



Mathbits

**2005 Minnesota Spring Mathematics Conference
April 29-30**

Quality Teaching: The Key to Understanding Mathematics



Jointly sponsored by Minnesota Council of Teachers of Mathematics
and Minnesota Mathematical Association of Two Year Colleges

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- Friday banquet keynote address: Laurie Boswell and Don Balka
Communicating Quality Mathematics
- Saturday lunch presentation: Jim Rubillo
Keeping the Magic in Teaching
- Over 150 sessions for elementary, middle, secondary, and post-secondary levels
- Math topics, teaching strategies, literature and literacy, aligning curriculum and assessment to *PSSM* and *MN Academic Standards*, implications of *No Child Left Behind* legislation, and much more
- Opportunities for networking and interaction among K-12 and post-secondary teachers of mathematics
- For more information, registration, and conference schedule visit the website at www.mctm.org or see flyer and registration in February's *Mathbits*

District Meetings at the Spring Conference

District Meetings will be held at 1:30 following the lunch on Friday. Check your conference program for exact meeting room for your district. Each district will be holding a drawing for a \$25 Gift Certificate redeemable for NCTM materials. Please come and join the district meeting to share your ideas and concerns. All members are encouraged to attend. We will be asking for resolutions to be considered at the afternoon delegate assembly.

Delegate Assembly 2005

The annual Delegate Assembly will be held Friday afternoon from 4:45 to 6:00 pm. Hors d'ouvres and drinks will be provided in the Harbor Side rooms as delegates discuss and vote on new resolutions for MCTM. All delegates in attendance will receive a \$30 Gift Certificate to use at the NCTM materials booth in the exhibit hall at the Spring Conference.

If you are interested in serving as a delegate to the 2005 Delegate Assembly, please contact your district director! Your initiative will save the directors' time recruiting later.

District Directors' Corner

Each of the eight MCTM district directors is eager to effectively represent mathematics teachers in their respective districts. One of the directors' main goals is to improve communication between the MCTM board and the MCTM membership. We want to know of questions and concerns teachers may have concerning math standards, assessment issues, reform vs. traditional curriculum, etc. Please feel free to contact us at anytime. Each district director's current email address is listed on the MCTM website.

Pondering by the President

Sue Westegaard

This fall I started taking yoga classes again. I was finding that my muscles just did not stretch the way I would like them to and that the joints were starting to show signs of the arthritis that affects nearly everyone else in my family. I was also looking for a way to get the blood pressure to go down without the medication. One of my classes is yoga and meditation. Each of us is to pick a mantra to recite during meditation. In theory, it is to keep the mind quiet. I finally chose mine.

“To do the useful thing,
To say the courageous thing,
To contemplate the beautiful thing,
That is enough for one woman’s life.” T.S. Elliot

Of course, T.S. Elliot said “man” rather than woman.

So how can this relate to mathematics and teaching, other than keeping Ms. Westegaard sane?

To do the useful thing:

- Help students whether they want it or not.
- Hold them accountable for their actions and their work
- Provide them with the best mathematics lesson you can craft
- Use calculators, manipulatives, activities ... whatever it takes to “hook” a student
- Smile at each student you meet in the hallway
- Write letters to your senators and representatives about education issues
- Sometimes you just need to throw away the lesson plan and focus on the students

To say the courageous thing,

- Tell anyone who stays in one place for more than one minute that schools need more funding. Give them specifics.
- Write letters to your senators and representatives about un-funded mandates
- When asked, don’t say “I’m just a teacher.” Be proud of your profession.
- When someone says that they weren’t any good at math, I usually say, “Evidently, you did not have had a very good teacher.” Usually they remember an incident that they can share about a teacher or a situation.
- To have honest conversations with teachers in your department about mathematics and issues. It is difficult to have to talk with a teacher about a mis-step on their part.

To contemplate the beautiful thing

- The light bulb going off in a student’s eyes when they “get it”
- The variety of students who enter your classroom ... not just the colors and hues, but the personalities, the life stories, the work ethics, the problems
- The conversations in my office about mathematics and teaching
- The sun rising when I enter school and the sun setting when I leave school.

That is enough for one teacher’s life. But just think about how much of a difference it would make.

Hope to see you in Duluth ...

Sue

P.S. Please add any ideas of your own to my list. I would love to hear what you add.



Teacher: How much is half of 8 ?

Student: Up and down or across ?

Teacher: What do you mean ?

Student: Well, up and down makes it 3,
but across the middle makes it 0.

Teacher: Can you count to 10?

Student: Yes, teacher-one, two, three, four, five,
six, seven, eight, nine, ten.

Teacher: Now go on from there.

Student: Jack, Queen, King.

MCTM CONNECT

A new name, a new focus

MCTM CONNECT (Committee to Orient and Network New/Novice Educators into a Community of (Math) Teaching) is the new name for the +1/-1 Committee. The new name indicates more clearly the focus of the group and committee members don't have to spend so much time explaining to people what +1/-1 means!

The committee has embarked on an ambitious program to connect with pre-service and beginning teachers, make them aware of the professional growth opportunities that MCTM and NCTM provide and to help them network with other enthusiastic math educators. A Mentoring program designed to pair beginning teachers with experienced teachers with similar interests will begin on a small scale in the spring of 2005. More details about participating in this program are found below or at www.mctm.org

The planning committee for the MCTM Fall Conference will receive help and suggestions from the CONNECT Committee to ensure that there will be several sessions designed to meet the needs of novice teachers, who will then be encouraged to attend.

MCTM, through the CONECT Committee and in conjunction with MinnMATYC, will continue to support, help plan and publicize the Future Teacher's Conference which is held each year in late February.

The program will culminate at the MCTM Spring Conference each year with the CONNECT session, held on the Thursday evening before the conference begins. In addition to a meal, attendees at this event will meet and network with other attendees and leaders of mathematics education. They will also receive advice and suggestions about getting the most out of their conference attendance.

Members are encouraged to nominate a potential mentor for a new teacher and to refer new colleagues to MCTM CONNECT activities. We think we can make a difference in the profession and ultimately for students. Members of the CONECT Committee are: Mary Jo Aiken, Stephanie Amberg, Anne Bartel, Kathy Cramer, Tara Evenson Daas, Nancy Desmond, Sonja Goerd, Alice Guckin, Larry Luck (Chair), Charlie Merhar, Nancy Nutting, Becky (Groseth) Read, Amber Richgels, Sharon Stenglein, Ann Sweeney, Bill Tomhave, and Terry Wyberg.

MCTM To Establish Mentoring Program

An opportunity to help a beginning colleague

Acting on resolutions presented at the 2004 Delegate Assembly, MCTM is establishing a mentoring program for novice Mathematics teachers. Research has shown that the amount and quality of professional support that beginning teachers receive affects their success rate and the rate at which they remain in the profession. School districts sometimes assign a mentor to new teachers but the mentor isn't always a mathematics teacher or one who has the skills and enthusiasm to be a real support to the new colleague.

Nominations are being requested for prospective mentor teachers. Mentors can be a mathematics teacher, active or retired, at any grade level K-12. The mentor, if selected, will make a commitment to regularly initiate email communication with a mentee for a period of at least two years. These communications will be a time to offer encouragement and maybe a teaching tip or a lesson that worked well. Mentors will be encouraged to attend the Fall and Spring MCTM conferences, as will the mentees, with the intention that they connect with each other while there so that the mentee can have a rewarding conference experience. The mentors will be supported by members of the MCTM CONNECT committee who will periodically share information of interest to mentees.

MCTM will use all of its methods of reaching pre-service and beginning teachers to describe the mentoring program invite them to request a mentor if they'd like one. Mentees will submit an information form about themselves, their needs and their teaching situation and these will be sent to the potential mentors who will select a mentee with whom they feel they could be effective.

Mentees will be able to be in communication with their mentor about any issues they may have including classroom management, motivation, lesson planning, curriculum questions, mathematics questions, or school politics. Mentors will not need to be experts on all topics posed by their mentee as they will have access to a network of other mentors and the

MCTM CONNECT committee. While the mentor commitment is for two years, it is hoped that a collegial relationship will last longer than that. In addition, teachers with more than two years of experience who feel they are in crisis situations may also request a mentor.

Readers are encouraged to nominate a colleague as an MCTM mentor. Simply fill out the nomination form below or at www.mctm.org. Those prospective mentors who are selected will be contacted and invited to serve and to submit their qualifications and interests. Mentors are not required to come to any meetings but are expected to be in email contact with their mentees, other mentors and the CONNECT committee. The program will begin as soon as some mentors and mentees are identified. So please submit your nominations now.

MCTM Mentor Nomination Form

MCTM members are invited to nominate colleagues who would be good mentors for beginning teachers. Nominees should be enthusiastic teachers of mathematics in grades K-12, active or retired, and be interested in helping new members of the profession.

This nomination comes from: _____

ABOUT THE NOMINEE:

Name: _____

Email address: _____

Mailing Address: _____

Phone number: _____

School: _____

Grade level(s) _____

Number of years of teaching experience: _____

Tell us, in a few sentences, why this person would be a good mentor for a beginning teacher:

Return this form to:

Larry Luck

7341 Lyric Lane

Fridley, MN 55432

larryluck@aol.com



New Teachers & Future Teachers:
 Join us to
CONNECT*
 with other teachers and
 leaders in math education

You are invited to a special welcome session
 created just for new and future teachers

Thursday Evening
 April 28, 2005
 7:00-9:00 PM
 at the DECC in Duluth

- soup, sandwiches, pop and dessert provided
- free teaching materials & ideas
- fun activities, fun people
- discover how to get your own personal mentor to bounce off teaching ideas and issues
- find out who's who in math education and how they can help you
- get an overview of the MCTM conference – best sessions and the ins and outs of making it a great conference
- network with other teachers in their first years of teaching
- network with others planning to enter the profession
- find out about other future events for new teachers

No need to RSVP – just come, be our guest

Join us in Duluth the evening before the MCTM Spring Conference. We'd love to meet you, help make your conference attendance a success and pass on some teaching hints and special surprises.



* sponsored by **MCTM CONNECT** (Committee to Orient and Network
New/Novice Educators into a Community of (Math) Teaching

Questions? See www.mctm.org or contact Sonja Goerd, dsgoerd@mainstreetcom.com

**Professional
Development
Opportunities****Mathematics Within**

The Institute of Technology Center for Educational Programs will offer three teacher professional development courses in the summer of 2005. These intensive courses aim to help teachers (grades 3-8) recognize the “language of mathematics,” deepen their math content knowledge, and connect new math knowledge not only to a teacher’s school’s curriculum but to the bigger picture of middle school math content. For more information, please contact itcep@umn.edu or visit <http://www.itcep.umn.edu/profdev/>.

Algebraic Processes and Their Connections to Geometric Structures

Dates: August 8-19, 2005

Location: Anoka-Hennepin School District

Spend two weeks deepening your knowledge of algebraic foundations by discussing and exploring topics such as subtraction and negative numbers, fractions, and the Pythagorean theorem. Discover new connections between division, multiplication and addition. Delve into visual representations and manipulatives that help students (and teachers) struggling to understand difficult but foundational math concepts. Units are aligned with state and national standards for grades 3-6 mathematics curricula. One or two mathematics graduate semester credits are available; some grant-supported seats may be available; contact ITCEP.

A Deeper Study of Algebraic Processes and Connections to Geometric Structures

Dates: July 11-22, 2005

Location: University of Minnesota, Twin Cities, East Bank

This continuation course will further enhance a teacher's insight and comfort with teaching geometric aspects of mathematics. Discuss the geometric applications of division and fractions, find Pythagorean Triples through experimentation, and explore representational systems for shape, position and movement. Investigate mathematical situations through pattern, symmetry and transformations, and study the characteristics of and relationships between two and three dimensional shapes. Units are aligned with state and national standards for grades 3-7 mathematics curricula. Participants must have completed “Algebraic Processes and Their Connections to Geometric Structures” or an equivalent course and obtain permission from ITCEP. Tuition and fees for two graduate semester credits in mathematics as well as daily lunches and snacks, a parking stipend, and all books and materials are funded through a grant from the MN Higher Education Services Office, Improving Teacher Quality Program.

A Capstone View of Algebraic and Geometric Concepts in Middle School Mathematics

Dates: June 20-30, 2005

Location: University of Minnesota, Twin Cities, East Bank

This course will use common mathematical questions from elementary and middle school students (Why do we need an order of operation? Why is a square a rectangle but a rectangle is not necessarily a square?) as the basis for units to deepen your understanding of the underlying concepts. The course will not only focus on answering these questions, but provide you opportunities to deepen your understanding of mathematics through development of problem solving skills and an appreciation of the role of proof. Units are aligned with state and national standards for grades 3-8 mathematics curricula. Participants must have completed “Algebraic Processes and Their Connections to Geometric Structures” or an equivalent course and obtain permission from ITCEP. Tuition and fees for two graduate semester credits in mathematics as well as daily lunches and snacks, a parking stipend, and all books and materials are funded through a grant from the MN Higher Education Services Office, Improving Teacher Quality Program.

Texas Instruments Twin Cities Learning Cadre Summer Training Workshops

Workshop Title: **Integrating Multiple Technologies**

The workshop is designed for teachers of algebra and pre-calculus who have some experience using the TI-83 Plus & TI-84 Plus family of graphing calculators. TI educational technology used includes TI-83 Plus, TI-83 Plus Silver Edition, TI-84 Plus, TI-84 Plus Silver Edition, TI Interactive!™ software, CBR™ data collection device, CBL2™ data collection system, TI Connect™ software, Transformation Graphing App, DataMate App, and TI Navigator™.

Dates: June 13-15, 20-21 and August 18-19 with last two days tentatively scheduled for Oct. 10-11, but subject to change based on attendees' schedule availability.

Cost: \$650 per attendee for the nine days of training

In addition to training, attendees will receive a new TI-84 teacher edition and a copy of SmartView, the computer emulator for the TI-84 (\$285 value).

Objectives of the Integrating Multiple Technologies Institute:

- To assist teachers in gaining the confidence to use new teaching strategies and lessons as they incorporate the use of technology in their classrooms.
- To instruct teachers in the exploration/investigation mode of teaching secondary mathematics including algebra, data analysis, and other topics.
- To engage teachers in significant problem situations and in the use of technology as a tool for learning mathematics.
- To develop teachers' familiarity with TI InterActive!, Calculator-Based Lab
- (CBL2™), Calculator-Based Ranger (CBR™), TI Connect™, TI-83 Plus/TI-84 Plus with Apps

The primary focus of the activities is to explore algebra and pre-calculus concepts, problems, and applications using TI handhelds and computer technology as tools for teaching and learning. Participants will learn new teaching strategies and will have opportunities for hands-on experience. The goal of the institute's program is to instruct teachers in new and innovative ways to effectively teach mathematics using technology. Materials for this institute were written in the spirit of the *Curriculum and Evaluation Standards for School Mathematics* (NCTM, 1989), *Professional Teaching Standards* (NCTM, 1991), and *Principles and Standards for School Mathematics* (NCTM, 2000).

For information contact Tom Allen, Texas Instruments at tallen@ti.com or 651.423.6002

Minnesota Institute for Talented Youth (MITY) and the Minnesota High School Mathematics League are jointly sponsoring a two week, summer math class for students in grades 7-12, *Mathematics: A Way of Thinking*. The class is designed and taught by Bill Boulger and Thomas Kilkelly, and will focus on problem solving and building habits of mind that help students solve math problems.

Dates: July 11 - July 22, Monday - Friday, 8:30am - 4:00pm

Location: Macalester College, St. Paul, MN

Tuition: \$450 for commuters, \$1150 as residents. Some financial aid is available.

More information, a class description, and application forms are available on the MITY website www.mity.org or call 651-696-6590 for a catalog.

The Fall 2005 MCTM Conference is scheduled to be held on October 21 at Andover High School. This is the same location as in 2003. Be sure to mark this on your calendar and give consideration to speaking at the event. More information will follow in upcoming newsletters.

If you have information about upcoming professional development opportunities, please submit an announcement for the next issue of Mathbits.

**Opportunity for
Students**



planning ahead

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Mission Statement: *The MCTM is an organization of professionals dedicated to promoting the teaching and learning of meaningful mathematics for all students by supporting educators in their efforts to improve mathematics education.*

Mark Your Calendar

Apr 28	Mathematics Education Symposium
Apr 29 – 30	MCTM Spring Conference, Duluth
May 2	PAEMST nomination deadline
Oct 21	MCTM Fall Conference, Andover High School

Do we have your correct address?

MCTM strives to provide membership with current information regarding mathematics education in the state of Minnesota. To accomplish this goal, we need an accurate, permanent address for each member. Is your correct address printed on the label of this issue of *Mathbits*? If not, contact Exec. Director Arnie Cutler at 612-626-8326 or cutler@tc.umn.edu or visit the MCTM web site (www.mctm.org) membership page to make your change. Student MCTM members and members in transition are encouraged to provide a permanent address. Thank you for helping us stay in touch!

Check the mailing label for your membership renewal date. Renew online at www.mctm.org

FYI: In an effort to be cost effective, MCTM sends newsletters at USPS bulk rate. As a result, delivery times may vary between postal districts. MCTM is working to ensure timely delivery of information. Please contact Teresa Gonske or Arnie Cutler with any concerns.

Please submit items for the Summer issue of *Mathbits* to tlgonske@nwc.edu by May 20, 2005. Email or call 651-631-5228 if you have questions. - Teresa Gonske, Editor
