

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

MATHWEST NEWS

SEPTEMBER 2002 Volume 15, Issue 3

*We're
coming to
The Berkshires!*

Inside this
edition:

★ The Mary Alice
Wilson Grant
Application

★ A listing of
NASA's on-line
educational
resources

★ Registration
form for bus
transportation to
the NCTM regional
conference in
Boston

★ Articles
recently in the
press regarding
mathematics
education

THE FALL

MEMBERSHIP MEETING

October 17, 2002



Our next meeting will be a dinner meeting to be held at the Dakota Steak House on the Lenox/Pittsfield border. The meeting will start at 4 PM. Come meet other members of your mathematics community, enjoy what the Berkshires has to offer, and learn a little mathematics.

The cost will be \$10 for the evening. Mark your calendar now and mail your check to MATHWEST so you don't miss this great meeting.



Look inside for more information about this event! Please feel free to duplicate page 5 and distribute the information on this meeting to your colleagues.

VISIT OUR WEB SITE

www.wgby.org/edu

and click on Teacherline and Professional Development

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RESOURCES AND PROFESSIONAL DEVELOPMENT OPPORTUNITIES

NEW AFFILIATE DIRECTORY ONLINE

The Affiliate Directory on the NCTM Web site has recently been redesigned. Not only does the new site provide information pulled in real time from the database, it provides much more information than we had listed previously.

Here's what you will now find online:

- Search capacity by state/province and/or category of Affiliation (for example, look up all the student Affiliates in Missouri or all the Partner Affiliates in the US and Canada);
- Improved instructions for how to join an organization;
- Listing of all officer names on record (from the list of officers that we track).



FREE PERIODICAL FOCUSES ON ISSUES IN RURAL MATHEMATICS EDUCATION

Readers anywhere on Earth can subscribe to a free on-line periodical that is devoted to rural mathematics education. *Rural Mathematics Educator*, published at Ohio State University, combines the features of a newsletter and a journal to take a creative, provocative look at issues facing this large segment of the education spectrum. Readers can subscribe for free at their site:

kant.citl.ohiou.edu/ACCLAIM/comm/comm_sub/sign_up.htm.

Subscribers will be notified by email as future issues appear. For more information visit the ACCLAIM website at: www.acclaim-math.com.

LAST CHANCE FOR CALCULUS RESOURCE

The AP Calculus group in the past has ordered and received copies of "AP Calculus Problem Part II AB and BC, 1987—2001." Published by the Mathematical Olympiads for Elementary and Middle Schools, it contains the open response questions and solutions for the last fifteen years of AP Exams. Cost of each book is \$15, plus \$4 shipping.

A letter received at the beginning of September has indicated that the College Board has decided to suspend all outside publishing of test items. As such, this will be the last issue available to the public. If you are interested in a copy, please contact:

Math Olympiads
Attn: Richard Kalman, Executive Director
2154 Bellmore Avenue
Bellmore, NY 11710-5645

Tel: (516) 781-2400

FREE DISTANCE LEARNING PROGRAMS AVAILABLE FROM NASA

The NASA Center for Distance Learning (dlcenter.larc.nasa.gov) offers instructional distance learning programs that are research- and standards-based, support the national mathematics, science, and technology standards, and use NASA programs, facilities, and people to establish a "connection" between the math, science, and technology concepts taught in the classroom and the math, science, and technology used every day by NASA researchers. The programs listed below are free and are not copyrighted. Broadcast and off air rights are unlimited and granted in perpetuity. However, educators are required to register for the NASA SCIENCE Files™ and NASA CONNECT™. In an attempt to provide the widest dissemination and use, educators are encouraged to copy and share the lesson guides with their colleagues.

NASA's Kids Science News Network™

URL: ksnn.larc.nasa.gov

NASA's Kids Science News Network™ (KSNN) is a research and standards-based, award winning program that (1) uses web- and video-based technology, (2) targets K-2 and 3-5 audiences and (3) is available in both English and Spanish. KSNN explains the everyday phenomena of our world, corrects misconceptions, and answers frequently asked questions about the Earth and beyond.

NASA SCIENCE Files™

URL: scifiles.larc.nasa.gov

The NASA SCIENCE Files™ is a research and standards-based, Emmy® award-winning series of 60-minute instructional programs for students in grades 3-5. Programs are designed to introduce students to NASA; integrate mathematics, science, and technology through the use of Problem-Based Learning (PBL), scientific inquiry, and the scientific method; to motivate students to become critical thinkers and active problem solvers; and to introduce students to careers requiring proficiency in math, science, and technology. The series includes an instructional broadcast, a companion educator's guide, an interactive web site featuring a PBL activity, plus a wealth of instructional resources. The NASA SCIENCE Files™ airs nationally on Cable Access, ITV, and PBS-member stations and can be taped for later use.

- continued on page 3



CALCULUS SUPPORT GROUP WILL CONTINUE TO MEET

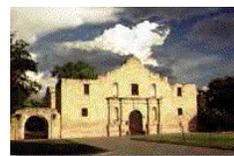
The AP Calculus support group will continue its monthly meetings at Bertucci's Pizzeria in West Springfield on the Third Tuesday of each month at 4 PM. During the months of February through April the meeting are the second Tuesday of the Month due to school vacations. Any current or future teacher of calculus is encouraged and welcome to attend. The only requirement is MATHWEST membership. To get more information, calculus resources, or emails about future meetings, contact Scott at SLTrahan@aol.com.

FREE DISTANCE LEARNING PROGRAMS
continued from page 2

NASA CONNECT™ URL: connect.larc.nasa.gov
NASA CONNECT™ is a research- and standards-based, Emmy® award-winning series of mathematics-focused, instructional programs for students in grades 6 - 8. The series includes a 30-minute instructional broadcast, a companion lesson guide, and an interactive web-based application. Programs are designed to establish a connection between the mathematics, science, and technology concepts taught in the classroom to those used every day by NASA researchers. The lesson guide, containing a hands-on activity, and the web-based application reinforce and extend the objectives presented in the program. NASA CONNECT™ airs nationally on Cable Access, ITV, and PBS-member stations and can be taped for later use.

NASA LIVE™ URL: live.larc.nasa.gov
NASA LIVE™ (*Learning through Interactive Videoconferencing Experiences*) represents a new dimension in education and instruction. NASA LIVE™ is a series of videoconferencing programs that (1) are designed to extend and strengthen NASA's commitment to educational excellence at the K-12 level; (2) provide opportunities for learning, instructional enrichment, and professional development for students and educators by engaging them in an interactive, virtual environment with NASA researchers; and (3) communicate NASA knowledge, foster collaboration, and the exchange of ideas. This program links students and educators to NASA in an interactive, virtual setting. Students and educators across the nation will have the unique experience of visiting NASA experts via videoconferencing without the inconveniences and expenses associated with extended travel.

NCTM 81st Annual Meeting
April 9-12, 2003
San Antonio, Texas



"Building Mathematical Communities"

Hosted by: Alamo District Council of Teachers of Mathematics

Opening Session begins at 5:30 p.m.
on Wednesday, April 9th

Closing Session begins at 2:00 p.m.
on Saturday, April 12th

NCTM members will receive the San Antonio Annual Meeting Preview Brochure in the mail in early November. The Preview Brochure will also be posted on the NCTM Web site in November. Conference pre-registration forms and hotel reservation forms will be included in the Preview Brochure to help you make your plans early and save money by pre-registering before the deadline of Monday, March 3, 2003. We look forward to you joining us in San Antonio.

MATHWEST
DATES TO REMEMBER

September

5th ~ MATHWEST Board Meeting, 4 PM
Bertucci's Pizzeria, West Springfield

17th ~ AP Calculus Support Group, 4 PM
Third Tuesday of each Month
Bertucci's Pizzeria, West Springfield

October

15th ~ AP Calculus Support Group, 4 PM
Bertucci's Pizzeria, West Springfield

17th ~ Fall Membership Meeting, 4 PM
Dakota Steak House, Pittsfield

November

14th - 16th ~ NCTM Regional Conference
Park Plaza Hotel
Boston, Massachusetts

November

19th ~ AP Calculus Support Group, 4 PM
Bertucci's Pizzeria, West Springfield

21st ~ MATHWEST Board Meeting, 4 PM
Location: TBA

December

19th ~ AP Calculus Support Group, 4 PM
Bertucci's Pizzeria, West Springfield

January

TBA ~ MATHWEST Get-Together
Mohegan Sun Casino

March

TBA ~ Spring Membership Meeting, 4 PM
Topic: Measurement

April

9th - 12th ~ NCTM Annual Meeting
San Antonio, Texas

IN THE PRESS

THIS SECTION OF MATHWEST NEWS DOES NOT NECESSARILY REFLECT THE OPINIONS OF MATHWEST OR ITS BOARD OF DIRECTORS. THE ARTICLES ARE REPRINTED HERE TO ENLIGHTEN OUR MEMBERSHIP ABOUT WHAT WAS RECENTLY PRINTED IN THE MEDIA ABOUT MATHEMATICS EDUCATION.

ALGEBRA POSES A PROBLEM OF TIMING

Washington Post, 18 August 2002 (p. A01)

In the first of a two-part series, the Washington Post examines the uneven progress of school districts attempting to get every student through algebra by the end of eighth grade. Although algebra has become the focus of a major overhaul of many middle schools and junior highs, educators are still divided over whether all students should be required to master the subject.

Robert Moses believes it is so important for minority students to master algebra that he founded the Algebra Project in Cambridge, Massachusetts to advocate on their behalf. "Algebra is a gatekeeper subject," he said. "Reaching for this level of mathematical literacy is as important for the new age that is upon us, as reading and writing has been for the age that we have just been living through."

But some teachers subscribe to the alternative viewpoint pushed by Gerald Bracey, an educational psychologist. Bracey maintains that mandating algebra for all students "is more likely to turn kids off math, even off school altogether."

In Arlington, Virginia, officials are trying to get around that problem by better preparing students in the lower grades with a stronger math curriculum. Last year, about 35 percent of the district's eighth-graders completed algebra or a higher math course. Other Virginia districts are trying to curb student frustration with algebra by giving students two years to finish the course.

Shirley Kossoy, a teacher at Washington Irving Middle School in Fairfax County, has been surprised to see how well some students have performed in a course she would not have recommended for them. As a result, she now believes that "everyone can take algebra, and I don't think there is a problem with taking algebra in the eighth grade."

ALGEBRA = X IN ONE SCHOOL, Y IN ANOTHER

Washington Post, 19 August 2002 (p. A01)

In the second of a two-part series, the Washington Post examines claims that schools are offering watered-down algebra classes in an effort to get everyone through the course.

"A lot of algebra courses aren't really teaching algebra," said Tom Loveless, director of the Brown Center on Education Policy at the Brookings Institution. "And schools are giving up on kids who can't do basic arithmetic, putting them in phony algebra courses to cover up the problem."

Many districts do not have a standard algebra test for all schools. As a result, course content varies widely from school to school. The Southern Regional Education Board has convinced 12 southern states to compare algebra standards and tests in an effort to improve overall quality.

"The only way to make the standard true is to have a good end-of-course test," said Jim Watts, the board's vice president.

Maryland does have a state algebra test, but it has been criticized for being too easy. Jerome Dancis, an associate professor of mathematics at the University of Maryland, went so far as to call the test "pretend algebra." But the State Board of Education says it was their intent to start out slow, and raise the bar slowly.

The test doesn't become a requirement for graduation until 2007.

Some teachers argue, however, that tougher tests help reduce the temptation to water down course content. Shirley Kossoy has found ways to get struggling students through her algebra class at Irving Middle School in Virginia without diluting class exams. She has students keep journals of what they find helpful and unhelpful about her lessons, then changes her teaching methods accordingly.

What may eventually work best, she says, is giving students a choice between a solid algebra course, and a tougher version of the same class. "It just means that I would teach it somewhat differently to kids who were at a different level or had a different need," Kossoy said.

A PROBLEM: MCAS RESULTS SHOW MATH WOES

Boston Globe, 18 July 2002 (p.A01)

Massachusetts education officials are acknowledging that the state's new standardized math exam may be too difficult. Preliminary data shows that more than half of the multiple-choice questions on the exam stumped half of the 10th-graders who took the exam this year. On the English exam, only four of the 36 multiple-choice questions foiled as many students.

State Education Commissioner David Driscoll called for a thorough analysis of the test results to determine whether some questions are too difficult and whether the passing point ought to be lowered.

"It may be that we did not have in our mix as many straightforward, easy [questions] as we have had in the past," Driscoll said.

Beginning next year, students must pass both the English and math portions of the Massachusetts Comprehensive Assessment System exam to graduate. Boston School Superintendent Thomas Payzant has suggested delaying the math graduation requirement, however, if retest scores don't improve.

"Something's not aligned - whether it's the curriculum and frameworks and the test, or where people have been putting the emphasis based on their understanding of the frameworks," he said.

Much of the test requires students to apply mathematical concepts to solve word problems. Conceptual questions can be difficult for students used to simply regurgitating math facts or plugging in formulas, noted Mahesh Sharma, provost of Cambridge College.

TRAINING BACKGROUND TO BE DISCLOSED

Dallas Morning News, 22 August 2002

A new study by the Education Trust reveals that one in four classes at public middle and high schools is taught by a teacher not trained in the subject. In 12 states, minimally trained teachers teach more than 30 percent of core subject classes. The problem is the worst in middle schools, where out-of-field teachers teach an average 44 percent of core subject classes.

Craig Jerald, the study's lead author, blamed school administrators for continuing to assign teachers out of field. Statistics on teacher qualifications have not changed since 1993, he said.

But Paul Houston, executive director of the American Association of School Administrators, said many administrators have no choice. "If the people aren't there and aren't willing to work for these [school] systems, you're going to have a problem," he said.

The No Child Left Behind Act requires principals to send a note home notifying parents if an instructor is assigned to a subject he or she is not qualified to teach. Jerald said he hoped that requirement will eventually "embarrass state and local officials to do something on a system-wide basis."

MATHWEST GENERAL MEMBERSHIP MEETING

October 17, 2002

Dakota Steak House, Pittsfield, Mass.

4 PM

From Broken Eggs to King Arthur's Round Table

Jane Stephens invites us to come try some of the fun open-ended questions for young math students (grades 8-12). Many of us in the region have used these problems from the four year Interactive Mathematics Program, IMP, and she would like to share some of her enthusiasm for the curriculum. Jane's experience has been that as students each year attack progressively harder problems in many different ways they learn the basic mathematical concepts through discovery. As one student stated, "it makes you feel like you are actually solving the problem, not just repeating what the teacher says".

SCHEDULE OF EVENTS

4:00 PM	WELCOME
4:15 PM	PRESENTATIONS (Choose one)
5:30 PM	DINNER

Why do students have to learn math?

Kathy Erickson will lead a discussion of the importance of mathematics and some methods to help students study math, including applications and student research.

REGISTRATION:

Fill out the form to the right and send it, along with your check payable to MATHWEST, to:

MATHWEST
P.O. Box 784
Easthampton, MA 01027

DIRECTIONS:

The Dakota Steak House is located in the beautiful Berkshires! Take the Mass Turnpike to exit 2 (Lee Exit). Take Rt. 7 North. It is located on the right near the Lenox / Pittsfield line.

Name: _____

Address: _____

Telephone: _____ Email: _____

Which workshop will you be attending?

___ *From Broken Eggs to King Arthur's Round Table*

___ *Why do students have to learn math?*

Which type of registration do you need?

___ *\$10 for members (includes dinner)*

___ *\$25 for members (includes dinner and membership renewal)*

___ *\$25 for non-member (includes dinner and 1 year membership)*

Note: If you need a membership, please also fill out the form on the back page of the newsletter.

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, 2002 or February 1, 2003**. 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

Boston 2002: Reaching New Heights in the Teaching and Learning of Mathematics



NCTM Regional Conference

Boston, Massachusetts
November 14-16, 2002

VOLUNTEER

The success of the 2002 regional conference in Boston depends on committed volunteers. The equipment committee, chaired by a MATHWEST member, is in search of people to them during the conference. If you are planning to attend the conference, could you possibly volunteer for a one or two shifts? If so please contact Scott at SLTrahan@aol.com as soon as possible.

REGISTRATION

Conference preview brochures have been sent to NCTM members in June. If you have not received one, information and a registration form can be found on-line at the NCTM web-site, www.nctm.org.

Send your registration in today. Space is limited.

"Are We Tessellating the Mathematics Curriculum in PreK-16?"
Presidential Address

Thursday, 14 November 2002

Boston Park Plaza Hotel's Imperial Ballroom
Johnny Lott, NCTM President

"One if by Land, Two if by Sea; Math in Our Nation's History"
Opening General Session

Thursday, 14 November 2002

Faneuil Hall, Boston, MA
7:30-9:00 pm (Limited Availability)

"Reaching New Heights-Mathematics in Spaceflight"
Keynote Session

Friday, 15 November 2002

Boston Park Plaza Hotel's Imperial Ballroom
Charles Precourt
NASA, Chief of Astronauts

*"Alternative Ways to Teach Math Facts Based
On Students' Learning Styles"*

Closing General Session—Elementary

Saturday, 16 November 2002

Boston Park Plaza
Patricia Davidson
UMass-Boston

"Math & Laugh"

Closing General Session—Middle School / Secondary

Saturday, 16 November 2002

Boston Park Plaza
Don Fraser
University of Toronto

Another Revolutionary Event in Boston!

BEGINNING TEACHERS MEETING

NCTM EASTERN REGIONAL CONFERENCE
NOVEMBER 14, 2002

In addition to the difficulty of hiring qualified teachers of mathematics, school districts are finding it extremely difficult to retain them for any length of time. In recognition of this phenomenon **on November 14, 2002, in conjunction with the National Council of Teachers of Mathematics (NCTM) Eastern Regional Conference** there will be an all-day "**conference-within-a conference**" for secondary mathematics teachers (grades 8-12) who have not yet completed three years of teaching. It will be held at the Radisson Hotel in Boston. The participants will hear presentations by Paul Foerster and Laurie Boswell, both successful teachers, textbook authors, and Presidential Awardees in Mathematics Teaching and by former NCTM President, Shirley Frye. In addition there will be a panel discussion

focusing on the concerns of mathematics teachers new to the profession. Time will be provided for the participants to view the commercial exhibits later in the afternoon. **Registration will be separate from the NCTM meeting, lunch will be provided and the cost to the participants will be \$50.**

Teachers interested in attending this conference should obtain a registration form by contacting: John J. Waite, Jr., 22 Grove St. Place #20, Winchester, MA 01890; email: jjwaite@prodigy.net; phone: (781) 729-6022; If contacting by mail please enclose a stamped, self addressed envelope.

Participants may attend the remainder of the NCTM conference by registering for a one-day (Friday) session for an additional fee of \$60 for NCTM members or \$90 for non-members. Anyone wishing to do this should request a Program Preview Booklet containing further information and a registration form at the same time as above.

Save Yourself Parking Fees in Boston!



MATHWEST has received a grant to provide bus service to the NCTM regional conference in Boston. Morgan Bus Lines will provide this service. Busses will be available on Thursday and Friday. The bus will leave Northampton's Commuter Lot (Rt. 9, Bridge Street) by the athletic fields near the Tri-County Fair Grounds at 6 AM. It will then stop in Holyoke at 6:20 AM next to Pier 1, across from Barnes and Noble Booksellers. A third and final stop will be made at the McDonald's (near the Mass Pike entrance) in Ludlow at 6:40 AM on the way to Boston. Teachers from the Berkshires are encouraged to join us at the Holyoke or Ludlow stop. The bus will depart from the Park Plaza Hotel in Boston at 5 PM for the return trip. Cost will be \$10 for each day, whether one-way or round-trip.

BUS REGISTRATION FORM

Fill out the form to the right to the register for bus transformation. Please specify whether you will be returning each day. Return the form with check made payable to MATHWEST to:

MATHWEST
P.O. Box 784
Easthampton, MA 01027

Deadline for registering for the bus is November 1, 2002.

Name: _____

Address: _____

Telephone: _____

Departing From:
____ Northampton
____ Holyoke
____ Ludlow

On Which Day:
____ Thursday
____ Friday
____ Both

Service Needed:
____ Round Trip
____ One-Way to Boston
____ One-Way from Boston



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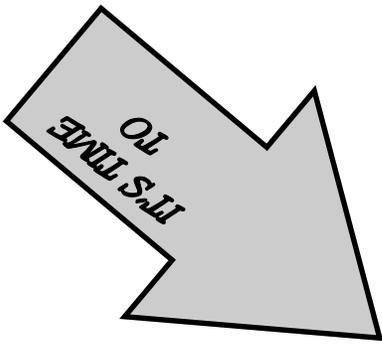
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Position Open

The Board of Directors of MATHWEST is looking for an energetic and creative person to take on the role of Newsletter Editor starting in January 2003. The person would publish approximately four eight-page newsletters, helping 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.



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.