Nebraska Earth Science and Education Network
And
Laboratory Earth Alumni Association
NEWSLETTER
November 2008

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1. UNL Environmental Studies Program Under New Management.

Dave Gosselin was appointed the new Director of the Environmental Studies (ENVR) Program at the University of Nebraska-Lincoln this past July. His first action as the new director was to hire Sara Yendra, formerly of Southwest High School as the programs academic advisor. There is a growing demand for professionals who have the abilities and skills to deal with the complex nature of current and future environmental challenges. Dave and Sara want the ENVR program to become a major player in the preparation of students at UNL to face the wide range of environmental challenges and opportunities that they will experience in the future. Please check out one of the following sites to learn more the Environmental Studies program. http://tinyurl.com/53s8lk or http://www.casnr.unl.edu/workman/environmental_studies/adobe_intro/index.htm.

Also feel free to contact Dave or Sara with questions or refer students who might be interested in the environmental field to dgosselin2@unl.edu or syendra2@unl.edu.

2. Lab Earthlings – Stay Connected!

Those of us involved in the Nebraska Earth Systems Education Network are very proud of the Laboratory Earth classes we offer. Over 100 teachers from across the country have participated in these online, distance delivered courses. In order to allow the Lab Earth community to continue to develop, we have created the Laboratory Earth Alumni Association Facebook page. It's easily accessible, easy to use, and gives Lab Earth participants, both past and present, a place to go with their questions, answers, and insights.

See the NESEN web page to get directions to create a Facebook account and to enter the Lab Earth Alumni Association page. We hope to see you there!

3. Earth Science Sites of the Week (shortened for relevance)

FEATURES

GEOSPHERE
1) Patterns in geologic time
2) Edible earth
3) The race is on: Activity about seafloor spreading
HYDROSPHERE
1) Resources for discussing bottled vs. tap water
SPACE
1) 4D model: live model of Earth's ionosphere
2) Solar Observatory: educational activities
TEACHING
1) Jeopardy: Powerpoint templates for Jeopardy
2) Super Science Day: make the students experts

FEATURES

GEOSPHERE
PATTERNS IN GEOLOGIC TIME, ENSI, (Christie Brewster) You've got to try this new lesson, "Patterns in Time", posted on the ENSI site at
http://www.indiana.edu/~ensiweb/lessons/pat.in.time.html
EDIBLE EARTH FOR K-4, (Christie Brewster) Just got a link to this from a kindergarten teacher listserv I'm on and immediately thought of the mailing. Add it to your pile of edible science!
http://www.kidskreate.com/edible_earth.htm
THE RACE IS ON, Barbara Simon-Waters, (Michael Passow) The Oct 2007 "School of Rock Activity of the Month" features an activity about seafloor spreading called "The Race Is On," which you can access at
http://www.joiscience.org/learning/activityofthemonth/oct.

HYDROSPHERE
RESOURCES FOR DISCUSSING BOTTLED VS. TAP WATER, (David Robison)
http://tappening.com/
http://www.tappening.com/Why_Tap_Water
http://www.tappening.com/Why_Not_Bottled_Water
SPACE
4D MODEL, NASA (Bruce Goncer) NASA-funded researchers released to the general public a new "4D" live model of Earth's ionosphere. Without leaving home, anyone can now fly through the layer of ionized gas that encircles Earth at the edge of space itself. All that's required is a connection to the Internet. FULL STORY at
http://science.nasa.gov/headlines/y2008/30apr_4dionosphere.htm?list42572
SOLAR OBSERVATORY, SOHO (Mike Passow) Check out some of the NASA solar observatory and other educational activities. Here's a start:
http://sohowww.nascom.nasa.gov/classroom/sun101.html

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TEACHING

JEOPARDY, Amy Johns (Eddie Tabata) Here is a link to a site that hosts a variety of PowerPoint templates for Jeopardy.
http://teach.fcps.net/trt2/links/powerpointgames.htm

SUPER SCIENCE DAY, (Virginia Malone), have each student or pair of students become an expert about some local rocks, minerals, rock formations, plants, animals or whatever. On Super Science Day the students use their expertise to present to younger students. For more tips on how to pull off a Super Science Day check out.
http://wetheteachers.com/viewfiles.php?fid=328

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DEPARTMENTS

ANIMATIONS

MT ST HELENS DOME ANIMATION See a time lapse overhead view of the growth of the (new) Mt. St. Helens lava dome. It seems to be growing at the rate of 2 m3/second, and viewing this video makes that seem possible.
http://www.youtube.com/watch?v=rj9ahS4qtmc

QUIZ ON EARTHQUAKES, (Alice Kasten) This is a flash earthquake quiz that I haven't seen make the rounds before. Its good training for that inevitable What do you do after an earthquake question.
http://www.nwcn.com/sharedcontent/features/flash/quake/during.html

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4. Earth Portal

November 3, 2008

ENVIRONMENT IN FOCUS – This week Dr. Czech discusses the characteristics of a steady state economy as the main macroeconomic policy goal of ecological economics. Do not forget to explore top related websites and recommended reading among other features in this week's Environment in Focus.

THE ENCYCLOPEDIA OF EARTH --
Wikipedia with quality control. Among our most recently published and updated articles are:

- Heat island from the Environmental Protection Agency
- Global marine biodiversity trends by Drs. Enric Sala and Nancy Knowlton
- Energy profile of Russia from the Energy Information Administration
- Check out historical e-book Walden by Henry David Thoreau, 1854.

Contribute your expertise to the Encyclopedia of Earth, a comprehensive, science-based, online environmental information hub.

EARTH FORUM --
Have you ever wanted to pick the brain of an expert? Well here's your chance. Engage in discussions with experts on environmental issues – science, policy, news, something happening in your local community, or on any other topic of interest. Join discussions already going on:

- *Call for Exhibitors* by Cassandra Brunette
- *R&D on Ecosystem Services and Biofuels* by Dr. Sidney Draggan
- *Call for authors: SAGE Green Series* by Ellen Ingber

EARTH NEWS--
EarthNews gathers news from various sources, including hand picked stories by the experts to give you the most up-to-date information. Some big stories this week include:

- Fisheries are 'at the point of the sword' of ocean acidification
- 'Human fingerprints' evident as Arctic, Antarctic warm
- Combating desertification could help tackle other global crises – UN official

Read about recent events relating to a steady state economy around the globe.

- Toward a greener economy
- Special report: How our economy is killing the Earth
- Leading economists prescribe infrastructure projects, renewable energy for battling recession

5. NASA Educational Sites

For Students:
Grades K-4:
"What is Infrared?" – A cool page to help kids understand a type of light they can't see with their eyes.
(http://coolcosmos.ipac.caltech.edu/cosmic_kids/learn_ir/index.html)
Grades 5-8:
"The Scoop on SCUBAnauts" – SCUBAnauts are young marine science explorers who participate in actual underwater research. Ages 12-18.
(http://www.nasa.gov/audience/forstudents/5-8/features/the-scoop-on-scubanauts-58.html)
Grades 9-12:
"The Great Moonbuggy Race" -- The 16th Annual Great Moonbuggy Race will be held April 3-4, 2009 in Huntsville, Alabama, at the U.S. Space & Rocket Center. Students are required to design a vehicle that addresses a series of engineering problems that are similar to problems faced by the original Moonbuggy team.
(http://moonbuggy.msfc.nasa.gov/)

6. NASA Project INSPIRE!! An Opportunity for Students.

The Interdisciplinary National Science Project Incorporating Research and Education Experience, or INSPIRE, is a multi-tiered student pipeline program designed for students in grades 9-12. The application deadline is December 31, 2008.

As part of this program, selected students will:

--Learn about science, technology, engineering and mathematics, or STEM, fields of study and careers.
--Participate in the INSPIRE online community.
--Compete for unique summer experiences at a NASA facility.

Here are some of the students' comments regarding their summer experience this year:

"INSPIRE has been such an incredible and unique experience. Now I can say that I physically worked on a rocket. I could not ask for a better summer experience."

"Through this hands-on experience, I was able to more fully comprehend what I was reading. I could not have asked for a more interesting and fun job. I plan to major in aerospace engineering, and the internship is definitely a way to see whether that is truly what I want to do. This is my first introduction to the real world of business and office work. This gave me a good basic knowledge of planes and aerodynamics and how to handle office work."

"It was very cool to see all the aircraft, especially the ones that took off and landed during our trip on the flightline. The chance to go inside NASA's new Orion Crew Exploration

Vehicle was equally as exciting and fun"

During fall 2008, NASA will recruit students for INSPIRE's online community (OLC). Once selected to participate in the OLC, students will be invited in spring 2009 to compete for next year's summer experiences.

For more information on this fantastic program, please visit link below. Remember, the application deadline is Dec. 31!

http://www.nasa.gov/audience/forstudents/postsecondary/programs/INSPIRE_Project.html

Topic 7. Miscellaneous Resources

These websites and tools are also available on the NESEN website under …..

ASTRONOMY::
National Geographic – Our Cosmic Neighborhood.
All sorts of information on the solar system we live in, in great National Geographic style.
(http://science.nationalgeographic.com/science/space/solar-system)
HYDROSPHERE::
National Geographic – How Much Water Does the World Have to Go Around?
Articles on the abundance of water, but the little clean drinking water the world has today.
(http://www.nationalgeographic.com/signsandsolutions/)

MISC::
National Geographic – Natural Disasters.
Information on Tsunamis, Tornadoes, Hurricanes, Avalanches, Lightning, and Earthquakes. Some links even have interactive tools, like "Make Lightning Strike" or "Unleash an Avalanche".
(http://environment.nationalgeographic.com/environment/natural-disasters/)