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South Carolina Earth Science Teachers Association Newsletter

Reminders about the SCESTA's Share-a-thon

Please send a copy of your activity to Dr. Wagner (irwgnr@clemson.edu). He'll be sure to get it put on the website so that we can continue to help other teachers with tried and true activities.

Also, start thinking of a good activity to share at this year's conference. Charleston – here we come!

'Need to Contact an Officer?'

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Nominations for the Outstanding Earth Science Teacher for 2003 are now being accepted.

The nomination form will soon be posted on the SCESTA website. In the meantime, you can get a nomination form from Dr. John Wagner at Clemson University irwgnr@clemson.edu or the NAGT website <http://www.nagt.org>.

Earth Day 2003

April 22, 2003

Earth Day, which occurs annually on **April 22**, involves tens of thousands of events, from rallies and teach-outs to concerts and earth fairs. Earth Day events happen everywhere: in casbahs, capitals, villages, schools and temples. Together, we send a message that our planet is precious, perishable, and belongs to all of us. For information on national Earth Day events see: www.EarthDay.net

To find out about events in S.C. check out the following website: <http://www.scdhec.net/earthtoday/>

Also available in Acrobat format are the environmental glossary (<http://www.scdhec.net/recycle/forms/glossary.pdf>) and activity book (http://www.scdhec.net/recycle/forms/act_book.pdf).

Featured Resources

'Need help teaching those S.C. Geology standards? If you 7th and 8th grade teachers missed the presentation by Dr. Murphy and Donna Petty at SC², you can still find these activities on-line. These activities use Dr. Murphy's book - *Carolina Rocks!*, SCMAPS, and common household items. Find them here at :

http://home.usit.net/~carolina_rocks/

AGI – American Geological Institute

Look for great on-line activities at EarthComm and Investigating Earth Systems:

<http://www.agiweb.org/education/curriculum.html>

EarthComm is an Earth Science curriculum developed by the American Geological Institute (AGI) and supported by the National Science Foundation and donors of the American Geological Institute Foundation. Through EarthComm, AGI focuses attention on the national deficiency in high school Earth Science education (grades 9-12) and on development of a complete high-school Earth Science curriculum.

Investigating Earth Systems is a new, standards-based, Earth Science curriculum for the middle grades developed by the American Geological Institute in association with It's About Time Publishing.

• More Resources

EXPLORATIONS THROUGH TIME

(suggested by Rurik Johnson, Plymouth, MN) from University of California Museum of Paleontology, the site has a series of interactive, web-based K-12 educational modules that address topics such as fossils, the history of life, biological evolution, the science of paleontology and the scientific process. Each module targets a specific grade level and includes an extensive teacher's guide with suggested lesson plans, handouts and assessments. Topics include the fossil record, geologic time, cladistics, and evolution. (Audience: K-12)

<http://www.ucmp.berkeley.edu/education/explotime.html>

POSTGLACIAL FLOODING OF THE BERING LAND BRIDGE: A GEOSPATIAL ANIMATION

(suggested by Jennifer Mangan DLESE) from the University of Colorado, Geographic Information Systems (GIS) were used to create movies showing how the Bering Land Bridge evolved after the Last Glacial Maximum, about 21,000 years ago. Global sea level at that time was approximately 120 m (400 ft) lower than today. The Land Bridge existed as a vast tundra plain connecting Asia and North America.

As the world's glaciers and ice sheets melted over the following thousands of years, rising sea level flooded the Land Bridge -blocking migration routes for animals and humans. View the animation through large 3.8 MB, medium 1.6 MB, and small windows 0.5 MB (Audience: all)
http://instaar.Colorado.EDU/QGISL/bering_land_bridge/

These sites are archived at RESOURCES FOR EARTH SCIENCE AND GEOGRAPHY INSTRUCTION at
<<http://personal.cmich.edu/~franc1m/homepage.htm>>

The links are organized around the sequence of topics typically taught in an introductory earth science or physical geography class. Links are also, available for environmental science, earth science/geography education, career opportunities, and more. The sites selected are based on image quality, ease with which lesson plans can be developed, organization, authenticity, scope, and format.

Student Opportunities

From NASA:

[Robot Helper Design Challenge](#) -

Would you like to have your very own robot buddy that floats around and helps you out? Talks to you? Understands what you say? Finds the homework you lost? Students can participate in this design

challenge from NASA Quest. Sign up begins **March 3**. Supporting events last through **May 1, 2003**

<<http://quest.arc.nasa.gov/projects/space/robotdesign/>>

Call for Papers – Get Published!

The NSTA is looking for Earth Science teaching or lesson articles for their magazines. Please send your submission to:

Janet Gerking, NSTA Editor
443 Valley Stream Dr.

Geneva, FL 32732

Phone: (407)349-9093

Fax: (407)349-9094

jgerking@nsta.org

Upcoming Courses and Workshops of Interest to Earth Science Teachers

If you know of any courses or workshops we can post here, please send the info to dpetty@usit.net and/or danielg@clermson.edu. We'd love to pass it on to teachers, etc. **Check with the following Colleges and University Geology Departments to find courses of interest to you!**

[Charleston Southern University](#)
[The Citadel](#)

[Clemson University](#)
[SCMaps/SC Life Courses](#)

[Coastal Carolina University](#)
[Coker College](#)
[College of Charleston](#)
[Erskine College](#)

[Francis Marion University](#)
[Furman University](#)
[Lander University](#)
[Newberry College](#)
[Presbyterian College](#)

[South Carolina State University](#)

University of South Carolina

[Columbia campus](#)
[Aiken campus](#)
[Beaufort campus](#)
[Lancaster campus](#)
[Salkehatchie campus](#)
[Spartanburg campus](#)

[Winthrop University](#)

[Wofford College](#)

Roper Mountain Science P.L.U.S.

Visit this web site for this summer's course offerings and an application:

<http://www.ropermountain.org/PLUS/coursedescriptions.shtml>

Volunteer Newsletter Editor and Webmaster Needs Your Help

Any news? Do you have your own class website? Do you know of good links or other resources we can pass on? Please drop us a line! Both the website and the newsletter are only as good as you make them by letting us know what is important to you. Together we can be a strong force for Earth Science education in South Carolina! Please send your news, as it happens, to: dpetty@usit.net and/or danielg@clemson.edu

Thanks!

Donna & Tex

Check Out These Sites for Freebies (or almost free stuff)!

- **Resource Guide for Teaching Astronomy Through Science Fiction**

A new annotated topical index to science fiction stories and novels that use good astronomy can be found on the education web pages of the nonprofit Astronomical Society of the Pacific (an NSTA Associated Group). The guide currently has 195 entries organized into 40 categories, ranging from "anti-matter" to "Venus." It includes stories and novels by scientists (some writing under a pseudonym) and by other writers who pay attention to the accuracy of their science. The stories and novels listed deal with such topics as the dangers of asteroid impacts and exploding stars, the future exploration of Mars, the search for intelligent life in the universe (and the forms it might take), and a look at what it would be like to live among the rings and moons of the outer solar system.

Though not designed as a complete index, the guide highlights stories that teachers have found particularly useful for making scientific ideas come alive for non-science students. Access it at www.astrosociety.org/education/resources/scifi.html.

- **The Environmental Research and Education Foundation's Educational Activities for Secondary Schools**

You'll find these activities on www.erefndn.org (see link on the right-hand side of the web page). Activity 1 deals with Landfills. Activity 2 concerns packaging and transporting municipal solid waste and hazardous waste. Classes who complete the activities will receive a Certificate of Completion from EREF.

For grades K-5, EREF offers its Solid Choices curricula, also available on the website. All EREF materials can be downloaded as pdf files.

- **Testing To Assure Mission Success—A Look Inside Los Alamos National Laboratory**

McREL Genesis Education and Public Outreach has released a new Genesis mission video that documents work done for NASA's Genesis mission at Los Alamos National Laboratory in Los Alamos, NM. The video comes with a teachers guide and student activity. Read more about the video, and access it online at www.genesismission.org/product/lani_video_product.html.

- **"Free Stuff" from the PALEOMAP Project**

This project aims to illustrate the plate tectonic development of the ocean basins and continents, as well as the changing distribution of land and sea during the past 1,100 million years. Visit www.scotese.com/free_stuff.htm for instructions for making your

own Pangea Antenna Ball.

The website also offers free Earth System History-GIS Time Slices. Each time slice consists of the reconstructed positions of present-day continental coastlines, shelf margin, major tectonic boundaries, active plate boundaries, and seafloor spreading isochrons. Because the shapefiles are in decimal latitude and longitude (geographic coordinates), they can be easily transformed to other map projections.

To request a free time slice, you must have ArcView 3.x installed on your machine. Choose one of the following time slices: Present-Day, Late Cretaceous (K/T Boundary), Pangea (Late Permian), Rodinia (Late Precambrian), or Pangea Ultima (+250 million years in the future). Call 1-888-288-0160, or e-mail info@scotese.com with your request.

- **Pathfinder Teaching and Learning Units**

Science curriculum materials that address island environmental issues are now available free online at www.prel.org/products/ms_pathfinder/pathfinder.htm. The Pathfinder Teaching and Learning Units present important scientific concepts in Pacific Island learning contexts and engage island values, such as careful stewardship of the home environment. These standards-based instructional units were developed by Pacific classroom teachers as part of the Operation Pathfinder Institutes sponsored by the Pacific Mathematics & Science Regional Consortium at Pacific Resources for Education and Learning and the University of Hawaii Sea Grant College Program.

The Pathfinder Teaching and Learning Units are available as a printed publication or as HTML and PDF files. For more information, e-mail askmathsci@prel.org.

- **Geoblox offers two free paper models** on their site: the composite cone volcano (<http://www.geoblox.com/color>

[olcano2.pdf](#)) and a groundwater model (<http://www.geoblox.com/jones/spring.pdf>).

- **NASA El Niño Poster and Activities**

<http://topex-www.jpl.nasa.gov/education/el-nino-poster.html>

- **LA Coast Free Offers**

Teachers can request a variety of items in support of wetlands education from the Louisiana Coastal Restoration Web Site. <http://www.lacoast.gov/FreeStuff/>

- **Earth Today TV Show**

"Earth Today" is a half-hour program that will feature student anchors and reporters in a network morning news program format that will provide segments on a variety of environmental issues including air and water quality, energy conservation and recycling.

"Earth Today" will air statewide on **April 22, 2003**, beginning at **1 p.m.** on all **South Carolina ETV** stations. Teachers will be able to download lesson plans developed on the segments - correlated to the South Carolina Science Standards - along with pre- and post-tests at www.scdhec.net/earthtoday in late March.

"Earth Today" has been developed by the S.C. Department of Health and Environmental Control, S.C. Energy Office, Palmetto Pride: The Governor's Council on Beautification and Litter, South Carolina ETV and Instructional Television, the US Environmental Protection Agency and International Paper. For more information please call or email Holly Storey National ARD Board Member SC ARD Coordinator "Make Every Day America Recycles Day" SC Department of Health and Environmental Control Office of Solid Waste Reduction and Recycling 2600 Bull Street Columbia, SC 29201; phone 803.896.4233 or 1.800.768.7348 fax = 803.896.4001 storeyhl@dhec.sc.gov

- **Teacher Grant Award Application (2002-2003)**

(SC)2 is pleased to offer its members a teacher grant for up to \$1,000 to support classroom innovations and projects. This grant is a tradition for our organization. If you have a special project or program in working with your students that equires funding outside of your normal school

resources, consider applying for this grant. It will support materials, equipment, purchased services, substitutes or consultants and travel costs associated with your project.

This grant supports projects for the 2002-2003 school year and should be completed by October 1, 2003. Because award notification is June 15, 2003, funded projects can be extended until April 1, 2004.

To apply: go to the (SC)2 webpage - www.scscience.org - for the application or email Leslie Sanford - sanford@earthlink.net - for more information.

- **SC LIFE Virtual Field Trips**

The SC LIFE Project at Clemson University has completed its second virtual field trip, "The Cove Forest." This resource will be posted shortly on the SC ETV website <<http://www.knowitall.org/sclife/>> joining "The Salt Marsh" as the first group of several virtual field trips highlighting the various natural habitats of South Carolina. Most SC LIFE study areas are correlated with SC MAPS Study Sites.

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