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South Carolina Earth Science Teachers Association Newsletter

Highlights from the Annual Meeting at SC²

On November 2, 2001 we had our annual meeting at the SC² Conference at Myrtle Beach Convention Center. The following will continue to serve the second year of their term as officers:

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Sixteen members were in attendance.

Treasurer Leslie Sanford reported that we have \$1,049.14 in our account. This amount has built up substantially in the last couple of years because the Department of Geological Sciences at Clemson University has been printing and mailing our SCESTA newsletter for free. Now that Geology at Clemson has been merged with Environmental Engineering, we are not sure whether this arrangement will continue. This year for the first time, SCESTA had to pay for display space in the exhibit hall. The officers were asked to explore ways that the surplus could be most productively used. One suggestion was to "sweeten the pot" of the Earth Science Teacher Award since we're not sure about continued contributions from the Mining Association. Tom Littlejohn volunteered to donate something for the first "Golden Pick Award".

Rick White resigned as newsletter editor. After much discussion about the need for a newsletter, Donna Petty agreed to take on this task and complete his term.

Phil Astwood agreed to ask the S.C. Mining Association if they would be willing to cover costs of the SCESTA display at future SC² meetings.

The group discussed the future of the organization. Several people noted that "earth-science" teacher doesn't mean the same thing as it once did, before the new curriculum standards scattered earth science topics across all grade levels. However, this means that many teachers who never had an earth science course are now teaching earth science topics in the classroom. It was determined that SCESTA still has an important role to play in providing resources and moral support to these teachers. The group decided that SCESTA should sponsor a "Share-A-Thon" of activities for Elementary Teachers to use to address their Earth Science Standards during next year's SC² convention. Tom Littlejohn volunteered to fill out the proposal form and submit it to the Program Chair for next year's meeting. Plans are to charge \$5 per ticket (which includes membership in SCESTA). The officers will coordinate with Tom Littlejohn to solicit commitments from SCESTA members to present activities at this session. **Please take a look at their standards and come up with some sort of activity for this – we'll give you more details later.**

New Webmaster to Help with the SCESTA Website

The SCESTA website has been re-activated and updated. A Clemson Junior, Tex George, is serving as webmaster as part of his duties under an NSF grant headed up by Dr. John Luedeman and Dr. John Wagner. Tex is a geology major and is enrolled in the honors program at Clemson. Please take some time to check out the website at: <http://www.ces.clemson.edu/scesta/>

The purpose of the website is to provide Earth Science Teachers with:

- Up-to-date information and news about Earth Science
- A resource to share ideas for teaching Earth Science topics
- News and events associated with SCESTA

Drop him a line at: danielg@clemson.edu or call him at (864) 646-5414 with any suggestions or additions for the web page. **Be sure to give him the URL for your class web page!**

Earth Science Teacher of the Year Announced

The winner of the Outstanding Earth Science Teacher Award for 2001 is Susan Yelton of Dent Middle School in Columbia. Susan has taught for 22 years and is described by her colleagues as an experienced teacher who leads teachers as well as students in worthwhile learning experiences. Ms. Yelton believes that the hands-on approach provides the most opportunities for a meaningful learning experience. A field trip to Forty Acre Rock, participation in Sesquicentennial Park's Archeology Day, and Physics Day at the State Fair are just a few examples of the inquiry experiences that Susan and her students have taken part in.

Susan models a positive attitude and is a terrific role model to others. She has participated in the Curriculum Leadership Program through the MIMS Hub, serves as a teacher board member for the Clemson University Sandhills Research and Educational Center to design and develop outdoor classrooms, and coached a team of students that received semifinalist status for the Bayer/NSF Award. Ms. Yelton is always willing and eager to share her expertise with not only her students and fellow teachers, but also student teachers that are seeking guidance to become effective educators.

Susan was presented with the award at the December 11 School

Board meeting in Richland District 2. She received a plaque from the National Association of Geoscience Teachers, a subscription to the Journal of Geoscience Education, a set of rock bookends and a check from the Carolinas Section of the Society of Mining Engineers, and a check from the Mining Association of South Carolina.

Nominations for the Outstanding Earth Science Teacher for 2002 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 jrwgnr@clemson.edu.

Earth Day 2002

April 22, 2002

Earth Day is April 22, 2002. To get a resource guide, booklet, schedule a program through DHEC, or to find out what events are taking place across South Carolina, visit the following website: <http://www.scdhec.net/earthday/>

For information on national Earth Day events see: www.EarthDay.net

Featured Resources

Have you seen the wonderful geology education slides on the **SCDNR's Earth Science Education Teacher Outreach** page? These are correlated with our State Science Standards and can make wonderful overhead transparencies! See them at: <http://water.dnr.state.sc.us/geology/Teacheroutreach.htm>

The **High School Earth Science Project** from USC's Center for Science Education is available on the web. New modules will be added soon. The address is: <http://cse.psc.sc.edu/hses/>

Barrick Goldstrike Exemplary Elementary Earth Science Teaching Award
<http://www.nsta.org/182>

This award is given to an elementary science teacher who has demonstrated exemplary earth science (specifically environmental or geology) teaching practices in one or more of the following areas: innovative design and use of hands-on earth science materials; creative design and implementation of earth science lesson plans/curriculum; and fostering student, school, and school-community instructional programs in elementary earth science.

SCIway.net's second annual Web Design Contest for South Carolina K-12 students

is now under way. To take part in this contest, a student design team must create a web site about a South Carolina topic. Contest rules and an online entry form can be found at <http://sciway3.net/2002/rules.html> . Cash prizes and trophies will be awarded in three divisions: grades 1-5, 6-8, and 9-12. Last spring more than 100 South Carolina student design teams entered SCIway's first Web Design Contest, and 18 teams won \$4,200 in prizes. You can find the winning sites at <http://sciway3.net/2001/> .

Share Your Best Practices!

Don't ya just despise seeing lessons or activities that sound like they would never work with your students? You have the voice of experience and we need your expertise. We'd like every member of SCESTA to share one of their favorite lessons, activities, or other tips through the newsletter.

This edition's contribution is from Nancy Parson:

Density lab

Standards: Standard III, b. 1 Earth's layers.

Objectives: To understand the concept of density in relation to the rocks that make up the Earth.

Materials: balance, graduated cylinder, granite, iron and basalt samples, overflow cans

Procedure: Demonstrate how to use the overflow can to determine volume of the samples.

Demonstrate how to measure the mass of the samples. Discuss how data should be recorded.

Student task:

1. Find the mass of each sample, and record.
2. Find the volume of each sample, and record.
3. Calculate and record the density of each sample by using the following formula: density = mass / volume.
4. Clean up the work space and answer the following questions.
 - Would the density of larger samples of basalt have the same or different density? Explain why you gave your answer.
 - Where is each rock type found in the Earth?
 - Using your data what is the average density of the Earth materials you tested? How does that compare to the average density of the Earth?
 - What happens to density of the rocks as you go deeper into the Earth?

Assessment: Performance assessment in finding density of other objects using the same tools.

Thanks Nancy!

Upcoming Courses and Workshops of Interest to Earth Science Teachers:

- **SMED 520: Earth Science for Teachers I** (grades 3-8) will be offered in Florence at West Florence HS beginning Jan 17 from 4-7 p.m. Contact Ned Owings at Florence District One for registration. Phil Astwood will be instructing this. Register through USC.
- **NASA, Earth System Science Online Recertification Courses for**

Teachers

Both courses, one on a high school level and one on an elementary level, will run 14 weeks and use an open-ended approach to explore Earth system science content as well as related teaching and learning issues in the classroom. Course Dates: January 21, 2002 to May 16, 2002 Course Costs and Credit: \$343.25* for 3.0 Graduate Credits, or \$25.00 for 4.5 CEUs, and \$75.00 for Books, Curriculum, and Materials. For more details, visit: <http://www.gma.org/essea> For more information or to register: e-mail Thomas Farmer (onlinecourse@gma.org), or call the Gulf of Maine Aquarium at (207) 772-2321

• **Spring Distance Learning Course - SCMAPS**

Clemson University is now accepting applications for GEOL 790, SC MAPS Distance Learning Course for Spring Semester, 2002. This 3-credit graduate course for teachers is subsidized by a grant from the South Carolina Department of Education and costs only \$75 (plus \$40 fee if you have not taken a Clemson course in the past 5 years). There are ten units to choose from (six geographic and four thematic) which provide a standards-based, content-intensive look at the geology and geography of South Carolina.

You must have at least four teachers enrolled from your school or district to constitute a local group (a significant amount of group work is required) or be willing to travel to a nearby district to work with another group. E-mail and internet access (home or school) is also required. Additional information and registration forms are located on the SC MAPS website <<http://www.clemson.edu/scmaps>> ; or you can contact the SC MAPS Project Office at Clemson University <mannett@clemson.edu> (864) 656-1560 for more details. Class group arrangements will be

finalized by mid-January. The course will begin shortly thereafter. Course counts for recertification credit.

- **SC MAPS Workshops** are now being scheduled for winter and spring. Offerings include the traditional 2.5 day workshops (Expanded Workshop), abbreviated one-day sessions (Introductory Workshops), and one-day Update (Advanced) Workshops for folks who already have gone through a training session. Information on all these sessions can be found on the SC MAPS website

<http://www.clemson.edu/scmaps>.

- **The CESE Meeting** is in January in Maryland at the Goddard Space Flight Center.

- **The SC Earth Physics Project** (SCEPP) will be conducting training next summer. Contact Tom Owens or Jim Bartholomew at USC for more information.

Volunteer Newsletter Editor Needs Your Help

Are you an Earth Science enthusiast like me? I am, and I suppose that is why I volunteered to help with the newsletter. The problem is – I have no psychic

abilities whatsoever – that is why I need you to send me any news that you may think has some value to other earth science teachers like yourself. 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 . Thanks!

Donna M. Petty

Walking with Prehistoric Beasts Video Set Coming Soon!

After finding “Walking with Dinosaurs” to be such a great asset when doing my Paleontology unit, I’m looking forward to seeing Discovery Channel’s latest – “Walking with Prehistoric Beasts”

Check out:

http://shopping.discovery.com/stores/servlet/ProductDisplay?catalogId=10000&storeId=10000&productId=14909&langId=-1&categoryId=11496&parent_category_rn=1117

for information on ordering this and/or the book or board game.

FUTURE NEWSLETTERS WILL BE SENT ELECTRONICALLY (e-mail).

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

- <http://www.engr.ncsu.edu/mrl/freestuff.html>

- http://www.tufts.edu/as/wright_center/svl/posters/posts.html

- <http://www.flinnsci.com/homepage/free/freeform.html>

- <http://www.mii.org/posterpackets.php>

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

- <http://ourworld.compuserve.com/homepages/CVisco/free.htm>

- The **Viking** 20th Anniversary Education CD-Rom is available from the Center for Mars Exploration. Send a letter explaining how the CD would be used in the classroom and specify Mac or Windows format. Center for Mars Exploration, Mail Stop 245-1, Moffett Field, CA 94035-1000, 415/604-4217. Send E-mail to cmex_cd@barsoom.arc.nasa.gov

SPECIAL NOTE: SCESTA has a list-serve. If you're not on this list, please send your e-mail address to Mannetta Shusterman <mannett@clemson.edu>.

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