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**WWW . . .**

NAGT  
[www.nagt.org](http://www.nagt.org)

SE-NAGT  
<http://facstaff.gpc.edu/~pgore/nagt/se-home.html>

Geological Society of America  
[www.geosociety.org](http://www.geosociety.org)

US Geological Survey  
[www.usgs.gov](http://www.usgs.gov)

Earth Science Week  
[www.agiweb.org](http://www.agiweb.org)  
[www.earthscienceworld.org](http://www.earthscienceworld.org)  
[www.earthsciweek.org](http://www.earthsciweek.org)

**Summer-Fall 2009 Newsletter  
Deadline:**

**August 15, 2009.** Please send  
news items to Bill at  
[wITHERSPOONB@FC.DEKALB.K12.GA.US](mailto:wITHERSPOONB@FC.DEKALB.K12.GA.US)

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## President's letter

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A few days ago one of my students asked me how I ended up as a geologist... I think they assumed that I had a life long love of dinosaurs or started collecting rocks as a child. None of that is true. I took an earth science class in High School, but never considered the possibility of going into it as a profession. My dad was an engineer, and that seemed like a good career for a girl who liked science and was good in math.

I moved to Georgia to study civil engineering. Almost two years into my program I finally got around to taking one of the required courses, Rocks for Jocks (formally known as Intro Geology). That class changed my life... I ended up changing majors, changing schools, and starting down a career path that still doesn't seem like a "job".

Members of our organization appreciate the art of teaching and know how important it is to our students... not just the ones that come into our classes knowing that they want to be geologists. Just as important are the ones who come into our classes and discover a course of study that they never knew existed. We can introduce them to a new passion that can last a lifetime, even if they don't end up making it a career as we did.

Andy Rindsberg will be heading up SENAGT for the next two years. I have had the pleasure of taking one of Andy's paleontology workshops, and have first-hand experience of his skills as both a paleontologist and a teacher. As I leave I want to thank each of you for supporting NAGT through your membership. And most of all I want to thank that teacher all those years ago who introduced me to the Earth as I had never seen it before and ended up changing my life.

*Nan*

Nan Huebner  
Atlanta, GA  
March 2009

# ESLI and Energy Geoscience Literacy at SEGSA

by Bill Witherspoon

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In the previous issue I proposed an SENAGT-sponsored session at Southeastern GSA on “Energy Geoscience Literacy: What should Teachers, Students, and the Public Know?” This session will take place on Friday morning, March 13.

After last fall’s article was written, I became aware of the Earth Science Literacy Initiative (ESLI; <http://earthscienceliteracy.org/>) This NSF-funded project is defining “Big Ideas” and supporting concepts that all Americans should know about Earth sciences. It dovetails with similar efforts in the Ocean, Atmosphere, and Climate communities. ESLI will serve as a springboard for Friday’s session, as we discuss what additional geoscience concepts the public and our students should master in order, for example, to evaluate statements about energy made by politicians and others in the news media.

The lead author of ESLI, Michael Wyssession, will be sending a poster explaining ESLI to SEGSA’s Thursday afternoon Geoscience Education poster session. He had a previous commitment and will not be at SEGSA, but I will be at his poster between 1:30 and 3:30 to discuss the initiative. I will pass along a summary of any discussions to him. Dr. Wyssession is also my co-author on the wrap-up talk at the end of Friday’s Energy Geoscience Literacy session.

## MEETING CALENDAR

### Most recently reported dates of past or future meetings

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National Science Teachers Association and Affiliates		
Area	Latest date on web site	City
National	Mar. 18–21, 2010	Philadelphia
Southern	Nov. 12–14, 2009	Fort Lauderdale
Alabama	Sept. 30 - Oct. 1, 2008	Birmingham
Florida	Oct. 23-25, 2008	Orlando
Georgia	Feb. 12-14, 2009	Savannah
Louisiana	Nov. 1-3, 2007	LaFayette
Mississippi	Oct. 20-21, 2008	Jackson
North Carolina	Nov. 19 - 20, 2009	Greensboro
Puerto Rico	March 15-16, 2007	Bayamon
South Carolina	Oct. 22-24, 2008	Myrtle Beach
Tennessee	Nov. 6-7, 2009	Franklin

Geological Societies		
Organization (Area)	Latest date on web site	City
GSA (National)	Oct. 18-21, 2009	Portland, OR
GSA (Southeastern)	Mar. 12-13, 2009	Tampa
GSA (South Central; incl. LA)	Mar. 15-17, 2009	Dallas
Georgia Geological Society	Oct. 17-19, 2008	Cartersville
Carolina Geological Society	Nov. 6-8, 2009	Columbia

## Congratulations 2008 OEST Award Winners!

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This year we did not get the jump on the NAGT publication, the *Journal of Geoscience Education*, in congratulating the Southeast winners of the Outstanding Earth Science Teacher awards. In the better-late-than-never department, here are the inspiring stories of this years OEST's. Congratulations to Tina Coleman who is the 2008 Southeastern Section OEST. State winners are:

Alabama	Jennifer Grant
Florida	Kathryn Bylsma
Georgia	Rebecca E. Chunn
Louisiana	Wendy DeMers
North Carolina	Robert Greenberg
South Carolina	Dina Ledford
Tennessee	Tina Coleman

### Tina Coleman (Southeastern Section and Tennessee)

Tina Coleman's teaching career began when she was 9 years old, while playing school with her little sister. Tina taught her to read, an experience she will never forget. When not playing school, Tina was exploring the banks of the Mississippi River and frustrating her mother by bringing home every piece of rock or interesting piece of debris she could find.

Upon entering the University of Tennessee at Martin, she was able to find a niche where her love of rocks and earth materials actually made sense. From there she set out to pursue her dream of making a difference in the lives of students and ended up at Martin Middle School, a small rural school in Martin, Tennessee. Once there, she wrote a Goals 2000 Grant for an integrated science and math lab and was able to secure the tools necessary to implement an inquiry based approach. Through a variety of teaching strategies and by providing students with real-life experiences and connections, each student becomes successful in her classroom.



Tina's science classroom centers around a discovery center where she has trays of fossils, rocks, minerals, sand, seashells, crystals and a variety of other items she has collected throughout her travels and professional development experiences. She states, "My students are enthralled with the various items in our classroom collection. Many of them have never experienced the feeling of running their hands through sand on a beach or the chance to examine volcanic rock in a natural setting. In my classroom I am able to give them a taste of what it is like, instilling within them a dream to one day explore on their own, instilling within them a life long love for learning." Tina's greatest satisfaction comes from those students who cross her path later in their lives and tell her their life is better because she was their teacher.

## Jennifer Grant (Alabama)

Jennifer Grant has taught eighth grade earth science for fourteen years at Montgomery Academy in Montgomery, Alabama. During her childhood, her family moved frequently, but the one constant was a home environment where dinner table conversation centered around science and technology issues related to her father's work on the U.S. nuclear program. As a result, she has had a passionate interest in science ever since and graduated first in her class at the University of Florida.

Jennifer enjoys teaching and appreciates the opportunity to influence students, expose them to new ideas, emphasize the importance of education to their future, and make them more aware of their environment. She has shared with her students her passion for fossil digs and conservation of wildlife and natural resources. In her spare time, Jennifer enjoys organic gardening, raising chickens, and training dogs for competition in agility and obedience.



## Kathryn Bylsma (Florida)

For the past 15 years, Mrs. Kathryn Bylsma has been facilitating learning for Pasco County students at the elementary and middle school levels. Currently, she is sharing the new state standards with sixth, seventh, and eighth grade gifted students at Dr. John Long Middle School. She recognizes that a rigorous and relevant curriculum is necessary for depth of content understanding as well as improved thinking skills.

Though various grant programs, students at Long Middle School are developing an interpretive nature trail to support existing interdisciplinary environmental curriculum topics across grades six through twelve. Mrs. Bylsma also facilitates professional development opportunities that support teachers as learners, a necessary ingredient of effective inquiry-based education.



After completing a master's degree in middle school science curriculum, Mrs. Bylsma intends to create an informal science learning center for students that will also provide professional training for teachers

## **Rebecca E. Chunn (Georgia)**

Mrs. Rebecca E. Chunn has been teaching at Glynn Academy in Brunswick since Fall 2007. Previously, she was at Griffin High School where she taught a majority of her classes bilingually (English and Spanish).

Rebecca has been featured in a national teacher training video on Understanding by Design for the Association for Supervision and Curriculum Development. She has been asked by the Georgia Department of Education (DOE) to help write performance standards for Geology and other courses and has developed curricula using topographic mapping techniques and GPS to assist students in mapping their own school and/or neighborhood.



Rebecca employs a variety of teaching techniques, but her teaching philosophy is simple. “All students have a right to learn and be taught in a way that appeals to them.” Students often remark that they were having so much fun that they didn’t realize that they had actually learned so much.

## **Wendy DeMers (Louisiana)**

Wendy DeMers teaches middle school science at Edward Hines Charter School in New Orleans. The 32 year veteran’s mission is to make middle school science both fun and challenging. Wendy seeks to provide a variety of activities geared to meet a wide range of interests, learning styles, and abilities, and believes in building a connection between concepts and skills learned in the classroom and their relevance to real life needs of her students and her students’ families.

Wendy has attained National Board Certification for Middle Childhood and has begun a second certification in Early Adolescence Science. Among other community and state activities, Wendy is a member of the Louisiana Earth Science Teachers Association, a board member of the Louisiana Science Teachers Association, and has served as a NSTA Middle Level Science Committee member. Wendy is a 2004 Presidential Awardee and was recently chosen as Louisiana Middle School Teacher of the Year.



## **Robert Greenberg (North Carolina)**

Robert Greenberg has a Bachelor's degree in Geology and has worked as a hydrogeologist. Rob is currently working on his Masters in Science Education. His research topic focuses on ways to guide and support students as they work on their high school graduation research projects.

Before becoming a formal teacher, Rob was part of the education team at the Museum of Life and Science in Durham. He has been an earth and environmental science teacher in the Chapel Hill–Carrboro City Schools for the past thirteen years. He has developed and led numerous geology field trips in the state and across the country. In 2006, he guided his students in building a biodiesel fuel processor, which was later donated to the Forest Foundation of Durham. This type of collaboration, between high school students and the community, has led to the annual 'Celebration of Earth and Sky' event, now in its fourth year.



## **Dina Ledford (South Carolina)**

Dina Ledford taught eighth grade earth/space science for eight years before moving to the high school level where she now teaches a variety of science courses including earth science and astronomy at Fort Dorchester High School. In all, she has taught in the Dorchester County school system for fifteen years.

Dina's goal in teaching science is to facilitate her students' ability to investigate concepts as 'real' scientists do in the real world. She cultivates their curiosity in the world around them to help sharpen inquiry skills and tries to instill in her students a life-long love of learning. To keep her teaching relevant, and to feed her own curiosity, she looks for ways to incorporate technology and authentic research activities into all her classroom investigations.

Dina is a past-President of the South Carolina Earth Science Teachers Association and was a 'NASA MESSENGER Fellow'. She has also run several local training workshops for her fellow teachers.



# Regional News in Geoscience Education

**Alabama** (submitted by David C. Kopaska-Merkel)

## State

The State of Alabama is experiencing a hiring freeze. This reduces job opportunities for geoscience students and recent graduates. School systems throughout the state are suffering layoffs. I don't know that geoscience teachers have been laid off, but many nonessential personnel have been and earth science is not a core course.

I learned a few days before submitting this update that an "Academic Freedom Act" has been submitted by Alabama state Rep. Grimes as HB300. I have not seen the wording, but I expect this bill is like the others that have been submitted in nearly every recent year.

## College

The Geology, Geography and Meteorology department of the University of South Alabama, which in recent years has had an active educational outreach program, has cut back. They have been proactive, but now provide community support only when asked.

## K-12

Earth science education at the pre-college level is limping along in Alabama. At least once a month I'm contacted by a home school parent or teacher who wants information needed for teaching some aspect of earth science. Recently, a new teacher e-mailed me because she was about to begin teaching geology. That's good news, but she had no training or experience in the subject, which is typical for people who end up trying to teach it. No matter how dedicated or intelligent she is, her lack of formal training is going to be a big handicap.

## Other institutions

The Encyclopedia of Alabama (<http://encyclopediaofalabama.org/>) has a few earth science entries new since the last time I checked.. These are entries about minerals of Alabama, the Hodges meteorite, and the Wetumpka meteor crater, all listed here:

<http://eoa.duc.auburn.edu/face/Categories.jsp?path=GeographyandEnvironment/TheNaturalEnvironment-1/Geology-1/>.

The two amateur paleontological societies, APS and BPS, continue to hold monthly field trips and public lectures. APS has also gone monthly to the Minkin Site as part of their ongoing project to salvage Carboniferous vertebrate trackways and other fossils.

[www.alabamapaleo.org/](http://www.alabamapaleo.org/)

<http://bps-al.org/>

## Lectures and workshops

ALLELE lectures on evolution <http://bama.ua.edu/~evolution/index.html> resume at the University of Alabama March 9, 2009. We don't have the schedule up on the website yet, but here is last year's schedule: <http://bama.ua.edu/~evolution/schedule.html>

Fossils of the Black Belt, a one-day field workshop for teachers held each October, will continue in 2009.

Contact me for information.

David C. Kopaska-Merkel

Geological Survey of Alabama

[dkm@gsa.state.al.us](mailto:dkm@gsa.state.al.us)

**Florida** (no information submitted)



## Georgia (submitted by Bill Witherspoon)

### Georgia Science Teachers Association

The GSTA met in Savannah in mid-February to some lovely spring-like weather, suitable for the free passenger ferry crossings from the convention center to River Street. There were several earth science gems for those who attended sessions and exhibitor booths.

Jan Rebel of Gwinnett County Schools presented some remarkably sophisticated 6<sup>th</sup> grade Earth Science student project examples. Carol Potter, a Gwinnett County High School teacher, shared her creative *Evolve!* board game for high school biology students.

At the Valdosta State University booth, Dr. Leslie Jones autographed and gave away copies of *Teaching about Scientific Origins: Taking Account of Creationism*, an anthology of advice for teachers funded by a US Department of Education Teacher Quality Grant.

One of the general session speakers was Dr. Francis Eberle, the new NSTA Executive Director, who identified himself as having a geology background, and who mentioned both Energy and Climate Change as among a handful of focus areas for NSTA work that lies ahead.



At the GSTA awards banquet, Dr. Pamela Gore and 2006 OEST Bill Waggner presented the 2008 Georgia OEST award to Rebecca Chunn.

### Georgia Geological Society field trip

The Georgia Geological Society visited the Georgia Valley and Ridge for the 2008 Annual Field Trip (October 17-19). The trip, entitled "The Emerson-Talladega Fault, the Great Smoky Fault, and adjacent Folding and Faulting: Geology and Historical Interpretations based on detailed Geologic Mapping in Polk and Bartow Counties, Georgia," included visits to ochre pits of Bartow County led by New Riverside geologist Stan Bearden, and dueling interpretations along the Emerson-Talladega fault south of Rockmart, courtesy of Randy Kath, Tom Crawford, Tim Chowns, and Jim Tull.

### Tellus Museum is open

Cartersville's Tellus Museum, previewed in the previous issue of this newsletter, opened in January. Its extensive mineral and fossil galleries, planetarium, and observatory are described on the updated web site at <http://www.tellusmuseum.org/>. The museum has a fossil dig and gem panning area sponsored by Vulcan Materials.

### Fernbank Museum of Natural History hosts new dinosaur exhibit

*Dinosaurs: Ancient Fossils, New Discoveries* is on view at Fernbank Museum through August 16, 2009. This exhibition from the American Museum of Natural History explores "how scientists are reinterpreting many of the most puzzling dinosaur mysteries—how they looked, how they behaved, how they moved, and whether they are really extinct."

**Louisiana** (no information submitted)

**Mississippi** (no information submitted)

## **North Carolina** (submitted by Randy Bechtel)

### **NC Science Teachers Association Professional Development Institute (NCSTA-PDI) in 2008**

The N.C. Science Teachers Association Professional Development Institute was held in conjunction with the National Science Teachers Association (NSTA) Area Conference in Charlotte, N.C. Oct. 28 – Nov. 1, 2008. Attendance was estimated at 3,400 teachers from across the country.

The N.C. Geological Survey, or NCGS, partnered with Society for Mining, Metallurgy and Exploration/ Women in Mining (SME/WIM) and the Carolinas section of the Association of Engineering Geologists, or AEG, to bring, literally, tons of free science materials to the area conference. We gave away eight different rock/mineral samples from an estimated 2.5 tons of material that were separated into 9,920 baggies and combined into almost 2,000 rock kits. Also included in the rock kits were other materials such as: 1,500 rock descriptions, 1,500 each of a list of NCGS popular publications and NCGS Geo Fact Packs, 910 Common Ground DVDs from Caterpillar and other stickers and materials from SME/WIM.

This rock giveaway would not have been possible without the generous support of volunteers and sponsors. More than 45 volunteers sorted, bagged, stuffed and gave away the materials over the course of the three-day conference. The tons of rock and mineral samples were provided through the N.C. Aggregate Association, N.C. Mining Commission, Vulcan Materials, PCS Phosphate, Nantahala Talc and Limestone Company, Martin Marietta Aggregates, Hedrick Industries, Unimin and Engineering Consulting Services, Inc.

In a separate booth, the NCGS/state Division of Land Resources and the Carolinas section of the AEG gave away 650 AGI Earth Science Week Kits. This is the third year that AEG has purchased earth science week kits to distribute at the science teachers conference. Other donations for the purchase came from AEG Southeast Section, Groundwater Professionals of North Carolina, AIPG Carolinas Section, Nicholson Construction, Schnabel Engineering, Environmental Equipment, Dr. Charles Welby, and the Gill-Shaler and Lovett families. Each year, the number of kits purchased through the AEG and its co-sponsors continues to grow and, hopefully, this resource will become a mainstay at future NCSTA-PDIs. Many teachers voiced their great appreciation for all of the materials.

### **2009 N.C. Science Teachers Association Professional Development Institute (NCSTA-PDI)**

The NCSTA-PDI will be held at its usual venue this Nov. 19-20, 2009 in Greensboro, N.C. This year the N.C. Aggregates Association, or NCAA, will be holding its rock giveaway. The NCAA regularly schedules the rock giveaway every other year.

### **OEST 2008 award winner**

The North Carolina Outstanding Earth Science Teacher (OEST) winner for 2008 is Rob Greenberg from Chapel Hill High School. See OEST article for a biographical sketch.

In addition to the NAGT prizes, Rob received a \$500 check from N.C. Mining Commission, a certificate for select materials (publications, videos, posters) from the NCGS store and a map package from the NCGS focused on an area of his choice in North Carolina. He chose Grandfather Mountain. The map package includes any geologic maps and field trips of the area chosen as well as false-color infrared photography and color elevation maps customized to the specific location requested.

### **Changes in the 2009 OEST/OESE award**

There is a change to the name of the awards this year. The awards are now listed as the Outstanding Earth Science Teacher (OEST) award and the Outstanding Earth Science Educator (OESE) award instead of using the prefixes "traditional and non-traditional".

The OEST category is for a classroom teacher at the middle school or high school level. The OESE category is for an educator in a non-secondary school setting such as museums, camps, community colleges, government agencies, industry and elementary schools. For more information about the awards and to download a nomination form, you can go to

[http://www.geology.enr.state.nc.us/proj\\_earth/proj\\_earth.html](http://www.geology.enr.state.nc.us/proj_earth/proj_earth.html).

## **Education workshop**

The N.C. Geological Survey is partnering with the state Museum of Natural Sciences for the workshop called "Backbone of North Carolina." This workshop is part of the museum's Educator Trek series and is held along the vicinity of the Blue Ridge Parkway. We explore the geology of the North Carolina mountains from Linville Gorge to Grandfather Mountain while we discuss the big picture, and look at the tiny details of processes that have shaped the mountains. Last year was the first year we ran the workshop. We had such positive feedback that we decided to run it again. This year, the workshop is also full, with a waiting list.

## **North Carolina Environmental Education (EE) Certification Program**

The EE Certification program has been revamped with new requirements becoming effective January 1, 2009. For more information on the program and how to become certified, go to [http://www.eenorthcarolina.org/certification/about\\_program.html](http://www.eenorthcarolina.org/certification/about_program.html).

This program is administered by the N.C. Office of Environmental Education.

## **North Carolina Department of Public Instruction (NCDPI) Essential Standards Survey**

(Excerpt from the NCSTA Web site)

Earlier in 2008, following extensive input from the Blue Ribbon Commission on Testing and Accountability, the State Board of Education crafted the Framework for Change to dramatically change the scope of the Standard Course of Study and assessments and testing. The NCDPI has a five-year plan to implement the Framework for Change (see below). As the first wave of content areas develop Essential Standards, it is pertinent that NCDPI receive input internally and externally. To provide input and feedback go to [www.ncsta.org](http://www.ncsta.org), and complete the brief survey. The survey deadline has been extended to the end of February 2009.

For more information on the Framework for Change report by the Blue Ribbon Commission, you can go to <http://www.dpi.state.nc.us/accountability/>.

You can also contact Edd Dunlap, Science Section Chief  
K-12 Curriculum, Instruction and Technology Division  
N.C. Department of Public Instruction  
Phone: (919) 807-3607. E-mail: [EDunlap@dpi.state.nc.us](mailto:EDunlap@dpi.state.nc.us)

**Puerto Rico** (no information submitted)

## **South Carolina** (submitted by Gwen Marie Daley)

I hope my fellow South Carolinians enjoyed the Darwin Day celebrations at Clemson University, Furman University, College of Charleston, University of South Carolina campuses, Winthrop University and everywhere else Darwin's birthday was marked with conferences, debates, discussion groups and parties.

The South Carolina Geologic Survey has expanded its standard-appropriate, South Carolina-focused geological resources to include lectures in both PDF and Powerpoint format (<http://www.dnr.sc.gov/geology/Education.htm>). Each lecture includes a summary of which slides address specific Earth science standards.

The South Carolina Geographic Alliance (<http://www.cas.sc.edu/cege>) will be offering a week-long program about using mapping technology (e.g., GPS, GIS, and remote sensing) in K-12 classrooms. The 2009 GeoTech Institute will be held from June 14-19 at the University of South Carolina-Columbia. For more information, please see <http://www.cas.sc.edu/cege/events/gis.html>. The SCGA will also offer their annual Alliance Summer Geography Institute for K-12 teachers in Columbia from June 14-26 ([http://www.cas.sc.edu/cege/events/asgi\\_events.html](http://www.cas.sc.edu/cege/events/asgi_events.html)). Submission deadlines for both events are April 1st and early application is encouraged.

Clemson University's Bob Campbell Museum has several upcoming events, including an exploration of fluorescent minerals (March 31st), a lecture on fossil sharks (April 14th) and a field trip to Georgia to hunt for shark, turtle, crocodile and other fossils (April 18th). For these and other events, please see the museum's website <http://virtual.clemson.edu/geomusem>.

Information about Clemson's summer 2009 Geol 790 course (Discover Carolina Professional Development Program) is now available online (<http://www.ces.clemson.edu/geolk12/Grad/DC/DiscoverCarolina2009.html>). For other events, please see The Clemson's Geology K-12 Outreach Program (<http://www.ces.clemson.edu/geolk12/grad.html>).

The Carolina Geological Society will hold its annual meeting in early November. It will include a field trip to the South Carolina Piedmont led by Jerry Bartholomew. For more information about the meeting and the CGS, please see <http://www.carolinageologicalsociety.org/>.

The South Carolina Department of Health and Environmental Control has put together a rather nice website with extensive links to resources both within South Carolina and nationally, centered around the theme of Earth Day every day (<http://www.scdhec.net/environment/earthday/index.htm>). The department will award its first Earth Day Awards later this year to individuals and groups who "have actively embraced the spirit of Earth Day through the implementation of sustainable, environmentally-conscious practices or programs that improve or protect our state's environment." For more information, please point your web browser to: <http://www.scdhec.net/environment/earthday/awards.htm>.

## **Tennessee** (submitted by Michael A. Gibson and Ann Holmes)

### **2008 Tennessee Science Teachers Association Meeting**

Nashville hosted the 2008 NSTA Area meeting in December. TEST ran a day-long workshop on Astronomy. The workshop was organized by Dr. Lionel Crews (University of Tennessee at Martin). Attendance was low this year, primarily because most teachers attended one of several workshops regarding the newly instituted state science graduation requirements. Regardless, those teachers attending were treated to lectures and demonstrations on nearly every aspect of astronomy within their standards. TEST had received enough money to put together impressive teacher resource kits with classroom materials. Several additional breakout sessions were provided the following day for more focused topics and for teacher input and questions.

### **2009 TEST Workshop Planned**

The 2009 Tennessee Earth Science Teachers workshop topic will focus on ocean science. Activities will include investigations of sand and interpretation of "ancient oceans of Tennessee". The 2009 meeting will be an Area NSTA meeting held in Nashville at the Opryland Hotel. TEST is organizing a field trip to the Ordovician paleoseas exposed in the surrounding area as part of the meeting. Additionally TEST will organize a workshop using the Paleontological Research Institution's Teacher Friendly Guide to the Southeast. For information contact Dr. Michael Gibson, Dept. of Geology, Geography, & Physics, University of Tennessee at Martin, Martin, TN 38238 (731.881.7435; [mjgibson@utm.edu](mailto:mjgibson@utm.edu)).

### **2008 OEST Winner**

The winner of the 2008 Outstanding Earth Science Teacher is Mrs. Tina Coleman from Martin Middle School. Tina was presented her award at the 2008 Tennessee Science Teacher Association annual meeting. Tina was also selected as the Southeastern Regional Winner for the OEST.

### **New Science Graduation Requirements for High School Update**

The State of Tennessee's newly approved science graduation requirements is making a great impact on teacher preparation. Students on a "scholastic" tract will be required to complete one year of biology, chemistry, along with two additional sciences to graduate from high school. The new requirements are targeted to take effect 2008-09 academic year. The new standards are available online: <http://www.state.tn.us/education/ci/curriculum.shtml>. Unfortunately, the role that earth science plays in the new requirements was severely watered-down from the recommendations of the original committee who submitted content expectations for the new requirements. Earth science has all but been eliminated as a named science in upper middle school and high school. Earth science topics were cut short and moved downward to the sixth grade level.

### **Master of Education: Geoscience Education**

The University of Tennessee at Martin began offering its on-line courses leading toward a Master of Education; Interdisciplinary - Geoscience Education Concentration. The “gateway” beginning course, Earth Systems Science is offered each fall. Physical Geology is currently being offered by Dr. Michael Gibson and Dr. Lionel Crews. A summer field course with instruction of fossils and stars will be run at the Coon Creek Science Center in June. Fall courses will include the Earth Systems course and a new course entitled “Understanding Evolution”, taught by Drs. Michael Gibson and Lionel Crews. The degree consists of a combination of School of Education courses and 18 hours of graduate-level content courses in Earth material geology, planetary science, ocean science, climatology, and evolution, with a three-hour field experience requirement as well. Anyone interested can learn more about the program or register at: [http://www.utm.edu/utonline/msed\\_geosci.php](http://www.utm.edu/utonline/msed_geosci.php). For information contact Dr. Michael Gibson, Dept. of Geology, Geography, & Physics, University of Tennessee at Martin, Martin, TN 38238 (731.881.7435; [mjgibson@utm.edu](mailto:mjgibson@utm.edu)).

### **Yellowstone Field Trip**

In June 2008, the Chattanooga Geology Club toured the Yellowstone-Teton area on a 10-day geology field trip led by Ann Holmes, UT Chattanooga Geology professor. They also visited nearby exposures of Tertiary Absaroka volcanics, Proterozoic Banded Iron Formation deposits, early Paleozoic flat-pebble conglomerates of the Gros Ventre Fm, and Mesozoic outcrops near Lander, WY.

The trip began and ended in Jackson Hole. The trip drew participants from Texas and Atlanta, as well as Chattanooga.



Some of the 17 participants at one of the geyser basins in the Yellowstone caldera.



Participants examine a lava flow exposed in the Yellowstone caldera.

OEST nomination form is now available at <http://nagt.org/nagt/programs/oest.html> .

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