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July 1997

## Nebraska Earth Systems Education Network Newsletter – Summer 1997

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## **Nebraska Earth Science Education Network**

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### **Summer 1997 Newsletter**

Issue Number 15

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## **Summer Workshop Series Complete**

During July, 1997, NESEN completed its fourth annual summer workshop series. NESEN sponsored three workshops that 47 teachers attended. Overall, the response from teachers, as well as the workshop evaluations, were quite complimentary and positive. The three workshops included:

*Journey to the Center of Geology - Investigating Rocks & Minerals; Instructors: Dave Gosselin and Marv Carlson, CSD, July 8-9, and 10-11, 1997.*

This workshop used hands-on classroom activities and field trips to investigate rocks and minerals and their importance to Nebraska. Teachers attending: Mardelle Grandstaff, Greg Pavlik, Joan Lahm, Paula Holder, Mary Jane Bell, Betty Watt, Sharill Prey-Luedtke, Lynn Groff, John Barthule, Lorraine Etherton, Arnie Cerny, Derek Geise, Denise Haschke, Diane Woerman, Sharman Brisson, James Fitzgibbon, Dick Caster, Christine Southwick, Lynn Ruth, Michelle Crawford, Polla Hartley.

*Chili Today, Hot Tamale: Let's Look at Nebraska's Weather; Instructors: Steve Meyer and Mark Mesarch, Agricultural Meteorology, July 14-15, 1997.*

This workshop focused on hands-on activities that can be incorporated directly into your classroom related to: weather and the water cycle; interpreting standard two-dimensional weather maps; building a three-dimensional weather map; incorporating data into the classroom through weather observations; and examining Nebraska's climate and its influence on the physical and social environment using software (ClimProb) that participants took home. Teachers attending: Mardelle Grandstaff, Greg Pavlik, Susan Frack, Mary Jane Bell, Betty Watt, Roseanne Williby, Sharill Prey-Luedtke, Lynn Groff, Derek Geise, Diane Woerman, Sharman Brisson, Marilyn Jepson, Lorraine Etherton, Arnie Cerny.

*Virtual Nebraska - Putting Remotely Sensed Data to Work in the Classroom (NEW IN 1997) Instructor: Rick Perk, CALMIT, July 17-18, 1997*

This workshop included hands-on activities to introduce fundamental remote sensing concepts, image processing concepts and interpretation. Specific emphasis was given to Virtual Nebraska, which is a web site having the goal of exposing students and teachers to space- and air-borne remotely sensed imagery, and to encourage them to apply these data in the classroom. Teachers attending: Mardelle Grandstaff, Greg Pavlik, Susan Frack, Mary Jane Bell, Joan Lahm, Betty Watt, Roseanne Williby, Sharill Prey-Luedtke, Derek Geise, Christine Southwick, James Fitzgibbon, Lorraine Etherton.

## **Reminder -- NESEN at 1997 NATS**

The Nebraska Association of Teachers of Science (NATS) fall conference is just around the corner. NESEN staff and associates will be providing nine presentations or workshops that range from understanding acid rain to weather forecasting. Plan to attend the 1997 NATS fall conference. NESEN teachers -- please let us know about your presentation(s). We would like to recognize you in our next newsletter and on our home page. Here are the presentations and workshops scheduled to be given by NESEN staff:

- Five Day Weather Forecast: Crystal Clear or Crystal Ball - Steve Meyer and Mark A. Mesarch
- The Maury Project Physical Oceanography - Rick Perk and Brian Tolk
- Rocks, Weather and Remote Sensing: Activities Developed from the 1997 NESEN Workshops - Dave Gosselin, Rick Perk and Steve Meyer
- Sixth Annual NESEN Workshop: Mapping Your Environment and Increasing the Use of Maps in the Classroom - Dave Gosselin and others
- Water + Geology = Groundwater - Dave Gosselin
- The Weather Around You is unSTEDII - Mark A. Mesarch and Duane Mohlman
- NESEN and CSD information booth.
- NESEN Earth Science Lesson Plan Share-a-Thon - Coordinated by Sue Frack.

## **Update Your 1997-98 NESEN Membership**

Enclosed are your 1997-98 NESEN membership update forms. Please return them by Friday, September 12, 1997. For your convenience, the reverse side of the form is pre-addressed and marked postage-paid. All you need to do is complete the form, fold, tape and return. Your prompt response is greatly appreciated!

## **NESEN Membership Hits 400 Members**

In late August, NESEN membership passed the 400 mark. Approximately 75% of the membership are K-12 teachers. The remaining 25% is comprised of post-secondary educators (mainly from UNL), and a few others who are interested in earth science education. Also, through our interactions with other earth science organizations, and through the NESEN home page, we have gained several members from other states.

With several important events coming soon, including NATS, we anticipate that our membership will continue to grow. Our thanks to everyone who has supported NESEN and helped "spread the word."

## **NASA Regional Educator Resource Center**

*By Marian Langan, Education Coordinator, University of Nebraska State Museum.*

Looking for information on the Mars missions? Have a student interested in how plants are grown in space? Ever wonder how astronauts are selected? The NASA Regional Educator Resource Center, hosted by the University of Nebraska State Museum, is the place to turn. Visitors will find a self-help center providing educators with current materials that can be used in any classroom.

Available materials include videotapes, posters, slide programs, software, lesson plans, etc. All resources are in the public domain and can be copied at no cost, if you supply the videotape, slide film, etc. Staff is available to assist you during open hours. Come and visit or contact us for further information. Phone 402-472-4525; e-mail [nasa@unlinfo.unl.edu](mailto:nasa@unlinfo.unl.edu); web page <http://nesen.unl.edu/rtrc/rtrc.html>; or visit the NASA Education page <http://spacelink.msfc.nasa.gov>. Hours are Monday-Friday, 1:30-4:30 pm, and the first Saturday of each month,

10:00 am-12:00 pm, or by appointment. The Center's address is: NASA Regional Educator Resource Center, University of Nebraska State Museum, 135 Morrill Hall, 14th and U Streets, Lincoln Nebraska, 68588-0374.

## **Change of CSD Home Page Address**

Please note that the Conservation and Survey Division (CSD) home page has been changed to:

**<http://csd.unl.edu/csd.html>**

Please change your bookmarks. Thank You!

## **Two New Maps Available from CSD**

The Conservation and Survey Division (CSD), which also serves as NESEN's sponsoring organization, has available two new maps. These colorful maps were produced by the Center for Advanced Land Management Information Technologies, (CSD's GIS/Remote Sensing unit). The two maps are:

- LUM-34 Satellite View of Nebraska, (1:1,000,000; 1997) - \$10.00 (20" x 32")
- LUM-35 Satellite View of Nebraska, (1:500,000; 1997) - \$15.00 (3' x 5' poster size)

For more information, or complete ordering instructions, please call the CSD Maps and Publications Office at 402-472-7523, or FAX 402-472-2410.

## **1997-98 STEDII**

The Students and Teachers Exchanging Data, Information and Ideas (STEDII) Weather Project begins again this year with the Focused Measurement Period (FMP) from September 22-October 6, 1997. Ten new schools join the project: Fremont Jr.-Sr. High, Blessed Sacrament (Omaha), Lincoln Public Schools Gifted Program, Lincoln High (Lincoln), Osmond Public, Plattsmouth, Silver Lake, Skutt Catholic (Omaha), Waverly and Lyons-Decatur. Welcome. Geology 295 (Earth System Science for Elementary/Middle School Education Majors) students will also participate in this project. Each college student in the class will be assigned one or two schools during the semester. We hope that the college students and elementary/secondary students and teacher interact together and learn from the networking possibilities.

## **NESEN to Develop "Pod" Concept**

Through our discussions at previous steering committee meetings, teachers suggested that NESEN develop regional groups or "pods" of members throughout Nebraska. Although the concept is in its early stages, we will initially divide the NESEN membership into pods based on the educational service unit in which they reside. We will then be asking NESEN members in the pods to serve as liaisons between the NESEN membership and its Steering Committee and staff, as well as serving as a representative of the K-12 Earth Science teaching community to other educational groups. The primary purpose of this approach is to improve NESEN's responsiveness to its members and communication among members, promote national and state visions for science education, develop additional educational resources, develop workshops for other areas of Nebraska; and strive to reach all earth science teachers, especially those without electronic connectivity. Our first step will be to identify and contact members within all the Nebraska ESUs who would be willing to serve as a pod representative. Please contact contact Duane Mohlman, 402-472-7528 or dmohlman@unlinfo.unl.edu with your ideas or to volunteer to be a NESEN regional representative

## **The Bartak Depression -- Meteorite or Meteorwrong?**

Is the Bartak depression, located about 11 miles west of Merna, Nebraska, really a meteor crater? To answer this question, the Conservation and Survey Division is trying to obtain permission from the Bartak family to drill a series of test holes in early 1998. CSD and NESEN views this as a tremendous learning opportunity for students.

### **News From Brian and Derek**

Brian Lang, NESEN logistical coordinator, will be primarily responsible of developing a home page for the Great Plains Regional Center for the NIGEC (National Institute for Global Environmental Change). Office hours for the fall semester will be: Monday, Wednesday, and Friday, 10:30 am-12:30 pm, 3:00 pm-5:00 pm, and Tuesday 12:30 pm-4:30 pm.

Derek Geise, NESEN pre-service teacher intern, will be maintaining and updating links on the NESEN home page to help teachers receive and use on-line resources in a practical and user-friendly manner. He will also be assisting in enhancing the K-12 educational component for the National Drought Mitigation Center. Office hours for the fall semester will be Monday-Friday, 2:00 pm-5:00 pm.

### **School of Natural Resource Sciences**

On August 1, the School of Natural Resource Sciences (SNRS) was officially approved by the Post-Secondary Coordinating Committee. With the creation of the School, NESEN will continue to enhance opportunities for collaboration among individuals in the Departments of Agricultural Meteorology and Forestry, Fisheries, and Wildlife, as well as parts of the Conservation and Survey Division, Water Center/Environmental Programs, and the Nebraska Statewide Arboretum so as to continue to provide relevant and timely information to our K-12 members. Dr. Blaine Blad, head of the former Department of Agricultural Meteorology, who is an enthusiastic supporter of NESEN, will serve as director of the SNRS.

### **CD-ROMs available from the NESEN Lending Library**

NESEN members can borrow any of these CD-ROMs for two weeks. The only cost involved is return postage. For a complete list of resources available from the NESEN Lending Library, see the NESEN home page (<http://nesen.unl.edu/nesen.html>) or the NESEN Resources Guide and Membership Directory. If you would like to borrow a CD(s), contact Brian Lang, 402-472-0773, or [blang@unlinfo.unl.edu](mailto:blang@unlinfo.unl.edu).

#### **#0601: Conterminous U.S. Land Cover Characteristics Data Set (1990 Prototype)**

This CD-ROM contains a prototype land cover characteristics data set for the Conterminous United States derived from the classification of 1990 AVHRR time series data, with post classification refinement based on topography, climate, soils, and ecoregions. The data consists of: the source data, the initial and final interpretation of land cover regions, descriptive and quantitative attributes, and derived thematic data sets. IBM-PC and Macintosh compatible.

#### **#0602: Earth and Space Sciences "Joint Education Initiative"**

A set of 3 CD's sponsored by NASA, NOAA and the U.S. Geological Survey that contains information, images, and programs on the following subjects: GLORIA, Yellowstone, planets, spectral analysis, thematic mapping, Antarctica, Voyager, comets, and more. IBM-PC and Macintosh compatible.

#### **#0603: "The Theory of Plate Tectonics"**

This CD lets you actually see how volcanoes and mountain ranges are formed, what causes earthquakes, how the continents move through time, how the earth's plates collide, and much more. Not only will you visualize and understand the theories, you'll answer questions, look up key terms, and solve problems.

#### **#0604: "Explore the Planets"**

Explore the Planets takes you on an illustrated tour of our solar system. In addition to viewing the fascinating landscapes of the Earth and other worlds, you'll study the processes that sculpt them: volcanism, impact cratering, faulting and folding, landslides, water processes, and work done by the wind. In addition to viewing stunning photographs, you'll perform interactive exercises, plot graphs, learn terms in the illustrated glossary, and answer review questions.

**#0605: "Introduction to Topographic Maps"**

With this CD you will learn to use topographic maps to determine elevations, landform types, and principles of scale and location. You will also learn how to draw contour lines based on points of known elevation and how to construct topographic profiles.

**Please remember to return the enclosed 1997-98 NESEN Membership Update Form.**

**Thank You!**

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The NESEN Newsletter is written by Duane Mohlman, Dave Gosselin, Mark Mesarch and Brian Lang, and edited by Charles Flowerday, Conservation and Survey Division, University of Nebraska-Lincoln. If you have information for the fall issue, please send it to Duane Mohlman, by October 31, 1997. Articles or information from our NESEN teachers are especially encouraged.