
Upper East Tennessee Council of Teachers of Mathematics

NEWSLETTER

VOLUME 17 ISSUE 5

MARCH 2017



Announcements

Summer learning
opportunities!
(see pg. 2)

Fall 2017
meetings to be
determined.
Keep watching the
website

www.uetctm.org
for the earliest
posting, or check
with your district
mathematics
coach/specialist.

INSIDE:

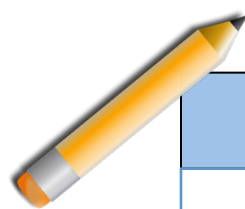
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Summer Learning opportunities!

Add effectiveness to your teaching and classroom practices by adding an NCTM Interactive Institute to your summer schedule. Enjoy face-to-face, in-depth professional development by leading experts in Pre-K-12 math education in a two-and-a-half day learning event that will help you formulate and implement:

- **Instruction** more strategically aligned to career-ready and college standards.
- More effective **teaching strategies** based on the foundational *Principles to Actions*.
- Practical **classroom strategies** that facilitate student performance and success.

Sharpen your strategies: Pencil in Summer Institutes!



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Link [here](#) for more information.

Facilitating Meaningful Mathematic Discourse

July 17-19

Baltimore, MD

What is mathematical discourse? How can it lead to improved student learning? Discover a better way to engage your students.

Supporting Students' Productive Struggle

July 20-22

Baltimore, MD

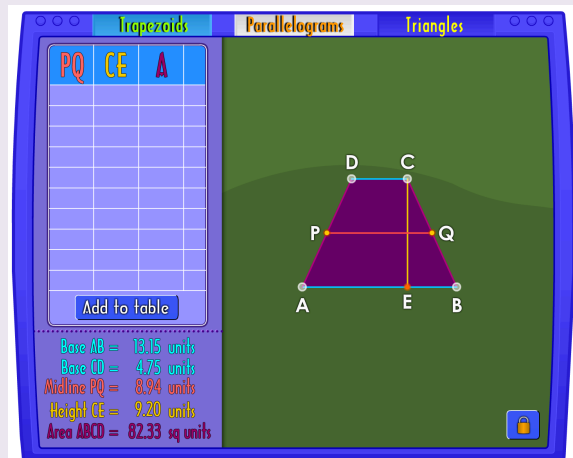
Forget easy: The productive struggle leads to breakthroughs. Learn how to build and nurture the productive struggle in your classroom and school.

Aim higher with ARCs.

ARC: Activities with Rigor and Coherence

Rigor in the math classroom has never been more important, and now to help teachers set high standards and support students so they reach them, NCTM offers a new and innovative resource: ARCs, Activities with Rigor and Coherence. Demonstrating the concepts of the instructional guide *Principles to Action*, this new series of lessons addresses a variety of math topics and integrates diverse NCTM resources to optimize learning opportunities for K-12 students.

ARCs are designed around global essential questions and implemented through activities that encompass a hook, lessons, ARC assessment and technology resources. For example, "Counting Strategies" for kindergarteners addresses the relationship between numbers and quantities; for the hook, students write their names and guess the number of letters, while engaging technology resources include: [Five Frame](#), [Ten Frame](#), and [Concentration](#).



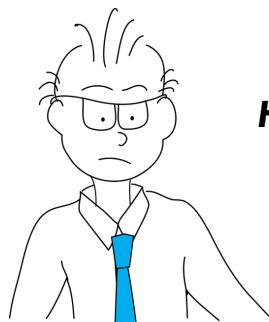
Interactive area tool used in Grade 6 ARC: *Discovering Area Relationships of Polygons*.

The ARC community features also allow users to read and create online reviews, post feedback and connect with other teachers.

Ready to aim higher? Explore ARC activities [here](#). ■



Making homework work better.



How can I help my child with homework?

Most teachers have heard this question at one time or another from a concerned or frustrated parent. For parents of upper grade students, the “problem with the problems” may be the content itself, but for parents of younger children, the lack of familiarity with current instructional practices is often to blame. Practices used today to aid conceptual understanding may not have been part of the parents’ childhood educational experiences, a lack that often leaves them feeling confused and helpless.

Implemented effectively, homework provides students with crucial learning opportunities and benefits, including practice and perseverance.

So what’s the solution?

In a recent message to NCTM members as well as a video address to parents, NCTM President Matt Larson points out that once parents understand and are engaged in the homework process, they are much more likely to support the assignment of homework. One tip to help keep parents on board: **Make sure homework is as straightforward and comprehensible as possible, a goal which may require assignments that limit student problem-solving methods to the preferred and most efficient one.**

Find Larson’s complete message to members [here](#), and his video address to parents [here](#). ■

Keep it simple and keep parents on board.



Balancing act: Conceptual vs. Procedural

"The math wars aren't over."

— *Common Core Math in the K-8 Classroom:
Results from a National Survey.*

Finding the right balance in math education has never been easy, as NCTM President Matt Larson notes in his recent message to organization members. In fact, disagreements over the relative importance of procedural fluency over conceptual understanding date back over two hundred years, and today, the debate continues to rage with the implementation of Common Core.

Citing the recent K-8 Common Core math survey, Larson points out the "false dichotomy" of the either-or mindset, since understanding makes learning skills easier, while skill level is tied to conceptual understanding.

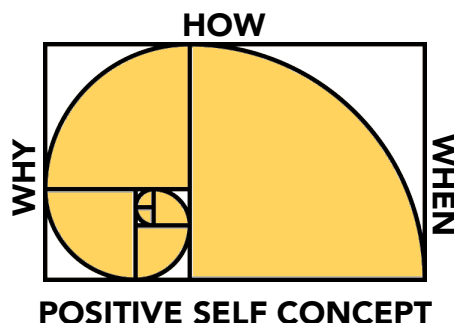
Larson urges teachers to use the NRC definition of mathematical literacy as a guide, helping students learn the how, why and when:

- **How:** Know how to solve problems (procedures),
- **Why:** Know why procedures work (conceptual understanding), and
- **When:** Know when to use problem-solving and application

Building on those three foundational principles, teachers should also help students build a positive mathematics identity and a greater sense of self-efficacy.

For Larson's complete message, link [here](#).

**Finding balance
with mathematical
literacy:**



Orpda: Another Language in Counting by Becca Gifford

Have you ever wondered why your students cannot remember the names of their numbers or the order of which they are to be counted in? Have you wondered why they just cannot get the “gist” of place value? Although in second grade, many students have the names and order of the numbers 1-20 locked into their brains, there are still those that struggle. This is seen even more often in kindergarten and first grade. We wonder why they just cannot seem to get it, but have we really put ourselves in their shoes?

Learning to count can seem like a foreign language to some students, and when learning to count in Orpda the first day of MathElites, I felt like I was learning a foreign language. In doing this, the experience led me to realize just how many of my students feel when they are learning to count, and also as they are trying to understand place value, which is a huge part of second grade.



**Do you speak
Base 5?**

During the first day of MathElites, our instructor gave us a paper that contained symbols and names of numbers. The numbers such as one, two, and three, no longer existed.

The language was completely foreign to each of us, and as we sat there, frustrated, we started to realize just how many of our students feel as we are working through our math lessons day by day. As the lesson went on, she provided different activities that asked us to do a variety of things. Each activity was different, and some made more sense than others. As we continued to work through each activity, it became easier and easier, and this “foreign language” became more natural to each of us.

Continued on page 7

Orpda: Another Language in Counting (continued)

What I feel that we can take from learning Orpda is that when we introduce numbers and place value to our students, it may be a foreign language to them. After all, some students may never have had the opportunity to even be introduced to vocabulary involving the names of numbers, much less having learned to count. We must provide our students with a variety of activities. What one student picks up on quickly, another student may struggle with, and vice versa. Provide students with an abundance of ways to learn, and understand. After all, we all learn differently, and some things come to us easier than others. Our students are no different. It is our job to turn these “foreign language” activities into something that is nothing more than second nature. Most importantly, it is our job not to give up on our students. Our students are our future. ■

one five value
place
seven
numbersten
new

“Some students may never have had the opportunity to even be introduced to vocabulary involving the names of numbers, much less learned to count.”



Movement in the Classroom

by
Tara Barnett

An important area in my teaching is movement for students. Movement is essential throughout my classes' entire day especially in the afternoon after lunch. This is the time of the day when we expand on calendar, and we have our math lesson. I have found it is also when my students and I begin to feel sluggish, tired, and ready to "check out" for the day. This is when movement becomes imperative.

To help motivate my students, I participate in the activities as well. One of our daily activities is counting to 100. There are several ways we can do this. One way is to start counting and exercising when the song "Let's Get Fit" by Jack Hartman begins. During this song, the students' exercise changes every 10 intervals. For example: They may walk in place while counting 1-10 and stretch their arms up 11-20. This type of activity continues until they count to 100.



Another daily activity is counting by 5's. I use the song "Exercise and Count by 5's" by Jack Hartman. This song has no specific movements; however, I incorporate movement. I like to use cross-body movements with this song which is brain stimulating for both left and right brain learners.

Some calendar songs I like to use are "Macarena Months" by Dr. Jean and "Days of the Week" to the tune of the Addams Family by Michelle Lebowe. I find you can incorporate songs and movement when teaching any subject. Be creative and get moving!! ■

Cross-body movements are brain stimulating for both left and right brain learners.



Visualizing Classroom Success by Emilee Little

Math hasn't always been a subject I have enjoyed. When I was in school I had a difficult time understanding many of the math concepts taught. I believe my problems came from being a visual learner. The manipulatives used today in the classrooms have given students such as me a deeper understanding of math. I have grown to love math and teaching math.

I have learned many new and different ways to teach math that will make my classroom a better learning environment. One technique I will be using in my classroom is the Rekenrek. The Rekenrek is a calculating frame, or arithmetic rack. I love the visual model the Rekenrek offers to young learners. Students can develop a variety of ways to use both addition and subtraction strategies. The Rekenrek allows a student to explore more than one way to think about a number. I love the possibilities the Rekenrek can bring to my classroom.



Another must in every classroom is the Growth Mindset instead of the Fixed Mindset. A Fixed Mindset is someone who avoids challenges, gives up easily, and is threatened by other people's success. A Growth Mindset embraces challenges, sees effort as necessary, learns from criticism, and is inspired by others' success. If teachers are not promoting a Growth Mindset in their classroom they are setting themselves and their students up for failure. ■



Word Problems by Emily Cornett

I love the idea of creating our own word problems using the different types.

Word problems are categorized by two types:

1. *Change Problems where a physical action is taking place, and*
2. *Part-Part-Whole or Compare problems.*

In the Change Problems category, you can add/join with the result unknown, change unknown, or start unknown, or you can subtract/separate with the result, change or start unknown.

Most word problems written by teachers tend to be the join: result unknown, or the separate: result unknown. Part-Part-Whole word problems can be whole unknown, one part unknown or both parts unknown.

Compare word problems can be the difference unknown, larger quantity unknown, or the smaller quantity unknown.

We can see how we need to include all types of word problems for our students, so they are exposed to and can practice the higher order problem-solving skills. This exposure begins to create a level of thought and confidence as they climb grades throughout their school career. ■

Exposure to word problems begins to create a level of thought and confidence as students climb grades throughout their school career.



READ UNDERSTAND IDENTIFY



UECTCM Leadership 2017-2018

President

Amanda Cole
Kingsport City Schools
acole@k12k.com

President-Elect

Sunshine Light
Kingsport City Schools
slight@k12.com

Past President

Andrea Fissel
Johnson City Schools
FisselA@jcschools.org

Newsletter Editor & NCTM Representative

Ryan Nivens
Department of Curriculum
and Instruction, ETSU
Box 70684 Johnson City, TN 37614-1709
Phone: (423) 439-7529
nivens@etsu.edu

Secretary

Tina Hill
Washington County Schools
hillt@wcde.org

Web Master

Daryl Stephens
ETSU Math Department
Box 70663
Johnson City, TN 37614
Phone: (423) 439-6981
stephen@etsu.edu

Treasurer

Amy Glass
Hawkins County Schools
amy.glass@hck12.net

Membership Application 2017-2018



Complete application and return to Amy Glass with a check for \$10 made payable to UETCTM. Mail completed application and check to:

Amy Glass
UETCTM Treasurer
712 Whippoorwill Court
Mount Carmel, TN 37645

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Home Phone: (____) _____ - _____

School: _____

School Address: _____

School Phone: (____) _____ - _____

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