Texas Mathematics Teacher

Volume XLVIII Issue 1 Fall 2000

A PUBLICATION OF THE TEXAS COUNCIL OF TEACHERS OF MATHEMATICS

IN THIS ISSUE

Order in the Court

Certification

Awardees

Nomination Form

TEXAS COUNCIL OF TEACHERS OF MATHEMATICS

GOALS 2000-2001

MISSION: To promote mathematics education in Texas

GOALS:

* Maintain journal quality
* Support CAMT
* Increase scholarship funding and awards, including CAMTerships
* Communicate better among board members and affiliated groups.
* Maintain website
* Support affiliated group conferences by advertising in journal and on website
* Encourage affiliated groups to put TCTM membership on their membership forms
* Continue to maintain TCTM booth at CAMT

If your label includes a date earlier than "**12/00**,"

please send a check for $13 to renew your TCTM membership.

Send the form on the next page to renew.

Don't miss a copy of the *Texas Mathematics Teacher*.

TEXAS COUNCIL OF TEACHERS OF MATHEMATICS

INDIVIDUAL MEMBERSHIP ($13 per year)

Name: _____

Home Mailing Address: _____

City: _____ State: _____ Zip: _____

(Include a street address or PO box.)

E-mail address: _____

Circle area(s) of interest: K-2 3-5 6-8 9-12 College

Check One: Renewal _____ New Member _____ Change of Address _____

$13 x _____ = _____ Amount due to TCTM
# of years

PROFESSIONAL MEMBERSHIP FORM

To enroll school, institution, or affiliated group. $40 per year. Includes 3 journals.

School District or University: _____

Campus: _____

School Mailing Address: _____

City: _____ State: _____ Zip: _____

Check One: New _____ Renewal _____

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# of years

NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS MEMBERSHIP

_____ New
_____ Renewal

_____ One Journal
_____Additional Journals

___Teaching Children Mathematics ($65)
___Mathematics Teaching in the Middle School ($65)
___ Mathematics Teacher ($65)
___Journal for Research in Mathematics Education ($87)

___Teaching Children Mathematics ($28)
___Mathematics Teaching in the Middle School ($28)
___ Mathematics Teacher ($28)
___Journal for Research in Mathematics Education ($50)

_____ Institutional Membership for Campus $95.00 (Please indicate the one journal you wish to receive.)

Total Amount Due to NCTM: $ _____

Scholarship Donations: TCTM awards scholarships to high school seniors planning to pursue a career in mathematics teaching either as a mathematics specialist in elementary school or as a secondary school teacher with certification in mathematics. You may contribute to the scholarship fund in any amount. Please write a separate check for scholarship donations. _____

Make check(s) payable to TCTM and mail to:
TCTM Treasurer
38 Bradford Circle
Sugar Land, TX 77479

Total Amount Due: $ _____

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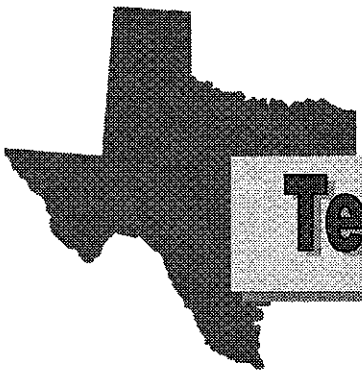

Texas Mathematics Teacher

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2000-2001 Officers ..... Inside Back Cover

Editor: Dr. Paul A. Kennedy
Department of Mathematics
Southwest Texas State University
601 University Dr., San Marcos, TX 78666
pkennedy@swt.edu
Phone: (512) 245-2551 Fax: (512) 245-3425

Associate Editor and Director of Publication:
Diane McGowan
4511 Langtry, Austin, TX 78749
dmcgowan@tenet.edu

Assistant Editor: Michelle Morvant
Ingram Tom Moore HS; 510 College Street
Ingram, TX 78025
mmorvant@personalcomputer.net

Texas Mathematics Teacher, the official journal of the Texas Council of Teachers of Mathematics, is published in the fall and spring. Editorial correspondence and manuscripts should be mailed or e-mailed to the assistant editor.

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 or Works. Submit four copies and an IBM formatted 3 1/2 inch diskette containing the manuscript or send as an e-mail attachment to assistant editor.

Articles for *Voices From the Classroom* should be relatively short. A discussion of appropriate grade level and prerequisites for the lesson should be included.

Items for *Lone Star News* include, but are not limited to, TCTM affiliated group announcements, advertisements of upcoming professional meetings, and member updates

Businesses interested in placing an **advertisement** for mathematics materials should contact Paul Kennedy.

Letter from the President

Howdy to all mathematics educators and friends of mathematics education!

This is my first letter as President of TCTM. As I sit and contemplate what to write about, I am overwhelmed with the honor of being president of the organization and recognize the responsibility for serving the mathematics community of Texas. With the publication of NCTM's *Principles and Standards for School Mathematics* (2000) document and the changes to be implemented on the TAAS for 2003, mathematics education is at the forefront of the news. The critical shortage of certified mathematics teachers is also a major problem both nationally and statewide. There will be articles in the *Texas Mathematics Teacher* discussing these current issues, and we will continue to keep our readers informed.

During CAMT 2000, I realized that many mathematics educators in Texas are not aware of TCTM. I was asked several times what TCTM does and how we serve our members. I answered that we publish a journal twice a year, award scholarships to high school seniors planning to become mathematics teachers, award CAMTerships to teachers attending CAMT for the first time, give service awards to outstanding mathematics educators, and co-sponsor CAMT each year. We have been doing a great job, but I believe we can do more. I would like to offer an open invitation to anyone reading this letter to make suggestions on how we can better serve our members.

The question is: What do you want TCTM to do for you? Please e-mail (kmittag@utsa.edu), fax (210-458-5848), or phone (210-458-5851) me with your suggestions. There is also a form at the end of this letter to use for mailing suggestions. I will take all the suggestions to our Winter Board meeting and present them. Several Board members have already made some great suggestions. The Board will determine which suggestions are "doable," and I will report them in the Spring 2001 journal.

Once again, thanks for the opportunity to serve, and I hope that your school year has begun well and will continue to be rewarding and fun. Take care of yourself and take time for yourself.

Sincerely,

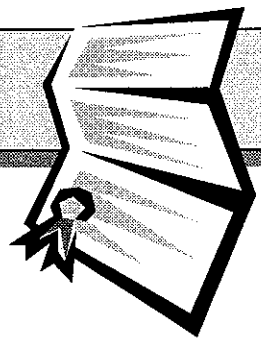
Kathleen Cage Mittag, TCTM President 2000-2002

TCTM SUGGESTION FORM

Please answer this question: **What do you want TCTM to do for it's membership?**

Mail to: Kathleen Mittag, UTSA, 6900 Loop 1604 West, San Antonio, TX 78249.

Mathematics Teacher Certification and Student Achievement



Michael E. Baldwin, Science Curriculum Specialist, Brownwood ISD
Carla Peralas, Project TEAMS Evaluator, Laredo ISD

As the teacher shortage in mathematics and science increases, the instructional effectiveness of teachers on permit becomes an important area of concern (Darling-Hammond, Hudson and Kirby, 1989). School districts would be well served to examine the student achievement of uncertified teachers and teachers on permit when disaggregating student achievement data. Goldhaber and Brewer (2000) explain that there is very little substantive research on the effectiveness of our present certification system. In this study, some interesting trends appear when the Texas Assessment of Academic Skills (TAAS) scores of middle school mathematics teachers on permit are compared to the district TAAS scores. A strong relationship of lower TAAS scores was indicated for teachers who are on permit when compared to the average TAAS scores from the district Academic Excellence Indicator System (AEIS) report.

The study was initiated by identifying the number of secondary math and science teachers who were certified in their area, on permit, or teaching out of their area of assignment in eight schools. The data, shown in Table 1, indicated that 25% of the middle school mathematics teachers, 33% of middle school science teachers, 18% of high school mathematics teachers, and 24% of high school science teachers were on permit during the 1998/99 school year. The number of teachers teaching out of their area was low, except in middle school mathematics, where 18% of teachers were teaching out of their area of certification. The majority of teachers teaching out of area were sixth grade teachers with an elementary certification.

In 1998-99 a significant number of secondary mathematics and science teachers were teaching on permit. The table below is a more detailed breakdown of teacher certification by school.

Science and Mathematics Teachers (1998-99)

	Math				Science			
Middle School	**Area**	**Out of Area**	**Permit**	**Total**	**Area**	**Out of Area**	**Permit**	**Total**
School A	6	1	2	9	3	0	2	5
School B	9	3	5	17	4	2	4	10
School C	12	4	5	21	5	1	2	8
School D	11	4	5	20	7	0	3	10
Total			17	67			11	33
Percentage of Uncertified Teachers			**25%**				**33%**	
High School								
School E	0	0	2	2	2	0	0	2
School F	10	1	3	14	10	0	0	10
School G	17	0	0	17	8	0	6	14
School H	17	0	5	22	9	0	3	12
Total			10	55			9	38
Percentage of Uncertified Teachers			**18%**				**24%**	

The TAAS scores of the middle school math teachers on permit were compared to the district TAAS scores because of the large number (25%) of teachers on permit. Another reason to compare middle school mathematics was due to the fact that middle school students are tested each year making comparisons relatively easy.

The chart below shows the percent of students passing the TAAS for teachers on permit compared to the district average for middle school mathematics.

scored at the same level as other students in the district, the level of student achievement for the district would be considerably higher.

Many factors may explain the reason that these teachers have students who are passing at much lower levels than other students. We could speculate that these teachers are new and therefore receive less desirable teaching assignments or that they may lack experience. Goldhaber and Brewer (1999) noted that students of uncertified mathematics teachers, statistically

TAAS Scores by Teacher vs. District Average (1998-99)				
Teacher Number	**Grade Level**	**Percentage Passing the TAAS(4/99)**	**District Average for grade level**	**Difference in averages**
1	6	61.54		
2	6	43.28		
3	6	43.4		
4	6	63		
5	6	100		
6	6	58		
Grade 6 Averages		**61.54**	**72.7**	**11.16**
7	7	33.33		
8	7	51		
9	7	39		
10	7	79		
11	7	77		
Grade 7 Averages		**55.87**	**72.3**	**16.43**
12	8	63.79		
13	8	63.79		
14	8	69		
15	8	69		
Grade 8 Averages		**66.40**	**78.6**	**12.21**
Average Combination/ Comparison		**61.27**	**74.53**	**13.27**

***The calculated average passing rate for students of certified teachers is 79%.

The study shows that the passing rate for students of teachers on permit was an average 13.27 percent less than the district average as reported in the AEIS. This relationship was even more significant considering that the scores of these students are included in the district average. If the students of teachers on permit

lower test scores, lower levels of parental education, and lower family income. Whatever the reason for the lower scores, the most important consequence of the study is that a target group for intervention has been identified. The potential for improvement in student

achievement is very high if we focus resources at this level. In a site-based system, such as the one in our school district, it behooves principals to identify whom their uncertified teachers are in order to assure that they receive extra support and staff development.

Intervention strategies might include efforts to make sure that these teachers are recruited for appropriate staff development sessions. Possibly, extra release time to attend training or observe more experienced teachers can be arranged. Personal growth plans that include TEKS for Leaders, TEXTEAMS, appropriate technology, and instructional methods can be developed. Mentoring or coaching programs with experienced teachers and close supervision by administrators is needed.

Further study in this area is needed to see if this relationship between certification and student achievement holds true over several years. The small sample size and limited scope of the project make generalizations about the effectiveness of the alternate certification program risky. Most larger and more rigorous studies have shown very little relationship between ACP programs and regular certification programs (Goldhaber and Brewer, 1999, Kwiakowski, 2000, Newman and Thomas, 2000). The more valuable use of this data disaggregation is for district planning for staff development. The effects of a careful intervention plan need to be studied to determine which interventions are most helpful in improving student achievement and instruction with this target group. In attempting to systemically improve student achievement, the identification of the origins of low achievement should be identified and addressed. Through this study we have identified that student achievement has the potential to increase significantly if we can address the needs of teachers in our district who are on permit.

References:

Goldhaber, D. and Brewer, D. J., "Teacher Licensing and Student Achievement." *Thomas B. Fordham Foundation*, (02-18-00) *http://www.edexcellence.net/better/tchrs/09.html*, 1-16.

Kirby, S., Darling-Hammond, L., and Hudson, L., "Nontraditional Recruits to Mathematics and Science Teaching," *Educational Evaluation and Policy Analysis* 11 no. 3 (1989): 309.

Kwiatkowski Michael, "Debating Alternative Teacher Certification: a Trial by Achievement." *Thomas B. Fordham Foundation*, (1983, modified 02-18-00) *http://www.edexcellence.net/better/tchrs/15.html*, 1-20

Newman, C. and Thomas K., "Alternative Teacher Certification." *Perspectives OnLine*, 25, (September1999) *http://www.aaesa.org/pub/99perspect/altern_teacher_certif.html*, 1-14

TCTM Past-Presidents

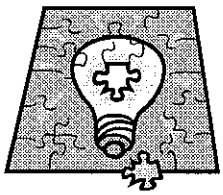
1970-1972	James E. (Chuck) Carson	1986-1988	Maggie Dement
1972-1974	Shirley Ray	1988-1990	Otto Bieless
1974-1976	W. A. Ashworth, Jr.	1990-1992	Karen Hall
1976-1978	Shirley Cousins	1992-1994	Susan Thomas
1978-1980	Anita Priest	1994-1996	Diane McGowan
1980-1982	Patsy Jonhston	1996-1998	Basia Hall
1982-1984	Betty Travis	1998-2000	Pam Alexander
1984-1986	Ralph Cain		

Active Teaching Strategies

Lynne Barry, Secondary ESL Coordinator, Ingram ISD

Active teaching strategies help students get involved in learning and take an active part. They can be used to vary the daily routine, get students to work together, and modify for special needs students. The strategies listed here are especially useful in mathematics classes. Try them with different classes and modify them to fit your needs. They can be used to work problems, discuss large amounts of information, and break-up hands-on activities, as well as many other things.

Jigsaw



Jigsawing is a very popular strategy—enjoyed and appreciated by both teachers and students. Jigsawing is a great tool for taking a big bite of information and making it easier for your students to swallow.

1. Group students. Students count off within their groups.
2. Students rearrange groups according to their number. They are assigned a particular section of information based on their number. For example, 1's read pages 1-5, 2's read 6-10, etc.
3. After completing the task, students work with someone of the same number to compare information. This is a "practice pair" where students review how they plan to present the information to their groups.
4. If time permits, students switch partners and discuss with someone else of the same number.
5. Students go back to original group and teach area of expertise. Material presented by other group members is learned.
6. Conduct a whole class review or assessment.

There are several keys to this strategy. First, students are not overwhelmed by volumes of reading or work. You are the hero for reducing their "workload." Second, students must become an expert in order to teach to the group. If you can teach it, you know it. Finally, whole group review and assessment ensures everyone has knowledge of the information.

Try this activity when you need to teach several definitions, theorems, or examples at once. For example, on note cards, write the term students need to define and include examples and non-examples of the term. Students then develop definitions for their terms. By regrouping, they will get all the other groups information, but they will have a more active part in the process. Plus, using examples and non-examples to write definitions uses higher-order thinking skills than does looking up the definitions.

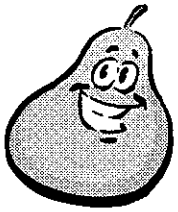
Numbered Heads Together

Numbered Heads Together is incredibly easy to use and requires almost no preparation at all.

1. Group students. Students count off.
2. Teacher asks a question.
3. Students consult/discuss to make sure everyone knows the answer.
4. Teacher randomly picks a number and table to answer the question.

The greatest advantage to using this strategy is your students are not "put on the spot." All students, especially ESL students, have the opportunity to hear and practice an answer in a small group before answering in front of everyone. At-risk students benefit in the same manner. Confidence levels rise. Also, if an answer is incorrect, some of the burden is lifted because the student was not the only one who came up with the answer.

One of the goals in teaching ESL students, as well as at-risk students, is to create an environment where anxiety is lowered. Numbered Heads Together is a perfect tool for this task.



Think-Pair-Share

Just like Numbered Heads Together, Think-Pair-Share is incredibly easy to use and requires almost no preparation at all.

1. Teacher asks a question.
2. Time is given for students to think of the answer/response.
3. Students pair up with someone and discuss the answer/response.
4. Finally, students share, either with a larger group or whole group.

One of the keys to this strategy is the "think" time. Too often, students are asked questions and expected to respond immediately. This technique allows the student time to formulate an answer. In addition students have the opportunity to practice an answer or to get an idea in a less threatening environment before answering in front of everyone. Lower anxiety results in greater learning, and confidence levels rise. Again, like Numbered Heads Together, if an answer is incorrect, some of the burden is lifted because the student was not the only one who came up with the answer.

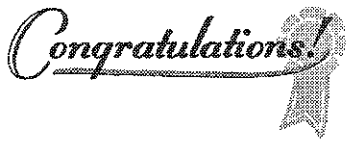
One last advantage of Think-Pair-Share is that it provides an easy and natural, yet beneficial, "break." Studies show students can only track for 16-20 minutes at a time. Think-Pair-Share provides an opportunity to break up your class time into smaller segments without totally restructuring your activities.

Both Think-Pair-Share and Numbered Heads Together are great ways to work problems. You can use them for any type of assignment, from identifying different shapes to working word problems. These techniques are especially useful when the workload is larger or harder than usual. Try doing your next assignment using one of these techniques.

References:

Silberman, Mel. Active learning: 101 strategies to teach any subject. Allyn and Bacon, 1996.

Winner's Circle



E. Glenadine Gibb Award

Bill Hopkins, UT Dana Center -for outstanding service at the local, state, and national level.

TCTM Leadership Award

Lloy Lizcano, Austin ISD - for service to the Austin Area CTM

Mathematics Specialist Scholarship Recipients

Amanda Grubbs, Longview HS
Karye Kellum, Lubbock Cooper HS
Lacie Robicheaux, Conroe Caney Creek HS

1999 Texas National Presidential Awardees

Elementary Mathematics– Kathy Tipton, Waco ISD
Secondary Mathematics– Linda Gann, Northside ISD

2000 Texas Presidential Awardee Finalists

Elementary: Teresa Greene, Plano ISD
Helen Wieser, Houston ISD

Secondary: Alma Agurre, San Antonio ISD
Margaret Cregg, Plano ISD
Diane Walters, Goose Creek ISD

From Lloy Lizcano:

I would like to thank all members of TCTM and especially the members of the Austin Area Council for graciously nominating me to receive the TCTM Leadership Award for 2000. As I sat and listened to portions of my letter of nomination being read, the question which came to mind was: "Did I do that?" Then: "What motivated me to do these things?" After much consideration, I have concluded that there are basically two things that motivate teachers. (1) Being surrounded by strong and supportive colleagues and (2) being determined to provide the best learning experience possible for as many kids as possible.

To young (and not so young) teachers reading this, I would say, look around you. Not just in your building and not just in your discipline or grade level. You will see teachers like you making a difference at the building, district, state, and national level. Follow the lead. Get involved. You can find the support you need.

As for reason number two, the kids, well, they had me at "Good morning."

Algebra Support

from The Charles A. Dana Center

Resources

- Mathematics TEKS Toolkit, including Clarifying Activities and Lessons (*www.tenet.edu/teks/math*)
- Algebra TEKS Assessment Supplement (*www.utdanacenter.org/ssi/docs/algebra.pdf*)
- Mathematics AP Vertical Teams Toolkit (*www.utdanacenter.org/ap/math/APMVT.html*)
- Advanced Placement Capacity Audit Tool (APCAT) (*www.utdanacenter.org/ap/math/APCAT.html*)

TEXTEAMS Professional Development (*www.utdanacenter.org/ssi/projects/texteams/*)

- Algebra I Institute (revised institute available Spring 2001)
- Algebra II/Precalculus Institute
- Rethinking Secondary Mathematics: Mathematical Modeling Institute for Secondary Teachers
- Rethinking Middle School Mathematics: Proportionality Across the TEKS
- Rethinking Middle School Mathematics: Algebraic Reasoning Across the TEKS

Research

- Improving Algebra I End-of-Course Exam Scores: Evidence from the Field (*www.tenet.edu/teks/math*)

For Leaders

- TEKS for Leaders (*www.utdanacenter.org/ssi/teksforleaders*)
- Algebra for Leaders (*www.utdanacenter.org/ssi/projects/texteams/topics.html*)

Coming Soon

- Benchmark Assessments for Algebra I
- Pre-AP issue brief
- Texas Professional Development Online: Algebra I (professional development and support based on the Algebra I Institute; a project of the UT System, pilot 2000-2001, available to districts 2001-2002)
- Rethinking Middle School Mathematics: Numerical Reasoning Across the TEKS
- Rethinking Secondary Mathematics: Statistical Reasoning Across the TEKS
- Rethinking Secondary Mathematics: In-Depth Secondary Mathematics

Exit-level TAASII (coming 2003) will assess students on Algebra I, Geometry, and other objectives including probability, statistics, and problem solving. For many students, Mathematical Models with Applications will be their third mathematics credit and may hold the key to their passing exit-level TAASII.

Additional resources for Mathematical Models with Applications

- Student and teacher course materials for science contexts (*www.tenet.edu/teks/mmacd/mma.htm* or by CD-Rom)
- TEXTEAMS Institute for Mathematical Models with Applications Course Materials: Science (*www.utdanacenter.org/ssi/projects/texteams/institut.html*)
- Teacher Resource Guide (*www.tenet.edu/teks/math/resources.mmatrg.html*)
- Mathematical Models List serve (mathmodels@lists.cc.utexas.edu)

Order in the Court

Dr. Pam Littleton, Professor of Mathematics,
Tarleton State University

Objective: The student will be able to place decimal, percents, and fractions on a number line between 0 and 1.

Materials: Number cards cut apart, tape

Procedure:

1. Give the zero card to a participant and ask him/her to place it on the board. It does not have to be on the far left end; however, if it is placed too far right, you might want to verify that it is where the participant wants it.

2. Give the 1 card to a participant and ask that it be placed on the board. Anywhere to the right of zero will work, but too close will cause problems later. If it is placed too close to zero, do not move it. Let the group decide it needs to be moved, along with all the other numbers that have been placed so far.

3. Continue giving cards to participants (or letting them draw from the deck) to be placed on the number line. Ask the group if they agree with the placement and why.

4. You can change the difficulty of this activity by the cards you hand out first. If you give the benchmarks first (halves, fourths, and thirds), then the activity will be easier. If you start with other numbers, then the activity will be harder. The first time the activity is done, start with the benchmarks. Then try different variations if there is time.

Extensions: Instead of handing out the benchmark cards first start with the other cards. Also, try using fractions, percents, and decimals greater than one.

0.0	0.1	0.2
0.3	0.4	0.5
0.6	0.7	0.8
0.9	1.0	1.1
0.05	0.10	0.20
0.30	0.40	0.50

0.60	0.70	0.80
0.90	1.00	1.10
0.08	0.17	0.25
0.32	0.46	0.59
0.67	0.75	0.83
0.92	1.05	1.17

0	1	$\frac{1}{2}$	$\frac{1}{3}$
$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{7}$
$\frac{1}{8}$	$\frac{1}{9}$	$\frac{1}{10}$	$\frac{1}{11}$

$\frac{1}{4}$	$\frac{3}{4}$	$\frac{2}{5}$	$\frac{3}{5}$
$\frac{4}{5}$	$\frac{1}{6}$	$\frac{5}{6}$	$\frac{2}{3}$
$\frac{2}{7}$	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{5}{8}$

$\frac{4}{9}$	$\frac{3}{10}$	$\frac{6}{11}$	$\frac{5}{12}$
$\frac{2}{4}$	$\frac{4}{5}$	$\frac{5}{16}$	$\frac{6}{7}$
$\frac{7}{8}$	$\frac{4}{19}$	$\frac{3}{13}$	$\frac{10}{11}$

$\frac{11}{12}$	$\frac{2}{15}$	$\frac{8}{15}$	$\frac{15}{16}$
$\frac{6}{17}$	$\frac{7}{18}$	0%	5%

10%	45%	85%	50%
15%	20%	25%	55%
75%	80%	90%	95%

100%	8%	10%	42%
30%	35%	40%	60%
67%	33%	65%	70%

14th Annual
Texas Alliance
Science, Technology & YOUth Symposium

The 14th Annual Texas Alliance Science, Technology & YOUth Symposium will be hosted on **Texas A&M University** Campus on **Saturday, March 3, 2001**.

The Texas Alliance Science, Technology & YOUth Symposium acquaints Texas high school students with the developments and importance of science and technology in today's society. Volunteer speakers from across the State of Texas represent a variety of scientists and other individuals whose work affects the lifestyle of the coming century. Sessions include workshops, seminars, and tours. All students in grades 9 through 12 are encouraged to attend with teacher sponsors. Teachers of elementary, junior high, and high school students are also invited to attend.

The Texas Alliance Science, Technology & YOUth Symposium has served an average of 1,650 Texas high school students over the past five years. The Symposium has been made possible by the financial support and participation of many Texas A&M Offices and Colleges, as well as numerous dedicated volunteers. We are looking forward to continuing this phenomenal Aggie tradition.

The Texas Alliance Science, Technology & YOUth Symposium is a project of the Texas Alliance for Science, Technology & Mathematics Education. The Alliance is a statewide consortium of business/industry, education, and government committed to improving science, technology, and mathematics education.

If you are interested in presenting or attending, please contact:

Christy White
Texas Alliance Science, Technology & YOUth Symposium
Texas A&M University
College of Education - TLAC - M.S. 4232
College Station, TX 77843-4232
979-845-3910
fax - 979-845-9663
youthsymposium@coe.tamu.edu

Lone Star News

CAMT 2001

A Math Odyssey
The Journey Continues . . .
July 19-21
Henry B. Gonzalez Convention Center
San Antonio, Texas

Sponsors
Texas Council of Teachers of Mathematics
Texas Association of Supervisors of Mathematics
Texas Education Agency
Texas Section of the Mathematical Association of America

Make plans now to be at CAMT next summer. If you have not been to CAMT before and have taught five or less years, fill out the CAMTership application on p. 24. You could be chosen to receive $100 toward your CAMT expenses.

If you went to CAMT, share your experience with others. What was the best part of CAMT? What difference has it made in your classroom this year? How has it impacted your teaching? Why are you glad you went? Send a short e-mail response to mmorvant@personalcomputer.net. Your response could appear in the spring journal.

Future CAMT Dates

2002	July 8-10	Dallas, Adam's Mark Hotel
2003	July 30-Aug 1	Houston, George R. Brown Convention Center
2004	July 15-17	San Antonio, Henry B. Gonzalez Convention Center
2005	July 11-13	Dallas, Adam's Mark Hotel

Affiliate Group News

- **Austin Area CTM:** AACTM hold regular meetings. Contact Mary Alice Hatchett for information. Mary_Hatchett@RoundRockISD.org

- **Alamo District CTM:** ADCTM is co-sponsoring the NCTM Leadership Academy to be held in San Antonio February 20-21, 2001 at the Airport Hilton. For information on the Academy, see p. 22. For information, on ADCTM contact: Synthia Silva-Avila at (210) 659-9633 or ssilva@judson.k12.tx.us.

- **Conference on the Teaching of Secondary Mathematics** will be held on February 9-10, 2001, in the Lee Drain Building at Sam Houston State University. This year's conference theme is "Statistics Across the Curriculum." Presentation proposals on any statistics or mathematics topics for grades 6-12 are currently being solicited and are due by November 15, 2000 (or contact Max Coleman if past this date).

- **Rio Grande Valley CTM:** RGVCTM is holding its annual conference on November 11 at UTPA in Edinburg, Texas from 8 am to 4 pm. They are expecting over 1200 participants. RGVCTM typically meets on the last Thursday of every month with additional days scheduled prior to the conference. Each year, they mail out three newsletters to members, totaling over 1200. Also, they award three scholarships each year for $200. They also have a random drawing before CAMT for members who submit their names. Eight $100 awards are given to assist with any cost while attending CAMT. For more information, contact Sharon Walsh-Cavazos at cavalsh@aol.com.

NCTM Leadership Academy

Region 20 has been selected by NCTM to sponsor the NCTM Academy Inaugural Two-Day Institute in San Antonio, Texas. The institute will be held at the Airport Hilton February 20-21, 2001. TCTM will be co-sponsoring the conference along with the Alamo District CTM. The institute is one of six held in the United State during the fall of 2000 and spring of 2001. The institute is entitled "From Principles to Practice; from Words to Action: Implementing High Quality Mathematics Instruction in Your Classroom." The institute is open to all mathematics teachers, curriculum specialists, administrators, or other interested individuals. For information regarding this particular institute, you may contact Norma Torres-Martinez at (210) 370-5447. You may also go to the NCTM website at www.nctm.org/meetings/academy/institutes.html to view purposes and agendas.

National Science Foundation in Texas

Southwest Texas State University (SWT) Middle School Math Certification Initiative
The SWT Middle School Math Certification Initiative is funded by the National Science Foundation's Collaboratives for Excellence in Teacher Preparation Program. The goal of the project is to significantly increase the numbers of qualified middle school mathematics teachers, trained in appropriate student-centered content and pedagogy who are enthused about teaching and remain in the profession. We will create and sustain this new middle school mathematics certification program through a collaborative process involving recruitment, mentoring, curriculum improvement and implementation, certification, and induction. Collaborative partners include Southwest Texas State University, Austin Community College, and San Antonio College. For more information, please contact Paul Kennedy (pkennedy@swt.edu) or visit our website at http://www.math.swt.edu/~cetp/.

Texas Collaborative for Excellence in Teacher Preparation
The Texas Collaborative for Excellence in Teacher Preparation (TxCETP) is an NSF-funded initiative designed to promote reform in the teaching and learning of mathematics and the sciences at the university level in order to better prepare K-12 science and mathematics educators. TxCETP partners include university faculty members and administrators in Education, Sciences and Mathematics from ten Texas campuses, along with faculty members and administrators from associated community colleges and K-12 partner schools. The project has three deliverables:

1) Certification of more and better prepared K-12 science and mathematics teachers;
2) Reformed undergraduate courses that model inquiry-based teaching and learning, and for which materials are available on the web;
3) Inquiry Road Show – an introduction to inquiry. A half- to full-day experience for university professors, which can be appropriately modified for presentation to high school and middle school teachers.

For more information, contact Kit Price Blount, Texas A&M University – Corpus Christi, at kpblount@falcon.tamucc.edu.

Texas Rural Systemic Initiative (TRSI)
The Texas Rural Systemic Initiative (TRSI) is a partnership built upon the infrastructure of the Texas A&M University System and involves universities, K-12 schools, regional education service centers, Texas Education Agency, Texas Statewide Systemic Initiative, and other partners such as Southwest Educational Development Laboratory, Texas Association of Community Schools, Fort Worth Museum of Science and History and the Exploratorium in a collaborative effort to provide high quality mathematics and science education for students in rural Texas. The project is housed at West Texas A&M and is directed by Mrs. Judy Kelley. For more information, call 806-651-2271, email jkelley@mail.wtamu.edu, or go to the web site http://www.texasrsi.org/.

University of Texas Secondary Pre-Service Program in Math and Science
For more information, contact Michael Marder at marder@chaos.ph.utexas.edu.

FORT BEND COUNCIL OF TEACHERS OF MATHEMATICS

FBCTM welcomes anyone interested in improving the teaching of mathematics. Please encourage any teacher in public or private schools as well as students in teacher education to join and attend.

Membership Information

Name: _____

Home Address: _____

City and Zipcode: _____

Home Phone: (_____) _____-_____

School Phone: (_____) _____-_____

School District: _____

School: _____

Email: _____ **home or school?**

Circle level of interest: Elementary Middle High

Membership Fee: $10.00 **(Make checks payable to FBCTM.)**
Send registration form and fees to the following:

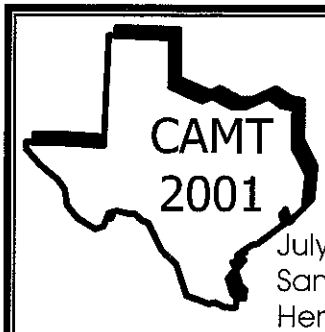
- ***Alief ISD Members*** **Rozanne Rubin, Elsik High School**
- ***Fort Bend ISD Members*** **Stephanie Collins, Lake Olympia Middle School**

2000 – 2001 MEETING DATES & LOCATIONS

Date:	November 9, 2000
Day:	Thursday
Time:	4:30 p.m.
Location:	Elsik Ninth Grade Center

Date:	March 1, 2001
Day:	Thursday
Time:	4:30 p.m.
Location:	Dulles Elementary

Please join us at the above times and locations. The spring banquet will take place in May of 2001. Specific date, time, and location will be announced.



2001: A MATH ODYSSEY

The Journey Continues...

July 19-21, 2001
San Antonio, Texas
Henry B. Gonzalez Convention Center

Speaker/Presider Proposal Form

The annual Conference for the Advancement of Mathematics Teaching (CAMT) sponsored by the Texas Education Agency, The Texas Council of Teachers of Mathematics, The Texas Association of Supervisors of Mathematics, and the Texas Section of the Mathematical Association of America, attracts 7,000 mathematics educators.

The program committee invites proposals for speakers and presiders. The CAMT registration fee is waived for a maximum of two speakers per session. If you would like to make an additional presentation on a different topic, submit a separate proposal for each session. Handouts are encouraged for all sessions. Please complete the presider section of the proposal form if you are willing to serve as a presider.

Presenters are limited to one additional equipment request (VCR, slide projector, tape recorder, or second overhead projector). These are limited and are available *only* upon prior request.

Session Types

Presentation:	One hour lecture / discussion. Room set up with chairs (no tables).
Activity:	One or two hour participatory session. Room set up with tables and chairs.
Extended Session:	Three hour or longer participatory session. Room set up with tables and chairs.
Computer Demo:	Room set up with one computer (PC or Mac), and large screen projection system. Special software is the responsibility of the speaker.
Computer Lab:	Room set up with designated number of computers (PC only). Special software is the responsibility of the speaker.
Poster:	Visual display or model and informal discussions. (only 1 fee waived)

Topic Ideas

Algebraic Thinking K-12
Geometric Reasoning
Mathematical Connections
Mathematics as Communication
Measurement
Assessment
Equity
Concept Development
Instructional Strategies
Problem solving
Technology

Proposals on other topics are welcomed

Please return the Speaker/Presider Proposal form by November 1, 2000 (or ASAP) to:

CAMT
P. O. Box 200669
Austin, Texas 78720-0669
Phone: 512-335-2268 (CAMT)
FAX: 512-335-8517
e-mail: adhcamt@flash.net
website: www.tenet.edu/camt

Pam Alexander & Judy Bishop
2001 Program Co-Chairs

CAMT 2001 Speaker/Presider Proposal

Your interest in being a speaker and/or presider at CAMT 2001 is greatly appreciated.
Please PRINT. Fill out this form completely using black ink. See additional information on reverse side.

Speaker 1:_____ District/Organization:_____

Home Address:_____ City/State/Zip:_____

E-Mail:_____ Home Phone:_____

School/Work Phone:_____

Speaker 2:_____ District/Organization:_____

Home Address:_____ City/State/Zip:_____

E-Mail:_____ Home Phone:_____

School/Work Phone:_____

If you can provide a presider for your session, please complete the presider section below.

Complete this section to be a presider (with or without presenting at the conference).

Presider:_____ District/Organization:_____

Home Address:_____ City/State/Zip:_____

E-Mail:_____ Home Phone:_____

School/Work Phone:_____

Title of Session: (limit 60 characters): _____

_____

Description to appear in program (limit 150 characters): _____

_____

_____

Grade Level(s): PK K 1 2 3 4 5 6 7 8 9 10 11 12 College General Interest

Type of Session: Please refer to descriptions on reverse. Check type of session and the length, where applicable.

_____Presentation 1-hr. ____Activity 1-hr. ____Activity 2-hr. ____Extended Session (Length__hr)

_____Computer Demo ____Computer Lab ____Poster

Room Capacity: Rank choices (1st, 2nd, 3rd): ____80 and under ____100 or under ____Over 100

Equipment: An overhead projector will be available in each room. Please check only ***ONE***, if needed:

_____Additional Overhead _____Slide Projector _____VCR _____Tape Recorder

Computer Set-up, if needed:

_____ 1 Computer (Mac) _____ 1 Computer (PC) _____ Computer (bringing own)

_____ Projection Device _____ Computer Lab (PC)

Presenting Twice: If you are willing to present this session twice, check your time preference.

_____ Back to Back _____ Same Day _____ Different day

Special Requests: _____

_____

Return by November 1, 2000 (or ASAP) to: CAMT ♦ P O Box 200669 ♦ Austin, TX 78720-0669 ♦
FAX: 512-335-8517

CAMTERSHIP APPLICATION

Six $100 CAMTerships will be awarded to those teaching five or fewer years who are members of TCTM and have not attended CAMT before. The money is intended to help cover expenses associated with attending CAMT and to encourage new teachers to attend CAMT. Two CAMTerships will be awarded to teachers in each of the following grade levels: K - 4, 5 - 8, and 9 - 12. Winners will be determined by random drawing of names and will be notified by March 1, 2001. Winners will be asked to work for two hours at registration or NCTM material sales and will be TCTM's guest at our breakfast, where the checks will be presented. Good luck!

Deadline: February 15, 2001

Name: _____

Phone number: _____

Home address: _____

City, zip: _____

School: _____

Grade(s) taught: _____

School address: _____

School phone: _____

Principal's name: _____

Are you a member of TCTM? _____

Note: If you are not a member of TCTM, you may enclose $10 with this application to apply for membership.

Have you attended CAMT before? _____

How long have you been teaching? _____

Describe your primary teaching responsibilities:

Send your completed application to:

Kathy Mittag
4627 Pinecomb Woods
San Antonio, TX 78249

TEXAS COUNCIL OF TEACHERS OF MATHEMATICS
MATHEMATICS SPECIALIST SCHOLARSHIP

Amount: $1000 or $500

Application Deadline: June 1, 2001

Eligibility: Any student who will graduate in 2001 from a Texas high school - public or private - and who plans to enroll in college in the fall of 2001 to pursue a career in mathematics teaching either as a mathematics specialist in elementary school or as a secondary school teacher with certification in mathematics.

Name: _____
Last First Middle

Address: _____
Number and street Apt. number

_____
City Zip code

Phone number: ( )_____ Birth date: _____

Social security number: _____

High school(s) attended: _____

What college or university do you plan to attend? If you are awarded this scholarship, TCTM's treasurer will send a check directly to the business office of the college. We need the college's complete address.

Enclose the completed application with each of the following in the same envelope and mail to Pam Alexander at the address listed below. **YOU MUST INCLUDE 3 COPIES OF ALL REQUIRED MATERIALS.**

1. On a separate sheet, list high school activities including any leadership positions.
2. Official high school transcript
3. Letter of recommendation from a TCTM member
4. An essay describing your early experiences learning mathematics and any experiences explaining mathematics to your classmates or friends. This essay must be no more than two pages, double-spaced.
5. An essay telling why you want to be a mathematics specialist in elementary school or a mathematics teacher in middle or high school. This essay must be no more than one page, double-spaced.

Return all materials in one envelope to:

Kathy Mittag
4627 Pinecomb Woods
San Antonio, TX 78249

E. GLENADINE GIBB ACHIEVEMENT AWARD APPLICATION

The E. Glenadine Gibb Achievement Award is presented to someone nominated by a TCTM member to be honored for his/her contribution to the improvement of mathematics education at the state and/or national level. **Deadline: June 1, 2001**

Information about the TCTM member nominating a candidate:

Name: _____

Home address: _____

Home phone: _____ Business phone: _____ E-mail: _____

Are you a member of TCTM? _____ NCTM? _____

Information about the nominee:

Name: _____

Home address: _____

Home phone: _____ Business phone: _____ E-mail: _____

Is the nominee a member of TCTM? _____ NCTM? _____ Retired _____

Applications should include 3 pages:

- Completed application form
- One-page, one-sided, typed biographical sheet including:
  - Name of nominee
  - Professional activities
  - National offices or committees
  - State TCTM offices held
  - Local TCTM-Affiliated Group offices held
  - Staff Development
  - Honors/awards
- One-page, one-sided essay indicating why the nominee should be honored for his/her contribution to the improvement of mathematics education at the state/national level

Send the completed application, biographical sketch, and essay to:

Kathy Mittag
4627 Pinecomb Woods
San Antonio, TX 78249

TCTM LEADERSHIP AWARD APPLICATION

The TCTM Leadership Award is presented to a TCTM member who is nominated by a TCTM Affiliated Group. This person is to be honored for his/her contributions to the improvement of mathematics education at the local and state level. He/she has designed innovative staff development and has promoted the local TCTM Affiliated mathematics council. **Deadline: June 1, 2001**

Information about the of Affiliated group nominating a candidate:

Name of Affiliated Group: _____

President of the Affiliated Group: _____

Home address: _____

Home phone: _____ Business phone: _____ E-mail: _____

Are you a member of TCTM? _____ NCTM? _____

Information about the person being nominated:

Name: _____

Home address: _____

Home phone: _____ Business phone: _____ E-mail: _____

Is the nominee a member of TCTM? _____ NCTM _____ Retired _____

Applications should include 3 pages:

- Completed application form
- One-page, one-sided, typed biographical sheet including:
  - Name of nominee
  - Professional activities
  - State/local offices or committees
  - Activities encouraging involvement/improvement of math education
  - Staff Development
  - Honors/awards
- One-page, one-sided essay indicating why the nominee should be honored for his/her contribution to the improvement of mathematics education at the state/national level.

Send the completed application, biographical sketch, and essay to:

Kathy Mittag
4627 Pinecomb Woods
San Antonio, TX 78249

You Can Make A Difference in Mathematics Education

TCTM is an affiliated group of the National Council of Teachers of Mathematics (NCTM). As a member of TCTM, you can help drive the direction and focus of NCTM.

In 1999, TCTM helped pass the following resolution at the Delegate Assembly in San Francisco:

RESOLUTION M.NR.2.99

> *Be it resolved that NCTM and its Affiliates use their influence to advocate and encourage state and local educational agencies to provide and require appropriate ongoing professional development in mathematics content and mathematics pedagogy in accordance with NCTM Standards for all elementary, middle, and secondary teachers of mathematics.*

As a result of this resolution, NCTM has begun work to publish materials for staff development.

If you are concerned about an issue, please send it to your NCTM representative. It will be written as a resolution and sent to the Southern Regional Caucus and Delegate Assembly held during the NCTM Annual Conference. If your resolution passes, then the NCTM Board of Directors will use it to determine their focus for the coming year. As a member of TCTM, this is your platform.

Please send your ideas to your NCTM Representative:

Sharon Taylor
23B Pate Place
Statesboro, GA 30458
tailors@gasou.edu

Nomination Form

Please nominate people for the positions below. Include the name, email address, and phone number if possible. A description of each position from the TCTM Constitution is included.

President-Elect: "The president-elect shall perform the duties as assigned by the president and shall be an ex-officio member of all committees. He or she will succeed the president in office and will serve a two-year term.

_____

_____

Vice President – Elementary: "The vice president-elementary shall serve as a board member of STEAM, promoting membership and providing publicity." He or she will serve a two-year term.

_____

_____

Regional Directors: "Each regional director shall promote the organization and maintenance of the local councils and solicit from the region nominations for TCTM offices. The regional director may organize leadership workshops for officers of local affiliated groups and may organize TCTM sponsored regional conferences, or any other activity that may benefit the local affiliated groups. Directors serve two-year terms.

Southwest Regional Director (serves and should live in ESC Regions 15, 18, 19)

_____

_____

South Regional Director (serves and should live in ESC 1, 2, 3)

_____

_____

Southest Regional Director (serves and should live in ESC 4, 5, 6)

_____

_____

place
stamp
here

Judy Rice
2400 Old South Dr. #707
Richmond, TX 77469

TEXAS COUNCIL OF TEACHERS OF MATHEMATICS

Affiliated with the
National Council of Teachers of Mathematics

2000-2001 Officers

President
Kathy Mittag
4627 Pinecomb Woods
San Antonio, TX 78249
kmittag@utsa.edu

Past-President
Pam Alexander
Rt. 4 Box 5212
Nacogdoches, TX 75964
palexander@nacogdoches.k12.tx.us

Vice-President-Elementary
Darlene Varga
5826 Queensloch Dr.
Houston, TX 77096
dlvarga@tenet.edu

Vice-President-Secondary
Judy Rice
2400 Old South Dr. #707
Richmond, TX 77469
jrice@esc4.net

Northeast Regional Director
Linda Antinone
2705 Merida Ave.
Fort Worth, TX 76109
antinone@tenet.edu

Northwest Regional Director
Beverly Anderson
5209 70th Street
Lubbock, TX 79424-2017
banderson@esc17.net

Southeast Regional Director
Susan Larson
Rt. 1 Box 366B
Hearne, TX 77859
JLarson712@aol.com

Southwest Regional Director
Diane Reed
10147 Buckwood
El Paso, TX 79925
dianreed@earthlink.net

Central Regional Director
Cynthia Schneider
234 Preston Hollow
New Braunfels, TX 78132
cschneider@mail.utexas.edu

South Regional Director
Sheryl Roehl
1905 Leary Lane
Victoria, TX 77901
sroehl@esc3.net

Secretary
Paula Gustafson
227 Altwein Rd.
Blanco, TX 78606
paulag@moment.net

Treasurer
Susan Cinque
38 Bradford Circle
Sugar Land, TX 77479
105004.72@compuserve.com

Membership
Becky Teague
1000 Gladstell Apt. 204
Conroe, TX 77304
bteague@flex.net

NCTM Representative
Sharon Taylor
23B Pate Place
Statesbore, GA 30458
tailors@gasou.edu

Parliamentarian
Bill Jasper
1601 N. Bluebonnet Circle
College Station, TX 77845
mth_waj@shsu.edu

TEA Consultant
Barbara Montalto
9902 Talleyran Drive
Austin, TX 78750
bmontalt@tmail.tea.state.tx.us

NCTM RSC Representative
Pam Chandler
2811 Foxfire
Missouri City, TX 77459
pam_chandler@hmco.com

Government Relations Rep.
Judy Bishop
600 Rua de Matta
San Antonio, TX 78232-1118
Judybishop@aol.com

CAMT Board Representative
Jacqueline Weilmuenster
3547 Mercury
Grapevine, TX 76051
jweilmue@earthlink.net

Journal Editor
Paul Kennedy
Dept. of Math, SWT
601 University Dr.
San Marcos, TX 78666
pkennedy@swt.edu

Director of Publications
Diane McGowan
4511 Langtry Lane
Austin, TX 78749
dmcgowan@tenet.edu

Journal Assistant
Michelle Morvant
919 Garden St.
Kerrville, TX 78028
mmorvant@personalcomputer.net

When does YOUR membership expire?

Note the expiration date on your mailing label.
Use the membership form inside to renew **before** that date.

Texas Council of Teachers of Mathematics

Member 2000-2001

NAME _____

Texas Mathematics Teacher
919 Garden St.
Kerrville, TX 78028

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