



# UETCTM News

## Meeting on Monday, October 6

The second meeting for the Upper East Tennessee Council of Teachers of Mathematics will occur from 4:00 to 6:00 on October 6, 2008 on the Campus of Northeast State. We will be hosted in room A110, the faculty/staff dining room next to Subway.

The meeting will follow the standard agenda beginning with a social time from 4:00 to 4:30. From 4:30 to 5:00 we will address logistical concerns regarding future meetings and guest speakers.

We have three presentations during the meeting. Malissa Trent from Northeast State will provide a lecture for elementary school teachers. Daryl Stephens, a professor from ETSU, will speak on the topic of "Proportionality" to middle school teachers. Robert Beeler, also a professor from ETSU, will present on "Regression" for high school teachers and college professors.

### Future Meeting Dates

Tuesday, Nov. 11

Monday, Feb. 9

Tuesday, March 3

Monday, May 4

### Franklin Math Bowl

The annual Franklin Math Bowl will take place on Saturday, November 8 on ETSU's main campus. This is a competition for students in grades 6-8. For more information please visit <http://www.etsu.edu/math/fmb>. Registration forms are on this site, and they are due by Oct. 15th.

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# Math Perspectives

UETCTM Newsletter  
Editor

Ryan Nivens

Department of Curriculum  
and Instruction

Box 70684

Johnson City, TN  
37614-1709

[nivens@etsu.edu](mailto:nivens@etsu.edu)

Assistant Editor

Casey Anderson

[zcja3@goldmail.etsu.edu](mailto:zcja3@goldmail.etsu.edu)

## How We Teach Our Students Mathematics Matters

By Tara Carver Peters

One of the greatest questions often posed to me is “what can we do better?” when it comes to mathematics instruction. Four thoughts immediately surface:

- \* Excellent classroom management must occur at all levels
- \* Increased Math Knowledge must occur for teachers at all levels
- \* Differentiated instruction must occur for students at all levels
- \* Inspirational Teaching must occur at all levels

Classroom management is at the core of effective classroom instruction at all grade and ability levels. It does not matter if you are an “Einstein” and you know “everything” about your subject if you cannot control your students. Students truly crave structure **Continued on page 3**

## On School and Student Teaching

By Casey Anderson

Although I am currently pursuing a masters in the arts of teaching, my undergraduate degree was in English and math, so my first experiences in the professional educational world began only a year ago. Since then, my classes have focused on teaching me and my peers the importance of student centered approaches to teaching and diversifying our **Continued on page 4**

## MISSION: Discovery in Learning

By Julie Tester

As a preservice teacher, one of my missions is to find excellent learning activities to incorporate into my classroom when I begin teaching. Over the last year, I have redefined my goal by examining the learning activities and asking myself one simple question: does this activity promote a higher level of learning, or is it simply fun?

**Continued on page 5**

## **How We Teach Our Students Mathematics Matters (cont.)**

and a teacher who is in control of the classroom. Students respect teachers who maintain excellent classroom control while providing excellent mathematics instruction.

Every teacher of mathematics can and should be a perpetual learner. Knowledge is infinite, and teachers of all subject areas, especially mathematics teachers, must commit themselves to on-going and continuous learning. Teachers who are perpetual learners attend and learn from workshops/in-services designed to improve both their mathematical knowledge-base and teaching strategies. Such teachers also pursue additional university-level mathematics courses that will ultimately serve to make one a stronger and more confident teacher in the classroom. Teachers who are perpetual learners look for opportunities to go outside and beyond the scope of the textbook, especially when looking for ways to make the mathematical concepts relative and interesting.

Differentiated instruction is the key for teaching students at all levels of learning. The “it’s my way (which is usually one way) or it’s wrong” approach must end. We must understand that students come to us with different life experiences, therefore, their brains are

wired differently for learning. Teachers of mathematics must expose students to many different methods for solving problems. Mathematics teachers must be willing to learn new ways of solving problems so they can understand the different approaches students will use when solving problems. Also, as much as possible, mathematics teachers should teach the subject from many different perspectives: verbally, conceptually, algebraically, geometrically, analytically, numerically, and technologically.

Inspirational teaching is a goal all teachers should strive for when teaching today’s students. How do you grab and maintain student interest in the subject area? Everyone is so concerned about test scores. That’s understandable, but there’s a bigger concern at hand. Ask yourself, what good are test scores if we fail to inspire our students to seek mathematical knowledge and pursue careers involving mathematics? And, if we fail to produce students who want to continue studying and learning about mathematics, what will this ultimately mean for our country’s future? What an awesome responsibility and opportunity for today’s mathematics teacher! Be inspirational and motivational when teaching mathematics!

## **How We Teach Our Students Mathematics Matters (cont. 2)**

Can we solve all of our problems and conquer all of the challenges set before us? Absolutely not--there is no magic formula that can fix every problem we face! But, can we improve upon how we currently teach mathematics? Absolutely yes! We just have to be willing to learn, grow, and evolve as dynamic mathematics teachers!

-Tara Carver Peters is the 6th-12th Mathematics Specialist for the Sullivan County School System.

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### **On School and Student Teaching (cont.)**

teaching styles to meet the needs of students with different learning needs.

While I have eagerly taken my classes and passed my Praxis tests, I know that sitting in a desk on this side of the classroom is much different than standing at a podium on the other side. This thought evokes my biggest fear: that when I finally stand before my first class I'll feel completely unprepared for the task, or, worse yet, that I'll forget everything I've studied about creating a student-centered classroom, placing an emphasis on higher-order thinking tasks, and ensuring my lessons appeal to different learning styles. After all, the one word I hear people use most often in describing their first year of teaching is "survival."

In college, I have weeks or, at the very least, days to make the "perfect" assignment for a grade level and subject I *might* be teaching when I am hired by

a school. This certainly doesn't seem like a realistic scenario in the world of teaching, especially during my very first year; between grading papers, planning lessons and units for the entire year from scratch, and getting a "feel" for how my new school operates, how do I find time to plan and teach that perfect lesson they had us working on every semester? Can I do it every day? No. Once or twice a week? Sure.

I begin my student teaching next fall, and, despite my concerns, I am confident that with the help of my peers, my professors, and my mentor teachers, I can find the balance between grading papers, discovering creative activities I can implement on a daily basis, and finding time to carefully plan and craft the lessons that will speak to my students by engaging them through activity they will enjoy and find interesting. While I have learned a lot

## **On School and Student Teaching (cont. 2)**

about the theory of teaching in my classes, I believe my most valuable lessons will come from my student teaching experience which will help me understand what being a teacher is truly like.

-Casey Anderson is ETSU Graduate Student working towards a Masters in Teaching with a certification in both math and English. He begins student teaching next fall.

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## **MISSION: Discovery in Learning (cont.)**

During the last month, I have been fortunate to have the opportunities to attend two professional development meetings. The first was the TMTA Conference in Clarksville. The other was the “Integrating Storytelling and Science Instruction” Workshop, a collaborative program between Jet Propulsion Laboratory and the International Storytelling Center. During both of the seminars, I found activities that promoted a higher level of learning; the one that struck me as the most valuable, however, was a common thread between the two programs: journaling.

During the TMTA conference, I attended a session strictly devoted to math journaling. Led by elementary teachers Lynda Gunter (Kindergarten) and Carolyn Bingham (Second Grade), this session demonstrated the importance of math writing and the incorporation of math journals. The leaders stressed the value of having the students not only solve the daily math

problems, but also explain their solutions. These explanations assessed their understanding of the math principles. Additionally, the students were able to see that most problems have multiple solutions.

The “Integrating Storytelling and Science Instruction” Workshop also stressed the importance of journaling. In fact, one of the lead speakers, Laurie Thompson, explained that recent research has shown that keeping science notebooks can increase student comprehension by 44%. She explained that these results came from classrooms where science journal met the following criteria: student approached issues from various routes of discovery, students demonstrated understanding using pictures or charts and written language, and finally, students justified their solution in a written statement. These written statements provide the teacher with a means of assessment, while allowing the students to expand their

## MISSION: Discovery in Learning (cont.)

thinking by utilizing their language arts skills.

Both of these experiences have met the criteria of my mission. Journaling in various content areas is a valuable daily activity that will be incorporated into my future classroom. It is a wonderful means of assessment, while promoting creativity and problem solving in the classroom. Simply put, journaling is a mission into the discovery of learning.

-Julie Tester is pursuing a Bachelor of Science degree in Elementary Education with an emphasis in Interdisciplinary Studies and will be student teaching in the spring.

## Request for Article Submissions

Beginning this issue, our newsletter will contain a new editorial series entitled "Math Perspectives." Every month, four people will contribute to the series: a preservice undergraduate student, a preservice graduate student, a current classroom teacher, and one of our local math coordinators. Each person will voice their opinions, concerns, or observations upon a particular aspect of teaching mathematics. There are no set topics for this series yet, so the topic of each contribution is up to its author.

If you or someone you know would like to contribute to our new column, please contact the newsletter editor, Ryan Nivens.

### UETCTM Membership Application

Complete & return to Floyd Brown with a check for \$10 made payable to UETCTM. Completed Application and check may be mailed to Floyd Brown, Science Hill High School, Mathematics Dept., 1509 John Exum Parkway, Johnson City, TN 37604

Name: \_\_\_\_\_ Home Phone: (\_\_\_\_) \_\_\_\_\_

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

School: \_\_\_\_\_ School Phone: (\_\_\_\_) \_\_\_\_\_

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

Email Address: \_\_\_\_\_

## Officers of UETCTM for 2008/2009

### President

Dayna Smithers  
Division of Mathematics  
Northeast State Technical  
Community College  
PO Box 246  
Blountville, TN 37617  
(423) 354-2502  
[dbsmithers@northeaststate.edu](mailto:dbsmithers@northeaststate.edu)

### President Elect

Val Love  
Elementary Math Coach  
Johnson City Schools  
2303 Indian Ridge Rd.  
Johnson City, TN 37614  
(423) 943-2704  
[valhannah@yahoo.com](mailto:valhannah@yahoo.com)

### Past President

Daryl Stephens  
ETSU Math Department  
Box 70663  
Johnson City, TN 37614  
Phone: (423) 439-6973  
[stephen@etsu.edu](mailto:stephen@etsu.edu)

### Secretary

Guy Mauldin  
Science Hill High School  
1509 John Exum Parkway  
Johnson City, TN 37604  
Phone: (423) 232-2190  
[maulding@jcschools.org](mailto:maulding@jcschools.org)

### Treasurer

Floyd Brown  
Science Hill High School  
1509 John Exum Parkway  
Johnson City, TN 37604  
Phone: (423) 232-2190  
[brownf@jcschools.org](mailto:brownf@jcschools.org)

If you are reading this newsletter on paper, you're missing out on all the color! Visit our web site ([www.uetctm.org](http://www.uetctm.org)) to see the newsletter as a full-color PDF file with clickable links.

## Mark Your Calendar NCTM Conferences

### 2009 Annual Meeting & Exposition

Washington D.C.  
April 22-25

“Equity: All Means ALL”

### Regional Conferences & Expositions

Oklahoma City - Oct. 2-3  
Preregistration deadline:  
September 5

Cleveland - Oct. 16-17  
Preregistration deadline:  
September 16

Reno - Nov. 6-7  
Preregistration deadline:  
October 6

Events Taken from  
NCTM Newsletter (45.1)