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Nebraska Earth Systems Education Network Newsletter – Fall 1999

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Nebraska Earth Science Education Network

9 Nebraska Hall, University of Nebraska-Lincoln, Nebraska 68588-0517

Phone: 402-472-0773
Fax: 402-472-4608
Web site: http://nesen.unl.edu
Email: nesen 2@unl.edu

Fall 1999 Newsletter

Issue Number 22

"Everything Is Connected to Everything Else." - Dave Gosselin, NESEN Director

I hope all is going well for you now that you are into another exciting academic year. This summer NESEN hosted a week long workshop designed to support teachers who will be field testing Earth Systems Science in the Community (EARTHCOMM). The development of this high school curriculum is being coordinated by the American Geological Institute and involves many high school teachers who are serving as writers. During our workshop, I felt, once again, very fortunate to have the opportunity to interact with such dedicated and experienced educational professionals. They clearly have a passion for what they do and for improving their teaching skills. Without such dedication our educational system cannot improve. Over the next year, NESEN will be providing several professional development activities ranging from workshops to research experiences for teachers that will keep with our on-going theme of "Everything is Connected to Everything Else." We look forward to your participation so that we can keep working together to improve what we do in our classrooms. Have a great academic year.

New and Improved NESEN Web Page – by Mark Mesarch

Take a look at the new NESEN web page (http://nesen.unl.edu). Last spring the NESEN web pages took on a new look. To help you navigate better through our site and create some unity, the colors, the fonts, the links and the general page formats where changed. A menu bar across the top of each page allows you to jump through major sections our web site much easier.

To improve upon the communication within the earth science education community, a Chat Room and a Virtual Forum have been created. If you have an earth science question or comment, post it on the Forum and see what other people have to say.

As time goes on, our goal is to continually improve our site. If you find a broken link, typographical error, or color schemes that just do not read well on your screen, please bring these to our attention and we will try and solve the problem. Also, if you find interesting earth science links and you think they should be shared with others, let us know and we will link to them.

NESEN at NATS 1999

The 1999 NATS Conference will be held from October 28 to 30, at Camp Calvin Crest, Fremont, Nebraska. There will be a NESEN booth at NATS, so stop by and visit. Examples of presentations include:

- "Earth Science Activities for the Elementary Classroom" by Dave Gosselin,
- "A New Perspective on Weather Maps" by Steve Meyer,
- "Arid XXX-dry: An Expose' of Drought in Nebraska" by Mark Mesarch,
- "'Virtual Nebraska' The Gateway to Nebraska's Satellite, Space Shuttle, and Aircraft Imagery" by Rick Perk and Brent Holinger

STEDII Weather Is Persistent for Five Years – by Mark Mesarch

The Students & Teachers Exchanging Data, Information and Ideas (STEDII) project, which focuses on weather data collection, was started in fall of 1995. Beginning with eight schools, the project has grown to over 50 schools participating. Data collection instruments are provided. Although data collected by the schools occurs when it best fits into the teacher's curriculum, focused measurement periods (FMP) were developed to get as many schools involved as possible for two weeks at different times of the year. Even so, Osmond Public and Christ Lutheran Elementary in Norfolk took data almost every day during the 1998-1999 school year.

The FMP for this school year are fall: September 27-October 11, 1999; winter: January 31-February 14, 2000 and spring: April 10-April 21, 2000. This school year we have two new schools joining the STEDII ranks: Mary Christensen and students Monroe Public School in Monroe, and Lynn Connell and students at Humbolt Public School in Humbolt.

If you are interested in comparing your data to other participating schools, checkout the STEDII web page for other schools participating. Contact Mark Mesarch at mmesarch1@unl.edu or call at 402-472-5904, if you are interested in joining STEDII.

Virtual Nebraska Update – by Rick Perk

The Virtual Nebraska archive (http://www.casde.unl.edu/vn.htl) has two new "Teacher Toolboxes" available for checkout. The first, "T-1: Introduction to Image Interpretation," contains imagery, maps, background information and classroom activities introducing the concepts of image interpretation for middle/junior high students. The second, "T-2: Remote Sensing--The Basics" contains a set of 12 table top spectroradiometers, background information, and a curriculum set of 10 tested classroom activities for junior/senior high science classes.

Partners at the University of Nebraska-Omaha's Office of Internet Studies have developed (http://ois.unomaha.edu/casde/) numerous tutorials covering a number of tools and software programs. In addition there are now over 100 classrooms tested "building blocks" available.

Visit CASDE at www.casde.unl.edu/casde.html or contact Rick Perk at rperk@tan.unl.edu for Virtual Nebraska Information or Paul Clark at pclard@esu3.esu3.k12.ne.us for CASDE education applications.

<u>Video Programs Available from the USGS EROS Data Center - by Duane</u> Mohlman

Several video programs are available at no charge to the general public. Available titles include (date, length):

Geographic Information Systems: Man, Nature, & Technology (1/22/88, 17:30 min.)

Go Places with USGS Maps (10/14/88, 6:30 min.)

Greenness Mapping (2/11/91, 4:12 min.)

Making America's Maps (11/1/95, 10:00 min.)

Yosemite: An Aerial Tour (2/11/91, 4:35 min.)

You may request a copy of the program by supplying a new blank videocassette in any of the following formats (½-inch, VHS; ½-inch, SVHS; ¾-inch, Umatic; ¾ inch, Betacam SP (NTSC American). Allow time for the duplication process. The USGS EROS Data Center does not loan video programs. Please send your request for video copies to:

[&]quot;Earth Science Resources Available from the Conservation and Survey Division" by Duane Mohlman

[&]quot;Gemstone Identification: Facts and Fallacies" by Roger Pabian,

[&]quot;Bigger is Better but Tinier is Mightier" by Francis Belohlavy and Steve Hartung

Mundt Federal Building Phone: 605-594-6175 Sioux Falls, SD 57198-0001 Fax: 605-594-6083

Attn: Don Becker, Video Production Internet: becker@edcserver1.cr.usgs.gov

A complete list, including detailed descriptions of the other video programs, can also be requested.

<u>Perilous Beauty--The Hidden Dangers of Mount Rainier</u> – by Duane Mohlman

The USGS Hazards Program produced this video program to increase public awareness of volcano hazards at Mount Rainier and help reduce the volcanic risk to nearby communities. For more information on volcano hazards at Mount Rainier or elsewhere in the Cascade Range, visit http://vulcan.wr.usgs.gov, contact the USGS Cascades Volcano Observatory in Vancouver, WA, 360-696-7693, or the Northwest Interpretive Association at 206-220-4140.

Earth Science in the Community

Last August, 21 secondary earth science teachers from Nebraska and 6 other states gathered at the University of Nebraska-Lincoln to prepare to field test a new secondary earth science curriculum. NESEN is working with the American Geological Institute to build the new curriculum, Earth Science in the Community (EarthComm). Its goal is to provide a framework for integrating earth science into the landscape of the local community. The University of Nebraska was one of four national test sites chosen to provide professional development for the new curriculum. Dave Gosselin, NESEN director, and Ed Robeck, science education specialist from Hastings College were facilitators for the EarthComm workshop. Thanks to the teachers who participated in the 1999 EarthComm workshop:

Joan Lahm-Columbus Scotus High School, Roseanne Williby-Skutt Catholic High School, Susan Frack-Lincoln Northeast High School, John Niemoth-Niobrara Public School, Paul Parra-Omaha North High School, Bob Feurer-North Bend Central Public School, Fawn LeMay-Plattsmouth Community School, Mary Jane Bell-Lyons-Decatur Public School, Keith Patton-West High School-Denver,CO, Rod Benson-Helena High School-Helena MT. Steve Ferris and Jason Ahlberg-Lincoln High School,
Aaron Spurr-Malcolm Price Laboratory School-Cedar Falls, IA,
Erica Larson-Tipton Community School-Tipton, IA,
Jim Price-Edwardsville Public School-Edwardsville, IL,
Theresa Harrison and Jim Matson-Wichita West High School-Kansas,
Julie Cook-Jefferson City High School-Jefferson City, MO,
Dave Miller-Parkview High School-Parkview, MO,
Caren Kershner-Moffat High School-Moffat, CO
Sharon D'Agosta-Creighton Preparartory School,

New Publication from the Conservation and Survey Division – by Duane Mohlman

The newest addition to the Conservation and Survey Division's (CSD) popular educational circular series is *Geology of Rock Creek Station State Hitorical Park* (EC-11a). Written by Robert F. Diffendal, Jr., research geologist, CSD, this16-page publication contains text, several black and white photographs and illustrations. The publication also includes the *Geologic Bedrock Map of Nebraska*, in a geologic time chart, and the *Topographic Regions Map of Nebraska*.

Each copy of EC-11a is \$7. For fast service, call 402-472-7523 with your VISA or MasterCard number. Each order will include a \$1.00 postage/handling fee, plus any applicable state and city sales tax.

1999 NESEN Summer Workshops

This summer, NESEN held two workshops for educators. The first workshop, "Why Did the Chicken Change the Climate?" was held on July 7-8. The presenters of the workshop were Dave Gosselin, UNL

hydrogeologist, and Steve Meyer, UNL meteorologist. This workshop examined what governs the climate system and how human impact on the atmospheric environment may be affecting the climate. Participants were: Patrick McGill, John Niemoth, Rod Pittam, Bob Walling, and Mary Christensen. The second workshop, "The 'Dirt' on Soil." was held on July 12-13. The presenters were Francis Belohlavy and Steve Hartung, UNL soil scientist. They explored characteristics of soil and what makes up a soil. Participants were: Tricia Meduna, Judy Dubs, Barbara Hart, Polla Hartley, Rod Pittam, Bob Walling, and Mary Christensen.

Dave Gosselin Receives Catalyst Award

Dave will be awarded the prestigious 1999 Catalyst Award from the Nebraska Association of Teachers of Science at its fall conference. This award is presented, "to an individual who has provided commendable Community service to science." Other past awardees are Senator Bob Kerrey, Dr. Lee Simmons, and Mike Voorhies.

Unless indicated, our newsletter was written by Joy Hurst and edited by Charles Flowerday, Conservation and Survey Division, University of Nebraska-Lincoln. Information for the NESEN Newsletter can be sent to Joy Hurst, 9 NE Hall, Lincoln, NE 68588-0517, email 00220664@bigred.unl.edu.