



Nebraska Earth Systems Education Network

Newsletter Winter

Nebraska Earth Systems Education Network Newsletter -- August 2009

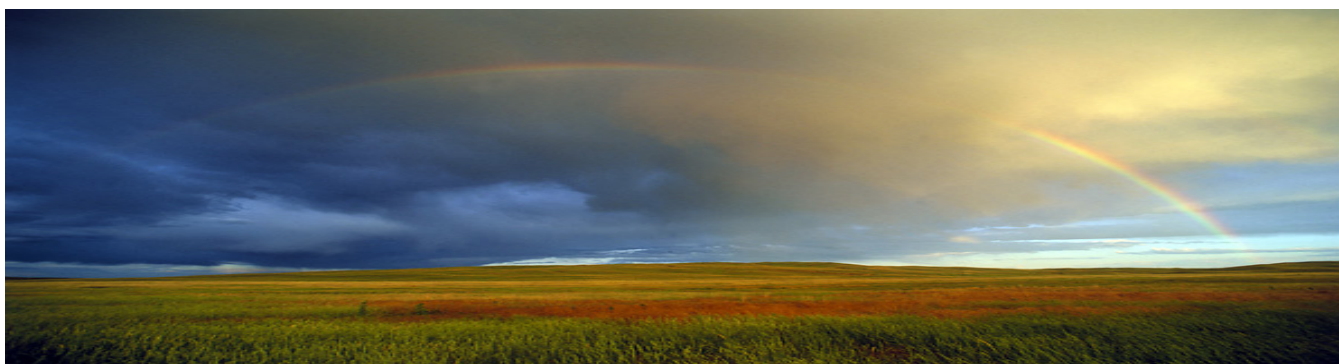


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The Masters of Applied Science Degree has a new specialization - Science for Educators! Learn about it here!

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We have compiled our set of favorite articles from the Earth Science Sites of the Week, compiled by Professor Mark Francek at Central Michigan University This weekly mailing is a great collection of websites and online tools covering topics related to the Geosphere, Hydrosphere, Space, Teaching, and others. We print a small portion of it, and include a link to the full pdf on the NESEN website.

Go here for a continually updated archive

- <http://groups.google.com/group/earth-science-sites-of-the-week>

To be added to the mailing list email Dr. Mark at mark.francek@cmich.edu

Topic 4. **Earth Science Week Update** (*page 5*)

Earth Science Week is the 11th-17th of October, and this year the theme is "Understanding Climate." Presented here is a piece of the latest of a series of monthly updates about relevant projects and information. The full monthly mailing can be viewed on our website as a pdf, or on the Earth Science Week Website at www.earthsciweek.org.

Topic 5. **The JOIDES Resolution** (*page 6*)

Information for teachers about the JOIDES and how to get involved with the researchers and the wonderful projects and data that they work on.

Applied Science - What's New

We are excited to announce the new Science for Educators specialization in the Masters of Applied Science Major! Recently, the UNL Graduate Council reviewed and approved a proposal to establish the specialization in Science for Educators. The goal of the Science for Educators Specialization is to improve educator's content knowledge of and teaching skills related to science, which, in turn, will lead to improvement in the academic achievement of K-12 students in science. An important attribute of this program is that the curriculum emphasizes the importance of learning science in context; hence the course work focuses on the application of basic science to the world around us. Anytime, anywhere, online, distance-delivered opportunities provide important access to professional development opportunities required by No Child Left Behind and pay scale advancement, especially in remote and rural areas.

The Master of Applied Science is a 36 credit hour, non-thesis graduate degree program. Eighteen (18) credit hours apply to the Science for Educators concentration. The classes required for this specialization are Teaching Biotechnology (AGRO 898/HORT 898), Insect Ecology (ENTO 806), Insects as Educational Tools for the Classroom (ENTO 810), Teaching Applications of Food Science (FDST 801), Seminar in Curriculum and Teaching of Science (TEAC924), and our very own Laboratory Earth Classes!

To find out more about this, visit the website at <http://onlinegraduate.unl.edu/science>.





NASA Global Climate Change Education Grant

In May 2009, UNL received one of 22 grants funded by NASA who awarded 6.4 million dollars to fund innovative approaches that improve elementary, secondary and undergraduate teaching and learning about global climate change using NASA content, Earth observation data and Earth system models. Our proposal directly targets teachers for grades 6-12, helping them to better understand climate processes and climate change so that they can pass that understanding on to their students. We will be developing four on-line, distance-delivered, scientifically and pedagogically relevant educational modules to improve climate and Earth Systems literacy among middle level to high school teachers. The four modules will incorporate resources from eight NASA sponsored educational programs to focus on essential principles of climate science. Each educator that takes this will be required to develop at least one educational unit that will be circulated to educators across the country. Through an action research component of the curriculum, the teachers and their students will create action in their own communities to address the challenges of climate change. We are very excited to be providing these modules to teachers.

If you are interested in potentially participating contact Cindy Larson-Miller at clarsonmiller2@unlnotes.unl.edu



Earth Science Sites of the Week
Selected Articles
From the Last Few Months

-- May 2nd -- GEOSPHERE

EARTHQUAKE MACHINE LITE, IRIS, contributed by: Michael Hubenthal. (2 Activities), These activities provide an opportunity for students to use a mechanical model to collect empirical data for earthquakes. Also these activities have a strong process of science emphasis and offer lots of opportunities for individualization.

<http://www.iris.edu/hq/resource/redefining_an_earthquake_v12>

<<http://www.iris.edu/hq/resource/>>

-- April 4th -- ATMOSPHERE

NORTH ATLANTIC HURRICANE ARCHIVE, contributed by: Elizabeth Bedell. This site has an archive with a map for each storm and the date, time, latitude, longitude, wind, pressure, and storm type. Click on the year, then the storm's name.

<http://www.wunderground.com/hurricane/hurrarchive.asp>

-- April 18th -- ATMOSPHERE

LIGHTENING IN SLOW MOTION, contributed by: Chuck Lawrence. This is a great animation showing the stepped leader and the more visible return stroke.

<<http://www.cpet.ufl.edu/sift/lightning.htm>>

-- April 25th -- SPACE

1. SETI INSTITUTE, SETI, contributed by: Joan Macomber. The Mission of the SETI Institute is to explore, understand and explain the origin, nature and prevalence of life in the universe. We believe we are conducting the most profound search in human history - to know our beginnings and our place among the stars. Check out the scientific lectures section.

<<http://www.seti.org/Page.aspx?pid=1241>>

-- March 7th -- SPACE

SATELLITE TRACKER, Spaceweather.com, contributed by: Keith McCain. US and Canadian readers, enter your zip code below, hit Go!, and you will find out what is going to fly over your area in the nights ahead. There are hundreds of satellites in Earth orbit; we cut through the confusion by narrowing the list to a half-dozen or so of the most interesting. At the moment we are monitoring spy satellites Lacrosse 3 and NOSS 2-1, the International Space Station, the ISS Toolbag, and the Hubble Space Telescope.

<<http://spaceweather.com/flybys/index.php>>

For more Earth Science Sites of the week, visit <http://groups.google.com/group/earth-science-sites-of-the-week>.



Earth Science Week
Monthly Update for July 2009

GSA Geoscientists
Reach Out to Educators

Teachers and students alike can learn a lot from the Geological Society of America (GSA), an AGI member society and Earth Science Week partner. GSA is an organization of geoscientists in industry, government, business, and academia who are committed to the ongoing professional growth of Earth scientists.

One of GSA's major education and outreach programs, the Teacher Advocate Program (TAP), provides "Explore Geoscience" CD-Roms, lesson plans, educational materials, and resource links for Earth science teachers. For more information on TAP, visit <http://www.geosociety.org/educate/tap.htm>. Teachers also can take advantage of GSA's Teacher GeoVenture trips, teacher workshops, and Distinguished Earth Science Teacher in Residence. GSA also offers a number of teacher awards and fellowships. See <http://www.geosociety.org/educate/> to learn more.

Students are encouraged to apply for GSA's GeoCorps America program, which works with the National Park Service, the Forest Service, and the Bureau of Land Management to place young geoscientists in geoscience-related positions at national parks. Find out more at <http://www.geosociety.org/geocorps/>.

GeoConnection Network:
Join on Facebook

You are invited to join the AGI Geoscience Workforce Program's GeoConnection Network on Facebook. Soon, the network will link you with all related university departments and AGI contacts.

Become a "fan" of GeoConnection, and you can receive updates about geoscience events, new data from the workforce program, and other intriguing geo-tidbits in your Facebook news feed. You can become a fan of GeoConnection by at <http://www.facebook.com/geoconnection/>.

To read the rest, and see past newsletters, visit this section of the Earth Science Week website.

JOIDES RESOLUTION

The “Joint Oceanographic Institutions for Deep Earth Sampling”, aka The JOIDES Resolution, was originally created to be an oil exploration vessel when it was built in 1978. In 1985 however, it began working for the Ocean Drilling program as a scientific research vessel. The ship is the only American vessel to do this kind of geological study.

If you travel to their website - www.joidesresolution.org - you’ll find a substantial amount of information on the JOIDES and its missions. From sampling the ocean’s microfossil level, to studying plate tectonics, the JOIDES Resolution has taken on many questions from the scientific community and come back with wonderful information. And the best part - you can read all about it on their website.

Here is the advertisement they sent us to pass along to you.

If you teach earth science, ocean science, the sedimentary record, tectonics, biology, chemistry, physics, or nature and process of science, extreme science or climate change then YOU need the JR.

The 470-foot JOIDES Resolution (JR) is one of the most important and largest earth and ocean science research vessels in the world. The JR is run by the Integrated Ocean Drilling Program and the core samples and data that its scientists and crew bring up from the seafloor hold exciting and significant clues to Earth’s history, climatic changes, geologic events, and much more.

NOW you and your students can get involved in this dynamic research through www.joidesresolution.org. On this interactive new site, you can ask real scientists questions, track the ship’s location, explore daily ship blogs, watch up-to-the-minute real time videos (be sure to check out PNN News on the home page!) and take advantage of other real time resources. Become a friend of the JR on Facebook, follow it on Twitter, and explore teaching activities for young children through college - including suggestions for how to use the website and real data from the ship. We also offer free posters, inflatable JR tracking globes, and other classroom materials. Check it out and pass it along!





For More Information

Future Newsletters

What is NESEN?

The Nebraska Earth Systems Education Network (NESEN) is a program within the School of Natural Resources (SNR), Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln. NESEN's goal is to improve linkages between K-12 educators and earth system science education resources.

For more information about NESEN, contact Dave Gosselin, NESEN director, (402-472-8919) dgosselin2@unl.edu; or Katie Hecker, NESEN project assistant, khecker@unlnotes.unl.edu.

The NESEN Newsletter is coordinated by Katie Hecker. Please send your earth science related news items and announcements for inclusion in our next issue to khecker@unlnotes.unl.edu. Digital copies are preferred however, hardcopy can be mailed or faxed to:

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