Texas Mathematics Teacher

Volume LVII Issue 1 Spring 2010

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in a kitchen!

see page 19

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2010 Ballot Enclosed
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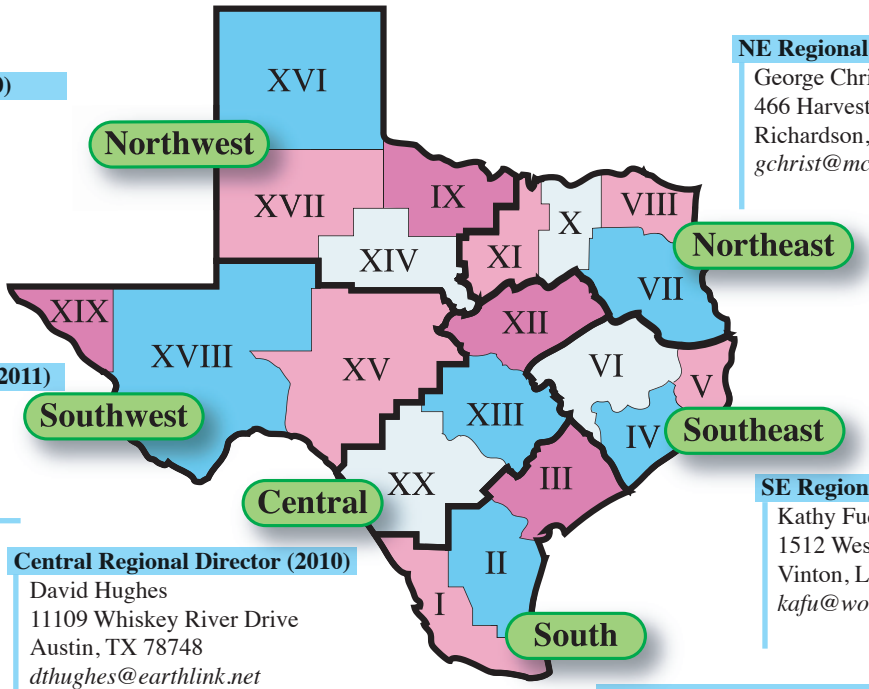

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Texas Mathematics Teacher

A PUBLICATION OF THE TEXAS COUNCIL OF TEACHERS OF MATHEMATICS

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Article

Features

Departments

TCTM Applications

All applications (including membership) are now available online at the TCTM website <*www.tctmonline.net*>.

Texas Mathematics Teacher (ISSN# 0277-030X), the official journal of the Texas Council of Teachers of Mathematics (TCTM), is published in the fall and spring. Editorial correspondence should be mailed or e-mailed to the editor.

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Call For Articles

Texas Mathematics Teacher seeks articles on issues of interest to mathematics educators, especially K-12 classroom teachers in Texas. All readers are encouraged to contribute articles and opinions for any section of the journal.

Manuscripts, including tables and figures, should be typed in Microsoft Word and submitted electronically as an e-mail attachment to the editor with a copy to the director. No author identification should appear on or in the manuscript. A cover letter containing author's name, address, affiliations, phone, e-mail address, and the article's intended audience should be included. After refereeing, authors will be notified of a publication decision.

Teachers are encouraged to submit articles for ***Voices From the Classroom,*** including inspirational stories, exemplary lessons, or management tools. If submitting a lesson, it should include identification of the appropriate grade level and any prerequisites. Items for ***Lone Star News*** include, but are not limited to, NCTM affiliated group announcements, advertisements of upcoming professional meetings, and member updates.

Businesses interested in placing an **advertisement** for mathematics materials should contact Mary Alice Hatchett. Advertisements do not imply endorsement by TCTM's board, editorial staff or members.

Deadline for submissions: Fall, July 1 Spring, January 1

Letter from the President

Dear TCTM Members,

It seems that you can't read the newspaper, watch the news, or check your email without seeing something about "College and Career Readiness." Whether that's the new buzzword coming out of both Austin and Washington, DC, or not, it's going to be shaping our worlds for the next several years.

So what is "College and Career Readiness" anyway? The National Governors' Association and the Council of Chief State School Officers have recently unveiled their versions of K-12 Mathematics Standards and College and Career Readiness Standards for mathematics. But those ideas aren't new to Texas. In 2008, the Texas Education Agency and the Texas Higher Education Coordinating Board released the Texas College and Career Readiness Standards (CCRS). After detailed analysis, a panel of educators agreed that the mathematics TEKS were highly aligned to those CCRS. For those of us that have been teaching mathematics in Texas for some time now, that isn't surprising. Our TEKS are rigorous, and when taught well, prepare Texas students to compete in the job market or college of their choice.

How do we know if a student is college or career ready? One way to gauge college or career readiness is to use a standardized assessment. Texas is no stranger to standardized assessments, and the next generation of Texas assessments will be the State of Texas Assessment of Academic Readiness, or STAAR. The STAAR End-of-Course assessments for Algebra 2 and English 3 will contain a College Readiness Component, helping teachers, parents, school administrators, and college administrators know whether or not students are college and career ready.

But those of us in the classroom know other ways to gauge college or career readiness. There are so many different types of knowledge that students possess, and not all of that knowledge can be assessed easily on a standardized test. Fortunately, in the 2010-11 school year, TEA is piloting an exciting new project called Project Share. Through a Facebook-like interface, teachers will be able to collaborate with their colleagues from all corners of the state, sharing their classroom experiences and their best lessons. Professional development from TEA and the Education Service Centers will begin to include online components, where teachers collaborate with one another electronically in addition to their face-to-face interactions.

To me, one of the more exciting components of Project Share is the one that allows teachers and students to build electronic portfolios of their work. Beyond just research papers and blog postings, the bold use of the Internet and other electronic media empowers teachers and students to use audio and video to demonstrate what they know. Ultimately, when students graduate high school, they will have an electronic portfolio of their work in a variety of courses. Students can use this portfolio to demonstrate more of what they know – especially the aspects that cannot be measured on a standardized assessment. Is that exciting, or what!

Come learn about the new initiatives that TEA is unveiling this summer through your local ESC. Better yet, come to CAMT in San Antonio! Program Chair Linda Gann, of Northside ISD, has put together an award-winning recipe book of featured speakers and innovative sessions to help you become even more of a gourmet chef in your classroom! Don't forget to bring your principal along to the Administrators' Conference so that she or he can learn new ways to better support you in your classroom.

Finally, when you come to CAMT this summer – July 15-17 – mark your calendar for the TCTM Business Meeting and Reception. Stop by for refreshments and door prizes, and say "hi" to our incoming President, Nancy Trapp! Nancy was a leader in her own classroom in Lyford CISD for many years before recently retiring, as well as serving as a teacher leader par excellence in projects such as the Texas Rural Systemic Initiative and organizations such as the Rio Grande Valley CTM. After 2 years of serving as your president, I will be proud to hand the gavel over to Nancy this summer, knowing that I leave TCTM in good hands.

Thank you for the opportunity to serve as your president! I look forward to continuing to work with you as we promote mathematics education in Texas.

Paul Gray
TCTM President 2008-2010

Lone Star News

Affiliate Groups

These are local affiliated groups in Texas. If you are actively involved with them, please send future meeting and conference information to Cynthia Schneider at <*cschneider@austin.utexas.edu*> so we may publicize your events. Contact information for each group is available on the NCTM website, <*www.nctm.org*>. Contact information for regional directors is located on the inside front cover.

SOUTHWEST REGION: *Service Centers 15, 18, 19*

Rita Tellez and Veronica Hernandez, Co-Regional Directors

Greater El Paso CTM
Holds an annual fall conference. Contact: <*gepctm@yahoo.com*> or see <*www.math.utep.edu/Faculty/lesser/gepctm.html*>

SOUTHEAST REGION: *Service Centers 4, 5, 6*

Kathy Fuqua, Regional Director

Fort Bend CTM
Holds a short meeting in August, a fall mini-conference, a spring mini-conference and an end-of-year banquet to serve the districts of Alief, Fort Bend, Katy, and Stafford. Contact: Alena McClanahan, <*alena.mcclanahan@fortbend.k12.tx.us*>.

NORTHWEST REGION: *Service Centers 9, 14, 16, 17*

Nita Keesee, Regional Director

Big Country CTM & Science
Will hold their 2011 Big Country Mathematics, Science, and Technology Symposium in January or February, at the Region 14 ESC. Contact: Leslie Koske, <*lkoske@esc14.net*> or 325-675-8661.

Texas South Plains CTM
Seventeenth Annual Panhandle Area Mathematics and Science Conference will be held in September 2010, in Canyon, TX. Contact: Gilberto Antunez, <*gantunez@mail.wtamu.edu*>, or see <*www.wtamu.edu/academic/ess/edu/*> for information on 2010.

NORTHEAST REGION: *Service Centers 7, 8, 10, 11*

George Christ, Regional Director

East Texas CTM
For current information contact the president, Robin McClaran, at <*robinmc@etbu.edu*>.

Red River CTM
The STEAM (Successfully Training Educators As Mathematicians) Conference is held every four years at the campuses of Texas A&M University-Texarkana and Texarkana College, Contact: Debra Walsh, <*dwalsh@redwater.esc8.net*> or Susie Howdeshell, <*showdeshell@pgisd.net*> or see <*www.tamut.edu/~rrcmath/*>.

Greater Dallas CTM
Holds two mathematics contests (W. K. McNabb Mathematics Contests) for students in grades 7 - 12 - one in the fall (early Nov.) and one in the spring (early April). A banquet in May is held for the winners. Contact: Tom Butts, <*tbutts@utdallas.edu*> .

SOUTH TEXAS REGION: *Service Centers 1, 2, 3*

Barba Patton, Regional Director

Coastal CTM
Will hold their annual conference on June 18, 2010, in Corpus Christi. Contact: Faye Bruun, <*faye.bruun@tamucc.edu*>, or see <*cctm.tamucc.edu*>.

CTM @ Texas A&M University at Corpus Christi (Student Affiliate)

CTM @ Texas A&M University at Kingsville (Student Affiliate)

Rio Grande Valley CTM

The 43rd annual conference will be held on Saturday November 20, 2010, at the University of Texas - Pan American, Edinburg, Texas, from 8:00 to 4:00 p.m. Contact: Nancy Trapp <*ntrapp@vtxb.com*> or see <*www.rgvctm.org*> .

CENTRAL TEXAS REGION: *Service Centers 12, 13, 20*

David Hughes, Regional Director

Austin Area CTM
TThe fall conference will be held in October 2010. Contact: Pam Johnson, <*pjohnso2@austinisd.org*>, or see <*www.aactm.org*>.

Alamo District CTM
Normally holds a fall and spring conference. Contact: Kathy Mittag, <*kmittag@utsa.edu*>, or see <*www.adctm.net*>.

Central Texas CTM
CTCTM will hold a spring mini-conference in Febuary 2011, in Waco at the Region 12 Service Center. Contact: Rachelle Meyer <*Rachelle_Meyer@baylor.edu*> or see <*www.baylor.edu/soe/ctctm*>.

STATEWIDE

Texas Association of Supervisors of Mathematics (TASM) meets in the fall and spring in Austin. Membership is required to register for this meeting. For membership and registration information, please see <*www.tasmonline.net*>.

The Association of Mathematics Teacher Educators of Texas (AMTE-TX) will hold their annual meeting at CAMT 2010. For more information contact the current president Sandi Cooper at <*Sandra_Cooper@baylor.edu*>.

NATIONAL

National Council of Teachers of Mathematics (NCTM) Annual Meeting and Exposition will be held in Indianapolis, IN on April 13-16, 2011.

TEA Talks

Hot News

For additional information, refer to the websites listed

Assessment Updates

TAKS Vertical Scale

- Texas Education Code, Section 39.036 required the development of a vertical scale for assessing student performance in reading and mathematics in grades 3-8.
- For Spring 2010 student achievement will be reported on the vertical scale for grades 3-8 mathematics and reading.
- For more information about the TAKS vertical scale score and changes to the academic achievement standards can be found at the Student Assessment Vertical Division website at
  <www.tea.state.tx.us/index3.aspx?id=3818&menu_id3=793>

Texas Projection Measure (TPM)

- A measure of annual student improvement is required by SB 1031, HB 1, and NCLB
- TPM for TAKS indicates whether students are projected to meet the standard in grades 5, 8, and 11 after receiving grade-level instruction
- TPM is reported for each subject as a "Yes" or "No," indicating whether the student is projected to meet the standard in that subject at the next high-stakes grade
- More information on the Texas Growth Proposal can be found at *<www.tea.state.tx.us/index3.aspx?id=3688&menu_id3=793>*
- An explanation of student results with TPM can be found at
  <www.tea.state.tx.us/index3.aspx?id=6410&menu_id3=793>

STAAR—State of Texas Assessments of Academic Readiness

- Begins in 2011-2012
- Must be linked to career and college readiness
- Will have "clearer, fewer, deeper" focus—will provide a more clearly articulated assessment program, focus on fewer skills, and address those skills in a deeper manner
- New assessment blueprints, reference materials, and information booklets
- Standards for EOC assessments planned for fall 2011; standards for grades 3-8 assessments planned for fall 2012

End-of-Course Assessments

- Legislation requires the phase out of high school TAKS and replaces it with EOC assessments in Algebra I, Geometry, Algebra II, English I, English II, English III, Biology, Chemistry, Physics, U.S. History, World History, and World Geography.
- Freshman class of 2011-2012 is first group to have EOC assessments as a graduation requirement (current 7th graders).
- In order to graduate, a student must achieve a cumulative score that is at least equal to the product of the number of EOC assessments taken in that content area and a scale score that indicates satisfactory performance.
- A student's score on an EOC assessment will be worth 15% of the student's final grade for that course.
- All 12 EOC assessments will be operational in 2011-2012. Algebra I – administered in current form since 2005; offered online only in spring 2010; offered in paper and online in spring 2011.
- Geometry – field tested in spring 2007; operational since spring 2008; offered in paper and online in spring 2010.
- Algebra II – field tested in paper and online in spring 2010; operational beginning spring 2011 (paper and online).
- Currently districts may volunteer at the student, teacher, campus, or district level for field tests and operational tests.
- Confidential student reports and the confidential list of students' results will be accessible for these operational EOC assessments at *<etest.pearson.com/Customers/Texas/eoct/txeoct/reporting.htm>* within 24 hours from the close of testing day.
- Summary reports available at *<www.tea.state.tx.us/index3.aspx?id=3631&menu_id3=793#eoc>*

Curriculum Updates

Mathematics Graduation Requirements

In January, the State Board of Education (SBOE) approved revised graduation programs. Math requirements remain the same for the most part. Students who entered high school in 2007-2008 or thereafter are still required to have four mathematics credits—Algebra I, Geometry, Algebra II, and a fourth math credit—to graduate under the required Recommended High School Program (RHSP). The fourth math credit for the RHSP can be Mathematical Models with Applications (MMA) if it is successfully completed prior to Algebra II.

The SBOE also approved three Career and Technical Education (CTE) courses that can satisfy the fourth math credit requirement. The CTE courses approved to satisfy the fourth math credit requirement for the RHSP are Mathematical Applications in Agriculture, Food, and Natural Resources, if successfully completed prior to Algebra II; Statistics and Risk Management; and Engineering Mathematics. For the Distinguished Achievement Program (DAP), Statistics and Risk Management and Engineering Mathematics were approved to satisfy the fourth math credit requirement. In addition, the SBOE also approved AP Computer Science to be used to satisfy the fourth math credit requirement for the DAP.

A 2010-2011 side-by-side chart, which includes these additional courses, is posted at *<ritter.tea.state.tx.us/curriculum/SBSGradReqs2010_2011.pdf>*.

For more information on the graduation requirements, please see the Frequently Asked Questions (FAQ) documents posted at *<www.tea.state.tx.us/graduation.aspx>*.

Texas Algebra Readiness Initiative

Background

In 2007, funding for the Accelerated Reading Instruction/Accelerated Math Instruction (ARI/AMI), and Intensive Reading Instruction/Intensive Math Instruction (IRI/IMI) grants was provided through an appropriations rider for the amount of $123,354,495 per annum (GAA, 80th Texas Legislature, Article III, Rider 44).

This formula funding has been replaced by a new rider for the amount of $151,999,650 per annum which details a multi-component strategic approach for supporting students and educators (GAA, 81st Texas Legislature, Article III, Rider 42).

The strategic approach for supporting students and educators includes comprehensive planning for cohesion and unity, targeted support activities, the creation and provision of high-quality professional development, and specific intervention grant programs.

To assist districts with a transition year following the elimination of the Accelerated Reading Instruction/Accelerated Math Instruction (ARI/AMI) grant program, funding in the amount of $44,240,726 was allocated for Student Success Initiative Grants (SSIG). The amount of each district's award was determined by the number of students who failed to meet satisfactory performance on the first administration of the 2009 Texas Assessment of Knowledge and Skills (TAKS) Reading in grade 3 and TAKS Math in grade 5. Most districts received

approximately one-third of last year's ARI/AMI allocations. Correspondence on the SSIG program has been posted at *<ritter.tea.state.tx.us/taa/curr100109.html>*.

Key Components

I. Focused Curriculum

Texas Response to Curriculum Focal Points (TxRCFP) (K-8)
The TxRCFP organizes the Texas Essential Knowledge and Skills (TEKS) around key conceptual ideas that emphasize integration of concepts across the strands/skills and lead naturally to mathematical connections and higher-level thinking. The pdf of the TxRCFP will be on the TEA website soon. TEA Mathematics staff will send a message to the TEA Mathematics Listserv when it is available.

II. Professional Development

Algebra Readiness Professional Development Academies
Middle School Student in Texas Algebra Ready (MSTAR): An Introduction (5-8)
The MSTAR Introduction informs and familiarizes participants with the TxRCFP as a framework for improving overall mathematics instruction and achievement with the goal of decreasing the percentage of students who need math intervention. MSTAR Intro is currently available through ESCs. An on-line summary version will be available soon.

Elementary Students in Texas Algebra Ready (ESTAR): An Introduction (K-5)
The ESTAR Introduction informs and familiarizes participants with the TxRCFP as a framework for improving overall mathematics instruction and achievement with the goal of decreasing the percentage of students who need math intervention. ESTAR will be available through the Texas Regional Collaboratives.

MSTAR: Geometric Approach to Algebra Readiness (6-8)
The MSTAR: Geometric Approach to Algebra Readiness Academy provides content-based professional development focusing on geometric approaches to algebra. The Geometric Approach to Algebra Readiness Academy also focuses on addressing the needs of all learners through response-to-intervention (RtI) strategies that focus on integrating the TEKS and creating quality Tier 1 lessons. The MSTAR: Geometric Approach to Algebra Readiness Academy will be available through the Texas Regional Collaboratives.

MSTAR Academies: Foundations for Grades 5-8
The MSTAR Academies provide intensive content-based professional development focusing on the how and what to teach to engage students in concepts and content. The MSTAR Academies also focus on addressing the needs of all learners through response-to-intervention (RtI) strategies that focus on integrating the TEKS and creating quality Tier 1 lessons. MSTAR Academies will be available through ESCs in the summer of 2010.

Math End-of-Course Professional Development (9-12)
The High School End of Course Success Academies for Algebra I, Geometry and Algebra II provide intensive content-based professional development to high school teachers. The High School End of Course Success Academies for Algebra I, Geometry and Algebra II also focus on addressing the needs of all learners through response-to-intervention (RtI) strategies that focus on integrating the TEKS and creating quality Tier 1 lessons. The Algebra I EOC Success Academy will be available through ESCs in the summer of 2010. The Geometry EOC Success Academy and the Algebra II EOC Success Academy will be available through ESCs in the summer of 2011.

III. Grants to districts

Algebra Readiness Grants focus on improving student achievement in the area of algebra readiness. Grantees will design, develop and implement a comprehensive school improvement model for mathematics. A list of the Cycle One Grantees may be found at *<ritter.tea.state.tx.us/opge/disc/algebra/overview0912.html>*. An announcement will go out to the mathematics listserv when Cycle Two grants are available.

IV. Technology Based Supplemental Math Instruction Pilot (5-8)

The Technology Based Supplemental Math Instruction Pilot focuses on students who are not on track to meet the end-of course standards by providing technology-based supplementary instruction in mathematics.

V. MSTAR Universal Screener (5-8)

The MSTAR Universal Screener serves as a screening tool for students in grades 5-8 which will allow teachers to target and assess specific Curriculum Focal Points connected to algebra readiness. This tool will be available through the TMSDS system during the 2010-2011 school year.

Texas Math and Science Diagnostic System (TMSDS)

The Texas Mathematics and Science Diagnostic System (TMSDS) is managed by CORE K12, a division of CORE ECS. TMSDS is provided at no cost to Texas school districts and charter schools.

TMSDS is a web-based TEKS-aligned diagnostic assessment system that covers grades 3 – 8 in mathematics and science as well as Algebra I, Geometry, Algebra II, Integrated Physics and Chemistry, Biology, Chemistry, and Physics.

Instructions for enrolling in TMSDS can be found at *<www.TMSDS.org>*. Please contact your regional education service center for training opportunities and technical assistance.

College Readiness Program

This program was created under Article 5, HB 1. "Public school educators and faculty of institutions of higher learning shall work within subject-specific vertical teams to address high school and college readiness curriculum issues." Vertical teams (VT) of 10 members were created in each core subject area. The teams included two co-chairs (one from public education and one from higher education).

In Phase I of this program, the VT established the College and Career Readiness Standards (CCRS). In Phase II, the charge of the VT was to evaluate whether secondary TEKS prepare students for college-level course work and to recommend how those TEKS could be aligned to the CCRS.

In Phase III, teams will develop instructional strategies to help prepare students for college-level work and develop minimum standards for curricula, professional development materials, and online support materials.

The May 2008 SBOE meeting included a discussion item pertaining to a limited scope review of the secondary math TEKS to incorporate the math CCRS. The SBOE submitted nominations to create a math TEKS review committee charged with recommending additions to the secondary math TEKS to address the CCRS.

The revised secondary math TEKS incorporating the CCRS were adopted by the SBOE in January 2009 and are currently being implemented. Math TEKS professional development will be delivered in the summer of 2010. Math college readiness online student materials will be available in the fall of 2010.

For more information about the College Readiness Program, contact Joseph Kulhanek, Director of the College Readiness Program, at *<Joseph.kulhanek@tea.state.tx.us>*.

Texas Virtual School Network (TxVSN)

The Texas Virtual School Network (TxVSN) was authorized by the Texas Legislature in 2007 to provide online courses to students in Texas.

The TxVSN is a supplemental rather than diploma-granting program. Online courses will supplement the services the district currently offers students, based on students' academic needs. The home (receiving) district will continue to award credits and diplomas. The TxVSN partners with the home district to meet student needs.

As an alternative to traditional classroom teaching, online courses are proving especially beneficial to reach students across the state—wherever they may live—who need additional or advanced courses, an opportunity to retake courses for graduation purposes, options to courses currently offered in their schools, or increased access to courses because of physical disabilities or health issues.

Some benefits for Texas districts include assistance with teacher shortages, expansion of course offerings options, increased availability of AP courses, and service to students in alternative school settings.

For more information, send questions to the TxVSN mailbox at <*txvsn@tea.state.tx.us*>, or visit the website at <*www.txvsn.org*>.

Everly Broadway • Director of Mathematics
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Larry Duncan • Student Assesment Division
Texas Education Agency • <Larry.Duncan@tea.state.tx.us>

2010-11 TCTM Mathematics Scholarship

There are ten $2000 scholarships available for 2010-11. Any student attending a Texas college or university - public or private - and who plans on student teaching during the 2010-11 school year in order to pursue teacher certification at the elementary, middle or secondary level with a specialization or teaching field in mathematics is eligible to apply. A GPA of 3.0 overall and 3.25 in all courses that apply to the degree (or certification) is required. Look for the scholarship application online at <*www.tctmonline.net*>. The application must be postmarked by April 25, 2010.

2010 President's Grant to CAMT

There are sixteen $600 President's Grants available for 2010. The President's Grant is intended to support mathematics educators with a district or campus affiliation with more than five years of teaching experience in Texas to attend CAMT. The $600 grant is intended to defray part of the costs to attend the state conference. If you plan to attend CAMT, have more than five years teaching experience in Texas and are currently affiliated with a campus or district, look for the application online at <*www.tctmonline.net*>. The application must have been postmarked by April 1, 2010. Those selected will be required to volunteer two hours at CAMT and attend the TCTM reception to receive their check. Look online after April 25, to see who was selected.

2010 CAMTership

There are sixteen $600 CAMTerships available for 2010. The CAMTership is intended to encourage beginning teachers to attend CAMT by helping cover part of the expenses associated with attending the annual state conference. If you have been teaching five or fewer years in Texas and are attending CAMT, look for the CAMTership application online at <*www.tctmonline.net*>. The application must have been postmarked by April 1, 2010. Those selected will be required to volunteer two hours at CAMT and attend the TCTM reception to receive their check. Look online after April 25, to see who was selected.

NCTM Membership

What's an easy way to support TCTM?

Join NCTM or renew your NCTM membership!

Sign up for your NCTM membership and use the link on the web form to indicate TCTM as the affiliate you wish to receive a rebate! Go to <*www.nctm.org*>.

TCTM will receive $5.00 if you are joining NCTM as a new member, and $3.00 if you are renewing. In the past, the state affiliate only received the rebate if the NCTM membership flowed through the state treasurer. Now you can sign up directly with NCTM and give back to your state affiliate. However, you may only choose one state affiliate for the rebate (it will not be split).

Please remember, you cannot join your local affiliates from the NCTM website. You must join the local affiliates directly by the process they have established. You may join TCTM by either attending the CAMT conference as a paid participant, or by using our membership form found online at <*www.tctmonline.net*>.

Voices from the Classroom

Reflections from My First Years of Teaching

During my first few years of teaching, I've found that if I want to be the type of teacher that gives my students the opportunity to grow and think mathematically, there are many factors that I need to contribute to the classroom when I teach. Some of these factors are:

The importance of having students talk about math.
I have found that if I have my students talk about how they solved a problem, then I often find mistakes that can be corrected quickly and easily without frustration for the student or the teacher. It is easier to discuss how what they are doing is one way to solve the problem when they add or take away a component. When my students do not talk about math, they do not experience the benefits that are so easily given with one quick discussion and their mistakes might become habits that are hard to overcome.

I have also found that students do not come to school with knowledge of academic language especially in the area of math. When math is discussed openly and frequently in the classroom, there is very little misunderstanding of key vocabulary concepts. In a classroom where the teacher lectures, models a little bit, and then has the students complete independent practice daily; the vocabulary is only being used by the teacher. The students are not communicating mathematically. When this occurs students know how to solve problems but have no idea as to how or why they solved the problem or concept placed before them.

The importance of having students work together.
In my first few years of teaching experience I have learned that it is VITAL that students are allowed to work together. I have noticed that students are more open to agree or disagree with one another when they are allowed to work in cooperative groups or in pairs. Again, when these same students are not allowed the opportunities to work together, they are prone to making the same mistakes again and again. It is much better to allow students to work together and learn from one another the many different ways to solve problems and communicate mathematically. Students are automatically given more time to process in a situation where they are comfortable. When students are allowed to work with peers rather than in a whole group, students might be more apt to answer questions that may be difficult for them to communicate with a whole group of their peers while a teacher is watching and waiting for an answer. As a student, I needed time for reflection when developing my answers and I believe that this is true for many students as well, regardless of age. Students need to experience the benefits that arise when they work with one another and complement one another on their work and thinking. In this environment there are MANY more opportunities for those "aha" moments to come.

The importance of hands-on instruction.
Being a first grade teacher has taught me that students simply do not get the concept of number and problem solving abstractly. The students need the opportunity to grow and develop into the abstract level of mathematics with EVERY new concept that is taught. This holds true for older grade levels as well. If a new concept is being taught I have found that if the teacher can allow the students to manipulate the problem that is being given them, then they are better able to understand the concept and subsequently take with them a strong foundation of the mathematic principals being taught. This is a step by step process from concrete to pictorial to abstract and I firmly believe that if every concept were taught using this process, students would have strong and firm foundations in key mathematical concepts.

It has been my experience that when these three key factors are incorporated into lessons and are repeated throughout every topic or concept being taught, then students are given the foundation that they deserve. Students are more prone to retain knowledge and are less apt to forget what was taught previously in the year. They remember those moments that they had when they were able to communicate, share, think, and use manipulatives to develop those strong foundations. It is in these moments when I realize that a student has a concept developed in their long term memory and their reactions remind me why I became a teacher. ■

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Hot Wheels

Many, if not most, students have collected or played with Hot Wheels ® cars. Therefore, I decided that middle-grades students could explore the mathematical concept of scale factor involving these miniature cars. This activity has been successfully used with students of all ability levels, including special education students. Since Hot Wheels cars cost about $1 each and this activity calls for only one car per student group, this is a relatively inexpensive activity to add to your classroom. It is intended to meet the following NCTM goals, as outlined in Principles and Standards for School Mathematics (2000):

- Solve problems that arise in math and other contexts
- Recognize and apply mathematics in contexts outside of math
- Use representations to model and interpret physical phenomena
- Understand measurable attributes of a system
- Make decisions about units and scale

Although Hot Wheels cars may be uncommon classroom manipulatives, I feel that the advice by Kennedy and Tipps still applies: "Children should be introduced to manipulatives informally before the materials are used in a lesson" (1991, p. 47). Therefore, I allow students to play for about five to ten minutes with the Hot Wheels cars before we shift gears into academics. This time allows them to handle the car if they have not already done so, and to be able to pay attention when we start talking about the math.

ACTIVITY PROCEDURE

After the short playtime, I tell students that a Hot Wheels car has a 1:64 scale and then ask them to work together in groups to figure out what that means. When one student answers, "If you put 64 small cars end to end, it will be as long as 1 real car," I want to make sure that the student was not trapped by the tendency to focus on only one dimension (Lamon 1993). I respond by asking about the height. The student recognizes that the height would have to change by the same ratio and suggested that she could (although impractical) stack 64 cars on top of one another vertically to obtain the corresponding height. Another student mistakenly thinks that 1 inch in the small car would equal 1 foot in the life-sized car (and not because the student thought that there were 64 inches in 1 foot). Rather, the student is focusing on a convenient unit: for a real car, that unit would be feet; for a toy car, that unit would be inches. (For that matter, when students want to measure the car wheels, they tend to prefer the even smaller unit of centimeters.)

Misconceptions such as this gives the class the opportunity to clarify that a 1:64 scale means that 1 unit of measure in the Hot Wheels car corresponds to 64 units of the same measure in the life-sized car. I also ask students if it matters whether we use centimeters instead of inches. It is important for students to understand that the units do not matter as long as they are the same for all measurements. Most students answer that they could use centimeters but would convert centimeters to inches because they are more comfortable using inches.

After observing that students understand a 1:64 scale, I ask them to measure the length, width, height, and wheelbase of their Hot Wheels car. The wheelbase refers to the horizontal distance between the center of the front wheel and the center of the rear wheel on the same side of the car. Students are given rulers marked in both inches and centimeters, but I do not tell them which units of measure to use. After students measure their cars, I ask them which unit of measure they chose and why.

The overarching goal of the Hot Wheels activity is for students to determine the life-sized, or "scaled up," size of their group's Hot Wheels car. I do not tell them how to scale up their car, but allow students to use their prior knowledge of multiplicative relationships

to find a method. Once students find a method for scaling up their Hot Wheels car, I ask if there might be some way to estimate what the real size of their Hot Wheels car might be so that they can check their work. Many students say that they know how tall their own car is relative to their own height and plan to use their height as a standard for their estimation of the car's real-life size.

When students have measured and scaled up their Hot Wheels car, I ask them to create some sort of representation of the life-sized car. This can be done by marking one or more of the dimensions (usually height or length) of the life-sized car on the chalkboard. If your students have an artistic flair, they can be asked to draw a profile of their life-sized car on butcher paper. It is important that students get a sense of the size of their scaled-up car. Students should also see other groups' work to compare different representations of scaled-up cars.

Once all the representations of the life-sized cars are prepared and on display in the classroom, I ask students if their scaled-up cars look life sized. Most of the time, they do not. For example, a Hot Wheels bus that is about 1 inch tall is only about 5 feet tall when scaled up. All students know that a bus in real life is taller than 5 feet.

This discrepancy created some confusion for students, because if the Hot Wheels bus is indeed a 1:64 scale model of a real bus, then when they scale up the Hot Wheels car, it should be the same size as a real bus. For some students, the "red flag" was raised by the numerical calculation alone, whereas other students did not question the numerical result but got suspicious when they looked at the picture they drew. To address the red flag, some students reworked their computation while others remeasured the car.

After seeing that that they cannot explain the discrepancy by saying they made a mistake, they conjecture that the manufacturer's scale factor must be incorrect; it must be a number larger than 64. I reaffirm the claim that the scale for Hot Wheels cars is indeed 1:64. After struggling together with their classmates, students find the real answer: Many Hot Wheels cars are simply not to scale for any scale factor. For a car to be a true scale model, there has to be a life-sized car on which the scale model is based. Most Hot Wheels cars are not modeled after a real car but are designed to fit in a 3-inch box for retail packaging. You can confirm this by finding the measured lengths of the groups' Hot Wheel cars. Students see that all the cars' lengths fall between 2.5 and 3 inches in length. The other dimensions of width and height are each capped at around 1 inch. When a Hot Wheels car is modeled after a real-life car, there is a possibility that the scale factor is not precisely 1:64 because of the packaging. Students realize that perhaps a more correct statement about the scale is that it is approximately 1:64.

Once students have scaled up their Hot Wheels car, they research the Internet to find the length of a lifesized car that is similar to their Hot Wheels car and scale it down using the 1:64 scale. Most auto makers' Web sites contain exterior measurements for a specific car under "specifications." Teachers are advised to complete this research ahead of time to find the reallife counterparts of the particular Hot Wheels cars so that students can find what they need quickly.

Students then compare their scaleddown measurements with their Hot Wheels measurements. While also using the dimensions of the life-sized car, students determine the accurate scale factor for the Hot Wheels car as if it were scaled down from a real car. Asking students open-ended questions in this context presents opportunities for students to think about scale factor.

BENEFITS

Several benefits accrue from implementing the Hot Wheels activity. I get to combine two of my passions: mathematics and Hot Wheels cars. When students see that I am passionate about collecting Hot Wheels cars, they become more interested in the activity. Moreover, they start to see that math can be applied to such everyday objects as toy cars. Finally, sharing a part of my life with students helps them see that I have interests that go beyond the classroom.

Bringing part of one's identity into the classroom is no small thing. As Palmer states: "My ability to connect with my students, and to connect them with the subject, depends less on the methods I use than on the degree to which I know and trust my selfhood—and am willing to make it available and vulnerable in the service of learning" (1998, p. 10).

Another benefit of this activity is that it connects to

several mathematical topics such as similar figures and proportional reasoning. When discussing similar figures, I refer to the Hot Wheels activity and note that similar figures have the same size but not necessarily the same shape. Hot Wheels, which are modeled after real cars, such as the Chevrolet Corvette, are the same shape as a life-sized car. The only difference is the size. As students explore similar figures, they notice that there is a scale factor between the smaller figure and the larger figure. This is the same as the 1:64 scale factor between the Hot Wheels car and the life-sized car. Proportional reasoning comes into play when students are given two similar figures in which the measure of one side is missing, and they are asked to find the missing measure. To find the answer, they must set up a proportion. Some of my students use the proportion

$$\frac{1}{64} = \frac{\text{HotWheelsmeasure}}{\text{life-sized measure}}$$

to find the dimensions of the lifesized car.

The activity also requires that students use their prior mathematical knowledge of measurement and estimation. For example, although students have learned how to measure length and have discussed measuring with accuracy, they must do so accurately and reflect on the units used when measuring a Hot Wheels car. Another way that students use their prior knowledge is to estimate how large their Hot Wheels car should be when it is scaled up. Using the Hot Wheels activity, and referring to it later in the semester, helped to reinforce the fact that mathematics is a connected subject. Students learn that they must remember the math learned at the beginning of the year so that they can use it later in the year.

The most important benefit of using the Hot Wheels activity is its real-life connections to math. The students I taught believed that mathematics was simply a set of drills to be completed rather than a tool to be used to analyze real-life objects. Students became immediately interested in the mathematics after playing with the cars for a few minutes and often commented that they (or their sibling) had a favorite Hot Wheels car. After working through the activity, students realized that they could use mathematics to determine what the life-sized car would look like or what a scaled-down car should look like. It helped students realize that mathematics is a driving force that is indeed applicable to real life.

SOLUTIONS TO THE ACTIVITY SHEET

1. Student answers will vary. Some might say that 64 small cars are as big as 1 large car. Help students think about all three dimensions of the car, not just length.
2. Answers will vary.
3. Answers will vary.
4. It is important that students understand that the unit of measurement does not matter as long as it is uniform and that some units of measure, such as inches or centimeters, are more appropriate to use because of the size of the Hot Wheels Cars. You would not want to use miles to measure a Hot Wheels car.
5. Students should notice that most of the scaled-up dimensions will not match their own experience with real cars. Students need to realize that 1:64 is an approximate scale because Hot Wheels are made to fit certain packaging. You can discover this by finding an average of the dimensions of the cars used in the exercise. Most Hot Wheels cars are about 3 inches long, 1 inch tall, and 1 inch wide.

6.–7. Students will find that the scale of their car is close to 1:64. Some may have cars that are approximately 1:64.

References

Kennedy, Leonard M., and Steve Tipps. *Guiding Children's Learning of Mathematics*. 6th ed. Belmont, CA: Wadsworth, 1991.

Lamon, Susan J. "Ratio and Proportion: Connecting Content and Children's Thinking." *Journal for Research in Mathematics Education* 24, no. 1 (1993) 41–61.

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Palmer, Parker J. *The Courage to Teach*. San Francisco, CA: Jossey-Bass, 1998.

www.hotwheels.com

www.hotwheelscollectors.com

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Activity Sheet : Hot Wheels Cars and Scale

1. The Hot Wheels cars have a 1:64 scale. What do you think 1:64 means?

2. As a group, come to an agreement of what a scale of 1:64 means. Share your idea with the rest of the class.

3. Measure your Hot Wheels car, and fill in the first column in the table. Use the 1:64 scale to determine how large the Hot Wheels car would be in real life.

Feature of the Car	Hot-Wheels Dimensions	Life-Sized Dimensions
Exterior length		
Exterior width		
Exterior height		
Wheel base length		
Other		

4. What unit of measurement did you choose when measuring your car? Explain why you chose that unit of measurement.

5. On the chalkboard, mark the height and the length for the life-sized dimensions of your car. Does this look like the size of a real car? Why, or why not?

6. Research the Internet and find the dimensions of a real car that might be similar to your Hot Wheels car. Scale the real car down using the 1:64 scale.

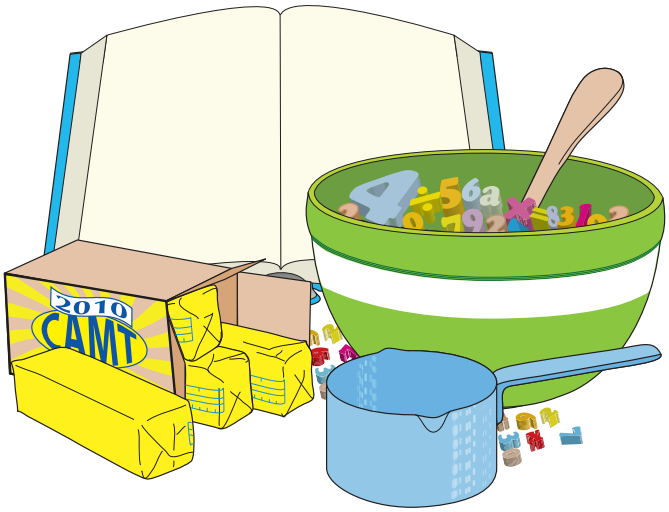
Feature of the Car	Real Car	Toy Version
Exterior length		
Exterior width		
Exterior height		
Other		
Other		

7. How do the scaled-down dimensions of the real car compare with the dimensions of your Hot Wheels car?

FEATURE

CAMT 2010 Featured Speakers

Mathematics: A Recipe for Success
Teaching With all the Right Ingredients



July 15 – 17, 2010
Henry B. Gonzalez Convention Center
San Antonio, TX

CAMT 2010 Mathematics: A Recipe for Success has invited great national/state featured speakers for this year's conference. Look for the TCTM logo on the following pages of CAMT featured speakers. This indicates they are also TCTM members!

CAMT 2010 will be held July 15- 17, 2010, at the Henry B. Gonzalez Convention Center in San Antonio, Texas. The Program Chair is Linda Gann of Northside ISD. Complete program information is available online in PDF format as of May 1, 2010 at:

<www.camtonline.org>

FEATURE

CAMT 2010 Volunteers

Dear Members of TCTM,

Volunteer to be a VOLUNTEER!

We believe that there is an opportunity for everyone to find their niche in helping CAMT to be a success for everyone involved – here's how you can join in on the efforts (we would love to have over 250 volunteers ready to go!). We are looking for fellow mathematics educators to assist us with supporting participants in areas such as the following: Registration, Exhibits, Speaker Check-In, or Transportation. Come work "behind the scenes." We need you! Please e-mail, telephone or fax your name and contact information (be sure to include contact information for the summer) to Martha Godwin, along with which of the following dates you are available to volunteer, Wednesday July 14, Thursday July 15, Friday July 16, or Saturday July 17. Specify if morning or afternoon is better and which area you prefer. Martha will respond via e-mail or home phone with a specific scheduled time and location.

Thank you for making every CAMT a wonderful experience!

Volunteer Information

Name:	Last	First	Middle	
Address:	Number and street		Apt. number	
	City	State	Zip Code	
Contact:	( ) Home Phone	( ) Cell Phone	Email Address	
Affiliation:	District or Professional Affiliation		ESC	

Please submit your form to Martha Godwin,

by mail: **Martha Godwin**
P.O. Box 82
Queen City, TX 75572

by email:
< mgodwin@qcisd.net >

CAMT Featured Speakers

Thursday, July 15

T 8:00-9:00 Ballroom B **E**	T 8:00-9:00 Ballroom C1 **G**	T 8:00-9:30 Ballroom C2 **G**	T 8:00-9:30 Ballroom C3 **E**	T 9:15-10:15 217A **G**
Marcy Cook, *Marcy Cook Math*	Robyn Silbey, *Montgomery County Public Schools*	Ted H. Hull, *LCM: Leadership, Coaching, and Mathematics*	Glenna W. Tabor, *Glenna Tabor Consulting*	David Eschberger, *Region 4 Education Service Center*
What's Cooking in a 'Live' Math Classroom? PK-2	**Differentiate Instruction with Higher-Order Thinking Questions**	**Leadership Hot Water to Healthy Soup**	**Making the Most of Your Mathematical Minutes Using Small-Group Differentiated Instruction**	**Questioning for Understanding**
T 9:15-10:15 Ballroom B **G**	T 9:15-10:15 Ballroom C1 **G**	T 9:45-11:15 Ballroom C2 **G**	T 9:45-11:15 Ballroom C3 **G**	T 9:45-11:15 217D **E**
David Schwartz, *Author*	Philip Daro, *SERP, America's Choice*	William McBride, *Educational Consultant*	Ellen Szecsy, *Exemplars Consultant*	Barbara Novelli, *Creative Mathematics*
The Magic of Millions and More: Exploring Big Numbers Across the Curriculum	**What Difference Do the Differences Make? Differentiation in the Mathematics Classroom**	**Engaging the Disengaged in Mathematics**	**Let's Mix It All Together: Assessment, Instruction, TEKS**	**Mixing Up Math Success for All Learners PK-2**
T 11:45-12:45 Ballroom B **S**	T 10:30-11:30 Ballroom C1 **G**	T 11:45-12:45 217A **S**	T 11:30-1:00 Ballroom C3 **S**	T 11:30-1:00 217D **S**
Pamela Weber Harris, *Independent Consultant*	Robyn Silbey, *Montgomery County Public Schools*	Paul Foerster, *Alamo Heights ISD*	Bea Moore Luchin, *NUMBERS Math Prof Dev*	Nora Ramirez, *TODOS: Mathematics for All*
Numeracy for Secondary Students	**Differentiate Instruction with Higher-Order Thinking Questions**	**Recycling Good Problems – The Temperature Drop**	**Let's GO – Using Graphic Organizers in the Secondary Mathematics Classroom Can Make a Difference**	**Teaching Proportional Reasoning with Equity and Excellence**
T 1:00-2:00 Ballroom B **E**	T 11:45-12:45 Ballroom C1 **G**	T 1:15-2:45 Ballroom C2 **G**	T 1:15-2:45 Ballroom C3 **G**	T 1:15-2:45 217D **E**
Greg Tang, *Houghton Mifflin Harcourt Math*	Janie Schielack, *Texas A&M University*	Robyn Silbey, *Montgomery County Public Schools*	James Williams, *America's Choice, Inc.*	Ron Brown, *Intelli-Tunes*
The Art of Smart	**The Texas Response to the Curriculum Focal Points K-8**	**The Math Coach: Raising Teacher Quality and Student Achievement**	**Blue Ribbon Instruction: The Difference Between Cooks and Chefs**	**Rock Your Math Class: PK-2**
T 2:15-3:15 Ballroom B **S**	T 2:15-3:15 Ballroom C1 **G**	T 2:15-3:15 217A **G**		
Pamela Weber Harris, *Independent Consultant*	Cathy Seeley, *Charles A. Dana Center*	David Eschberger, *Region 4 Education Service Center*		
Numeracy for Secondary Students	**Upside-Down Cake – Turning How We Teach Upside-Down to Stimulate All Students' Thinking**	**Get Your Ducks in a Row**		
T 3:30-4:30 Ballroom B **E**	T 3:30-4:30 Ballroom C1 **G**	T 3:30-4:30 Ballroom C2 **G**	T 3:00-4:30 Ballroom C3 **S**	T 3:30-4:30 278B **S**
Kim Sutton, *Creative Mathematics*	David Schwartz, *Author*	Frank Wang, *Wang Education, LLC*	Glenna W. Tabor, *Glenna Tabor Consulting*	Don Balka, *Saint Mary's College*
Setting Important Mathematics Goals	**Putting the "Wonder" Back in "Wonderful": Math Happens When Children Wonder About What They Read**	**Keys to Successful Teaching – Turning Research into Practice**	**Making the Most of Your Mathematical Minutes Using Small-Group Differentiated Instruction**	**Using Manipulatives in the Algebra Classroom**

General =	**G**
Elementary =	**E**
Secondary =	**S**

Featured CAMT Speakers

Friday, July 16

F 8:00-9:00 Ballroom C1 **G**	F 8:00-9:30 Ballroom C2 **G**	F 8:00-9:00 Ballroom C3 **E**	F 8:00-9:30 Ballroom B **E**	F 9:45-11:15 217D **E**
David Schwartz, *Author*	John Seidlitz, *Independent Educational Consultant*	Greg Tang, *Houghton Mifflin Harcourt Math*	Kim Sutton, *Creative Mathematics*	Ron Brown, *Intelli-Tunes*
Nature Books Are a Natural Way to Link Math with Science	**Success in Mathematics for ELL Students**	**The Art of Smart**	**Setting Important Mathematics Goals**	**Rock Your Math Class: PK-2**
F 9:15-10:15 Ballroom C1 **S**	F 9:45-11:15 Ballroom C2 **G**	F 9:15-10:15 Ballroom C3 **E**	S 9:15-10:15 Ballroom B **S**	F 9:15-10:15 006A **S**
Paul Kennedy, *Colorado State University*	Larry Lipman, *Fun Team Building*	Mary Alice Hatchett, *Consultant*	Marcy Cook, *Marcy Cook Math*	Don Balka, *Saint Mary's College*
Geometry with Geogebra	**Day of Discovery**	**Don't Just Improve Math Skills! Develop Both Skills and Understanding! K-2**	**What's Cooking in a 'Live' Math Classroom? 6-8**	**Becoming a Gourmet with Global Strategies from Research**
F 10:30-11:30 Ballroom C1 **S**		F 10:30-11:30 Ballroom C3 **G**	F 10:30-11:30 Ballroom B **E**	F 10:30-11:30 217 B/C **G**
Jennie M. Bennett, *NUMBERS Math Prof Dev*		Frank Wang, *Wang Education, LLC*	Marcy Cook, *Marcy Cook Math*	David Molina, *David Molina & Associates*
Asking the Right Questions for Award-Winning Student Success in the Classroom and on Assessments		**A Mathematical Roadtrip – Revisiting the Familiar and Exploring the New**	**What's Cooking in a 'Live' Math Classroom? 3-5**	**Measuring Our Performance: What Does Our TAKS Data Say About Our Mathematics Performance?**
F 1:00-2:00 Ballroom C1 **S**	F 1:15-2:45 Ballroom C2 **G**	F 1:00-2:00 Ballroom C3 **G**		F 1:15-2:45 217D **E**
Paul Kennedy, *Colorado State University*	William McBride, *Educational Consultant*	Carolyn Felux, *Math Solutions founded by Marilyn Burns*		Barbara Novelli, *Creative Mathematics*
Geometry with Geogebra	**Teaching to Gender Differences: Boys Will Be Boys and Girls Will Be Girls**	**Improving Student Learning through Teachers' Collegial and Collaborative Learning**		**Stirring Up Place Value Understanding and Success 3-5**
F 2:15-3:15 Ballroom C1 **G**		F 2:15-3:15 Ballroom C3 **S**		F 2:15-3:15 217A **S**
Timothy Kanold, *E2 –PLC Learning*		Steve Leinwand, *American Institutes for Research*		Terry Goodman, *University of Central Missouri*
Becoming a Teacher of Influence: Inspiring Vital Student and Teacher Behavior		**Thoughts on Rationalizing Algebra 1 and 2 in Ways that Serve Kids, Not Just Universities**		**Body Parts, Free Throws, and Bacteria: Algebra Contexts for Middle Grades**
F 3:30-4:30 Ballroom C1 **G**	F 3:00-4:30 Ballroom C2 **G**	F 3:30-4:30 Ballroom C3 **E**	F 3:00-4:30 Ballroom B **E**	
Sam Zigrossi, *Charles A. Dana Center*	Don Balka, *Saint Mary's College*	Carolyn Felux, *Math Solutions founded by Marilyn Burns*	Kim Sutton, *Creative Mathematics*	
You Should Not Just Be a Mathematics Teacher!	**A Guide to Mathematics Coaching: Equity and English Language Learners**	**Math for All: Differentiating Math Instruction 3-5**	**Primary Games that Go the Distance**	

General =	**G**
Elementary =	**E**
Secondary =	**S**

Featured CAMT Speakers

Saturday, July 17

S 8:00-9:00 Ballroom C1 **S**	S 8:00-9:30 Ballroom C3 **E**	S 9:15-4:30 217D **G**
Terry Goodman, *University of Central Missouri*	Barbara Novelli, *Creative Mathematics*	Sam Zigrossi, *Charles A. Dana Center*
Body Parts, Free Throws, and Bacteria: Algebra Contexts for Middle Grades	**Mixing Up Math Success for All Learners PK-2**	**You Should Not Just Be a Mathematics Teacher!**

S 10:30-11:30 Ballroom B **E**	S 9:15-10:15 Ballroom C1 **S**	S 9:45-11:15 Ballroom C3 **S**
Mary Alice Hatchett, *Consultant*	John Edgell, Jr., *Texas State University*	Bea Moore Luchin, *NUMBERS Math Prof Dev*
Don't Just Improve Math Skills! Develop Both Skills and Understanding! 3-5	**Measures of Arcs**	**Let's GO – Using Graphic Organizers in the Secondary Mathematics Classroom Can Make a Difference**

General =	**G**
Elementary =	**E**
Secondary =	**S**

TCTM Recognition Reception at CAMT 2010

Thursday, July 15, 2010, 5:00 p.m. - 7:00 p.m. at the Marriott Rivercenter

The TCTM Board has combined the TCTM Business Meeting with an informal reception. At the Business Meeting and Reception, we will acknowledge the TCTM Scholarship recipients as well as other TCTM award recipients. There will be door prize drawings! The Business Meeting and Reception are open to all TCTM members. However, we regret that children or other guests cannot be accommodated. There is no registration fee or need to preregister.

FEATURE

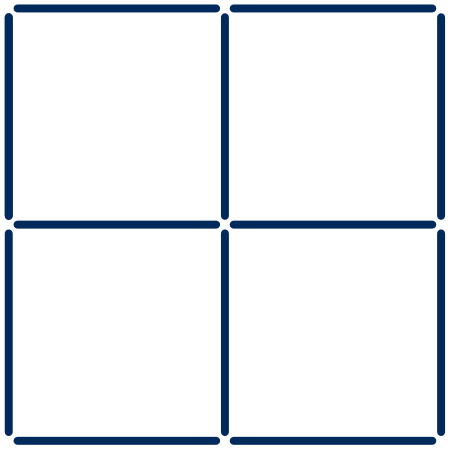
Puzzle Corner

Sticks #14 Puzzle

We are interested in how your students responded to this problem and how they explained or justified their reasoning. Please e-mail copies of your students' work, include your name, grade level, campus name and district name to Mary Alice Hatchett, Director of Publications, *Texas Mathematics Teacher*. Selected submissions will be acknowledged and published in subsequent issues.

Please prepare a sketch of your solution

Arrange 12 craft sticks to form the following figure.

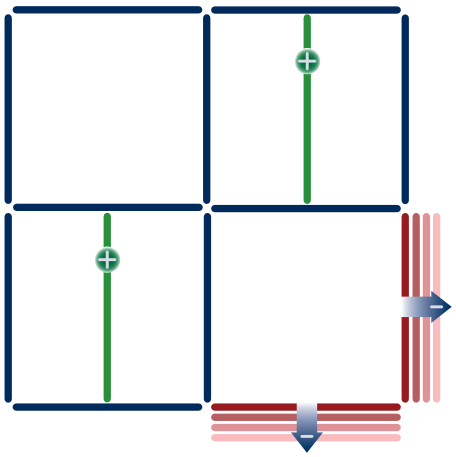


Puzzle: Remove two sticks to leave three squares.

Sticks #13 Answer

Arrange 12 craft sticks to form the original figure. Move two sticks to make nine rectangles including three squares.

Shown is a diagram of **a solution.**



FEATURE

Quotes for Thought

"The day you quit school, you condemn yourself to a future of poverty."

- Jaime Escalante, renowned Los Angeles teacher

"Mathematics is no more computation than typing is literature."

- John Allen Paulos, professor of mathematics at Temple University in Philadelphia

"A great teacher makes hard things easy."

- Ralph Waldo Emerson, American essayist, philosopher, and poet

On The Cover

Find the Mathematics…. in a kitchen!

When it comes to cooking in your kitchen, the secret ingredient is …. MATH! All of the basics can be found; following directions (an algorithm); measuring ingredients (selecting a tool); increasing or decreasing recipes (proportions); deciding on the right size pan for that yummy cake (geometry).

Find the math in this kitchen:

- How much water will that teapot hold? At what temperature does water make a hot cup of tea? At what temperature does water boil – is that too hot or not hot enough for a nice cup of tea? If 1 regular size teabag makes 1 cup of tea, how many teabags will you need for 1 quart of hot tea? Does the metal from the teapot leach into your hot water, if so, how much?
- Look at all those cake mixes. How many cakes can be made? What are all the ways that those 4 boxes can be arranged? What is the probability that a yellow cake mix can be randomly selected? Have you ever read the list of nutritional facts on a cake mix, what percent of your daily nutritional needs for vitamin C are met with a cake? How about for a slice of cake?
- If you are going to bake a cake, you probably will need to use the mixer. Will that bowl on the mixer be large enough? Is it large enough to make a double batch? How many of those 2-cup measuring cups of liquid will that bowl hold? Most mixers have a variety of speeds, what is a reasonable number of speeds for a mixer: 5, 10, 15, 20 revolutions per minute?
- Storage space in a kitchen is vital. Estimate the volume of the lower section of the wall shelf containing the spices. The wall unit seems to be divided into four equal size spaces with the ingredients categorized for each quarter. Can you name the categories? If you think of the four quarters of the wall unit like a Cartesian grid, in what quadrant is the salt box? Some of the dimensions of a salt box are 3 inches and 5 ½ inches. Match those measures to the height, circumference, diameter, radius or surface area of the salt box. On the same shelf as the salt, how many things have 'red' lids? 'green' lids? 'yellow' lids? Are there more/less red lids than yellow lids? How many more/less?

Yes, the secret ingredient is …. MATH. Can you find other uses of math in this kitchen? How about the kitchen at your house? Let us know what you and your students find.

Mary Alice Hatchett • <mahat@earthlink.net>
Independent K-12 Mathematics Consultant • Georgetown, TX

FEATURE

Recommended Readings and Resources

Mathematics in Focus, K-6: How to Help Students Understand Big Ideas and Make Critical Connections

by Jane F. Schielack and Dinah Chancellor ISBN: 978-0-325-02578-0 Publisher: Heinemann

NCTM gave us important guidance on developing a coherent curriculum with key focal points for each grade level. These Texas authors give us sensible strategies for implementing the focal points in our instruction.
A quick look at some of the short chapter titles reveals the range of strategies that math leaders/teachers can use in planning instruction designed to help students reach a deeper understanding:

- building purposeful connections
- designing instruction and assessment
- asking targeted questions
- balancing accountability and sense making
- making thoughtful selections of instructional tools
- managing classroom conversations
- building connections among multiple representations
- allowing appropriate time for learning
- differentiating instruction

From the moment I first opened this book, I thought WOW – what a great resource for thinking about instruction. This has a nice lesson plan template plus example lessons from expert teachers.

A GUIDE TO MATHEMATICS COACHING: Processes for Increasing Student Achievement

by Ted Hull, Don S. Balka and Ruth Harbin Miles ISBN: 978-1-4129-7264-2 Publisher: Corwin Press

The authors have compiled a commanding analysis of coaching relationships in their new book *A GUIDE TO MATHEMATICS COACHING*. It connects the basic principles established by NCTM and NCSM of providing direction for creating ongoing context-based adult learning (or professional development) for the express purpose of impacting student learning.

The *Guide's* three-part process offers suggestions on collaborating procedures, building teacher trust, and supporting both individual and campus change processes. All of which lead to better teaching practice and increased student achievement.

Discover how effective coaching relationships add up to improved mathematics teaching and learning by reading *A GUIDE TO MATHEMATICS COACHING*: Processes for Increasing Student Achievement!

Mary Alice Hatchett • <mahat@earthlink.net>
Independent K-12 Mathematics Consultant • Georgetown, TX

Voices from the Classroom

From Mayhem to Management

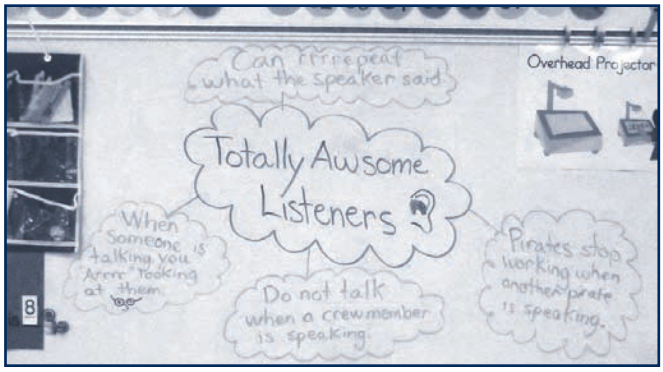
I attended an enlightening workshop in the spring of 2009 that instructed me on the fine art of teaching kindergarteners to communicate their mathematical thinking pertaining to math problem situations. The benefits of incorporating these communication strategies in the classroom were exciting and motivating. I left the workshop eager to get started with my own students. I felt confident that in no time, my crew of miniature mathematicians would be skirmishing to share and demonstrate the process they took to solve a real-life problem situation. I thought my crew of miniature mathematicians would find themselves using different methods to solve the same problem than that of their mates. I thought my crew of miniature mathematicians would have their fellow students hanging on their every word as the steps they took poured from their mouth… I pictured myself sitting back, facilitating instruction while my crew of miniature mathematicians were doing all the work.

But what I quickly realized was…

- My kindergarteners did not go to the workshop with me.
- Directions must be short, simple, and clear if students are to remember and follow them.
- Children need space to work, where their bodies are not getting crushed, where they are comfortable, and where they can keep track of their manipulatives.
- Manipulative usage is not automatically ingrained from birth.
- Many children are trained from a young age to attentively listen to adults, but only moderately listen to their peers.
- Kindergarteners will disrespect one-another's mess-ups unless firm consequences are in place.
- Students are often disciplined for communicating with their classmates, instead of encouraged. Students also have little instruction on the language to use when sharing their mathematical thinking with a classmate.
- Students have little interest in their schoolwork if they don't realize how to use what they've learned for another purpose in school today or at home.

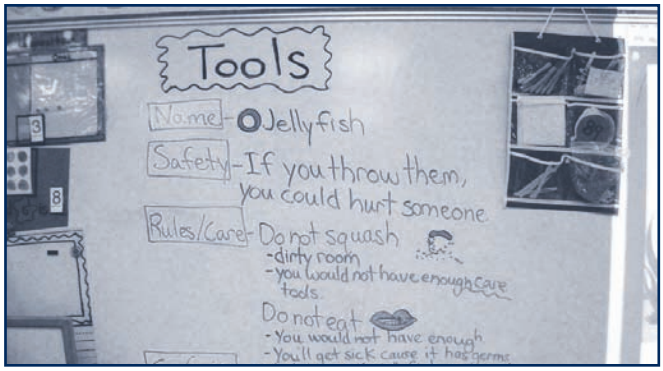
I did not prepare myself or my students, so I failed…but I did not give up. Instead I thought of what I needed to know so that I could explain the communication strategies, as well as what my students needed to know in order to communicate their thinking. My students and I created a creed containing 7 policies…

We Live and Work Together



1. We respect our teacher and our crew.
   We will always feel safe and respected
2. We will follow our teacher's directions.
   We will always know what to do, and save ourselves from trouble.

3. We will know our purpose for learning.
   We will get to and know how to use what we're learning outside of school.
4. We will know how to use, treat, and put away our manipulatives.
   We will have more time to work, and spend less time being confused.



5. We will get personal space.
   We will be comfortable, we will not fight, and we will not lose or mix up our manipulatives.

6. We will listen to our classmates and our teacher.
   We will learn from classmates' thoughts.
7. We will communicate with buddies and classmates. We have a right to be heard.
   We will learn how to use a different language - mathematics.

Since implementing this creed, our time available for learning new ideas has increased, the stress level of the students and myself has decreased, and I get to spend each day watching and listening to five and six-year old students talking about their mathematical thinking. Our entire crew of mathematicians looks forward to our time spent each day exploring new mathematical concepts!

Tracy E. Erbes • Kindergarten
Hitchcock Primary School • <terbes@hitchcockisd.org>

Janet D. Vela • Education Specialist
Region 4 ESC • <jvela@esc4.net >

About this Publication

Since 1971, the Texas Council of Teachers of Mathematics (TCTM) has produced the journal *Texas Mathematics Teacher* for our members. Our mission is to promote mathematics education in Texas. In the journal we accomplish this by publishing peer-reviewed articles by leading authors, state updates from the Texas Education Agency, and local news from around the state. TCTM is committed to improving mathematics instruction at all levels. We place an emphasis on classroom activities that are aligned to the Texas Essential Knowledge and Skills and the NCTM *Principles and Standards for School Mathematics.*

Texas Mathematics Teacher seeks articles on issues of interest to mathematics educators, especially K-12 classroom teachers in Texas. All readers are encouraged to contribute articles and opinions for any section of the journal. Teachers are encouraged to submit articles for Voices From the Classroom, including inspirational stories, exemplary lessons, or management tools. More specific guidelines for submissions may be found on page 3.

In 2004-05, our publication took on a new look with a four-color cover and one-color interior. Original artwork on the cover is another appealing change for our readers. We publish the journal twice each school year, in the fall and spring semesters. Our current website archives the more recent journals in PDF format. Please see *<www.tctmonline.net>* if you wish to view prior issues.

Our current publications committee consists of Cynthia Schneider, Geoffrey Potter, Mary Alice Hatchett, James Epperson and Larry Lesser. Larry and James serve as expert advisors; Cynthia is the editor. Mary Alice does many jobs, including requesting articles, serving as an elementary expert, and communicating with authors. Geoff is the layout and graphic designer; he manages to fit all the text into the limited number of pages we have to work with. The TCTM Board wishes to thank them for their leadership in improving the *Texas Mathematics Teacher*.

Advertising Guidelines for *Texas Mathematics Teacher*

All advertising is subject to the approval of the publisher. The journal staff shall be responsible for ascertaining the acceptability of advertisements. All advertisements should be sent "copy-ready" by the closing dates of September 1 for the fall issue and January 15 for the spring issue. Position preference, such as right-hand pages or first half of issue will be honored on a first-come basis. All advertisements must be pre-paid by the closing date with a check made payable to TCTM, and mailed to our current treasurer, Rebecca Ontiveros. Rates for *Texas Mathematics Teacher* per issue are: full page $500.00, half page $300.00, quarter page $200.00.

All advertisers must adhere to the following guidelines:

- Advertisements should focus on marketing products and services that pertain to the teaching and learning of mathematics.
- The design of all advertisements should be in harmony with the artistic appearance and technical level of the publication.
- Those placing an advertisement must be able to verify their claims.
- Advertising copy should be dignified and professional. Derogatory and inflammatory statements should be avoided, and all advertising copy should be nondiscriminatory with regard to national origin, gender, marital status, race, or creed.
- The journal staff shall be responsible for placement in the publication.

Advertising that elicits significant reader complaints will not be rerun before the complaints have been investigated by the journal staff and the advertiser.

VOTE

TCTM Candidates

for Vice-President Secondary

Pam Johnson

Pam Johnson currently serves as a Middle School Mathematics Specialist in Austin Independent School District. Her responsibilities include leading curriculum development teams in mathematics and she supports middle school campuses through job-embedded professional development. She has also had the opportunity to work as the K-12 Math and Science Coordinator for 8 years in a rural district and then 3 years in a fast growing suburban district. Her teaching experience includes eight years in the classroom at both the elementary and secondary levels.

Pam has served as President for the Capital Area Association for Supervisors of Curriculum Development and currently serves as President of the Austin Area Council of Teachers of Mathematics. She is also a member of TASM, NCTM, AERA and TCTM. Pam has a B.S. Ed and M.S. Ed. from University of Houston - Victoria and is a doctoral candidate anticipating completion of her Ph.D. at Texas State University in San Marcos this year. Her research interests include constructivist leadership, differentiated learning for professionals, and professional learning communities.

Mary Kemper

Mary Kemper is currently serving in her 4th year as Mathematics Curriculum Specialist for Pearland ISD. Prior to assuming this position, Mary taught 8th grade math and 9th grade Algebra I.

Mary earned her B.A. in Mathematics and M.S. in Curriculum – Mathematics Education from Texas A&M University. She also holds a K-12 Principal Certification.

Mary has presented at CAMT, NCTM Regional Conference, and trainings at various other districts across Texas. She provides district wide professional development to math teachers at a variety of experience levels. Mary guided her teachers to implement the revised TEKS and is making preparations for the next phase with the move to EOC. Recently, Mary organized an instructional fair in her district, providing the opportunity for teachers to present classroom proven strategies. In this way, Mary nurtures future math education leaders to share their knowledge and teach others. She encourages teachers to never stop learning as she promotes attendance at CAMT where math teachers can gather new and innovative strategies for their classrooms while collaborating with their colleagues from across the state.

She is a member of TCTM and NCTM as well as an active participant in TASM, HAMS, the Houston Area Mathematics Supervisors, and the Region 4 Mathematics Advisory Committee.

for Secretary

Faye Bruun

Faye Bruun is on the faculty of Texas A&M Corpus Christi and teaches graduate Math Education classes to in-service teachers working on their Masters in Education. She was formerly a middle school math teacher and was introduced to TCTM by attending CAMT for professional development. Faye has presented at CAMT conferences and has encouraged teachers to present there also.

Faye has worked with students and teachers in the Coastal Bend area with her work with the PEIC Grant as well as Mathis ISD with the GEAR UP/STAR grant. Her scholarship focuses on using literature and manipulatives to teach mathematics.

Faye is proud of her affiliation with the Coastal Council of Teachers of Mathematics (CCTM) as one of the founding members. She serves as President and has been an organizer of the annual ME by the SEa Conference at TAMU-CC since its inception five years ago. Faye has been a member of NCTM since 1999 and has presented at regional and national conferences. She attended the NCTM Affiliates Conference in Philadelphia. Faye is married, has three sons, and is happy to now have two daughter-in-laws. She would be honored to serve as Secretary for the Texas Council of Teachers of Mathematics.

LaKeasia Hammond

LaKeasia Hammond started teaching math for the state of Texas twelve years ago. She is currently the Math Instructional Specialist in the Spring Independent School District. As an instructional leader she provides professional development for instructional strategies, the use of the 5E lesson model, the use of technology, and classroom management strategies. She has served as Math Department Chair, Algebra Team Leader, Geometry Team Leader, and a member of the math curriculum writing team.

In 2008 LaKeasia was awarded a local school district grant to implement TAKS TV for Math. In 2009 she was one of five teachers to be recognized as the Teacher of the Year by HAABSE (Houston Area Alliance of Black School Educators.)

LaKeasia received a B.S. in Chemistry and M.Ed. in Educational Administration from Prairie View A&M University. This mother of three school age children feels a sense of responsibility to ensure that all students learn from a highly qualified teacher. As a product of the Houston Independent School District she donates her time to helping students in the community be successful not just on the TAKS test. LaKeasia helps students gain the confidence and work ethic needed to be successful well beyond high school.

TCTM Candidates

for Central Regional Director

vote only if you live in Service Center Region 12, 13, or 20

Linda Gann

Linda Gann currently serves as the Secondary Mathematics Instructional Specialist for Northside Independent School District in San Antonio. She supports secondary mathematics teachers with professional learning opportunities with curriculum, assessment, and instruction. Her teaching experience spans eighteen years in the classroom and the past four years in her current position.

She has served as the co-chair for the Texas College and Career Readiness Vertical Team all three phases and other subsequent collaborations between higher education and public education with the San Antonio Mathematics and Science Educational Partnership (SAMSEP) and Pathways. She has been privileged to have participated in many state-level committees including Geometry EOC, Algebra 2 EOC, MTR Clarification Grades 6-12, Geometry MTC Grades 9-12, MSTAR A Geometric Approach to Algebraic Readiness Grades 6-8, and in the development of Advanced Mathematical Decision Making course.

Linda currently serves as the program chair for Conference for the Advancement of Mathematics Teaching (CAMT) 2010. Presently, she is the president of the Alamo District Council of Teachers of Mathematics. She is a member of NCTM, TCTM, NCSM, TASM, and ASCD. Linda has received several recognitions for her dedication to education such as the Presidential Awardee for Excellence in Mathematics and Science Teaching by the National Science Foundation, Radio Shack National Teacher Award, Advanced Placement Siemens Award, and HEB Teaching Excellence Recognition Award—Secondary Leadership State Finalist. She has worked in the past for The College Board as a consultant and AP exam reader. Linda also serves as the chair for the Priest Holmes Foundation Scholarship committee. She has a BS in Mathematics from ISU and MS in Mathematics from UTSA.

Kelly Meshell

Kelly Meshell began her career in Fort Worth, Texas. After moving to Austin in 1997, she taught for one year at Hyde Park Baptist Schools. In the fall of 1998 she began her journey with the Austin Independent School District. Kelly taught 7th grade at Murchison Middle School for 9 years, where she was the mathematics department chair for 6 years. While at Murchison, Kelly received her National Board Certification and is recognized as a National Board Certified Teacher. In the fall of 2007 Kelly began working with Austin ISD as a middle school mathematics curriculum specialist. Kelly has a passion for improving mathematics classrooms for all children and teaching conditions for teachers. She also strives to improve the quality of professional development of mathematics provided to teachers and looks forward to the opportunity to work with other teachers and leaders who share her same passion.

Kelly has also presented and served as a volunteer at CAMT for several years. She is an active participant in the Austin Area Council of Teachers of Mathematics where she serves as the Treasurer for the organization.

VOTE

TCTM Candidates

for Northeast Regional Director

vote only if you live in Service Center Region 7, 8, 10, or 11

Tammy Chandler

Tammy Chandler serves as the Elementary Mathematics Coordinator for Frisco ISD. She has been an educator for over 18 years, has taught at the elementary and middle school levels, and has served as a math instructional facilitator prior to her current position. She received her undergraduate degree from Texas Tech University and her Master's in Educational Leadership from Dallas Baptist University.

As the math coordinator in Frisco ISD, Tammy has spearheaded the restructuring of the elementary mathematics curriculum that incorporates the 5E instructional lesson model into an electronic guide for optimal instruction and learning. The project has included: research, design, training for the lesson writers, and training for all teachers on implementation. The continuous improvement of the math curriculum project is in its third year of implementation to support math instruction by integrating research-based best practices at the 30 elementary campuses in Frisco to meet the academic needs of all the students.

This school year, Tammy has developed and implemented training for all the elementary special education teachers on math content, pedagogy, math resources, and researched-based best instructional practices that align with the general education expectation of math curriculum and instruction in Frisco ISD.

Tammy is a member of the ASCD and has submitted an application to present at the fall meeting this year. She is also a member of NCTM, TASM, and McMath (DFW area mathematics supervisors' organization). Tammy wrote fifth grade SSI math lessons with a small group of coordinators from McMath to be used by area districts for students between first and second administration of TAKS. Last summer she orchestrated a group of teachers to participate in presenting for Math-a-Rama at CAMT in Houston. She was named Wal-Mart Teacher of the Year in Abilene, Texas in 1997. Tammy and her husband have three children and have been a part of the Frisco community for the past 11 years.

Tammy looks forward to the potential to learn and share best instructional practices and elementary math resources with all educators for the benefit of student learning in our great state of Texas.

Martha Godwin

Martha Godwin currently teaches 5th and 6th grade mathematics at Morris Upchurch Middle School in the Queen City Independent School District. She also teaches a dual credit English class through Texarkana College for her school district. Her undergraduate and master's degrees are both from East Texas State University – Texarkana. As a teacher in a small school district, she has been given the opportunity to teach a variety of subjects, but her primary role has been teaching middle school mathematics for the past 28 years.

Martha is a member of NCTM. She has been a presenter at CAMT for several years and is serving as this year's volunteer coordinator. She has also been a presenter for several years at the Rio Grande Valley Council of Teachers of Mathematics Conference in Edinburg and the Successfully Training Educators as Mathematicians Conference in Texarkana. She was a Fellow in the Rural Systemic Initiatives in Texas Leadership Academy, a math academy trainer, and has served in various leadership roles on district and campus committees. Martha enjoys helping other teachers and feels that this position will provide more opportunities for this to happen.

for Northwest Regional Director

vote only if you live in Service Center Region 9, 14, 16, or 17

Ward Roberts

Ward Roberts currently serves as the Secondary Mathematics Curriculum Specialist for Wichita Falls ISD. Prior to this position, Ward taught math at his high school alma mater, and also worked as a Service Center Math Specialist. Now, he has a job where he can both teach students in the classroom and provide support to teachers through staff development. This mix provides Ward with what he considers the best of both worlds.

In addition to teaching students and training teachers, Ward's other educational pursuits involve creating curriculum products for the classroom. For example, after authoring assessment items for the Dana Center's Agile Mind services, Ward became a writer for CSCOPE. Most recently, Ward created a year's worth of activities for the CSCOPE Precalculus course. In addition, Ward also tries to meet the needs of TAKS-testers with materials like his popular review videos.

On the weekends, Ward likes to read, write, draw, and play music, but mostly enjoys spending time with his three children and his lovely wife.

Angie Watson

Angie Watson is the secondary mathematics specialist for Region 16 Education Service Center in Amarillo. Her responsibilities include working with grades 6th–12th paraprofessionals, teachers, and administrators in over 60 school districts and private schools by providing professional development, technical assistance, and content coaching. She also serves as project director for the Region 16 Collaborative for Excellence in Mathematics Teaching. Prior to her current position, Angie taught high school mathematics at Tahoka ISD, Midland ISD, and Floydada ISD.

Angie has served on numerous state-level committees including the Geometry End-of-Course Advisory Committee, MSTAR Advisory Council, MSTAR Universal Screener Blueprint Advisory Committee, TMSDS Item Review Committee, and the Mathematics Vertical Alignment Committee for the Texas College and Career Readiness Standards. She has also served as a collaborative writer for CSCOPE and MSTAR: A Geometric Approach to Algebra Readiness. Angie has experience presenting at the state level at CAMT, the CSCOPE Conference, and as an MSTAR State Trainer. She has also presented nationally at the NCSM Conference.

Angie is a member of several professional affiliations including ASCD, NCSM, NCTM, TASM, TxASCD, TCEA, and TCTM. She earned her Bachelor of Science and her Masters of Curriculum and Instruction both at Texas Tech University in Lubbock. Angie is honored to be nominated for the Northwest Regional Director office and looks forward to working with friend and colleagues in mathematics across the state.

TCTM Ballot

Circle your choices below. Write-in candidate names are acceptable. Copy and mail your ballot to Janet Vela at the address below. **Your ballot must be received by June 7, 2010**.

for Vice-President Secondary

☐ Pam Johnson ☐ Mary Kemper ☐ _____ write-in candidate

for Secretary

☐ Faye Bruun ☐ LaKeasia Hammond ☐ _____ write-in candidate

for Central Regional Director

vote only if you live in Service Center Region 12, 13, or 20

☐ Linda Gann ☐ Kelly Meshell ☐ _____ write-in candidate

for Northeast Regional Director

vote only if you live in Service Center Region 7, 8, 10, or 11

☐ Tammy Chandler ☐ Martha Godwin ☐ _____ write-in candidate

for Northwest Regional Director

vote only if you live in Service Center Region 9, 14, 16, or 17

☐ Ward Roberts ☐ Angie Watson ☐ _____ write-in candidate

Mail your ballot to:

Janet Vela
TCTM Vice-President Elementary
7145 West Tidwell
Houston, TX 77092

FEATURE

Legislative Update and Advocacy

This spring, the TCTM and TASM boards voted to no longer continue purchasing the legislative advocacy support that linked from our website. This decision was made to reduce costs. To identify your elected representatives, you may go to <*http://www.capitol.state.tx.us/Home.aspx*> and enter your address in the box on the right to find out who represents you. Once you have entered your street address, city and zip code, a link will open that identifies your U.S. Senators, U.S. Representatives, State Senators, State Representatives and SBOE member. It is each legislator's prerogative to support feedback through e-mail. If a legislator chooses to do so, you can find an e-mail feedback form on the legislator's home page. You can find your state representative on the house website <*http://www.house.state.tx.us*> and your state senator on the senate website <*http://www.senate.state.tx.us*>. Your voice is important.

A draft of the K-12 Common Core State Standards were released for public comment in March 2010. The final standards are expected to be released in late spring. To see the draft standards go to <*http://www.corestandards.org/Standards/K12/*>. An advisory group provides advice and guidance on the initiative. Members of this group include experts from Achieve, Inc., ACT, the College Board, the National Association of State Boards of Education and the State Higher Education Executive Officers. While Texas and Alaska have not joined in this collaborative effort, these standards will impact resources and assessments across the nation in significant ways. You may read NCTM's public comments on the Common Core at <*http://www.nctm.org/about/content.aspx?id=25186*>. For example, NCTM states "Several learning progressions are overambitious and push the bounds of what is known from research, and others are superficial or underdeveloped."

The Texas State Board of Education will be meeting in Austin on May 18-21, 2010. While the agenda is not yet posted, among other topics they will continue their review of the Social Studies TEKS and comment on the Commissioner's List of approved electronic textbooks. To view live and archived state board meetings, go to <*http://www.tea.state.tx.us/index4.aspx?id=3876*>.

Cynthia L. Schneider, Ph.D. • <cschneider@austin.utexas.edu>
Research Associate • Charles A. Dana Center,
The University of Texas at Austin

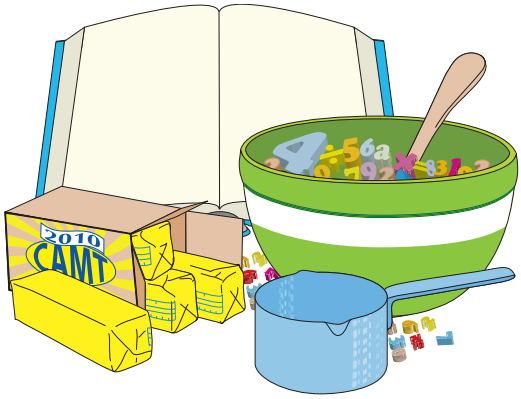
FEATURE

TCTM Leader Spotlight

Each year since 1995, TCTM has accepted nominations for two awards for leaders in our professional community. The TCTM Leadership Award is presented to a TCTM member who is nominated by a TCTM affiliate. The second award, the E. Glenadine Gibb Achievement Award, is presented to someone nominated by a TCTM member. The following individuals have been honored and we wish to acknowledge their former and ongoing contributions this year in the leader spotlight. **If you wish to nominate someone, please see the forms on our website**.

Our prior awardees are:

Year	Leadership(local/state)	Gibb (state/national)
1995	Mary Alice Hatchett	Iris Carl
1996	Betty Forte	Cathy Seeley
1997	Diane McGowan	Pam Chandler
1998	----	----
1999	Linda Shaub	Eva Gates
2000	Lloy Lizcano	Bill Hopkins
2001	Susan Hull	Pam Alexander
2002	Janie Schielack	Judy Kelley
2003	Bonnie McNemar	Dinah Chancellor
2004	Dixie Ross	Jacqueline Weilmuenster
2005	Barbara "Basia" Hall	Barrie Madison
2006	Nancy Trapp	Lois Gordon Moseley
2007	Kathy Hale	Cynthia L. Schneider
2008	Jim Wohlgeheagen	Juanita Copley
2009	Jane Silvey	Jo Ann Wheeler



Mathematics: A Recipe for Success
Teaching with All the Right Ingredients

The Conference for the Advancement of Mathematics Teaching (CAMT) 2010 will be held July 15-17, 2010, at Henry B. Gonzalez Convention Center in San Antonio; Texas. For more details visit the website at <*www.camtonline.org*>

TCTM 2009-10 Mission, Focus and Goal Statements

Mission of the Texas Council of Teachers of Mathematics:

To promote mathematics education in Texas

To support this mission, TCTM has five **focus areas:**

Recruit and Retain Mathematics Teachers	Curriculum and Instruction Support	Advocacy	Promote Communication among Teachers	Serve as Partner Affiliate for NCTM

TCTM activities will align to the five strategic goals. **Goals** of the organization include six strands:

Administration

- Streamline online membership registration through CAMT

Publications

- Survey membership to identify what they want in the *Texas Mathematics Teacher* (*TMT*)
- Review and refine the *TMT* journal and the TCTM website
- Improve the review protocol, establish criteria for reviewers
- Provide tips for new teachers in the *TMT* and on the website

Service

- Increase the donations toward Mathematics Specialist College Scholarships
- Staff CAMT with volunteers as necessary
- Advertise affiliated group conferences on the TCTM website, in the TMT and at CAMT

Communication

- Maintain an e-mail list of members for timely announcements
- Communicate with affiliated groups in a timely manner

Membership

- Encourage affiliated groups to include TCTM registration on their membership forms

Public Relations

- Sponsor and staff the TCTM booth at CAMT
- Follow NCTM Advocacy Toolkit (2004) for increased voice of TCTM membership on issues relevant to our mission

TCTM Past-Presidents

1970-1972	James E. Carson	1982-1984	Betty Travis	1994-1996	Diane McGowan
1972-1974	Shirley Ray	1984-1986	Ralph Cain	1996-1998	Basia Hall
1974-1976	W. A. Ashworth, Jr.	1986-1988	Maggie Dement	1998-2000	Pam Alexander
1976-1978	Shirley Cousins	1988-1990	Otto Bielss	2000-2002	Kathy Mittag
1978-1980	Anita Priest	1990-1992	Karen Hall	2002-2006	Cynthia L. Schneider
1980-1982	Patsy Johnson	1992-1994	Susan Thomas	2006-2008	Jo Ann Wheeler

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Texas Mathematics Teacher
Charles A. Dana Center
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Austin, TX 78701

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Mark your calendar for these important dates!

Coastal CTM	Corpus Christi, TX	June 18, 2010
Texas South Plains CTM	Canyon, TX	September, 2010
Greater El Paso CTM	El Paso, TX	October, 2010
Austin Area CTM	Austin, TX	October 2010
NCTM Regional	New Orleans, LA	October 28-29, 2010
Rio Grande Valley CTM	Edinburg, TX	November 20, 2010
Big Country CTMS	Abilene, TX	January, 2011
Central Texas CTM	Waco, TX	February, 2011
CAMT 2011	Dallas, TX	July 18-20, 2011

Mathematics: A Recipe for Success

Teaching With all the Right Ingredients

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