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

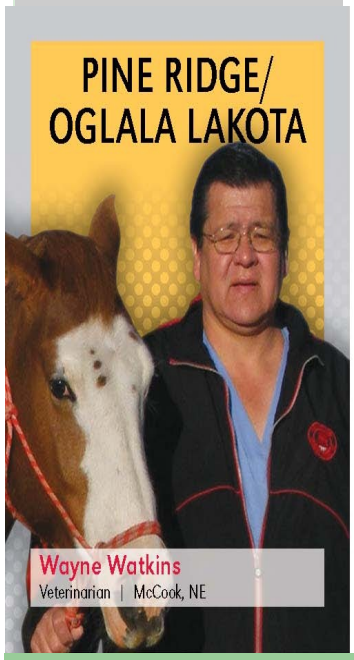
JANUARY, 2012, NEWSLETTER

ISSUE 2

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

News Letter Committee

Maurice Godfrey
Kim Soper
Liliana Bronner
Shrawan Kumar



SEPA MIDDLE SCHOOL SCIENCE CAMP – CONTRIBUTED BY DR. MAURICE GODFREY, PROGRAM DIRECTOR

For the better part of three decades I have been a professional bench scientist. My focus has been on designing and carrying out experiments to test any number of hypotheses. My first laboratory was not in a school, university, or hospital. It was in a room that exists in every home, the kitchen. Any great chef will tell you that experimentation is at the heart of great cooking. Have you ever wondered how a frozen TV dinner can be put into the oven (now microwave) for a given amount of time and the entrée, vegetable, and desert are all ready simultaneously? It is the science of food and science of cooking at work.

Our SEPA middle school science camp this summer will focus on the science of food and cooking. Among the topics we will explore is the art and science of preserving food. What are the methods that have been used for millennia and what are more modern preservation techniques?

What are the scientific processes that occur when we cook eggs, meat, fish?

We like sweets, don't we? Why? Making candy will make chemists out of all participants. Plus tasting the creations will be fun!

There is nothing as inviting as the aroma of fresh baking bread. This most basic of foods provides for some very complex science.

We will also explore our tastes and the complexity of flavors.

No program on the science of food and cooking would be complete without exploring the importance of growing our own food, the connection between farms and the table, and the link between nutrition, exercise, and obesity.

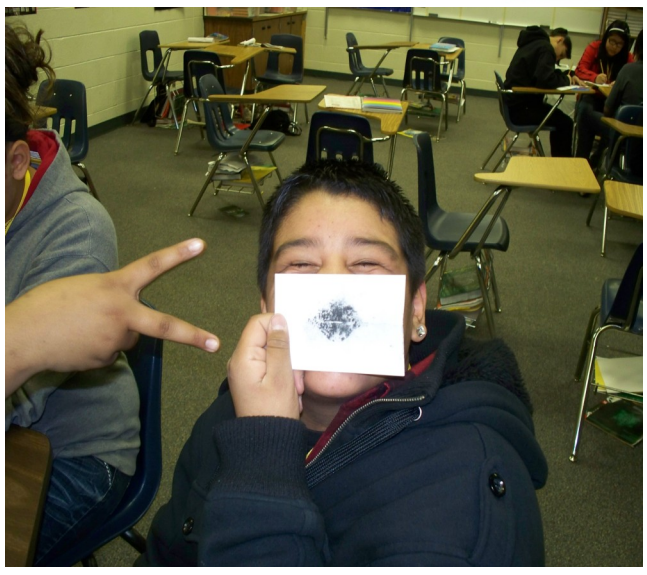
This will be an enjoyable experience for your students. We look forward to seeing them at the UNMC SEPA Summer Camp June 3-6, 2012. Registration will open on our website on April 23, 2012.

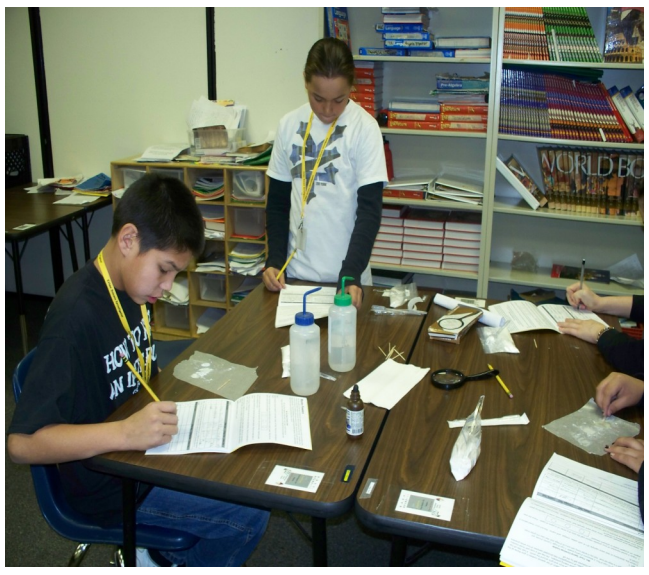
SOME OF OUR WORK WITH STUDENTS & TEACHERS IN 2011-12

We have held annual workshops covering topics in biology, chemistry, physics, forensic and earth sciences. 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.

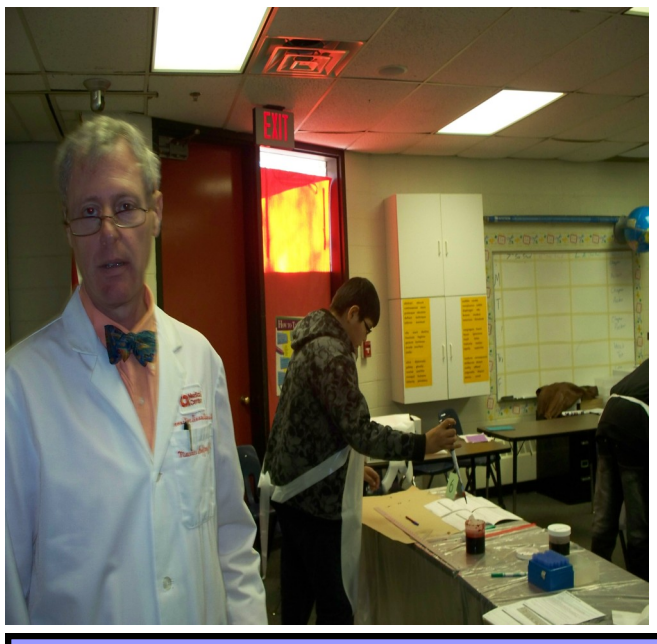
FORENSIC DAY - JANUARY 2012

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)





SOME OF THE ACTIVIITES STUDENTS ARE INVOLVED AT THE FORENSIC DAY-JANUARY 2012, WINNEBAGO SCHOOL



PARTNER NEWS

The students of Todd County High School and their teacher (SEPA Board Member Michelle Verrochi) have made a video to highlight their first semester of Principles of Biomedical Sciences. Type this link into your browser, **http://toddcountyhs.weebly.com/pltw.html** and see what her students have done!

University of Nebraska Medical Center
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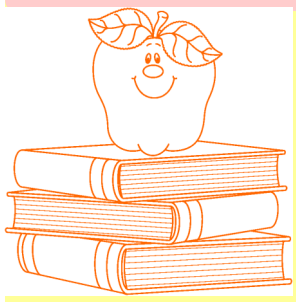
ISSUE 2

KIM'S CORNER

BY KIM SOPER



Aw the great outdoors, to some a menace and to others a paradise. For science teachers it is a great way to teach textbook topics in a new venue and expose students to real life examples of things they may have only observed in a book. This summer, June 10-14, teachers are invited to join us for the Outdoor Science Teacher Workshop. We will focus on ways to teach physics & physical science using playground equipment, look at plants & gardening, identification of trees, birds, and insects, how to design and utilize outdoor spaces around your school and other topics. There will be a special session for early childhood and K-4 teachers with Kate Murphy and Growing Up Wild.

Come join us for a fun and interesting time. Registration will open April 23 on our website.

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

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. Board Meeting - In January 27,2012
4. Student camp June 3-6, 2012
5. Teacher Workshop June 10-14, 2012

Please E-mail Kim for any information you need: sepa@unmc.edu

SIX MONTH REPORT - SCHOOL BASED COMMUNITY GARDENS: OBSTACLES AND CHALLENGES BY Dr. ANDY JAMETON

In our first six months, in partnership with City Sprouts, Inc., we immediately took the most important step and hired a half-time coordinator to lead the work of the project. We are extremely fortunate to have recruited a highly qualified coordinator, Colin Jones.

WHAT WE HAVE BEEN DOING
Mr. Jones has been visiting both Santee and the Wagner School each month for the last six months.

Mr. Jones has been visiting regularly and primarily with those at the two reservations most interested in conducting gardening programs – these are John Tyler at Wagner School and Julene Kay at Santee.

We have also formed an interest group and email list of interested parties working at the reservations, based on an October meeting with SEPA principals at Sioux City in October.

We have used some light, portable mini-greenhouses built earlier under the SEPA program to begin growing plants at both locations. Additionally, Mr. Jones has designed a desktop size mini-greenhouse that is well suited for many classroom science experiments.

We have identified related programs, such as the local growing marketing programs at Santee and elsewhere set up by the Center for Rural Affairs, and the Sioux City Humane Society, with both of whom we plan to work closely.

OBSTACLES AND CHALLENGES
In the initial stages, adding gardening to the schools' curricula may appear to burden faculty time, but we are very hopeful that the educational value of the project will overcome this challenge. The seasons are an obstacle, since school is out during the key growing season months. However, if we can garner resources to pay teachers for garden related summer work, the school schedule may turn out to be a strength.

In light of some of the challenges we perceive, we have applied for a grant to the First Nations Development Institute.

The project integrates essential elements of community gardening, food supply, and educational programs, all of which are necessary for successful nutrition and gardening programs that last over the years. We already have in place five-year educational programs in the Yankton and Santee Sioux reservations that connect schools, education, and community gardening; others are building marketing programs. We need four more key elements for these programs to work: **(1)** We need home-based gardening for families and friends of the schools involved; **(2)** Community gardening for the neighborhoods involved; **(3)** Sustainable techniques that are low in water and energy consumption that can withstand the progressive drying and heating of these areas highly likely in the coming decades; **(4).** Building inexpensive computer networks to sustain communication among the essential parts and to support agricultural education with IT skills for students.

Based on our experience at City Sprouts in urban brownfield areas, we think that it is important to include some assessment of the quality of soil (and our own inputs and amendments) with regard to possible health issues. The rural agricultural areas of Nebraska have a history of the use of lead arsenate and other toxic materials, which may remain in the soil. Moreover, groundwater seepage may have moved dissolved toxics from distant sites (such as coal and munitions plants) into growing areas. Insofar as we know, these important health-related issues have not yet been evaluated.

We have identified candidate sites for spring planting, and planning for these sites is at this point a high priority.

Why External Evaluation?

BY MOLLY STUHLSATZ, COLARADO SPRING, CO 80918

Often, funding agencies view external evaluation as providing impartiality and credibility to evidence of project outcomes. External evaluation for the UNMC SEPA project includes both formative (project development) and summative (long term outcomes) evaluation. The project evaluator and the project staff work closely together to identify what information the project needs to collect in order to improve and show that the project was successful.

The formative evaluation includes investigating the needs of the partner schools (early in the project), and the development of project activities. Formative evaluation is intended to provide project staff with suggestions about the initial impact of project activities, and how they could be improved. Summative evaluation is focused on investigating the efficacy of the project. For instance, do project participants learn skills or knowledge that non-project participants do not? Following data collection and analysis, the external evaluator is able to provide evidence that is both impartial and anonymous. When project participants provide information to the external evaluation team, they can be assured that comments are communicated to the project staff in a way that protects the individual identity of the participant. Not only does a qualified external evaluator provide an objective view of the project, he or she may also have expertise in researching the impact of program activities.

The external evaluation of the UNMC SEPA project is led by Molly Stuhlsatz at BSCS in Colorado Springs, Colorado. She is experienced in qualitative and quantitative data collection and analysis. Molly uses her experience in mixed methods to help the project staff understand the complexities of the people they work with and document both the short and long-term outcomes of the project.

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.