

MAY 2006

TENNESSEE SCIENCE TEACHERS ASSOCIATION SCIENCING QUARTERLY



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Check our website for a complete listing of all officers and board members:
www.uu.edu/tsta



AND YOU THINK THE WORLD IS ROUND?

By Diane Vaughn, President-Elect

The purpose of this series of articles is to look at how sound educational research can inform practice. This article digresses from looking at educational research to looking at how information from non-educational sources can inform practice.

Regardless of your role as an educator, there is a MUST READ that should become a part of your library. After you read it, you will want to keep it handy as a motivating eye-opener that could impact your thinking about what is happening in the “educational world” you affect. The book is *The World is Flat, A Brief History of the Twenty-First Century* by Thomas L. Friedman, a highly respected newspaper columnist and author. Fair Warning: Some Parts May Be Disturbing. To Ensure a Good Night’s Sleep, Don’t Read Before Bedtime. That is what happened to me when I started reading the book, but the book is so intriguing you will find an appropriate time to read it.

Do terms like work flow, open-sourcing, outsourcing, offshoring, supply-chaining, insourcing, and informing sound familiar? Most likely some and maybe all do. These are terms that describe how work is being accomplished in an increasingly globalized economy, work that is flattening the world. It was while Thomas Friedman was in India gathering information about services and information technology work being outsourced from the United States and other countries that he was introduced to the idea and began to think about the world being flat. What this means is that countries like India can now compete in global technology work. The world is being flattened, the playing field leveled. Work, such as medical transcription, can be sent to India at the close of the United State’s workday, be transcribed during India’s workday, and sent back to the United States in time for its new workday. Simple accounting, including income tax preparation, is being outsourced to

India by United States accounting firms. Much of the telemarketing calls are coming from India. But India is not the only country profiting from the globalization of work. Much work is offshored in China, the Caribbean, Mexico, and other developing countries. There are cities with over a million population in China that are responsible for manufacturing most of the world’s eyeglass frames or portable cigarette lighters or computer screens or mobile phones.

What kept jumping out at me, as I read this book, were terms like **intellectual work, knowledge centers, brainpower individual empowerment** and it scared me. Microsoft is just one example of a corporation that has developed knowledge centers in other parts of the world. They have centers in Redmond, Washington, Beijing, China and Cambridge, England. According to Microsoft they do not see these knowledge centers replacing what is happening in the United States as far as research is concerned. They view these centers as adding additional brainpower for research for Microsoft.

Where is China placing its emphasis? ..math, science, and technology. What are the attitudes of individuals in the countries where globalization and flattening is really taking place?...Let me learn, I want to learn, want to compete. The question that kept coming to my mind was, “What does this mean for the United States and its view of education?” Individuals from all over the world are being empowered through education and individuals from the United States can be empowered also. However, Friedman observes, “That sort of inspired leadership in science and engineering education is now totally missing in the United States.” (p. 268)

Continued on page 8...

MONEY MATTERS

BY BARRY FARRIS, TREASURER

TSTA enjoys a 501c (3) status with the Internal Revenue Service. This means that we are exempt from paying income tax on ordinary business income. It also means that TSTA is able to accept charitable contributions. We also have a Tennessee state sales-tax exemption number. We are also eligible for reduced postal rates when sent in bulk.

TSTA serves as fiscal agent for the Department of Education for several of its summer workshops, including "Targeting Student Assessment" and "Inquiry, Safety, and Standards: An Essential Partnership - Summer Science Institutes for K-8 Teachers." The organization also serves as fiscal agent for the Presidential Award for Excellence in Mathematics and Science Teaching in Tennessee which is facilitated through the State Science Consultant's office (Ms. Linda Jordan) and through the State Math Consultant's office (Dr. Scott Eddins). The organization receives a nominal remuneration for its provision of these services.

Our money is spent primarily on 1) the newsletter, 2) the professional development conference, and 3) expenses associated with the board meetings (4 per year). Every board member is a volunteer, dedicated to promoting science education in Tennessee (K – 16). I can assure you that they work hard to make the conference (and other professional activities held throughout the year) a success. If you do not know your district's board members (there are 2 per district), look in this newsletter to find out who they are. They will be delighted to talk with you.

As of April 6, 2006, TSTA has 501 members. It has in its database over 2500 current or former members. We are interested in having all science educators in Tennessee be a part of TSTA.

For more information please contact Barry Farris: farrisb@k12tn.net (931) 388-6167

As of April 6, 2006, TSTA has the following monies:

Checking:	\$17,310.08
Savings (business money market account):	\$14,039.56
Small business CD (4.00%, matures Oct. 2006)	\$10,200.32
Small business CD (4.00%, matures Sept 2007)	\$20,000.00

Toyota TAPESTRY, the nation's largest science teacher grant program of its kind, awarded nearly \$550,000 in grants to 76 K-12 U.S. teachers who submitted creative science project proposals. Fifty awardees received up to \$10,000 each and 26 received mini grants of up to \$2,500 each. Large grant winners accepted their awards at the NSTA National Conference on Science Education this month.

"NSTA is proud to collaborate with Toyota to support and fund innovative science education projects through the TAPESTRY program," said Michael Padilla, NSTA president. "We are dually committed to rewarding educators who are passionate about demonstrating creativity and excellence in their science teaching. We thank Toyota for making education a priority." Toyota awards grants to innovative K-12 teachers yearly, and teachers can apply individually or in teams. Applications are due in January.

For more information about Toyota TAPESTRY grants, visit <http://www.nsta.org/programs/tapestry> or call 800-807-9852.



**Toyota
Tapestry
Grant**



**TENNESSEE
TEACHER QUALITY ACADEMIES**
formerly called the Highly Qualified Teacher Academies.

The Tennessee Department of Education is pleased to offer the Tennessee Teacher Quality Academies, formerly called the Highly Qualified Teacher Academies.

These academies are open to all teachers of grades K-8, and Algebra I. This year, for the first time, academies for middle school teachers of science grades 5-8 are available at the five science museums across the state.

The academies are five days, Monday through Friday, with 40 contact hours provided. Participants will receive a certificate of completion, valid for license renewal and for 45 points on the HOUSSE matrix toward being highly-qualified (per NCLB requirements). Registration fee for the academy is nonrefundable \$100.00 per participant. Purchase orders are acceptable from school districts. These academies qualify as high-quality professional development, emphasizing standards-based practices aligned with the Tennessee Blueprint for Learning.

Teachers are encouraged to ask their districts to provide the registration fee from Title I or II funds. For those registrants who wish college credit as non-degree graduate

credit for plus hours above a master's degree, three semester hours of graduate, non degree continuing education credit at a reduced tuition cost of \$100.00 per course. Tuition is an additional cost to the \$100.00 registration fee. Registration for college credit will be taken at each academy site during the second day of the academy.

To receive college credit, the participant must complete the registration form, submit proof of teacher licensure, provide a check or money order payable to the college or university who offers the credit, and attend all five days. Absences, for any reason, will prevent the participant from receiving college credit. Teachers who attend all five days will receive significant resources for use with their classrooms.

Registration will open on April 6, 2006 on the website. Registration is on a first-come, first-serve basis with each session closing at 25 participants. Register now to hold your spot; your registration will be confirmed by email. Registration will close May 20.

Registration Available
April 6, 2006, on website
www.tntqacademies.com

Adventure Science
Center Nashville
June 12-16

Knoxville
June 12-16

Chattanooga
Creative Science
Center
June 19-23

Memphis Pink
Palace
June 26-30

Johnson City Hands
on Science
June 26-30



**CHANCELLOR'S HONORS
FOR CLAUDIA T. MELEAR**

Commission on Women
Woman of Achievement Faculty Honoree Award

Dr. Melear is dedicated to strengthening science education in our schools, especially in economically distressed communities. She encourages her students to deepen their understanding of the value of cultural diversity. Dr. Melear also takes students to Ossabaw Island, off the coast of Georgia, a pristine barrier island near Savannah to study science in nature. Previously, as a high school teacher in Georgia, Claudia won numerous awards for her innovative teaching and the success of her students in science fair and symposia competitions.



Claudia T. Melear, Associate Professor of Theory and Practice in Teacher Education

Middle: June 13-15

Rossvie
Middle School
Clarksville, TN

West: June 19-21

Northside High
Tech Prep Bldg,
Jackson, TN

East: June 27-29

Mosheim School,
Mosheim, TN

LOGISTICS

Cost \$60.00

A rate of \$50/teacher will be assigned for districts that send teams of 2 or more.)

Includes lunch and light refreshments

8:30 to 4 pm daily

**ALIGNED TO
TENNESSEE
SCIENCE
STANDARDS**

Summer Science Institutes for K-8 Teachers
Tennessee Department of Education
Inquiry, Safety, and Standards: An Essential Partnership

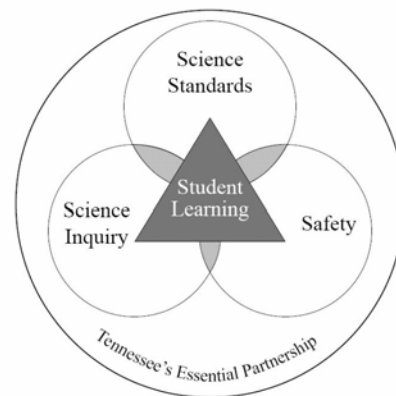
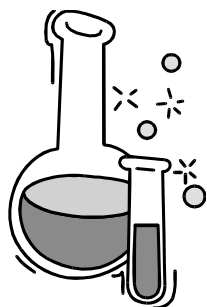
These three-day institutes will introduce the newly released Next Generation Tools for Teaching Standards-Based Science CD, a resource specifically prepared by the Department of Education to enable teachers to implement curriculum and instruction that are carefully aligned with the Tennessee Science Standards. This CD is a professional toolkit that science teachers can use to develop classroom learning experiences that are grounded in the Tennessee standards, emphasize learning through guided inquiry, target higher order thinking skills, and pay careful attention to critical safety concerns. The workshop will also provide ideas for embedding literacy learning opportunities into the science curriculum.

Activities

Templates and procedures found in the Next Generation Tools for Standards-Based Science Teaching CD will be used to develop instructional materials that are fully aligned with TN Science Standards. The CD resources emphasize the importance of curriculum integration and make extensive use of the Internet through the development of high-quality WebQuest lessons. Teachers will also incorporate a strong literacy thread by introducing science trade books into the framework of standards-based lessons.

Materials

All participants will receive a book on classroom inquiry, a National Science Teachers Association safety publication, and the Next Generation Tools for Teaching Standards-Based Science CD.



Attention School Administrators

School leaders are encouraged to participate in these workshops. From 9-11AM on the final day of each session, the Tennessee Department of Environmental Conservation will present the GREEN Schools and Safety Remediation program.

Registration

Each session is limited to 50 participants. We encourage participation by teams of teachers and offer discounts to districts that send groups. Lunch and light refreshments will be provided. We encourage participation by teams of teachers and offer discounts to districts that send groups.

SEE PAGE 5 FOR A
REGISTRATION
FORM

2006 Essential Partnership Summer Institute Registration

Mail completed registration forms with full payment no later than Friday, May 26, 2006 to:

Dr. Barry Farris
 2133 Williamsport Pike
 Columbia, TN 38401
farrisb@k12tn.net

NAME: (please print)

SCHOOL NAME _____

SCHOOL ADDRESS _____

City _____

State _____ Zip _____

TELEPHONE _____ - _____ - _____

FAX: _____ - _____ - _____

E-MAIL _____

HOME ADDRESS _____

City _____

State _____ Zip _____

HOME TELEPHONE _____ - _____ - _____

HOME EMAIL ADDRESS _____

Check the Institute you wish to attend:

Middle: June 13-15

West: June 19-21

East: June 27-29

Please duplicate form for multiple registrations. Make checks payable to Tennessee Science Teachers Association (TSTA).

Registration confirmation with site directions will be sent to your home address.

SEEDS OF DISCOVERY

- A great link to EPA's info on their Schools Chemical Cleanout Campaign (<http://www.epa.gov/sc3>). The contact is Eileen Naples: naples.eileen@epa.gov
- **Job Opening**
 1. Full-time Chemistry/Math teacher
 2. Full-time Physics Instructor

University School of Jackson,
 An independent college preparatory school in Jackson, TN.

To apply, contact: Mr. Don Coffey,
 Headmaster, University School of Jackson
 232 McClellan Rd.
 Jackson, TN 38305
 731-664-0812
- <http://www.nsta.org/main/calendar/events.php> has a **NSTA calendar of events** filled with interesting things for you and your students.
- **Building a Presence in Science Network**
 Contact Terry Lashley tlashley@utk.edu to enroll. When you enroll you will get weekly updates on workshops and other useful events. Every science teacher can enroll. We need a presence in every school K-12.
- American Chemical Society offers many **resources** to teachers. Go to www.chemistry.org and look under education.
- **Special \$22 Pre Service, New Teacher Membership Offer ... Don't Miss It** We know how difficult it can be starting your teaching career. That's why NSTA and GEICO are pleased to offer **pre service and new teachers** an opportunity to **save \$10** on their already reduced NSTA membership (**\$32 - \$10 = \$22**). To learn more, visit <http://www.nsta.org/geicospecial> today!
- The Office of Science and Technology Information (OSTI) for the government hosts a great website called "ScienceLab" that covers topics from K-16. The URL is <http://www.osti.gov/sciencelab/> and includes links to over 300 educational sites including governmental labs. The site is broken down into grade level clusters to make searching and using easier, and each cluster offers a variety of links, activities, and tools that are free to teachers (including on-line quizzes, grading, brainteasers, puzzles, and low-cost lab activities).site and post it.

DISTRICT DIVISIONS

DISTRICT 1: Carter, Greene, Johnson, Sullivan, Unicoi, and Washington

DISTRICT 2: Anderson, Knox, Loudon, and Monroe

DISTRICT 3: Bradley, Hamilton, McMinn, and Polk

DISTRICT 4: Blount, Claiborne, Cocke, Grainger, Hamblen, Hancock, Hawkins, Jefferson, Sevier, and Union

DISTRICT 5: Bledsoe, Campbell, Clay, Cumberland, DeKalb, Fentress, Jackson, Macon, Meigs, Morgan, Overton, Pickett, Putnam, Rhea, Roane, Scott, Smith, Trousdale, and White

DISTRICT 6: Bedford, Cannon, Coffee, Franklin, Giles, Grundy, Lawrence, Lincoln, Marion, Marshall, Moore, Sequatchie, Van Buren, and Warren

DISTRICT 7: Metro-Nashville, Davidson

DISTRICT 8: Benton, Cheatham, Dickson, Houston, Humphreys, Montgomery, Robertson, Stewart, and Sumner

DISTRICT 9: Hickman, Lewis, Maury, Rutherford, Williamson, and Wilson

DISTRICT 10: Carroll, Crockett, Dyer, Gibson, Haywood, Henry, Lake, Lauderdale, Madison, Obion, Tipton, and Weakley

DISTRICT 11: Chester, Decatur, Fayette, Hardeman, Hardin, Henderson, McNairy, Perry, Shelby, and Wayne

DISTRICT 12: Memphis City Schools

NOMINATE A TSTA REPRESENTATIVE OR OFFICER

As a member of the Tennessee Science Teachers Association, any member may nominate qualified candidates to act as representatives for your district. The Districts up for election in 2006 are Districts 2, 3, 8, and 11. See the side panel as a reference for counties represented in the 12 districts. TSTA board openings are for President Elect and Secretary. Copy and fill out the form with any attachments by no later than July 1, 2006.

TSTA Board of Directors Nomination Form

Position of nomination (Office or District)

Name of Nominee

Title _____

Address _____

City _____

State _____ Zip _____

School _____

School Address _____

City _____

State _____ Zip _____

County _____

Work Telephone (_____) _____

Home Telephone (_____) _____

Fax (_____) _____

Email _____

Attach an overview of professional information for this nominee.

****To be eligible to run for officer the nominee must live and work in the State of Tennessee. To run for Board of Directors the nominee must work in the State of Tennessee.**

DEADLINE: By July 1st

Please send to: Betty Jackson
107 Howell Rd.
Martin, TN 38237
Fax: 731-588-0514
jacksonb@k12tn.net

TSTA PROGRAM PROPOSAL NOVEMBER 16-18, 2006

The TSTA Conference and Professional Development Institute will be held at the Sheraton Music City in Nashville. We need educators from all grade levels—kindergarten through higher education—to come and share their skills, ideas and activities in science with fellow teachers. To more effectively meet the needs of Tennessee's science teachers with the ESEA/NCLB requirements, the focus of our conference and professional development institute is to provide teachers with the content they need to grow as science professionals. As you plan your presentation, please keep this in mind. Proposals are due by **Sept. 15, 2006**. We encourage you to submit a proposal and look forward to seeing you at the conference.

Please type or print clearly.

Name	Name
Address	Address
City State ZIP	City State ZIP
Day Phone	Day Phone
Home Phone	Home Phone
FAX	FAX
Email	Email
School/Affiliation	School/Affiliation

Your Session Facilitator _____

Title of Session _____

Brief Description _____

TYPE OF SESSION: <input type="checkbox"/> Hands-On <input type="checkbox"/> Demonstration <input type="checkbox"/> Lecture <input type="checkbox"/> Panel	AUDIENCE <input type="checkbox"/> K-2 <input type="checkbox"/> 3-5 <input type="checkbox"/> K-5 <input type="checkbox"/> 6-8 <input type="checkbox"/> 9-12 <input type="checkbox"/> Higher Education	ROOM ARRANGEMENT: <input type="checkbox"/> Classroom (Tables/chairs) <input type="checkbox"/> Theater Seating <input type="checkbox"/> Theater Seating with 1-2 Tables in front
CONTENT AREA: <input type="checkbox"/> LIFE <input type="checkbox"/> BIOLOGY <input type="checkbox"/> EARTH <input type="checkbox"/> SPACE <input type="checkbox"/> PHYSICS <input type="checkbox"/> PHYSICAL <input type="checkbox"/> CHEMISTRY <input type="checkbox"/> TECHNOLOGY <input type="checkbox"/> ENVIRONMENTAL <input type="checkbox"/> OTHER _____		

CONTENT STANDARD(S) ADDRESSED (Visit <http://www.state.tn.us/education/ci/cistandards2001/sci/ciscience.htm> for help)

PRESENTERS ARE RESPONSIBLE FOR FURNISHING THEIR A/V EQUIPMENT AT THEIR OWN EXPENSE.

If you have a preference for the day of your presentation, please indicate that for the committee. We will try our best to honor your request, but we cannot promise this day will be available during scheduling. FRI SAT No Preference

Would you do a second session? YES NO
Please indicate which time you prefer. 1 HR 1.5 HRS 2 HRS
 OTHER _____

PLEASE RETURN TO: Pat Carpenter, 55 East Ridges Dr. Ct, Chuckey, TN 37641
 SCHOOL PHONE: 423-235-5406 FAX: 423-235-7778
 E-MAIL: Carpenterp@K12tn.net or carpenterp2@greenek12.org

Bring in a new member! Copy this form and distribute it to the teachers in your school.

TSTA MEMBERSHIP FORM

First Name	
Last Name	
Title	
Mr. Mrs. Ms.	
Home Address	
Home City/State/Zip	
School Name	
School Address	
City/ State/Zip	
School System or County	
Email	
Home Phone	Work Phone

Newsletter format you prefer (electronic format requires an email address):
 by mail electronic format (pdf file)

What grade(s) do you teach? _____

Subjects Taught _____

Category Teacher Retired Administrator
 Higher Ed. Non-Educator
 I am a Pre-Service Teacher (free membership)

I am a new member I am a renewing member

Membership is only \$20 per year. Pre-service teachers are free. Mail your check (made payable to TSTA) and this form to:

TSTA, Barry Farris, Treasurer,
 2133 Williamsport Pike
 Columbia, TN 38401 email to : farrisb@k12tn.net

AND YOU THINK THE WORLD IS ROUND?



Continued from Page 1:



Diane Vaughn

When President Kennedy was trying to motivate the United States to do what needed to be done in order to compete in the space race, he stated that, "This decision demands a major national commitment of scientific and technical manpower...It means a degree of dedication, organization and discipline which have not always characterized our research and development efforts." (p. 279) Does this apply today?

We, as educators, cannot fall into the trap of thinking that we cannot do anything. We are the ones on the frontline. As educators, we can help provide the inspired leadership needed in our individual classrooms, as well as, taking steps to affect policy locally, statewide, or nationally by:

- 1) planning our units and lessons based on educational research that tells us how to develop an effective, motivating science lesson and/or classroom,
- 2) taking ideas to central office personnel and the Board of Education,
- 3) serving on statewide curriculum committees, and

- 4) communicating with our state and national representatives.

Students must be provided with an education that will give them the added value they need. Work will be done in the most efficient and effective venue. Lifelong employment in a given company is quickly becoming a thing of the past. Now, students must have the skills that will enable them to be employable for a lifetime which means being able to learn new skills throughout their lives. Educators, parents, students, and policy makers must realize that change is going to happen, it is important, and it must be dealt with in the most effective manner.

Treat yourself to this book. It does contain information about how the world is being flattened, but it also contains ideas that government leaders, **educators**, **parents**, and business leaders can use to help their part of the world to be ready for meeting the challenges of being productive in this flat world.

How Would You Like a Free Night's Lodging at the TSTA Professional Development Fall Conference?

The awards committee is seeking science teachers who enjoy working with our youth, other teachers, and/or have made an impact in the area of science education. We would like to honor them at our state conference in November. We ask for three items: the cover sheet with typical information (name, address, school, etc.); no more than two pages listing leadership roles in science; lastly a philosophy of science education.

Everyone who applies will receive a certificate. The winner in four categories (K-4; 5-8; 9-12; higher education) will receive from TSTA a plaque, \$100, Friday's night lodging, and two breakfast tickets for the awards breakfast on Saturday morning. Applications are available at our website and are due October 3, 2006. If you desire your students to apply for scholarship, grants, and awards, why not model to your students by applying for this award yourself or nominate a co-worker. Many school districts have used this award to inform the community of their excellent faculty.... it is a win - win award for everyone!

Need an
Extra
\$100?

TSTA WEBSITE
WWW.UU.EDU/TSTA

**ABOUT
OUR
ORGANIZATION**

**We're on the
Web!**

See us at

www.uu.edu/tsta



MISSION

The purpose of TSTA is to provide an effective forum for all persons interested in sharing science education ideas and to further science understanding; to provide the mechanism for the formulation of a collective voice for the science teaching community; to assist in the dissemination of knowledge related to the methodology of science education and curricular updating of science education; to encourage classroom education; to encourage classroom activities and programs which will promote an interest in science and the recognition of outstanding talent; and to provide a medium through which research in science and/or science education can be encouraged and supported at all levels.

**DON'T FORGET!
November 16-18
TSTA Professional
Conference**



*Tennessee Science Teachers
Sciencing Quarterly
2133 Williamsport Pike
Columbia, TN 38401*

**MAY
2006**