



Mathbits

Minnesota Council of Teachers of Mathematics

www.mctm.org

Fall Conference Keynote Speaker Announced

Dr. Judith R. O’Fallon, professor of biostatistics at Mayo Medical School, will deliver the keynote address for the 2002 Fall Conference of the Minnesota Council of Teachers of Mathematics (MCTM) and the Minnesota Science Teachers Association (MnSTA). The conference will take place at Eastview High School in Apple Valley on Friday, October 18th. Dr. O’Fallon is especially suited to address a meeting of both mathematics and science teachers because of her interests in the design of clinical trials, the conduct of such research, and the analysis of data. The conference theme, *Science and Mathematics: In the Classroom and Beyond*, will allow Dr. O’Fallon to relate her experiences in applying in a real context the concepts and skills we teach.

Judith O’Fallon is known to many educators in Minnesota for her involvement in a conference on quantitative literacy in the late 80’s and in other educational ventures in more recent years. In her professional vita, Dr. O’Fallon states, “For nearly 15 years, I have been especially interested in statistical education, including development of appropriate quantitative literacy instructional materials for use in kindergarten through high school classrooms...” Following the keynote address, there will be a conference session for those who wish to engage in ongoing dialog with Dr. O’Fallon.

Other Program Sessions Highlighted

The mathematics program for the Fall Conference will include elementary sessions such as “Show Me the Math in Children’s Literature” and “Exploring Symmetry, Patterns and Tessellations with Hmong Textiles.” A middle school session is planned with the title “Math for Rocket Scientists” and high school teachers can choose “Hot Dogs and Curve Fitting.” There will be opportunities to learn about the 11th grade math MCA’s and the State Mathematics Specialist will present a session aimed at assisting all attendees in understanding the implications of the federal legislation entitled “No Child Left Behind.”

For further information see the conference schedule and directions to Eastview in this newsletter. The conference early registration form is included in this issue of *Mathbits* and can also be found on the MCTM web site. Register now and plan for a great day of professional enrichment and socializing.

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With a Little Luck

On August 14-16, your Board of Directors gathered for a retreat and Board meeting. They gave up three precious days just before the start of the school year in order to develop a mission statement and a set of action items designed to achieve the goals for MCTM. Whenever I would hear my principal or superintendent use the words “mission statement” or “goals” at this time of year, my eyes would glaze over and I would try to find a way to escape being on a committee. But not so with this group; they attacked the issues with an enthusiasm that says much about the quality of people that you have elected. The Board is now in the process of prioritizing action items and there will be more discussion of them at the delegate assembly in October. Contact your district director; volunteer to be a delegate and be a part of this conversation.

President’s Column

Among the strengths that were identified during our strategic planning process was that MCTM takes positions on controversial issues. This happened again at our Board meeting when the Board unanimously accepted an MCTM position paper on Standards-based Mathematics Programs. We are extremely grateful to the task force made up of Kathy Cramer, Bill Eppright, Jim Foley, Tom Muchlinski, Tom Post, Sharon Stenglein, and Cathy Wick, who produced this document. This is a high quality production that clearly articulates the support of MCTM for mathematics programs based on the NCTM standards.

In 1991, then-governor Arne Carlson signed a statement declaring that the NCTM Curriculum and Evaluation Standards were to be the foundation of mathematics programs in Minnesota schools. The document that we have just approved puts us clearly in line with State of Minnesota policy, which requires programs that are comprehensive, coherent, characterized by depth, are sense-making, engaging and motivating. Our document advocates access to a quality mathematics program for all students as well as supports the need of teachers for professional development to implement standards-based programs.

You will notice that MCTM does not endorse one particular program but rather encourages any program that is based on the NCTM standards and that supports teachers in their efforts to implement high standards for all students. The document, which is written in question and answer format, will be useful to members when discussing appropriate instruction with administrators, counselors, school board members, parents, and community members. All superintendents, school board chairs, and chairs of high school counseling departments have received the document in the mail. It is available on the MCTM web site (www.mctm.org) and an executive summary will be sent to a large group of allied organizations for their information and dissemination.

As MCTM members, we have a lot to be proud of – our dedicated Board of Directors who so responsibly have charted a plan for the future of the organization, our highly successful fall and spring conferences, a strong cadre of skilled teachers, and now our most recent position paper. I encourage you to read the document and to use it as you work to improve mathematics education in your district. MCTM is making a difference in Minnesota and nationally – catch the excitement!

Larry Luck
MCTM President

MDCFL Update

“No Child Left Behind” – What It Means for Mathematics in Minnesota

The new Elementary and Secondary Education Act (ESEA) President Bush signed in January increases the involvement of the federal government in K-12 education and has the potential to dramatically change the education landscape over the next few years. Referred to as the “No Child Left Behind Act,” the bill contains several major themes including accountability for all schools and all students, flexibility in the use of federal funds, the recruitment and retention of a high quality teaching staff, and an emphasis on parent choice.

The Title I provisions of the legislation maintains the previous emphasis on serving educationally disadvantaged students with new assessment and accountability requirements. The previous legislation required that only schools receiving Title I funds must adopt standards in reading/language arts and mathematics. Beginning in 2002, all schools in districts that accept Title I funds must adopt standards in these areas. Beginning in 2005, all students in grades 3-8 must be assessed annually in reading and mathematics and all students must be assessed in these areas once sometime during grades 9-12. These tests must be aligned with state standards and must produce comparative student achievement data year to year.

The Title I provisions of ESEA present several implications for Minnesota. Tests that align with the state standards must be developed for grades 4, 6, 7, and 8. The 7th grade mathematics MCA is in the development process and will be field-tested the spring of 2003. The present 8th grade Basic Skills Test does not meet ESEA requirements, as it is not aligned with the middle school standards. Since Minnesota’s standards for grades 3-8 are defined by grade-band, the standards will need to be benchmarked to specific grade levels so that each grade-level test can be aligned to the standards. In addition, the legislation specifies that students must be tested on a core of content that all students have had an opportunity to learn. Since in Minnesota, students at the high school level have a choice in the mathematics standards they take, the present 11th grade MCA does not meet the requirements of the legislation. To meet this requirement, a “core” of mathematics content must be defined that all students have the opportunity to learn.

The Title II provisions of the legislation focus on teacher and principal quality through professional development and support mechanisms. It eliminates the Eisenhower program that targeted mathematics and science. These monies have been combined with class-size reduction programs and fund a variety of grant programs to states to recruit and train high quality teachers and administrators. States have the flexibility to set aside funds for the following: programs that target new teachers; alternative recertification/licensure routes; recruitment and retention of highly-qualified teachers; reform of teacher tenure systems; and professional development programs for teachers and principals.

The legislation defines “high-quality” as certified and licensed. Since most of Minnesota’s K-12 mathematics teachers are certified in mathematics, this provision, at least in the short-term, will have minimal impact. However, the elimination of the Eisenhower program may impact professional development in mathematics since staff development dollars are no longer earmarked specifically for mathematics. We all must advocate within our districts for the need to fund ongoing and coherent professional development that will promote student learning and thus address the accountability concerns of policymakers. As a guide for selecting professional development that promotes student learning, the North Central Regional Educational Laboratory (NCREL) suggests:

- Content-based professional development that can be applied directly to classroom instruction. Strengthening teachers’ knowledge of mathematics will enhance student learning and improve test scores.
- Teachers performing action research to identify the effects of new methods of instruction or changes in practice. Creating learning communities within schools will provide appropriate conditions for examination of practices and their effects on student learning.

(Continued on page 4.)

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MDCFL Update (continued from page 3)

- We learn how to use data. Data from classroom, district, and statewide assessments are powerful tools for understanding student achievement and gaps in achievement among subgroups of students.

The details of the “No Child Left Behind” legislation are still evolving. However, it is clear the federal government’s role in education is changing. While there may be some challenges presented by the legislation, it also provides opportunities. If we work to improve practice through coherent, sustained professional development we will realize the dual benefits of promoting students’ learning as well as better handling the federal accountability measures.

Tom Muchlinski
Mathematics Specialist

2002 MCTM Delegate Assembly

October 18, 2002

The 2002 MCTM Delegate Assembly will be held Friday, October 18, at Eastview High School in conjunction with the Fall Conference. The Delegate Assembly is one means by which the general membership of MCTM can provide input to the Board of Directors. It is an opportunity to bring issues and concerns before the Board in the form of resolutions. Once the Delegate Assembly passes a resolution, the Board then decides on an appropriate course of action. Resolutions and board action are reported to the membership through *Mathbits* and the MCTM web site.

The Delegate Assembly portion of the Fall Conference will consist of two sessions. Delegates will meet with their District Director over lunch to formulate resolutions. Following the conclusion of the conference, a reception will be held at a site to be determined, at which time the resolutions will be presented and voted upon using a form of approval voting.

If you are attending the fall conference, please consider volunteering to be a delegate and representing the membership of MCTM in this important function. Contact your District Director to volunteer. Contact information is available on the MCTM web site at www.mctm.org. District Directors are also recruiting delegates. If you are asked to be a delegate, please accept the invitation. It is a great opportunity. Not only will you get to attend a first-rate conference, you will have the opportunity to meet with colleagues from across the state in helping to shape the work of your organization. Delegates traveling 100 miles or more one way will be reimbursed for one night’s lodging. All delegates will receive at least partial reimbursement for mileage and will be guests at the reception.

Cognitively Guided Instruction Conference

October 25-26, 2002

Register now for the Second Biennial Cognitively Guided Instruction Conference, October 25-26, 2002, at Hamline University in St. Paul. The conference will have two tracks: one for those wishing to gain an overview of this professional development program and the other for those wishing to gain current insights into the research in number operations, algebra, fractions, measurement, and professional development implementation issues. Registration fees are \$95 per participant (\$135 after September 30). For further information about the conference, hotels, or to register on-line, visit the conference web site at www.mctm.org/cgiconference.



www.mctm.org

MCTM Fall Conference

Minnesota Council of Teachers of Mathematics
Joint Meeting with Minnesota Science Teachers

Science and Mathematics: In the classroom and beyond

Friday • October 18, 2002

Eastview High School
6200-140th St. West, Apple Valley, MN 55124

Schedule Highlights

- 7:30 • Registration
- 7:30 – 1:30 • Exhibits Open
- 8:00 – 9:15 • Opening Session
- 9:30 – 10:15 • Session I
- 10:30 – 11:15 • Session II
- 11:30 – 12:15 • Session III
- 12:30 – 1:15 • Box Lunch from
Panera Bread Co.
- 1:30 – 2:15 • Session IV
- 2:20 – 2:40 • Door Prizes

Registration Fees

Includes lunch

	Pre-Registered	On-Site
Member	\$25	\$30
Student Member	\$12	\$17
Non-Member	\$40	\$45
Student Non-Member	\$20	\$25

Special \$10 rate for each Math Ed Student if group from same college registers together, in advance, with one payment.

Over 50 Sessions for Kindergarten through Higher Ed throughout the day

Sessions will focus on classroom practice and applications. Registrants for the MCTM Conference are welcome to attend any MnSTA science sessions.

Directions to Eastview High School

from the north

take Cedar (Highway 77) south to 140th Street. Travel east (left) on 140th Street (about 1.25 miles). Eastview High School will be on the south (right) side of the street. Turn in at the sign (there is a stop light), park in the west lot, and enter through the west entrance.

from the south

Take 35E to County Road 42. Travel east (right) on County Road 42 to Cedar. Turn north (left) on Cedar. Travel north on Cedar to 140th Street. Travel east (right) on 140th Street (about 1.25 miles). Eastview High School will be on the south (right) side of the street. Turn in at the sign (there is a stop light), park in the west lot, and enter through the west entrance.

For more information contact:

Cathy Wick, Conference Chair
651-699-0506
cwick@ties.k12.mn.us

Kathy Cramer, Conference Chair
612-624-7312
crame013@umn.edu

Brad Larson, Conference Chair
507-444-8889
blarson@owatonna.k12.mn.us

Arnie Cutler, Registration
612-626-8326
cutler@tc.umn.edu

Visit www.mctm.org for registration and speaker forms and more information as it becomes available.

Minnesota Council of Teachers of Mathematics
FALL CONFERENCE EARLY REGISTRATION FORM
 Eastview High School, Apple Valley, MN
 Friday, October 18, 2002

Name _____

Mailing Address _____

City _____ State _____ Zip Code _____

If you are a new member OR if any of the following has changed, fill in the information below.

Home phone (____) _____ Work phone (____) _____

Fax number (____) _____ E-Mail address _____

District Office City _____ School building/Institution _____

Check appropriate designations:

<u>Position</u>	<u>Level</u>	<u>Early registration fee (includes lunch), mailed by 10/9/02</u>	
<input type="checkbox"/> Teacher	<input type="checkbox"/> Elementary	<input type="checkbox"/> MCTM member	\$25.00
<input type="checkbox"/> Supervisor	<input type="checkbox"/> Jr. Hi/M.S.	<input type="checkbox"/> Student member	\$12.00
<input type="checkbox"/> Student/Aide	<input type="checkbox"/> High School	<input type="checkbox"/> Non-member	\$40.00
<input type="checkbox"/> Retired	<input type="checkbox"/> Post Secondary	<input type="checkbox"/> Student non-member	\$20.00
<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Speaker	\$10.00
		<input type="checkbox"/> Math Ed Students*	\$10.00/person

* (Group from same college sent together with one payment and individual forms attached-includes 1 year of membership dues)

Dues for MCTM and/or NCTM:

MCTM Dues

Circle one: new renewal
do not need to renew

One year regular \$15.00
 Two year regular \$25.00
 Student \$ 7.50
 Retired \$ 7.50

NCTM Dues

(Full time students may join at one-half regular dues)

Circle one: new renewal do not need to renew

Membership with 1 teaching journal (choose below) \$65.00
 Additional teaching journal(s) (choose below) @ \$28.00
 Journal for Research in Mathematics Education \$50.00

Teaching Journal Choice(s):

Teaching Children Mathematics (K-6)
 Mathematics Teaching Middle School (5-9)
 Mathematics Teacher (8-14)

Register by Oct. 9, 2002 to qualify for early registration fees. On-site registrations are \$5 higher.

Method of Payment: Credit Card Check PO# _____ (copy of PO must be attached)

Conference Reg Fee _____
 Membership MCTM _____
 Membership NCTM _____
 Additional NCTM journals _____

Credit card number _____
 Expiration date _____
 Type of card Master Card Visa
 Signature _____

Total Due _____

Mail to: MCTM, P.O. Box 120418, New Brighton, MN 55112 or register online at www.mctm.org

MCTM Launches New Foundation

What is the MCTM
Foundation and how can
I get involved?

We thought you would
never ask!

On a lovely summer evening in 2000, the MCTM Board hosted a dinner to celebrate its honorary and retired members and to tap their expertise on a most important matter—that of creating an ongoing financial base to support mathematics instruction and professional growth. This gave birth to the MCTM Foundation with the unanimous support of the attendees. It also has 100% endorsement from the Board.

The members of a task force met this summer to flesh out the design of this wonderful new project. Members of the group are Arnie Cutler, Mary Jo Aiken, Don Langlee, Martha Wallace, Sue Westegaard, and chair, Emily Larsen. An official Foundation Governing Board will be in operation by this fall and will oversee the ongoing process, which will include the distribution of funds. The amount of funds to be distributed will vary with your participation. The task force recommends that money be distributed after we have reached a goal of \$25,000. The enthusiastic supporters of this new venture to strengthen mathematics education in Minnesota have already donated over \$10,000 and we are inviting you to personally help the fund grow. You might consider adding a donation to your annual membership, using the fund for memorial contributions, or just sending a check because the IRS believes in your charitable life.

The disposition of the funds will more than likely be in favor of teachers relatively new to the classroom. We would like to help them financially to participate in MCTM and NCTM activities and to realize that professional growth is a wonderful way of life. One of the duties of the Foundation Governing Board will be to make decisions annually on the distribution of funds. These records will be available to you through an annual report or personal request.

Do you remember the old bank commercial “Tuck a buck a day away?” Wouldn’t it be wonderful to tuck that buck away in a project with a heart, a foundation that will help our teachers help our students? Any size contribution will be acknowledged and appreciated and is totally tax deductible.

Mary Jo Aiken

New Feature: Problem Spot

Welcome to the Problem Spot, a new feature to *Mathbits*! We hope to use this as a place for viewing student work. However, we need your help. Here we will present to you a thought-provoking problem to pose to your students. Then, send in a sample of your students’ work. In a later issue we will provide a solution to the problem as well as some of the student responses that we received. Here’s this month’s problem:

Annie the ant is in a room shaped like a rectangular prism. She finds herself in a corner on the ceiling. On the floor at the other end of the room, in the opposite corner she senses a piece of candy. What is the shortest distance Annie can travel to reach the candy? The room is 16 feet long, 12 feet wide, and 8 feet high.

Send your electronic responses to: mibacon@rochester.k12.mn.us; or if you prefer, mail to Michelle Bacon, 2425 11th Ave SE, Rochester, 55904.

Do you have a problem you would like to see posed in the “Problem Spot?” If so, send your problem and at least one possible solution to Michelle and you may see it in an upcoming issue.

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2001 Presidential Awardees for Excellence in Teaching Mathematics

James Brickwedde, a teacher at Meadowbrook Elementary School in Golden Valley, and Donald Karlgaard, a teacher at Brainerd High School in Brainerd, were named 2001 Presidential Awardees for Excellence in Teaching Mathematics. Each was awarded \$7500, to be spent at their discretion and for which they already have plans. Also, both were flown to Washington, D.C., where they were honored and entertained. Their time in Washington included an awards program at the Kennedy Center, photo opportunities with the Vice President in the Oval Office, an evening cruise on the Potomac, and a dinner at the State Department to mention just some of the activities. As Don said, they were “entertained in a first-class manner.”

The two teachers have somewhat similar plans for their awards. Jim has easily come up with a few ways in which to use his award. He will support his fellow elementary teachers who want to take development in math. He will provide half their tuition, while the school provides the other half. His second project is to provide payment for substitute teachers, so that there can be collaborative mathematics planning between grade levels. Finally, he will provide a substitute teacher for his own classroom, so that he can assist his colleagues in further developing mathematics in their classrooms.

Don has already begun to use his award. It started by paying for him to attend a week of mathematics training in Iowa this past August. He will also be using the monies to take fellow Brainerd teachers to regional and national conventions. The remainder will be for putting together peer mentoring between the teachers at Brainerd High School.

What did Don and Jim do to receive this award? To begin with, each applied more than once. Jim explained that you are encouraged to reapply. The application included a description of the classroom and how it operates. It also involved picking a favorite lesson and assessment and explaining how it affects students and reflects your philosophy of teaching. In addition, the applicants gave a description of professional involvement in the mathematical community and got referrals from his/her principal and two others. Aspects of the application process are changing and can be seen fully at www.cde.ca.gov/ope/awards/paemst. If you have questions or would like to talk with past awardees, look for a session at the MCTM Fall Conference.

Free “Connect for Success” Toolkit

“Connect for Success: Building a Teacher, Parent, Teen Alliance,” funded by MetLife Foundation, is designed to help new teachers, especially those in high poverty middle and high schools, build partnerships with parents. This toolkit offers strategies and tools to help teachers break down barriers to parent participation, establish open, two-way communication with parents, and mobilize the resources parents bring to the education of their children. The toolkit also shows how this alliance can help parents improve their children’s academic future while improving teachers’ day-to-day practice and job satisfaction. Further information is available at <http://www.recruitingteachers.org/news/2002toolkit.html>

We're Building a Firm Foundation and We Need a Logo

A few years ago we started an MCTM Foundation with an initial goal of \$25,000. After the initial flurry of activity waned the fund has leveled off at about \$10,000. This summer a task force developed the blueprints for restarting the building process and sustaining the effort in the future *and* we need a logo to help people readily identify the foundation.

We want you to participate in this process via the MCTM Foundation Logo Contest. Please use the following guidelines as you develop and submit your proposed logo:

- Entries may be submitted by any current MCTM member.
- Entries must be received by January 15th, 2003.

The three top entries will be displayed at the 2003 MCTM Spring Conference in Duluth. Prizes awarded for these three entries will include an MCTM shirt, an MCTM membership, and a certificate for NCTM materials.

Entries should be mailed to:

Minnesota Council of Teachers of Mathematics
Foundation Logo Contest
P O Box 120418
New Brighton MN 55112

Entries need not be “camera ready” but should be more developed than a simple sketch.

PSSM Quick Reference Guide: Table of Standards and Expectations

The Quick Reference Guide, the newest *Principles and Standards* outreach product, provides the goals and expectations for the six principles and ten standards in an easy to use format. Taken directly from the Table of Standards and Expectations of the appendix of *Principles and Standards for School Mathematics*, the guide includes three 9 x 11 sheets that fold out to 11 x 17 to display the expectations across the four grade bands for each of the five content standards: Number and Operations, Algebra, Geometry, Data Analysis and Probability, and Measurement.

This format allows teachers and others to see how the same mathematical idea grows and develop from one grade band to the next. The guide also summarizes the principles and process standards. It can be used for a variety of purposes including a checklist or tool for teachers or administrators, a resource for professional development workshops, or supplementary material for college methods courses. Quantity discounts apply.

To order, call (800) 235-7566 or shop online at www.nctm.org

Tips for New Teachers

The NCTM web site offers words of advice, encouragement, and many practical ideas for teachers new to the profession. Visit www.nctm.org and go to the Teacher's Corner. You will find “Tips for New Teachers” under the heading “Teaching Resources.” You might also be interested in the publication *What to Expect Your First Year of Teaching*. A link to the online version is found under the “Web Resources” heading. Welcome to the profession and best wishes for a successful school year.

Mark Your Calendar

	<u>2002</u>	
10/18		MCTM Fall Conference, Eastview High School, Apple Valley
10/25 – 10/26		2 nd Biennial CGI Conference, Hamline University, St. Paul
	<u>2003</u>	
4/10 – 4/12		NCTM Annual Meeting, San Antonio, Texas
4/25 – 4/26		MCTM Spring Conference, DECC, Duluth MN
	<u>2004</u>	
4/22 – 4/24		NCTM Annual Meeting, Philadelphia, Pennsylvania
11/11 – 11/13		NCTM Regional Conference, Minneapolis Convention Center

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, please contact Executive Director Arnie Cutler at 612-626-8326 or cutler@tc.umn.edu or visit MCTM's web site (www.mctm.org). Student MCTM members and members in transition are especially encouraged to provide us with a permanent address. Thank you for helping us stay in touch!

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Published by

Minnesota Council of Teachers of
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New Brighton, MN 55112

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