

# TENNESSEE SCIENCE TEACHER SCIENCING QUARTERLY



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Linda Jordan	TN State Science Consultant	<a href="mailto:Linda.K.Jordan@state.tn.us">Linda.K.Jordan@state.tn.us</a>
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Tami Coleman	TN State Environmental Education Consultant	

## NSTA REGIONAL CONFERENCE IS COMING TO NASHVILLE DEC. 1-3

CELEBRATING  
SCIENCE THROUGH  
BEST PRACTICES

National Science  
Teachers Regional  
Celebration!



**Opryland Hotel  
Nashville, TN**

*December 1-3,  
2005*

Field Trips, Workshops, Short Courses, **Exhibits**, *Free Friday night Social Event*, tours, **Boot Scootin' Science** at Adventure Science Center, **Christmas in Nashville**, and networking with science educators from all over the nation.

**Nashville  
Convention Strands**

*“Connecting Research  
to Practice”*

*This strand emphasizes  
the research that best  
affects classroom  
practices in science.*

*“Serving Diverse  
Populations”*

*This strand emphasizes  
meeting the needs of  
diverse classroom  
populations.*

*“Investigating Current  
Science Interests”*

*This strand will provide the  
audience with an overview of  
current advancements in  
science.*

**Featured  
Speakers**

**1. Nanoscale Science and  
Technology – A New  
Paradigm for  
Education -  
Linda Horton ,  
PhD**



Metals and  
Ceramics Division  
Basic Energy Sciences  
Materials and Engineering  
Physics Program Director  
Center for Nanophase  
Materials Sciences Project  
Director

**2. Aligning Science  
Assessment Items with  
Content Standards**

George E. DeBoer  
Deputy Director, AAAS  
Project 2061

**3 . The Human Skeleton in  
Forensic Sciences.**

Dr. William Marvin Bass, III  
Professor Emeritus and  
Director, Forensic  
Anthropology Center,  
University of Tennessee,  
December, 1994 - August  
1998.

Professor  
Emeritus,  
September 1998



Working Smarter Not Harder  
Letting Research Help  
by Diane Vaughn, President-Elect  
A series of articles' based on educational research

Educational research today, in the United States and across the world, is at a point that educators, as consumers of research, can have confidence in what the research says. That is the basis for this series of articles. Research specific to science pedagogy, teacher professional development, and general education pedagogy will be highlighted.

*"Because you have received the TSTA newsletter, speaks to the fact that you are interested in developing yourself professionally."*

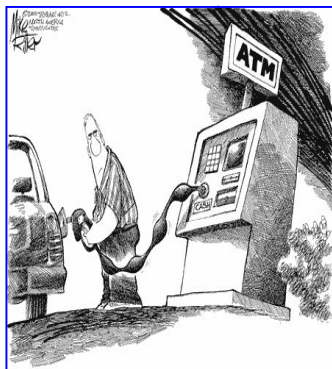
Because you have received the TSTA Newsletter, speaks to the fact that you are interested in developing yourself professionally. What does research say about this? Let's look at two sources to find out. One interesting source is the revised 2004 Tennessee Department of Education's *Framework for Evaluation and Professional Growth*, particularly the "Research Brief" supplied to the evaluator. These briefs address and site the research behind the different domains in the evaluation instrument. Domain Five deals with professional growth. Some key points found in the brief are: increase student achievement should be the purpose of professional development, focus should be on curriculum and instruction, it must be informed and guided by data analysis, professional development must be intense and provided through presentations and modeling of information and theory, multiple opportunities must be present to practice the strategy until it is being implemented accurately, it should be sustained over time, and opportunities for teachers to work together on a regular basis should be provided.

The last three points segue wonderfully into what Robert Marzano tells us about professional growth and collegiality in his book, *What Works in Schools, Translating Research into Practice*. Marzano identifies five factors at the school level that, if implemented, will help develop schools "that work." One of these factors is how much opportunity educators have to grow professionally through collaboration and collegiality. Schools that are achieving provide such opportunities for their teachers. Even if a school does not provide time for teachers to interact with each other, teachers on their own can "pick up the stick" to work together and help each other grow professionally. One of the most stimulating gifts you can give yourself professionally is to look for and/or make these opportunities.

Part of TSTA's vision is to provide professional development that will allow teachers, schools, and districts to achieve some of the points mentioned above. More information will be given about specific instructional strategies in upcoming TSTA Newsletters. These strategies can serve as a springboard as you collaborate and grow professionally.

Now is the time to join TSTA. Go to the TSTA website and download the application today. Don't miss the opportunity to be a part of the largest scientific organization in the state. Join and be involved.

<http://www.uu.edu/tsta/tstajoin.htm>



**Youth Incentive Award**

The Coleopterists Society, an international organization of professionals and hobbyists interested in the study of beetles, has established a program to recognize young people studying beetles. The Society has pledged to provide up to \$300 each year for the Youth Incentive Award Program. In addition to monetary grants of \$150, award recipients will receive up to \$200 (Junior Award) and \$400 (Senior Award) of equipment credit from the [BioQuip Products](#) catalog. In addition to monetary grants of \$150, award recipients will receive a one year subscription to the society journal, *The Coleopterists Bulletin*

**This is for children of grades 7-12 only.**

The objectives of the Youth Incentive Award are to:

- \* provide encouragement and assistance to young beetle enthusiasts (grades 7-12).
- \* promote the study of beetles, the most diverse group of insects, as a rewarding lifelong avocation or career.
- \* provide opportunities for young people to develop important life skills such as leadership, cooperation, communication, planning and conducting a scientific study, grant writing and managing funds.
- \* provide some financial support to enrich activities or projects.



A Youth Incentive Award Committee from the Coleopterists Society will evaluate the applications and will select up to two winners annually: one each in Junior (grades 7-9) and senior (grades 10-12) categories. The selection committee invites proposals for topics such as field collecting trips to conduct beetle species inventories or diversity studies, attending workshops or visiting entomology or natural history museums for special training and projects on beetles, studying aspects of beetle biology, etc. The proposed activities or projects will be evaluated on their degree of creativity, educational benefit to the applicant, scientific merit, feasibility and budgetary planning. This Award is for proposals by individuals only. Each applicant is strongly encouraged to find an adult advisor (teacher, youth group leader, parent, etc.) to provide guidance in proposal development, but the proposal **MUST** be written by the applicant. The Coleopterists Society would also be happy to assist in establishing contacts between youth and professional Coleopterists.

Additional details and application forms for **The Coleopterists Society Youth Incentive Award Program** can be obtained from: Dr. David G. Furth; Entomology, NHB, MRC 165; P.O. Box 37012; Smithsonian Institution; Washington, D. C. 20013-7012 (phone: 202-633-0990, FAX: 202-786-2894, email: [furthd@si.edu](mailto:furthd@si.edu)). Also check The Coleopterists Society WebPage: <http://www.coleopsoc.org/>

Applications for this year must be submitted by **15 November 2005**.

# CALL FOR NOMINATIONS FOR TSTA AWARDS

## TSTA SCIENCE EDUCATOR OF THE YEAR 2005 APPLICATION

Name \_\_\_\_\_

Home Address \_\_\_\_\_

Grade Level/Subjects Taught \_\_\_\_\_

Category: K-4 5-8 9-12 Higher Education

System \_\_\_\_\_

School \_\_\_\_\_

School Address \_\_\_\_\_

School Phone (\_\_\_\_) \_\_\_\_\_ Home Phone (\_\_\_\_) \_\_\_\_\_

E-mail \_\_\_\_\_

Name of local newspaper or Public Relation person for school  
\_\_\_\_\_

Judging will be based on the following items:

1. Listing of items that indicate leadership roles in promoting science and contributions in science education that positively impacts the community - limited to two pages.

2. Philosophy of science education - limited to one page

Winner in each division will be notified by October 25<sup>th</sup> and will receive \$100, one night lodging (reimbursement), and breakfast for self and a guest on Saturday morning @7:00

Mail your materials to:

Virginia Cooter

TSTA AWARDS COMMITTEE

202 Baileyton Main St.

Greeneville, TN 37745-3521

[cooterv@xtn.net](mailto:cooterv@xtn.net)

Materials must be received by October 4, 2005

*I hereby give my permission that any of the attached material may be shared with persons involved in the evaluation process for the TSTA Science Educator of the Year Award.*

Signature of Candidate \_\_\_\_\_ Date \_\_\_\_\_

## Tennessee Science Teacher's Association

2133 Williamsport Pike  
Columbia, TN 38401

Phone: 931-388-6167  
Fax: 931-380-8506  
Email: farrisb@k12tn.net



Dear Teachers and Administrators,

Adventure Science Center is pleased to offer several fun and educational opportunities for teachers in the upcoming school year. Our first event is an OPEN HOUSE just for teachers, administrators, and their families. On September 23 from 5:30 to 7:30 p.m. you are invited to explore, enjoy dinner, learn about programs, network with other educators and maybe win a door prize at Adventure Science Center. You will also get to see our latest interactive health exhibit, Body Quest. Our doors are staying open late just for you!

EDUCATORS OPEN HOUSE includes dinner, a beverage and dessert. **PLEASE RSVP no later than September 20. RSVP to Sharon Mendonsa at 615-401-5078 and leave your name, phone number and number in your party.**

TEACHER PROFESSIONAL DEVELOPMENT: ASC is offering several inexpensive or stipend-based professional development workshops which are listed below. Call Sharon Mendonsa for more information.

Don't forget to look for our new Learning Expedition Guide in your mailbox. They are being delivered to each school office this week.

We hope to see you on the 23rd!

### EVENTS

EDUCATORS' OPEN HOUSE  
Friday, September 23rd  
5:30 to 7:30 p.m.

**Teachers, Administrators, And Their Families Are Invited!**  
Super Science Demonstrations, Door Prizes, Food, Planetarium Shows!  
Call 615-401-5078 to RSVP

DINNER SPONSORED BY CORNERSTONE FINANCIAL CREDIT UNION (formerly Educators Credit Union)



DESSERT SPONSORED BY MAGGIE MOO'S ICE CREAM AND TREATERY



Bring your family to this special night! Enjoy dinner, programs, door prizes, and exhibits, including Body Quest. ASC's latest permanent health exhibit teaches visitors about human body systems, making healthful choices, the importance of exercise, and possible careers in the health industry. Here are just a few of the treats that await you on September 23:  
Manipulate a massive robotic hand, walk inside a giant brain or interact with a 6 foot heart

- Play your way through the digestive system. Feed the giant chomping mouth and follow the food through the interactive pathway
- Join the laser Body Battle that pits the good germs against the bad in a fight to stop an invasion of the human body
- Experience three floors of one-of-a-kind exhibits and the only Adventure Tower in the world - seven levels of science that pop out of the roof!. all 615-401-5078 to RSVP. Join us in a night of adventure!

TEACHER WORKSHOPS  
(teacher workshops require advance registration and/or payment)

WETLANDS WONDERS  
Saturday, September 10th from 10 a.m. to 3 p.m.  
3rd to 8th Grade Teachers  
Build your content knowledge with a field trip to a wetlands environment. Learn about the plants and animals common to a wetland ecosystem. After collecting samples and taking field data, we return to Adventure Science Center to examine the samples under microscopes. Pack a lunch and enjoy the company of other educators in this half-day field trip. Each teacher will receive a CD-ROM of wildlife and plant images, suggested standards-based lessons and activities, posters, and other resources. \$25 Materials Fee

CRIME SCENE SCIENCE  
Saturday, January 21st from 10 a.m. to 2 p.m.  
4th to 8th Grade Teachers

Capitalize on your students' interest in forensics and learn how easy it is to create a crime scene in your classroom. Educators at ASC will share ideas, materials, resources and standards-based crime scene units. \$25 Materials Fee

We come to you!

WHAT A BLAST! Rocket Building Teacher Workshop  
An Adventure Science Center Educator will come to your school to teach 4th to 8th grade educators how to use easily available materials to build a model rocket that really launches. Each teacher receives a rocket sample kit and a guide to incorporate rocketry into the classroom. This unit allows your students to use science, engineering, and math skills as they design, test, and evaluate their own handmade rocket. Call 615-401-5078 for more information.

THE CASE OF THE GREEN FEATHERS  
K - 3rd Grade Teachers

October 21, from 9 to 2:30  
Stipend for Classroom Teachers  
Explore allergies using a children's book that tells the story of Chick Chock™, a baby chick who awakens from a nap sneezing and covered with green dust. While learning about what is causing Chick Chock's health problems students are involved in activities that use communication skills, measurement, science experiments, and art.

CHEMICALS, THE ENVIRONMENT AND YOU: EXPLORATIONS IN SCIENCE AND HUMAN HEALTH  
7th & 8th Grade Teachers

November 18th from 9 to 2:30  
Stipend for Classroom Teachers  
Explore this rich curriculum that includes the nature of chemicals and toxins in the environment, understanding dose-response and individual susceptibility, and assessing the risks from environmental toxicants. Observe a mystery chemical and read real case studies of exposure; investigate chemical concentration effects on seed germination; hypothesize about experimental results, and discover ways to eliminate or reduce exposure to environmental toxic agents.

These two workshops are sponsored by the National Institute of Environmental Health Sciences Research Center at Vanderbilt University (NIH grant P30ES00267). Mr. Bradley Hawkins, Director of the Center's Outreach and Education Program, will provide instruction of the curricular materials. Each workshop participant will receive a \$50 stipend and a copy of the Curriculum.