright, Sr.
Buffalo Herd Manager | Niobrara, NE

This project was funded by the National Center for Research Resources (Grant#RR032178) and is currently supported by the Office of Research Infrastructure Programs (OD011071)

We held the first middle school Science Fun Camp in July 2007.

The purpose of the camp is to strengthen the interest in math and science of American Indian middle school youths who attend our partner schools in Nebraska and South Dakota. Since then more than 100 students have enjoyed a wide array of activities in these four-day summer programs. Our most recent camp was held in June 2011 in the Black Hills. Students lived in the dorms of Black Hills State University in Spearfish, S. D.

Activities included: Chemistry demonstrations and wildlife forensics at Black Hills State University in Spearfish, S.D. Students also took field trips to Wind Cave National Park, The Mammoth Site, a paleontological dig site in Hot Springs, S.D., the Journey Museum and South Dakota School of Mines in Rapid City, S. D., and the Deep Underground Science and Engineering Laboratory (DUSEL) in Lead, S.D.

Student surveys and interviews from the 2011 camp indicated that stu-

dents found the camp both interesting and motivating.

Here are a few quotes from students: "I wanted to come because I wanted to learn more about the stars and other things that relate to the world."
"The wind cave was most the most important part because it was so much to learn about."
"Science is very interesting to me. I think [the camp] will help me in science class as an 8th grader. I want to learn more science."

It was clear that students not only appreciated the opportunity to step into college life at Black Hills State, but also enjoyed learning about the unique work that goes on at the campus and beyond (Wildlife Forensics, Wind Cave exploration, Mammoth Site, DUSEL, etc.). Students also mentioned that their parents supported their participation in the camp and that they really liked getting to know new friends.



2009 CAMP OMAHA



2008 DNA DAY



2010 CAMP



2008 DNA DAY



TEACHER WORKSHOP
2010



TEACHER WORKSHOP
2007



TEACHER WORKSHOP
2009

HEALTH LITERACY BY TERESA HARTMAN

Chances are that you have questions about your or your family's health care, about your treatment options, or about specific health conditions for you or your family. It is important to know how to locate, judge, and understand information to make appropriate health decisions and access necessary health services. Here are two no-cost tools that you can trust - the first Internet-based and the second human-based - to help you when you are seeking information about your family's health issues.

MedlinePlus [<http://medlineplus.gov>] is created and maintained by the librarians at the U.S. National Library of Medicine for health consumers. It is arranged by health topics, population and age groups, and includes links to non-commercial health information, websites, videos, directories, and libraries. It also includes a medical dictionary, news, an encyclopedia, and a drug reference. MedlinePlus is updated daily, with new health topics added each month. It does not ask you to set up an account in order to use it, and is accessible through most school and library networks.

CHIRS - Consumer Health Information Resource Service [<http://www.unmc.edu/library/consumer>] is available to you through the University of Nebraska Medical Center's McGoogan Library. You can ask your health questions by calling 1-866-800-5209 (M-F, 8am-5pm central time). Medical librarians in Omaha will search your information and mail print-outs of the information you need to use in making your personal or family's health decisions. You can then take the information and discuss it with your healthcare provider. Library customer privacy is important - questions are not recorded with customer names.

KIM'S CORNERBY **KIM SOPER**

Welcome to our first newsletter!!

It's been a great summer, but now the real fun begins. Our new SEPA grant is up and we're off and running. I had the chance to read some great books over the summer and got some ideas that I would

like to share with you.

Dinah Zike has a new book out NOTEBOOK FOLDABLES®: Strategies for Comprehending & Interacting with Informational Text. It has over 80 strategy templates to use with notebooks.

Two on page 39 on summarizing are wonderful. The first has students summarizing the passage in 14 words; similar to a tweet, then refining that to 9 words and then finally to 5 words. The other exercise had 3 tabs: Main idea, Summary and Key points or words. Have students give each article or passage a title, then write the main idea, a summary and finally any vocabulary that's new or germane to the article.

Teaching students these strategies and using them during instruction will also help them do their own summaries as they learn to read and comprehend longer passages and more difficult text.

The other book was called Total Participation Techniques: Making Every Student an Active Learner by Persida & William Himmele. They had some oldies but goodies like think-pair-share, quick-writes and quick draws as well as some more involved and complicated ideas such as key word dance which identifies important words or terms from their notes and then has students use those to write a poem to make the word

dance to explain the big concepts. Definitely worth looking into the book is published by ACSD.

Math Concept Cards: As many of you know we have put math concept cards into most classrooms this fall, we are looking forward to getting feedback from many of you on how these can be changed, modified or improved to help you teach your students.

Sign up for the die-cut machine and dies at your school. For any questions please call me (308-726-5535).

These are the evaluation websites:

Number Sense, Concepts and Operations

<http://www.surveymonkey.com/s/sepanumbsense>

Measurement

<https://www.surveymonkey.com/s/sepameasure>

Algebraic Thinking

<https://www.surveymonkey.com/s/sepaalgebraic>

Geometry and Spatial Sense

<https://www.surveymonkey.com/s/sepageospatial>

Data Analysis and Probability

<https://www.surveymonkey.com/s/sepadataprob>

community garden of fifteen years experience. It has grown from a small garden to one and one-half acres, where City Sprouts sponsors small family garden beds for beginning gardeners, and an acre of growing area for food for donation to the neighborhood and for sale in farmers' markets (see its web site at <http://www.omahasprouts.org>).

Colin Jones will be leading the project. Originally from Santee, he is a resident of Elkhorn, Nebraska. He recently retired from the U.S. military, where he supervised and promoted a substantial agricultural improvement project in Afghanistan. His training is in farm and ranch

COMMUNITY GARDENING BY DR. ANDY JAMETON**COMMUNITY GARDEN**

Our SEPA partnership is excited about adding a new dimension to our project - community gardening.

We were inspired by gardening projects that already have been started at the Wagner Community School and Santee.

Our hope is to begin working with both of these projects to incorporate SEPA educational and communi-

ty building goals at these locations.

As we learn the best ways to approach the combination of community gardens with science education, we will expand our efforts at additional SEPA project locations insofar as communities and schools are interested.

This new dimension of SEPA is being conducted with the assistance of City Sprouts. City Sprouts is an Omaha-based urban com-

management from Northeast Community College in Norfolk, Nebraska. He is excited to be turning his considerable skills to community gardens.

He will be assisted by Andrew Jameton, a professor in health education at the UNMC College of Public Health. Prof. Jameton has had extensive experience in community gardening. He can be reached at ajameton@unmc.edu, 402-559-4680, or at College of Public Health, 984365 Nebraska Medical Center, Omaha, Nebraska 68198-4365. He will be visiting the SEPA project sites regularly.

Community gardens have become a national movement with many thousands of community gardens nationwide, partly because of their capacity to support science and nutrition education for children. Gardens also promote healthy eating and exercise for family members of all ages.

It is hoped that the project will encourage chil-

dren's interest in science through their practical application of science to growing food and other plants. Also, we are hoping that the gardens will provide a way for parents to work with their children in healthy activities.

We expect challenges. School class schedules are designed to run mostly during fallow seasons. We will need to construct spaces and projects that can be sustained during the school year. Moreover, summers can be times when families are busy or away, and so we will need to be working on continuity during the best growing season. Ideas are more than welcome! If you are interested in the project, please let any SEPA project partici-

parent know, or contact Colin Jones directly at: Colin Jones colin.cj.jones@gmail.com, 402-680-3894, or by mail at: Colin Jones, 411 S. 212th Street, Elkhorn, Nebraska 68022. And, look for Colin during one of his frequent visits to the gardens of their capacity to support science and nutrition education for children. Gardens also promote healthy eating and exercise for family members of all ages.



COMMUNITY GARDEN

UPCOMING EVENT ANNOUNCEMENTS:

1. Role model poster sets 6 and 7 are in progress
2. School Visits: Email/call Kim or Maurice to set up school visits, family service nights or to invite us to course activities
3. October 20th—Todd County High Schools - Genetics Day
4. Board Meeting - In January—TBA

ENGAGING STUDENTS—INTEGRATING CULTURE

BY CAROL REMPP, Program Coordinator, Multicultural/Native American Education, Nebraska Department of Education

A few weeks ago I attended a conference where a superintendent from a school on the Navajo Reservation talked about how his science teachers were integrating culture into the curriculum.

At the school in Arizona the biology classes are learning traditional methods of slaughtering sheep. In the process they are learning how to care for the meat, the wool, everything in a traditional man-

ner while also learning about the biology of the animal. They have matched the standards of biology that the students need to learn with the traditions of Navajo culture.

Sheep are to the Navajo what buffalo are to the Plains tribes. There is a spirituality associated with them because they provide everything the Navajo need to survive in stark desert conditions. Sheep symbolize a harmony and balance in life.

In hearing this story, because I have not heard or experienced a teacher in this part of the country doing this type of instruction, I wondered why?

Why hasn't a high school biology teacher taken on the task of working with a cultural instructor to use the slaughter of a buffalo to teach traditional significance of the animal and teach biology standards?

I wondered how many earth science teachers are using Native American star knowledge. How many teachers are teaching hide tanning and the science involved? Who will be the great science teacher of our area who will take on this challenge?



ROLE MODEL : 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. There are currently five sets of posters and each set features five tribal members.

ONEIDA NATION OF WISCONSIN



Chris Cornelius
Chemical Engineer | Blacksburg, VA

Chris Cornelius
Chemical Engineer | Blacksburg, VA

WORDS OF WISDOM:
"Never consider failure as a setback in achieving an idea or goal. Use these experiences as an opportunity to learn and grow. The bottom line is to keep pushing forward and never give up."

EDUCATION:
B.S. - Chemical Engineering
Montana State University
Ph.D. - Chemical Engineering
Virginia Tech

FURTHER INFORMATION:
Fireworks (Where's the Science Here?) by Vicki Cobb
Product Testing: The Chemistry of Ice Cream by Dianne N. Epp
Occupational Outlook Handbook www.bls.gov/oco (search "Engineers")
American Institute of Chemical Engineers www.aiche.org

www.unmc.edu/sepa

PONCA TRIBE OF NEBRASKA



Larry Wright, Sr.
Buffalo Herd Manager | Niobrara, NE

Larry Wright, Sr.
Buffalo Herd Manager | Niobrara, NE

WORDS OF WISDOM:
"Keep your life as simple as possible. Look for solutions to solve your own problems or get advice from more than one person to help you make choices in order to move forward."

EDUCATION:
Marty Indian School
Veteran of the Vietnam War

FURTHER INFORMATION:
Thunder on the Plains: The Story of the American Buffalo by Ken Robbins
Grandfather Buffalo by Jim Arnosky
Occupational Outlook Handbook www.bls.gov/oco (search "Agricultural Manager")
National Geographic <http://animals.nationalgeographic.com/animals/mammals/american-bison.html>

www.unmc.edu/sepa