



UETCTM News

Last Meeting for the Spring

The final meeting before Summer of the Upper East Tennessee Council of Teachers of Mathematics will be held at East Tennessee State University from 4:00 to 6:00 on Monday May 4, 2009 in room 3 on the third floor of the Culp Center. Directions can be found at <http://www.etsu.edu/maps/>. Visitor parking passes are not needed since our event begins after 3:30.

The evening will open with refreshments and a social time from 4:00 to 4:20. Refreshments include tea, cookies, chips, and goldfish. The regular business meeting will also occur during this time slot. From 4:50 to 6:00, the regular concurrent presentation will begin. Ryan Nivens and Tara Carver-Peters will be presenting “Fun with 3D geometry for Elementary Students.” Dr. Robert Beeler will be presenting “Invisible Purple Unicorns and Other Imaginary Beasts,” an investigation of imaginary numbers at the high school level. The middle school workshop has yet to be announced.

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“State of the Union”

A Reflection from UETCTM’s President

Wow, how quickly time flies. We started out the school year at Science Hill and then made our way to Northeast State, Science Hill 8/9 campus, Sullivan Central, Volunteer, and will end the year at ETSU. We heard some wonderful presentations through out the year and I want to take this moment to personally say “Thank You” to each presenter for your time and effort. I heard from a number of members that they learned so many new things from our meetings and really appreciated having the opportunity to be apart of an organization like UETCTM.

I think the expansion of the newsletter to include articles has been a wonderful addition and I would like to say “Thank You” to Ryan Nivens for his work on the new and improved UETCTM newsletter. It has been really interesting reading the different math perspectives that we have seen throughout this past year. We really appreciate each individual who took out the time to write an article for the newsletter and hope that many more of you will submit an article in the future.

This past year has been extremely busy for me, coming back to work as a new mom and taking on the role of being president of UETCTM, and I could not have done it without help.

Daryl Stephens, “Thank You” so much for everything and to our math specialists in Hawkins County, Johnson City, Kingsport City, Washington County, and Sullivan County. I really appreciate all of the assistance in trying to find locations and speakers throughout the year.

Lastly, I want to thank each UETCTM member for coming to our meetings and supporting our organization. Thank you so much for helping me make UETCTM’s 2008-2009 academic year a great one! I look forward to seeing everyone in the fall.

-Dayna Smithers

*Current President of the Upper East,
Tennessee Council of Teachers of
Mathematics*

Math Perspectives

Assessment: It Isn't Just an "Endpiece" Anymore

By Cathy Nester

What is assessment? For many years, assessment has been viewed as a means to an end. Often, it was something teachers did at the end of a lesson before moving on to the next lesson. Very little emphasis was placed on the information gained from the assessment if there was any analysis made of that information at all. In fact, it was seldom that anything was done with the assessment beyond recording the grade in the gradebook. That was then...

...This is now. Today we realize that in order to help students understand the concepts we are teaching them, we as teachers must understand what they already know. How are we to gain that information except through assessment? Pre-assessment! In fact, not only should we assess before we begin a unit of study, we should assess students throughout the study and at the end as well. This article will provide a brief discussion regarding each of these and hopes to inspire teachers to take a new look at assessment and its role in the classroom.

Pre-assessment should, ideally, be a reflection of the summative evaluation planned for the unit. Once the essential understandings for a unit of study have been identified, the summative evaluation can be created. Using this evaluation as a

guide, a pre-assessment can be created that asks students to tell what they already know and understand about the underlying concepts of the upcoming unit. The results of this pre-assessment will aid teachers in making adequate plans to address the needs of each individual student. Pre-assessment need not be just a shortened form of the test planned for the end of a unit, however. In fact, it may be something as simple as a survey asking students to write a brief paragraph stating what they already know and understand about a concept. For example, if the unit of study is focused on the concept of area and perimeter, and students will be asked on the summative evaluation to determine these measures for a simple floor plan, the pre-assessment might be to write a brief description of perimeter and area and describe how each would be used and why. From this simple task, teachers can identify students who are at the very beginning levels of understanding and those who are ready for a more challenging assignment. While these students should all be working to understand the concepts behind the same content standard, their tasks will be at very different levels. This is the key to differentiating instruction for students. (cont. on p 4)

Assessment: It Isn't Just an "Endpiece" Anymore (cont.)

It is also critical that we assess students daily. This practice provides direction for our unit and helps to pace the instruction for subsequent lessons. Daily assessments need not be lengthy, paper-pencil tasks, but instead may be very informal. For example, observations made as the teacher watches independent practice of tasks or listens as a small group works through a problem solving process are both forms of assessing students. Asking students to write two or three sentences on an index card at the end of class stating what they understood well from the day's lesson and what they wished to have further clarification of is another form of ongoing assessment. By simply asking students to give a

thumbs up sign if they understand, a thumb down if they are lost, or a thumb in the middle if they need a few more times to practice a skill, teachers can gain instant assessment regarding the current understanding of a concept. Such daily, formative types of assessment allow teachers to adjust their unit of study as they prepare for each day's instruction in a manner that will benefit all students. It also provides students with feedback, which has been a proven method of raising student achievement. This practice allows students the opportunity to resolve content issues as they arise, rather than waiting until the end of the unit only to fail an (cont. on p 5)

Mark Your Calendar NCTM Conferences

Annual Meetings & Exposition

San Diego - April 21-24, 2010
"Connections: Linking Concepts and Context"
Speaker proposal deadline is May 1

Regional Conferences & Expositions

2009

Boston - Oct. 21-23
Minneapolis - November 4-6
Nashville - November 18-20
(In Conjunction with TMTA's
annual meeting)

Events Taken from
NCTM Newsletter (45.6)

Assessment: It Isn't Just an "Endpiece" Anymore (cont.)

examination and be forced to move on to new content.

Of course, there must also be some form of summative evaluation following a unit of instruction. This task should require students to provide evidence of their personal understanding concerning the content presented and how it applies to their current level of mathematic development. This assignment should be more than a set of multiple choice questions if true evaluation is to be gained. Students should be required to process, problem solve, or write about the tasks performed in a manner that the teacher acquires insight into the thought processes and mathematical perceptions of each student. Ideally, this should be a demonstration of the content learned...not a quest to determine which students learned it and which ones did not. Students still requiring assistance with the content should receive further practice and instruction through a small group or individualized setting. Otherwise, the foundation for future mathematics content will be insufficient, creating obstacles to the learning process.

Finally, no discussion regarding assessment would be complete without looking at the importance of benchmark testing and the use of those

results. Periodic benchmark testing allows teachers to view student progress from year to year and can help in the identification of those students who may not be gaining in knowledge at the same rate as their peers. By looking at the progress of each student, teachers are able to create small, flexible groups for instruction based upon needs in skill and content areas specific to each. Once a teacher is able to diagnose a gap in understanding, an intense focus can be placed on remediation, allowing the student to move on to new and deeper levels of learning.

So you see, while teachers must start each unit of study with "the end in mind", a "one size fits all" approach to assessment is as ineffective as a "one size fits all" approach to teaching the content. The new focus is on content and the manner in which each student is able to navigate through the material in a quest for new understanding and the ability to put theory into practice by applying the concepts to real life.

-Cathy Nester is a elementary math specialist for Sullivan County Schools

Math and Music by Lynn Whitaker

Most all children and teens love music, and many students learn through music. Now there are mathematical CDs with math-specific songs to help students learn mathematics concepts and skills. Math CDs can be used to introduce a new math concept or to reinforce a skill. This multi-sensory approach can also be added to an existing calendar wall time in the early grades. Students remember the skill better when it is put to a musical beat. Older students learn and retain formulas better when put to music. Mathematical concept songs can be found on the Internet, or you can find math CDs in a math catalog or a school supply store. An example of a song is listed below:

Odd & Even Song (tune: BINGO)

There was a farmer who had a pig,
And Even was his name-o.

0, 2, 4, 6, 8; 0, 2, 4, 6, 8; 0, 2, 4, 6, 8;

And Even was his name-o.

There was a farmer who had a cow,

And Odd was her name-o.

1, 3, 5, 7, 9; 1, 3, 5, 7, 9; 1, 3, 5, 7, 9;

And Odd was her name-o.

*-Lynn Whitaker is a 1st grade
teacher at Gray Elementary
School in Washington County, TN*

Request for Article Submissions

We are always looking for people to contribute articles to our ongoing "Math Perspectives" series. Every month, we would like four people to write for 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.

Another section will be included next volume dedicated to mathematics problems. We are looking for people to submit favorite problems focused on various grade bands.

If you or someone you know would like to contribute to this column, please contact the newsletter editor, Ryan Nivens at nivens@etsu.edu.

NCTM Membership and Journal Subscriptions

Are you a member of NCTM (National Council of Teachers of Mathematics)? As an NCTM member you can receive one or more of four outstanding journals depending on your interests: Teaching Children Mathematics (geared towards elementary school), Mathematics Teaching in the Middle School, Mathematics Teacher (for high school teachers), or Journal for Research in Mathematics Education.

In addition, the NCTM web site has a number of members-only features including an online journal devoted to more high-tech tools for all levels, and NCTM publishes many books, monographs, and yearbooks of interest. Now when you join or renew an existing individual membership online, you can choose to have a rebate sent back locally to UETCTM. New NCTM members or members renewing after a lapse of at least a year earn UETCTM a \$5 rebate; renewing NCTM members earn us a \$3 rebate. Go to www.nctm.org for more information, and when you fill out the online membership form, select Upper East Tennessee Council of Teachers of Mathematics from the drop-down menu for the state.

Franklin Math Bowl Needs Test Writers

The Franklin Math Bowl is a middle school math contest held on a Saturday in the early part of November on the ETSU campus. It is co-sponsored by the ETSU math department, University School, and UETCTM. Each year we have a test for 6th, 7th, and 8th grade math plus Algebra I. The test consists of 25 multiple-choice questions. Sample tests can be found on the Franklin Math Bowl web page at <http://www.etsu.edu/math/fmb/>. We need some volunteers to write tests. (Or if you don't think you could write a test, at least contribute some questions.) Obviously we can't use middle school teachers who prepare their students for the test, but anyone else is eligible. Typically we ask writers to have their tests written by early September.

If you would be willing to help, have further questions, or want to see test writer guidelines, please contact Daryl Stephens, director, at 423-439-6973 or by email at stephen@etsu.edu. Thanks in advance for your help!



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 Address: _____

Home Phone: (____) _____

School: _____

School Address: _____

School Phone: (____) _____

Email Address: _____

**Officers of
UETCTM for
2008/2009**

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

ETSU

Department of Curriculum and Instruction

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