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MATH FUN

his year has 4 rare dates 1/1/11, 1/11/11, 11/1/11 & 11/11/11...but then....Take the last 2 digits of the YEAR of your birth, add the age you will turn this year and it will equal 111...If you were born in the 2000's it adds up to 11.

By Brittany Martin, ETSU Elementary Education Student



UETCTM MEETING Monday, February 7, 2011

Church Hill Intermediate School 211 Oak Street Mount Carmel, TN 37645 423-457-0252

Meeting Agenda

- 4 p.m. Refreshments
- 4:30 p.m. Business Meeting
- 5 p.m. Programs
 - Graphing in the Coordinate Plane Using Constellations
 (Kris Krautkremer UETCTM Secretary)
 - Hands on Equations Demonstration (Amy Glass & Ashley Jones)
 - 3/4 STEM lessons from TTU Conference (Laura Bright & Amanda Short)
 - Using Websites in the Classroom (Westley Duncan & Tara Harrell)



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A message from the ${\it President}$

Winter is in full force in East Tennessee and many of us are recovering from a near record number of snow days. Fortunately, the weather did not prevent us from having a wonderful meeting in Hawkins County.

I would like to announce the new president-elect, Tara Harrell. She is currently the Math Coach for Hawkins County Schools and is excited to begin her term as president next school year. Please introduce yourself to her if you have never met her before.

We are hosting the Tennessee Mathematics Teacher Association annual meeting this fall. The dates are set for September 23-24 and we will hold this event on campus at East Tennessee State University. We plan on having sessions for all grade levels PreK through 12 along with a dedicated set of presentation for both higher-level mathematics and STEM-related fields. If you or your colleagues have any outstanding lessons or activities, please consider applying to present them at the conference.

I look forward to seeing you all at the last two meetings this spring. Please put the dates on your calendar now and let's have a great ending to a great school year.

Sincerely,

Ryan Nivens

UETCTM President

Feb. 1. 2011



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MATH TRIVIA

- 1. Why don't statisticians like to model new clothes?
- 2. What did the Box Plot say to the outlier?
- 3. What did one regression coefficient say to the other regression coefficient?
- 4. Why did Yogi Bear become a statistician?
- 5. Why did the statistician do such a horrid job of laying tile on his bathroom floor?
- 6. Who is the most famous Statistician?

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• Answers on page 6.





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COMMON CORE STANDARDS SUMMARY

By Amanda Short Carter's Valley Elementary School Hawkins County Schools, 4th Grade



he Common Core Standards for 4th grade provide examples for teachers to actually see what the students are expected to know. It also helps the teacher see how constructing,

drawing, modeling, can be used to teach certain concepts on concrete settings.

The TN State Standards seems relatively large compared to the Common Core Standards. It lists each concept piece by piece. The Common Core standards show different ways to incorporate more than one standard in each lesson. For example, instead of just learning to measure the length of an object as compared to another, it states that you can show this number as a fraction or decimal, as well as show it on a number line. It sets the stage for a hands-on working environment, and provides examples of how to show the students.

As a teacher, the Common Core Standards help you see the whole picture, instead of just the pieces that the students are expected to connect by themselves.

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THE BENEFITS OF TEACHING MATH THROUGH PROBLEM SOLVING

By Heidi Randolph Hawkins Elementary School Hawkins County Schools, 5th grade



here are several benefits of teaching math through problem solving. One, it establishes a community of learners. Two, students use a variety of approaches to get to their answers.

Three, students see that it is not always wise to follow the crowd. The following paragraphs discuss these benefits and help support these statements.

Problem solving creates a community of learners. Students work together to arrive at a conclusion. They can all put input into how to reach the conclusion.

This is a different atmosphere than what is created by regular instruction and independent practice.

A variety of approaches can be used to arrive at an answer. One group may try to use addition or subtraction. Another group might try using solid particles or manipulatives to arrive at the conclusion. Some may just think about the situation and try to reason it in their head.

Students can visualize through problem solving that it is not always wise to follow the crowd. Two may stand alone with different opinions while a whole crowd may stand together with like opinions. When it comes time to support their answer they may not be able to and actually lose members to another group because they were convinced of another answer. The answer the crowd has ends up being incorrect.



A traditional classroom is changed by these benefits. You can observe learning taking place. Students rely on past knowledge to help in solving problems. Finally, the role of the teacher is completely different. They become a facilitator, not a lecturer. Teachers encourage risk taking. It is ok to make mistakes. Students will then be promoted to put a trust in their abilities to come up with a solution.

DO THE BENEFITS OUTWEIGH THE RISKS?

ARE YOU A RISK TAKER?

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ANSWERS TO MATH TRIVIA

- 1. Lack of fit.
- 2. Don't you dare get close to my whisker?
- 3. I'm partial to you.
- 4. Because he discovered that truth could be inferred on the basis of bare facts.
- 5. He incorrectly partitioned some of the squares.
- 6. George Washington. He claimed he never told a lie and got away with it.



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VOLUME 11 ISSUE 4

WWW.UETCTM.ORG

Feb. 1. 2011



UETCTM News

LET'S BUILD A BRIDGE

By Kristi DeBusk **Hawkins Elementary School** Hawkins County Schools, 5th Grade



n everyone's life there are ups and downs. We all have strengths and PRESIDENT weaknesses. Everybody needs somebody sometime. Often we rely on **COMMON CORE** STANDARDS SUMMARY friends or family to support us when we are weak or in need. Just as a

> natural bridge is a means to travel over a rough spot, or gap in the road, our loved ones can bridge the gap between our problems and solutions.

In education, who is building bridges for our children? Do teachers look ahead and reach beyond their own grade level expectations? Do teachers look back and reinforce gaps from the previous year's learning? As teachers, it is our responsibility to build a bridge from where students are now to where they want to be in the future. What kind of future will our children have if they are not prepared to compete in a struggling economy for jobs?

Although some jobs are disappearing, many more problem solving and analysis jobs are developing. This is why so much emphasis needs to be placed on what is going on inside of our Math classrooms. As teachers, we need to focus on meaningful problem solving as a daily practice, not an isolated skill. When teaching Math concepts, it is important to be aware of the developmental levels of the children we serve. Teaching in small chunks, reinforced with daily review, offer the greatest chance for retention of skills. Some teachers may feel that scaffolding is only a necessity for painters and construction workers. I believe scaffolding is just as important for educators. If we don't support learning with balanced review of skills, the skills could be lost. Like the saying goes, if you don't use it you lose it.

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We need to refocus our Math classes to foster quality lessons over the quantity of lessons. All too often, teachers are pressured to cover the most number of skills possible with the least amount of time given. The consequence of this way of teaching is a loss of conceptual understanding and retention of skills. This is too high of a price for our children to pay for the sake of high test scores. Perhaps this is why we sometimes ask ourselves if our students learned anything in Math before they entered our classrooms. We are playing beat the clock to teach the test, and not building enough bridges.





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REMEMBER, YOUR NURSE AT THE ER MAY BE A FORMER MATH STUDENT





This might be a source of stress, if you recall their mathematical skills were not the best, and they are measuring a narcotic into a syringe and this drug is about to be injected into your bloodstream. Or perhaps you remember them as one of your top students and they are about to change your tires. You are comfortable with their abilities, but had hoped they would do something fascinating in their career. Face it; their life after your classroom has taken some turns you never saw as possible.

f you have taught for more than five years, you might have

experienced meeting a former student in their occupation.

As a fifth grade teacher this is especially true. These young people have only begun to discover who they are. I need to keep the big picture in mind, not just a TCAP at the end of the year. The temptation to only see that test is increasing now that my evaluation is tied to a number they make on a one day test. I must be aware of what they will need from me to succeed later.

A good example of this comes from within my own household. My oldest daughter quickly surpassed my mathematical abilities by the time she was a sophomore in high school. Standards had been moved down to lower grades, and I was impressed and proud at how easily my daughter handled them. When she was a junior however, she came to me with puppy-dog eyes asking for help with an



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assignment that made my head spin. I told her I couldn't possibly help her, she knew so much more math than I did, and that I would be useless. But like a dutiful mother, I looked at it again and asked her if she had tried cross-multiplying. She had never seen or heard of this. I showed her how and why this worked with some basic fractions. She was elated; you would have thought I had just handed her a \$10,000 check. It took days for it to truly sink in that, with all of her abilities in math, there were basics she did not know. They had been forgotten in the race to move her forward. I was worried that there were other fifth grade skills she needed and lacked.

So, back to the guy changing the tires. He was a great student, but what might he have missed that he needed. Was that why he had not gone to college, or was it just one of those things life throws at us? Did that young nurse know more than I gave her credit for, or was I right to be worried?

With more standards coming to lower grades, more accountability coming in our test scores, and technology giving us crutches, we, as teachers must stop and force ourselves to teach to make functional people, not just test takers. Your next visit to the emergency room may count on it.



T.H.I.N.K

By Rhonda Markham Moresburg Elementary School Hawkins County Schools, 4th Grade



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T is for tinker. Have students read the problem, list what they know, and develop several different strategies they might use in solving the problem.

H is for hypothesize. Have students decide which strategy they feel will best help them in solving the problem.

I is for investigate. Let students explore their strategies using various manipulatives that may guide them in finding the answer.

N is for networking. Now have students share their strategies with others in the class to reinforce their procedures, build confidence, and reveal a variety of different strategies used to find the answer.

K is for know. Students will have now placed the information in their long-term memories and will be able to explore and explain other similar problems.



WOW, I LOVE MATH!

By Valorie Bausell Church Hill Intermediate School Hawkins County Schools 5th Grade Special Education



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his summer I had an opportunity to participate in the Eastman Scholar Mathlete Program. When I mentioned to others that I was going to spend two weeks doing a math program, I got some mixed responses. In fact, some would agree that this would be an experience they would not enjoy doing, especially in the summer. Obviously math is not a passion for them. As I looked around at the participants in this program, it is obvious that math is the thing that most of us love. It is exciting to be in a room full of professionals that share the love of math. I have enjoyed listening to the presentation of the lessons that we each were asked to share. It is amazing to me how many different ways teachers come up with to teach the same concept but in so many different ways. In today's society we have to continuously keep up with the latest technology. Our students are exposed to so many types of technology. If we can make our lessons fun and exciting, they will have a tendency to grasp the concepts more. Gone are the days that the teacher would stand at the front of the room and students would sit quietly and learn. I am thankful for the opportunity to gain knowledge that will help actively engage my students in what is expected of them.



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On one of our first days in the session, we were given a palindrome recording chart to count the number of steps and state the palindrome on the numbers 10-99. As I was participating in the activity, I thought I love doing this. I ever found myself wanting to get finished before the person beside me. This feeling of competition is one that many of us utilize when working with students. Some thrive on competition and are driven by it. I love the feeling that if gave me. I want to take this feeling back to my classroom. I want my students to think to themselves, wow, that was fun. I love math......



KEY THOUGHTS AND IDEAS

By Amanda Short Carter's Valley Elementary School Hawkins County Schools, 4th Grade



t is imperative for teachers to provide their students with something they can relate to before they can get their minds around new concepts. They need to see it happen. Whether we use videos, pictures, real-life objects, manipulatives, posters, or diagrams, they need to know it actually happens in "real life".

I know that we are supposed to activate prior knowledge and make connections, but I am learning quickly that not all students have a well-rounded background. As teachers, we must find common ground with them first, and then move them forward to new ideas. This will allow them to have a foundation to brand new concepts, and start building from there. This will also open many other opportunities for them, and prepare them for future lessons. Again, once it is relatable to them, they will be able to grasp it, and hold on to it.

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UPPER EAST TENNESSEE COUNCIL OF TEACHERS OF MATHEMATICS

Monday, February 7, 2011 Church Hill Intermediate School, Hawkins County, TN

Tuesday, March 8, 2011 Indian Trail Middle School, Johnson City, TN

Monday, May 2, 2011 Bristol City Schools, TBA



NATIONAL COUNCIL OF TEACHERS OFMATHEMATICS 2011 REGIONAL CONFERENCES AND EXPOSITIONS

2011 RESEARCH PRESESSION

April 11–13, 2011 Indianapolis, IN

2011 Annual Meeting and Exposition April 13—16, 2011 Indianapolis, IN

NCTM 2011 REGIONAL CONFERENCES

- Atlantic City, New Jersey—October 19–21
- St. Louis, Missouri—October 26–28
- Albuquerque, New Mexico—November 2–4



TENNESSEE MATHEMATICS TEACHERS ASSOCIATION



SOUTHWEST VIRGINIA COUNCIL OF TEACHERS OF MATHEMATICS

Request for Article Submissions

e are always looking for people to contribute articles to our ongoing "Math Perspectives" series. Every month, we would like four submissions 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 in the next issue dedicated to mathematics problems. We are looking for submissions on favorite problems focused on various grade bands.

If you or someone you know would like to contribute to this column, please contact Ryan Nivens, Newsletter Editor.

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Rvan Nivens, Ph.D. **Assistant Professor**

ETSU

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UETCTM

Membership Application

best practices among mathematics educators.

Mail completed form to:

Jerry Whitaker Mathematics Curriculum Coordinator Washington County Schools 3089 Highway 11W Blountville, TN 37617

Membership Fee: \$10 Payable to: **UETCTM**



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The Upper East Tennessee Council of Teachers of Mathematics is an organization for anyone involved in mathematics education from preschool through college in the greater -Cities region. We meet six afternoons per year in various locations across the region. The purpose of UETCTM is to promote excellence in teaching mathematics and to share