

ASSOCIATION OF TEACHERS OF MATHEMATICS
IN WESTERN MASSACHUSETTS, AN AFFILIATED
GROUP OF THE NATIONAL COUNCIL OF
TEACHERS OF MATHEMATICS

MATHWEST NEWS

JUNE 2003 Volume 16, Issue 3

*Contemplate
Your Teaching
Methods This Summer!*

A Message from Our President

We live in a time where MCAS exams, financial woes, budget cuts, and teacher layoffs are part of the daily news. That makes it more important than ever for educators to double efforts to make all of education sound in content, practical in application, challenging in assessment, and solidly aimed at benefiting students of every level.

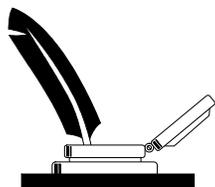
As mathematics educators, we have the added responsibility of preparing students to live in a highly technological society, where mathematical skills become increasingly important to job placement and advancement and to individual daily functioning in the banking, industry, business, and financial sectors of that society. Indeed, if you add to that the global dimensions of each of these sectors, and the ever-expanding need for logical thought, computational dexterity, and mathematical understanding, the magnitude and challenge of the task before us becomes almost overwhelming.

Almost 15 years ago, NCTM, in its *Principles and Standards for School Mathematics*, provided us with a powerful resource for improving the way mathematics is taught in the classroom -- to the benefit of each child. Perhaps the time is ripe for us, as individual teachers, to examine ourselves in light of those standards, to see if we have risen to the challenge NCTM has given us. Our demanding daily teaching responsibilities do not excuse us from the personal reflection required to stay the course we have set, to implement the growth and change required, and to develop the potential of each of our students. They always deserve our best!

During the summer months, I challenge each of you to examine your ways of putting NCTM's *Principles and Standards* into practice in your class. Drop me a line to let me know of your findings.

Have a great end of the school year and a wonderful, restful, fun-filled summer!

Louise M. Lataille



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VISIT OUR WEB SITE

www.wgby.org/edu

and click on Teacherline and Professional Development

PROFESSIONAL DEVELOPMENT OPPORTUNITIES

NTEN Elementary Space Science June 28 - August 15th

The National Teachers Enhancement Network is offering an exciting on-line course this summer. NTEN was created by Montana State University and funded by the National Science Foundation. NTEN delivers quality teaching resources and professional development opportunities through the Internet directly to elementary teachers who teach science. NTEN courses strengthen the understanding and knowledge of the common science concepts found in FOSS, STC, Insights, and T.R.A.C.K.S. science kits. You do not have to have the listed kits in order to benefit from the courses. If you are a teacher who likes to lie out and look at the moon at night, then their astronomy course this summer is for you.

Cost: \$250 tuition, \$75 materials

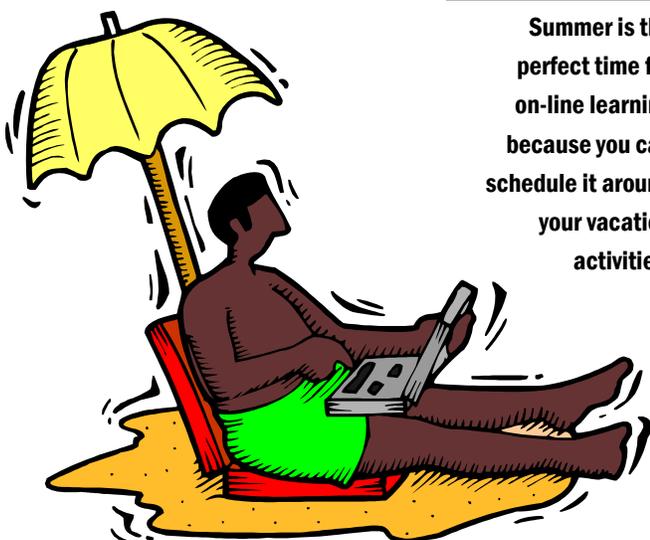
The T.R.A.C.K.S Investigating Objects in the Sky kit manual is included.

Credits: 1 grad. credit, Montana State University

Time commitment: 6-8 hours per week

Grade: based on 40% discussion, 40% activities, and 20% quizzes.

For more information call 1-800-461-9635 or go to www.scienceteacher.org/courses.htm or contact Lisa Brown at nten_elem@montana.edu.



Summer is the perfect time for on-line learning because you can schedule it around your vacation activities.

Geometry for Elementary Teachers July 14-18, 2003 EDCO, Lincoln, MA

Developing Mathematical Ideas: Examining Features of Shapes is a course designed to help experienced K-5 teachers think through the major ideas of K-5 geometry and examine how children develop those ideas. Participants will explore the geometric ideas embedded in the elementary curriculum through adult activities, listen carefully to students in print and on video as they grapple with important geometric ideas and hear their teachers reflect on what is happening, develop an appreciation for students' rich and complex thinking, consider how activities can be adapted to meet individual student needs, examine students' geometric reasoning, and connect their experience with research.

Cost: \$275 includes cost of casebook.

Credits: 2 grad. Credits, Fitchburg State College, for an additional fee of \$150.

For more information or to register go to www.cesame.neu.edu/summer2003/dmi-geometry.html

WGBY'S Center for Instructional Technology

Face-to-face workshops have ended for the school year and a new schedule of classes will be published in the fall. However, *Teacherline* online courses beginning in mid-July. Summer is the perfect time for online learning because you can schedule it around your vacation activities. For up-to-date information, visit www.wgby.org/edu.

WGBY's video lending library is also available to you all summer, so take some time to preview piles of videos! You can request videos online by visiting our web site. You can also pick them up during drop-in hours (Tuesdays and Thursdays from 3-5) or any other time M-F, 9-5 if you give us advance warning! New videos are arriving

PROFESSIONAL DEVELOPMENT OPPORTUNITIES

Proposed Grant Provides Opportunity for Standard Mathematics Certification

Believe it or not, it may be possible to obtain your standard mathematics certification without a Master's degree. A grant, recently submitted by educators in western Massachusetts, would allow, under new regulations, mathematics teachers with initial certification to obtain their standard certification by completing a two-part program. The program would consist of an online mentoring program and fifty hours of content work in the subject matter.

The content portion of the course will take place over thirteen four-hour Saturday sessions taking place from October through May. During these sessions, teachers will be exposed to several branches of mathematics. During each session, three to four lessons and activities dealing several challenging concepts of a particular branch will be presented and discussed. As homework, participants will then be asked to develop their own lessons and activities for challenging concepts that arise in that branch. A sharing of their idea development will take place.

Although not a course on teaching pedagogy, an effort will be made to present the material in a variety of teaching models, in order to demonstrate a variety of teaching techniques. The style of lessons and activities will focus on types of student explorations, the use of technology in mathematics (graphing calculators and dynamic geometry software), small group activities, as well as the traditional lecture format. Reality-based application problems will be emphasized in all sessions.

If approved, the part involving content would be offered for graduate credits through Westfield State College. If you are interested in learning more about the program and its current development, please feel free to contact Scott at SLTrahan@aol.com.

Master of Art in Mathematics offered at Western New England College

Western New England College offers a Master of Arts in Mathematics degree program intended for mathematics teachers in western Massachusetts and Connecticut who are looking to obtain a master's degree. The next session begins July 7.

Consulting local school system administrators, the College developed a ten-course program to fit the schedules of working teachers. Courses are offered in the fall, winter, spring, and summer for eleven-week terms. Two courses are offered per term, running back to back, two days a week, late afternoons, and early evenings. The program can be completed in less than two years time.

Recognizing the growing need for area educators to obtain their master's degrees for advancement and/or state certification, the College's School of Arts and Sciences is developing masters programs such as the MAMT for middle and high school teachers specific to their subjects of teaching.

To learn more about the Master of Arts in Mathematics for Teachers or other graduate programs at the College, contact the Office of Continuing Education at 1-800-325-1122 ext. 1249 or visit www.wnec.edu/CE. A Continuing Education open house for the fall session, which begins September 29, is scheduled for Wednesday, August 13 at the College's Welcome Center from 4:30 to 7:00 p.m.



Calculus Support Group

The AP Calculus support group will continue its meetings in September. Plans are for meetings to be bi-monthly on the second Tuesday of the month. Any current or future teacher of calculus is encouraged and welcome to attend. The only requirement is MATHWEST membership. To get more information, calculus resources, or emails about future meeting, contact Scott at SLTrahan@aol.com.

GET INVOLVED!

MATHWEST is currently looking for people to serve on its Board of Directors. Members serve a two-year term.

ODDS AND EVENDS

THE SPIDER'S WEB Web Resources for Math

Math Word Problems for Children

www.mathstories.com

This site is a resource for elementary and middle school students for help with problem solving.

MATH Worksheets

www.bry-backmanor.org/mathsheets.html

This site offers plain and simple math worksheets for grades K-4.

Consortium for Mathematics and its Applications

www.comap.com/elementary/

Projects and professional development for teachers in math for grades K-12.

Zona Land

id.mind.net/~zona/

In Zona Land you will find educational and entertaining items pertaining to physics, to the mathematical sciences, and to mathematics in general for grades 7-12.

Yahooligans - School Bell: Math: Geometry

www.yaholligans.com/school_Bell/math/geometry

Inside this site are formulas for circles, elementary geometry tutorial, tips on lines, angles, segments, and triangles.

Women Mathematicians

www.agnesscott.edu/lriddle/women/alpha.htm

This site consists of brief biographies of more than 100 notable women in the field of mathematics.

Thinkquest - tessellations

[library.thinkquest.org/16661/?](http://library.thinkquest.org/16661/?tqskip1=1&tqtime=0719)

[tqskip1=1&tqtime=0719](http://library.thinkquest.org/16661/?tqskip1=1&tqtime=0719)

Learn all about and view tessellations, including ones by famous Dutch artist M.C. Escher.

Problem Site's Order of Operations Challenge

www.theproblemsite.com/games/onetoten.aspgame

This site offers students the challenge of creating expressions for the counting numbers from 1 to 10 using 4 digits and the order of operations.



Figure This! Math Challenges for Families

Do Movies Make Money?

The theater box office receipts for the movie Ratio in Magicville for the past four weeks were: \$15,000, \$12,000, \$12,000, and \$10,000, respectively. The theater owner pays the movie distributor the following percentages of the box-office receipts: 70% for each of the first two weeks, 60% for the third week, and 50% for the fourth week. Other operating expenses are \$4500 per week. Did the theater make or lose money?

Check out more challenges at: www.figurethis.org



HUMOR IN MATHEMATICS

Subject: Transportation Safety Administration (TSA)

At JFK International airport today, an individual, later discovered to be a public school teacher, was arrested trying to board a flight while in possession of a compass, a protractor, and a graphical calculator.

TSA authorities believe he is a member of the notorious al-Gebra movement.

He is being charged with carrying weapons of math instruction.

IN THE PRESS

GOVERNOR EYES PLAN TO FIRE TEACHERS **Boston Globe, 02 May 2003 (p.B01)**

Massachusetts Governor Mitt Romney wants to give principals at low-performing schools the authority to fire up to 10 percent of their faculty.

"I believe it's an essential element of having our education system recognize that our kids come first," Romney said at an education forum celebrating the 10th anniversary of the state's Education Reform Act, "and that if a student has a teacher who is not able to fulfill that, they should find another occupation where they would be more successful."

Teachers' union officials, however, said principals already have the authority to fire incompetent teachers. "Instead of talking about firing teachers, Romney should be talking about finding the money to fund all the aspects of education reform in Massachusetts," said Steve Crawford, spokesman for the Massachusetts Federation of Teachers.

The Massachusetts Association of School Superintendents said the proposal would unfairly blame teachers for the performance of students who may have only been in the school for a short time.

Romney also proposed a mandatory training program for all parents of children in under-performing schools. That idea drew a note of caution from House Speaker Thomas Finneran. "All states historically have been very, very hesitant to intrude themselves into the living rooms, the kitchens, the family rooms of the nation," Finneran said.

However, John Silber, a former member of the state Board of Education and current chancellor of Boston University, agreed with the ruling, saying that students who can't pass the MCAS are "not qualified for any range of educational opportunity."

"Let them go back to high school and pass the MCAS," Silber said.

SUGAR FIX MAY BOOST TEST SCORES **Chicago Sun-Times, 08 April 2003**

A new study documents an unusual strategy for raising test scores in struggling schools. Some schools provide kids with sugary snacks prior to taking exams because it seems to help them do better.

These "empty calories" do "have substantial, very short-term cognitive effects, but no long-term benefits," said David Figlio, a professor at the University of Florida and the study's author.

Figlio found that schools that gave kids glucose-laden snacks before an exam did succeed in boosting scores. The use of such strategies by desperate educators supports the notion that "test score gains associated with accountability systems may in part be artifacts of manipulation rather than improved efficiency," the report concluded.

"In addition," researchers warned, "the finding of increases in caloric content of school lunches suggests that the recent trend toward increased testing may, in its own small way, further exacerbate America's recent epidemic of childhood obesity."

KIDS MUST PASS MCAS TO GET **FEDERAL FINANCIAL AID** **Boston Herald, 24 April 2003**

U.S. Secretary of Education Rod Paige has notified Massachusetts officials that public school students will not be eligible for federal financial aid unless they pass the state's high school exit exam.

The state had requested that students who pass all graduation requirements but haven't passed the MCAS still be considered eligible for college loans. Those students are not given diplomas, but do receive a "certificate of attainment."

Students who will be hurt most by Paige's ruling are those pursuing technical degrees predicted Brad MacGowan, a high school guidance counselor and vice president of the New England Association for College Admission Counseling. "My feeling is a lot of them would say forget it, I'm going right into a job...I need to get on with my life," MacGowan said.

SCHOOLS STILL FAILING, **EDUCATORS, EMPLOYERS SAY** **Detroit News, 27 April 2003**

Twenty years after the landmark report, "A Nation at Risk," many policymakers and employers say American schools have not improved much. Despite two decades of reform measures sparked by the report's warning that the country's educational system was slipping, more than a third of college freshmen and sophomores take at least one remedial course; math and science scores for high school seniors are near the bottom of a 23-nation ranking, and the average verbal score on the SAT has not budged.

A recent report from Public Agenda showed that while 78 percent of high school teachers believe graduates have the skills to succeed in the workplace, only 41 percent of employers agree. Employers are "really profoundly unhappy with what they are getting," said Deborah Wadsworth, president of the research group.

THE MARY ALICE WILSON GRANT

GRANT APPLICATION

While associated with The Five College/Public School Partnership, Mary Alice Wilson was instrumental in the first PIMMS Initiative from which the decision to fund MATHWEST originated. The Mary Alice Wilson Grant is funded by MATHWEST, The Association of Teachers of Mathematics in Western Massachusetts, for the purpose of enhancing mathematics understanding and appreciation in grades K—16. Grants are awarded annually for up to \$500 per project, \$1000 per year. All members of MATHWEST are eligible to receive the award.

Name of Applicant: _____

Mailing Address: _____



Phone: _____

Fax: _____

Email: _____

School System: _____

School Name: _____

Years of

Teaching Experience: _____

Amount Requested: _____

*Please return proposals by **October 1, 2003 or February 1, 2004**. Grants are reviewed and awarded in November and March with the final report due by November or March of the following year.*

Return proposal to:

Nancy Strouse

MATHWEST

PO Box 784

Easthampton, MA 01027

Summarize your proposal on no more than two pages and include:

- A. goals and objectives
- B. the population to be served
- C. tasks to complete the project
- D. timeline
- E. evaluation instrument
- F. how it will affect the MATHWEST membership
- G. project budget

NEWS AND INFORMATION

Grant Provides Students A Learning Opportunity

No one would predict that there would be an ice storm in April, but that's exactly what happened. On the morning of April 5th, a severe ice storm hit Western Massachusetts, but that did not stop 64 of the over 120 students who registered for a five-hour event sponsored by a Mary Alice Wilson Grant from MATHWEST. These students from eight different schools converged on Agawam to take a practice AP Calculus test in order to prepare for their actual test held in early May.

Although the data from surveys has not yet been collected, feedback has poured in from the teachers and students involved. "My students could not believe how organized the test was. It gave them a great opportunity to see what they are capable of." In a thank you note, one student from South Hadley wrote, "Thank you very much. Now I have a much better idea of what to expect and I am much more relaxed."

Each student who participated was given the 1998 released AP exam in its entirety. The only change was that students worked on the open response first, so that teachers could grade their responses and give students a score before they left. Following the exam, students were provided with a free lunch, a complete answer key to their exam, and their graded exam.

Plans are already underway for next year's practice test. One idea is to have two different tests, one for schools in the northern towns, and one for schools in the southern regions. Also, planners are contemplating a \$10 fee per student who wants to participate when a school as a whole does not take part. There were many schools that wanted to send students but could not get a teacher to help with grading. With a fee in place, graders could be hired to help with these extra tests. No matter what happens, however, this event is one way that MATHWEST grants can help promote mathematics education.



Students try to remember all they have learned to complete the challenging exam.

Proposed Amendment to the MATHWEST By-Laws

The Board of Directors of MATHWEST have proposed an amendment to the by-laws of the Association. The following amendment would be to "ARTICLE I. DUTIES OF OFFICERS AND EXECUTIVE BOARD" under the new subheading, "STIPENDS (ANNUAL)." The amendment will be presented and voted on at the general membership meeting in the fall, due to the cancellation of the meeting on March 6th due to inclement weather.

STIPENDS (ANNUAL)

The stipends will be paid to the officers following their year of service to the Association. The President shall receive \$200. The Immediate Past President/President-Elect and Treasurer shall receive \$100. The Secretary shall receive \$50.

Due to the importance of their roles to the Association, the Membership Chair will receive \$50 annually, and the Newsletter Editor will receive

\$100 per newsletter. However, the number of newsletters is not to exceed five per calendar year.

In addition, for representing the Association at NCTM's Delegate Assembly at the National Meeting, the MATHWEST delegate will receive \$50.

A Membership Reminder

Your membership might be due to expire this September 1st. Membership is for an academic year, September through August. Any dues received after April 1st go towards membership for the next school year. Take a moment and check the expiration date on your address label. If it's about to expire, fill out the form on the back cover and send it in. Don't let your membership lapse.



NEWS AND INFORMATION

A Texas-Sized Meeting

An army of math teachers three times larger than the number of troops Santa Anna commanded when he overran the Alamo gathered in San Antonio this spring.

Nearly 18,000 math educators from around the world headed to San Antonio for the 81st Annual Meeting of the National Council of Teachers of Mathematics (NCTM) from April 9-12.

Among the star attractions at the four-day conference was an algebra whiz from Cambridge, Massachusetts, a master puzzle solver from Ireland, a former Peace Corps teacher in Africa, and an Austin professor renowned for helping minority students excel in calculus.

NCTM President Johnny Lott kicked off this year's conference, "*Building Mathematical Communities*," on Wednesday, April 9, at 5:30 p.m. Judith A. Ramaley, assistant director of the National Science Foundation (NSF) and a nationally recognized leader in science and math education, was the guest speaker. At NSF, Ramaley is committed to fusing the needs of a changing student body with the demands of a technology-fueled economy.

NCTM's Annual Meeting is the largest gathering of math educators in the world. More than 1,200 sessions, workshops, hands-on computer classes, and minicourses—led by national and international education experts—are planned, with an emphasis on helping teachers strengthen skills and teaching methods for the 21st century mathematics classroom.

Calendar of Events

September

- 4th ~ *MATHWEST Board Meeting*, 4 PM
Friendly's Restaurant, Rt. 5, West Spfld
- 16th ~ *AP Calculus Support Group*, 4 PM
Bertucci's Pizzeria, Rt. 5, West Spfld

October

- 16th ~ *General Membership Meeting*, 4 PM
Theme: Measurement
Location: To Be Announced

The NCTM Academy Algebra Institute, All Grades October 27—29, 2003 Mystic, Connecticut

Extend your knowledge of the algebra strand. Problem solving provides a context for learning and applying mathematical ideas in all grades.

Apply the *Principles and Standards* into your classroom. The Learning Principle emphasizes learning mathematics with understanding. How do you ensure that your students are learning mathematics with understanding?

Learn to incorporate technology into your teaching. What kinds of questions could you ask to help your students make connections between the physical act of running and its graphical representation?

Reflect on your teaching methods. Many states and school districts have mandated algebra in specific grades or by graduation.

Registration deadline is September 26th. For more information or to register, visit the NCTM website at www.nctm.org.

Expand Your Opportunities

Join Us at the
NCTM 82nd
Annual Meeting

April 21-24, 2004
Philadelphia,
Pennsylvania



For the most up-to-date information
or to register online, visit
www.nctm.org/meetings
or call (800) 235-7566.



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Membership

To Be Announced

GET INVOLVED!

The Board of Directors of MATHWEST is looking for an efficient and organized person to take on the role of **Membership Chair** starting in September 2003. The person would be responsible for updating the membership database, contacting members via emails, and publishing annual membership reports and mailing labels. By doing so, you would help to promote mathematics education while increasing communication between teachers in Western Massachusetts. A small stipend is offered.

Interested persons should contact:
SLTrahan@aol.com for more details.



Professional Development
Opportunities Shine Inside!

MATHWEST NEWS

P.O. Box 784
Easthampton, MA 01027

MATHWEST MEMBERSHIP APPLICATION FORM

Mail to: MATHWEST, P.O. Box 784, Easthampton, MA 01027

Membership Category:

- _____ 1 Year Regular (\$15)
- _____ 1 Year Full-Time Student (\$5)
- _____ 1 Year Full-Time Retired (\$10)
- _____ 3 Year Regular (\$40)

Area of Professional Interest:

- _____ Elementary
- _____ Middle School
- _____ Secondary
- _____ College

Application Type:

- _____ New Membership
- _____ Renewal

Amount Enclosed \$ _____

NAME _____

STREET _____

CITY _____ STATE _____ ZIP _____

PHONE _____ EMAIL _____

Are you a member of NCTM? YES NO

A member of another NCTM affiliate? YES NO If yes, which one? _____

Please: If paying by PO, please include the names and addresses of members to be renewed.