



Mathbits

Pursuing Equity—The Pathway to Student Success

2009 Spring Mathematics Conference

Duluth Entertainment Convention Center, Duluth, MN

Friday, May 1 & Saturday, May 2

The Minnesota Council of Teachers of Mathematics
and Minnesota Mathematics Association of Two-Year Colleges

- Algebra • Number and Operations • Problem Solving • Connections
- Equity Principle • Assessment Principle • Standards

Inside this issue:

President's message	2
Conference announcements	2
Resolutions report	3
Election results	5
Professional development	8
Math day at the zoo	10
Math awareness month	11

Explore these opportunities for engagement in mathematics and mathematics education at this year's conference:

- ♦ Session for all interest levels pre-K through post secondary
- ♦ Keynote speakers:
 - Gary Rockswold, Minnesota State University - Mankato
The Amazing Impact of Mathematics on Modern Society
 - Jim Rubillo, Executive Director, National Council of Teachers of Mathematics
Differentiation Does Not Mean Entirely Different
- ♦ Networking with other teachers during the Friday MCTM reception
- ♦ Special sessions for new teachers and pre-service teachers
- ♦ Be part of the future of MCTM by attending the annual Delegate Assembly. Contact your District Director to see how you can get involved.

Thursday Registration 7-9 pm—CONNECT event (see p. 6)

Friday Registration and exhibits open 7:30 am—Sessions begin 8:40 am
District meetings 5:15—Reception 5:45—Delegate Assembly 7:30 pm

Saturday Registration and exhibits open 7:30 am—Sessions begin 8:15
Closing lunch and keynote speaker 12:45

Online conference registration and printable registration forms are available on the MCTM website.

Sampling of Session Titles

Got 10 Minutes? Do Algebra!	A Journey into Algebraic Thinking
Formative Assessment for K-3: Spotlight on Math	Initial Decimal Ideas and Student Thinking
Math Games for Primary Grades	Activities to Improve Basic Skills
Algebra for the Young	Successful Lessons for Primary Classrooms
Teaching Math with a Smart Board	Beginners Session on the TI-Nspire™
Making Algebra Accessible	3-D graphing for the Kinesthetic Learner
Math Strategies for ELLs	Getting Ready for Algebra in 8th Grade
This is NOT your Mother's Algebra	Working on MCA Success in an Urban Setting
Exploring the Idea of Balance in Developing Algebraic Thinking	
Using Manipulatives and Investigations in Geometry	
Stashing Money, Falling Trees, & Mackinac: Algebra for ALL	

President's Message

Judy Stucki
judy@stucki.us

I can't believe I am writing my last president's message. I want to thank you for electing me to serve as your president for the last two years. As I meet people around the state you would be surprised how often they quote their child's math teacher. They are listening to us about the importance of mathematics and what their student needs to do to learn it. We need to continue to give good advice and improve our teaching to help them.

Have you planned your summer math learning? We have listed as many workshops and classes as we could find. I hope you can find time to do some type of enrichment for yourself this summer. If a workshop does not fit in to your schedule, catch up on your journal reading. I know I have a few issues of *Mathematics Teacher* on my desk that need some attention. Also, keep your PLC meeting over the summer or start one if you aren't a member of one now.

I have always considered teaching a profession and not a job. I hope you do also and continue to work toward self-improvement.

Judy Stucki

District Meetings and Delegate Assembly 2009

**Be a delegate!
Contact your district
director.**

District Meetings will be held at the Spring Conference on Friday following the final afternoon sessions. The program book will list exact meeting locations for each district. Please come and join your district meeting to share your ideas and concerns. We will be asking for resolutions to be considered at the evening delegate assembly. All members are encouraged to attend. Each district will hold a drawing for a Gift Certificate redeemable for NCTM or MCTM materials and attendees will receive a free drink ticket for the evening reception.

The annual **Delegate Assembly** will be held Friday evening at 7:30 pm. Delegates will discuss resolutions presented at the district meetings and will vote on new resolutions for MCTM. A dessert buffet along with coffee and tea will be provided. All delegates in attendance will receive a Gift Certificate to use at the NCTM/MCTM materials booth in the exhibit hall at the Spring Conference.

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, types of curriculum and its use, etc. Please feel free to contact us at anytime. Each district director's current email address is listed on the website. If you are unsure which MCTM district your school is in, this information is also available on the MCTM website.

Your \$\$ Needed—Support the MCTM Foundation

MCTM Foundation

The MCTM Foundation has an endowment fund whose investment returns are used to support activities that promote continued excellence in mathematics education in Minnesota. During the spring conference, the MCTM Foundation will have a table in the DECC exhibit hall. Stop by to visit with members of the Foundation Governing Board. Get acquainted with this year's recipients of Foundation grants for conference participation. Find out how your contribution will be significant for the long-term advancement of mathematics education in Minnesota. Everyone can be a Foundation donor.

For more information about the MCTM Foundation, contact Bill Johnson, Foundation Board chair, at wedge1973@yahoo.com.

As an MCTM member, you can impact the future of K-12 mathematics education. Each year MCTM holds a delegate assembly during the Spring Conference at 7:30 on Friday evening. During the Delegate Assembly resolutions are introduced, discussed and voted upon by the delegates. These resolutions are then sent to the Board of Directors to be further discussed and acted upon.

The process is straightforward. Friday at 5:15 each district (the district boundaries are drawn similar to the congressional districts) meets to introduce a resolution. Each district is entitled to send its resolution and delegates to the assembly meeting held at 7:30. (If you are interested in being a delegate, contact your district director.) The 7:30 meeting is open to any MCTM member, but only official delegates have voting privileges. Those resolutions that are passed at the assembly meeting are given to the Board of Directors.

The Board of Directors is obligated to report to MCTM members how each resolution has been dealt with. Any dissatisfaction a member may have with a resolution can be forwarded to the appropriate district director who will then forward the issue to the full board.

The 2008 resolutions and the action taken are as follows:

Algebra Standards

Resolution #1

Be it resolved that MCTM disseminates information about districts' implementation of the algebra requirements including course names.

Action Taken: The Algebra Task Force is working on this resolution. Due to the magnitude of the mandate for algebra to be part of the 8th grade curriculum, the Task Force is working on many related, interconnected projects. This project will continue to be

(Continued on page 4)

Report on Spring 2008 Delegate Assembly Resolutions

MCTM Board of Directors

Elected Officers	District Directors	Appointed Offices
President Judy Stucki judy@stucki.us	District 1 Joan Rustad-Huisman jrustad@blueearth.k12.mn.us	Executive Director Tom Muchlinski tmuchlinski@earthlink.net
President-Elect Terry Wyberg wyber001@umn.edu	District 2 Heidi Boerboom heidi.boerboom@minnesotaschools.org	Recording Secretary Bill Eppright wjeppright@nwc.edu
VP Elementary Patty Wallace Patty.Wallace@isd181.org	District 3 Elizabeth Johnston ejohnsto@sowashco.k12.mn.us	Financial Secretary Craig Rypkema crypkema@paulbunyan.net
VP Jr.High/Middle School Michelle Bacon mibacon@rochester.k12.mn.us	District 4 Mary Roden mary.roden@moundviewschools.org	State Mathematics Specialist Sue Wygant susan.wygant@state.mn.us
VP High School Lisa Conzemius lconzemius@detlakes.k12.mn.us	District 5 Kristin Johnson johnson.kristin@slpschools.org	NCTM Representative Paul Agranoff pagranof@ties2.net
VP Mathematics Ann Sweeney ajsweeney@stkate.edu	District 6 Kathleen Miller kathleen.miller@anoka.k12.mn.us	NCTM Affiliate Services Representative Tom Muchlinski tmuchlinski@earthlink.net
VP at Large Sara VanDerWerf sarav@mpls.k12.mn.us	District 7 Jane Reck jareck@isd2170.k12.mn.us	MinnMATYC Representative Jim Foley Fol246@aol.com
VP Math Education Bill Tomhave tomhave@cord.edu	District 8 Paula Bengtson pbengtson@rushcity.k12.mn.us	Newsletter Editor Teresa Gonske tlgonske@nwc.edu
		Webmaster Rich Enderton enderton@minnehahaacademy.net

(Continued from page 3)

worked on, but at this time has not been completed.

Resolution #2

Be it resolved that MCTM disseminates information to identify best practices and intervention strategies to address the needs of students who are significantly behind their cohorts and those who will have difficulty meeting the 8th grade Algebra requirements.

Action Taken: This resolution is coupled with resolution #1. As with #1 it will continue to be worked on, but at this time has not been completed.

Funding Request

Resolution #3

Be it resolved that MCTM communicate to legislators a request for ongoing technology funding to support the new standards requirements and for the administration of the computer based tests.

Action Taken: Considering the current financial state of Minnesota, this was deemed to be impractical.

Quality Teacher Network

Resolution # 4

Be it resolved that MCTM encourage its members to contact MDE or their legislators to support and fund the math Quality Teacher Network.

Action Taken: Due to current financial conditions, it was decided that the best chance of success was through having individual members contact their legislators.

Conference Communication

Resolution # 5

Be it resolved that MCTM explore the possibility of providing a flash drive at the conference with email addresses of presenters.

Action Taken: Email addresses of presenters will appear in the conference program book. This should be sufficient.

How can each member contribute to effecting improved mathematics education in the state?

Special Events in
Conjunction with
the 2009 Spring
Conference

Ross Taylor Symposium for Mathematics Education and Leadership

Developing Leadership for Creating Successful Algebra Programs for Grades K-12

Thursday, April 30, 2009

Registration 9:00 am—Opening session 9:30 am—Symposium ends 3:30 pm

Registration information available at the MCTM website.

Questions? Contact Terry Wyberg—612-625-9823—wyber001@umn.edu

CONNECT Welcome Session—for New and Future Teachers

Thursday, April 30, 7:00-9:00 PM at the DECC in Duluth

Immediately preceding the joint MCTM/MinnMATYC Spring Conference
Soup, sandwiches, pop and dessert provided * Free teaching materials & ideas
Fun activities, fun people * Discover how to get your own personal mentor

Newly Elected MCTM Board Members to Begin Terms May 2009

Vice President Elementary	Judy Hansen, Pipestone Area Schools
Vice President Mathematics	Kay Wohlhuter, University of Minnesota Duluth
District 2 Director	Rhonda Bonnstetter, Southwest Minnesota State University
District 5 Director	Seth Leavitt, Field Middle School, Minneapolis
District 8 Director	Greg Gearey, Forestview Middle School, Brainerd

Election Results

The year 2009 marks the 10th year that the MCTM Spring Conference will be held at the Duluth Entertainment Convention Center (DECC). After many successful years meeting at Cragun's in the Brainerd area, it was apparent that the conference had outgrown their facilities. The board considered several locations, and selected Duluth for several reasons. The DECC was large enough to meet our needs, hotels were plentiful and close, and Duluth provides an ambience that is hard to beat.

So with a bit of trepidation the board headed north. The 2000 conference was exciting and challenging. With everything new there were some glitches, but there were also improvements. We kept some things the same—Arnie Cutler insisted we keep the Friday night dance—and proceeded to demonstrate that “Dancing with the Stars” came several years too late. Some things were changed and after a few years the annual delegate assembly was switched from the fall conference to the spring conference.

To give recognition to the 10th anniversary at the Duluth location, this year there will be posters on display of all of the program books from MCTM's DECC era. While you are at the conference, see if you can find them all. Maybe they will spark a pleasant memory of attending an outstanding session, meeting a new friend, winning a door prize, getting a great teaching tip, shaking hands with the NCTM president, or just talking to other people who like students and mathematics.

To start memories flowing, here are the Duluth themes:

2000—Mathematics for 2000 and Beyond: Changes, Challenges and Choices

2001—Taking the Basics into the 21st Century

2002—Catch the Excitement!

2003—Q3 (Quality Content, Instruction, Assessment) = Quality Mathematics for ALL Students

2004—Mathematics – The More the Merrier

2005—Quality Teaching: The Key to Understanding Mathematics

2006—Explore the Possibilities: Engage in Mathematics

2007—Mathematics: Sharpen the Focus

2008—A+ in Mathematics: Algebra and Much More

2009—Pursuing Equity – The Pathway to Student Success in Mathematics

A Decade in Duluth

Named for the first known European explorer of the area (Daniel Greysolon, Sieur du Lhut), Duluth was incorporated as a town in 1857 and as a city in 1870. During much of the twentieth century, the city was an industrial port town, housing several mills, a cement plant, and a U.S. Steel plant. The decline of the city's industrial core since 1970 caused a shift in the local economic focus to tourism, resulting in the revitalization of the city's downtown district and the conversion of old warehouses along the waterfront into cafes, shops, and restaurants. Duluth today is a regional hub and major transportation center. Did you also know that Duluth once fielded a National Football League team in the 1920s?

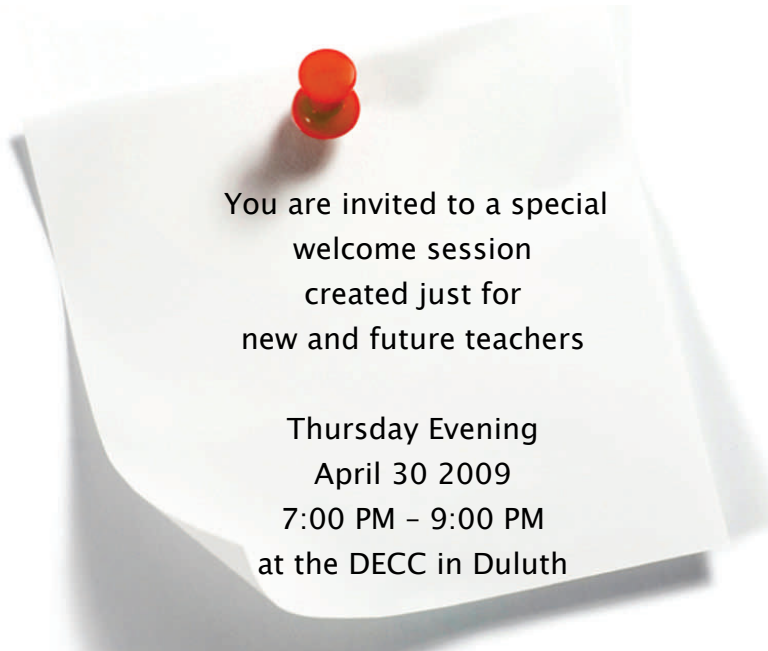
A bit of Duluth history

New Teachers & Future Teachers:

Join us and

CONNECT*

with other teachers and leaders in math education



- soup, sandwich, pop and dessert provided
- free teaching materials & ideas
- fun activities, fun people
- discover how to get your own personal mentor to discuss teaching ideas and issues
- find out who's who in math education and how they can help you
- get an overview of 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 teaching profession
- find out about other future events for new teachers

RSVP appreciated (ambergps@gmail.com) but not necessary –
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 in a Community of (Math) Teaching)
Questions? See www.mctm.org or contact Stephanie Amberg, ambergps@gmail.com

Here is a game for the older kids that makes knowing your math facts fun. It actually turns into a cooperative game because the kids like to work together to get the best score and it doesn't seem to be competitive

How Close Can You Get?

Math Skill: addition, subtraction & multiplication

Objective: to have the lowest score

Materials: deck of cards Ace-9
scratch paper to work on
score sheet

Set Up: 2-9 cards are face value and the ace is a one (1)
3 or 4 players
For one round, one player is the dealer and the score keeper, the job rotates.

Playing the Game:

The dealer gives out four (4) cards to each player.

The dealer then turns up the next two cards and forms a number.

Example: If the dealer turns over the numbers 2 & 8, the dealer can form 28 or 82.

All players look at their own four cards and use the operations of addition, subtraction and multiplication to get as close to the dealer's number as they can by using all four of the numbers on their cards.

Example: The dealer formed the number 28 and one player received cards with the numbers 4, 2, 6, and 2. The player can take $(4+6) \times 2 + 2 = 22$ OR $(6 \times 2) \times 2 + 4 = 28$.

The player's score would be the difference between his or her total and the number laid down by the dealer.

Example: Since the dealer's number is 28, the player would pick the last example (with a result of 28) because his or her score would then be 0.

Once all players have decided that their scores are the best they can get and have recorded their scores, the next round of play starts with a new dealer.

Focus on Elementary Grades

Contributed by
Judy Hansen, Pipestone

Questions from the Classroom:

- 1) A Kindergartener asks, "Is there a 'teen' with a 2 in it?" How do you respond?
- 2) A high school student mentions to you that she noticed something puzzling in her textbook. After offering several examples, the textbook states, "In general, the sum of the angles of a polygon is equal to the number of sides multiplied by 180 degrees, minus 360 degrees." Your student asks, "So if that's *generally* true, what are the exceptions?"

This month's questions were shared by Christopher Danielson, Minnesota State University Mankato.

If you have a good answer to either question, or an interesting question scenario to share, please submit it to the editor, subject: classroom question, at tlgonske@nwc.edu



Mathbits

Summer math offerings at Bemidji State University

Bemidji State University has several opportunities for MN teachers funded with NCLB money through the MN Higher Education Services Office. The courses and dates are:

Number Sense and Number Theory for Elementary & Middle Teachers

June 8 to June 26

Assessment and Probability & Statistics for Secondary Teachers

June 8 to June 26

Geometry for Elementary & Middle Teachers

June 29 to July 17

Arithmetic Foundations for Teachers and Paraprofessionals

Arithmetic Foundations I July 20-28, 2009

Arithmetic Foundations II July 30- Aug 7, 2009.

For additional information and application procedures please see the website:

<http://faculty.bemidjistate.edu/grichgels/ITQP/SummerAppForm.html>

Contacts: Todd, TFrauenholtz@BemidjiState.edu (218) 755-2817
Glen, GRichgels@BemidjiState.edu (218) 755-2824

Summer 2009 Professional Development and Education Opportunities

NEMEI Summer Institute

Northeast Metro Educators' Institute will be held during the week of **June 22 - 26, 2009**. The location for the Institute is Capitol View Center in Little Canada. The Summer Institute provides required teacher licensing classes, optional graduate credit, continuing education credit (CEU) for all courses, and continental breakfast and lunch.

This year June 22 is Licensure Monday, offering four sessions to meet licensure requirements. These sessions include: Understanding Common Mental Health Disorders, Positive Behavior Management Strategies, Accommodating All Learners, and Effective Reading Strategies. Seventeen courses are offered the rest of the week, June 23-26, covering content areas, diversity, and unique learners.

Brochures, registration forms, and further information regarding the Institute courses can be accessed at: <http://www.nemetro.k12.mn.us/services/institute.html>

All Minnesota educators are welcome to register for these courses. Most of the courses are eligible for optional graduate credit through Hamline University. The registration deadline is May 8, 2009.

Graduate course

On-line graduate course in mathematics education:

Understanding Algebra and Pre-Algebra Better through Teaching Simulated Students

Offered by Hamline University, St. Paul, **June 16 - August 14, 2009**

Are you now or soon going to be teaching pre-algebra or algebra to middle-school students? Do you want to teach in a way that engages students and promotes deeper understanding, but you're not sure how well you understand it yourself? Gain opportunities to deepen your mathematical understanding while you practice problem-based pedagogy. In online simulations you'll teach virtual students, who can't hold any grudges.

For more information: <http://www.hamline.edu/personal/lcopes/courses/algebra.html>

SPPS teacher development

The Institute of Technology Center for Educational Programs will offer teacher professional development courses in the summer of 2009 primarily for teachers in the St. Paul Public School. Further information will be available by contacting ITCEP at 612-625-2861 or itcep@umn.edu or visit <http://www.itcep.umn.edu/teachers/profdev/>

BestPrep's Technology Integration Workshop helps teachers enliven their lessons by integrating technology and workplace skills. Participants bring a previously taught lesson plan that they would like to **modify** by developing a new approach for teaching the content. With the help of a Technology Integration Specialist, teachers develop at least one technology infused lesson or unit to use in their classroom during the next school year. The collection of all previously developed lessons can be found online at

<http://www.bestprep.org/TIW/tiwell.html>

As part of the program, teachers are connected with a volunteer Business Partner. They spend a half-day job shadowing their Partner to better understand the skills students need after graduation. Teachers use this experience to develop more relevant curriculum that connects with real-world applications.

The Workshop is offered at the University of St Thomas in downtown Minneapolis from **August 3-6, 2009**. Teams of teachers are invited to attend. Teams consist of two or more teachers from the same school or district. The fee for teams to participate is \$175 per person for two team members; three or more members is \$150 each; and the individual fee is \$200 per participant. (The Workshop fee qualifies for Perkins and Tech Prep funding.)

More information and applications are available online at <http://www.bestprep.org/TIW.html> or by calling Bonnie Vagasky at the BestPrep office 763-398-0090 x227.

2008 Participants gave these responses on a post-workshop survey:

100% learned a technology integration skill that they will apply when writing curriculum.

100% learned a technology skill that they will use in their classroom during the upcoming year.

93.1% stated they have a better understanding of the skills students need to be successful when entering the workforce.

86.2% stated they will be able to increase their students' awareness of careers.

"Thank you so much for the fantastic Workshop last week. My brain is still reeling, and I have so much to explore yet, but you opened doors that I am eager to enter."

-Connie LaCombe, Math Teacher, Harding High School-St. Paul

MITY (Minnesota Institute for Talented Youth)

Macalester College, 1600 Grand Avenue, St. Paul

Expand Your Mind: Classes for current 7th – 12th graders

Session A: **June 15–June 26** 8:30 am – 4:00 pm

Session B: **July 6–July 17** 8:30 am – 4:00 pm

Tuition: \$510 – Commuter; \$1,300 – Residential (*Some financial aid available*)

ExplorSchool: Classes for current 4th – 6th graders

Session: **June 15–June 26** 8:30 am – 4:00 pm

Tuition: \$500 (*Some financial aid available*)

For program catalogs & applications: www.mity.org or 651-696-6590

Geometry 3-D Shapes is an interactive Web site where students can learn about three-dimensional shapes, calculate surface area and volume, and discover some of the mathematical properties of shapes. Students will analyze the attributes and properties of basic three-dimensional shapes, such as pyramids, prisms, and cylinders. They will develop mathematical arguments about the relationships they discover, such as Euler's theorem, which describes the relationship between the number of faces, vertices, and edges of any polyhedron. Students will distinguish between surface area and volume and learn how to calculate both. Students will also conduct an in-depth exploration of a special group of polyhedra--the Platonic solids. <http://www.learner.org/interactives/geometry/index.html>

**BestPrep Technology
Integration at
Univ. of St. Thomas**

**Professional
Opportunities
and Programs
for Students**

**MN Institute for
Talented Youth at
Macalester College**

How to Feed a Dolphin...

A 450-pound pregnant dolphin eats 25 pounds of capelin and herring a day. Each capelin weighs eight ounces and each herring weighs 12 ounces. The diet should be distributed into five feedings for the day and with 75 percent of it consisting of capelin. How much capelin and herring is needed for the daily diet? How much goes into each of the five feedings? And you thought being a dolphin trainer was all fun and games!

This is just one of the many mathematical problems zookeepers at the Minnesota Zoo solve every day. In fact, math is used all over Zoo—from cashiers distributing the correct amount of change to exhibit designers building fences high enough to keep a leopard from jumping out of their enclosure. It also includes knowing how many seats remain on the Monorail for the next trip if 64 are waiting to ride, and how many gallons of water are required to complete a 50 percent water change on the sea horse tank.

The Minnesota Zoo's yearly Math Day event demonstrates to students how math is integral to the Zoo's operation. Students visit stations throughout the Zoo providing an opportunity to think like zookeepers, exhibit designers, or aquarists. Each station presents four real-life mathematical questions for students to answer; each level slightly harder than the previous to challenge different grade levels and abilities. Station topics vary including Animal Exhibit Design, Animal Diets, and SCUBA Diving—all of which are essential to the daily operations at the Minnesota Zoo.



The next Math Day is November 10, 2009. Join us! It's a great way to show your students that learning those math formulas really do matter in the real world.

Do you teach a high school upper level math class? We are seeking schools to develop and host stations at our event. Station hosts will receive free admission to the event. Please contact Gina at 952.431.9260 more information.

The Ten Commandments of Math

One of several versions—original source unknown

- 1) Thou shalt read thy problem...carefully.
- 2) Whatsoever thou doest to one side of thy equation, do ye also to the other.
- 3) Thou must use thy "common sense", else thou wilt have flagpoles 9,000 feet high. Yea, even fathers younger than sons.
- 4) Thou shalt ignore the teachings of false prophets to do all thy work in thy head.
- 5) When thou knowest not, thou shalt look it up; and if thy search still elude thee, thou shalt ask thy All-Knowing Teacher.
- 6) Thou shalt master each step before putting thy heavy foot down on the next.
- 7) Thy correct answer does not prove that thou hast worked thy problem correctly. This argument convincest none, least of all thy Teacher.
- 8) Thou shalt first see that thou hast copied thy problem correctly, before bearing false witness that the answer book lieth.
- 9) Thou shalt look back even unto thy youth and remember thy arithmetic.
- 10) Thou shalt learn, read, write ,speak, and listen correctly in the language of mathematics, and verily A's and B's shall follow thee even unto graduation.

The American Mathematical Society, the American Statistical Association, the Mathematical Association of America, and the Society for Industrial and Applied Mathematics announce that the theme for Mathematics Awareness Month, April 2009, is **Mathematics and Climate**.

One of the most important challenges of our time is modeling global climate. Some of the fundamental questions researchers are currently addressing are:

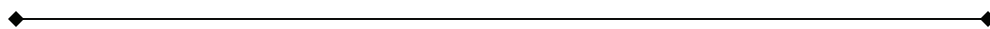
- How long will the summer Arctic sea ice pack survive?
- Are hurricanes and other severe weather events getting stronger?
- How much will sea level rise as ice sheets melt?
- How do human activities affect climate change?
- How is global climate monitored?

Calculus, differential equations, numerical analysis, probability, and statistics are just some of the areas of mathematics used to understand the oceans, atmosphere, and polar ice caps, and the complex interactions among these vast systems. Indeed, analyzing feedback effects is a crucial component of global climate modeling and often a significant factor in long-term predictions. For example, warmer temperatures cause ice to melt, exposing more land and water, so that more sunlight is absorbed-instead of being reflected, in turn leading to more warming.

Mathematics, computer science, and other sciences are inextricably linked, and each is required to begin to solve the fundamental questions about earth's climate, particularly those concerning global warming. Moreover, math and science are central to the development of both traditional and alternative energy sources, and to the evolution of other strategies for mitigating the effects of climate change.

Each year the Joint Policy Board for Mathematics sponsors Mathematics Awareness Month to recognize the importance of mathematics through written materials and an accompanying poster that highlight mathematical developments and applications in one particular area.

Resources for this year's Mathematics Awareness Month program can be found at www.mathaware.org.

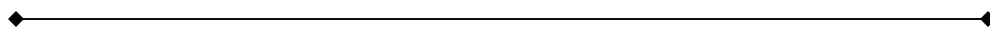


April is **Financial Literacy Month**. This is a great time to teach young people about money. Spending and savings habits will be important to them in life, regardless of the careers that they pursue. Many resources designed to help teach money management skills are available.

The **Council for Economic Education** provides K-12 economic and personal finance education programs, including the basics of entrepreneurship, consisting of teaching resources across the curriculum, professional development for teachers, and nationally normed assessment instruments. <http://www.councilforeconed.org/>

Feed the Pig for Tweens, a financial literacy unit for students in grades 4-6, helps children learn about the urgency of saving while building important math skills in an enjoyable and engaging way. <http://tweens.feedthepig.org/tweens/>

The **JumpStart Coalition for Personal Financial Literacy** encourages curriculum enrichment to ensure that basic personal financial management skills are attained during the K-12 experience. <http://www.jumpstart.org/>



Ideas for using literature in mathematics lessons

Elaine Young of Texas A & M University has compiled extensive listings of literature and associated math concepts for all levels PK-12.

<http://sci.tamucc.edu/%7Eeyoung/literature.html>

Mathematics Awareness Month

April 2009

Theme:
Mathematics and Climate

www.mathaware.org

Financial Literacy Month

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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

April 22-25, 2009	NCTM Annual Conference, Washington, D.C.
April 30, 2009	MCTM Symposium
May 1, 2009	PAEMST Nominations due
May 1-2, 2009	MCTM Spring Conference, Duluth, MN
November 4-6, 2009	NCTM Regional Conference, Minneapolis, MN

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 Co-Exec. Director Tom Muchlinski at 763-475-3168 or muchl002@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. Newsletters mailed to student members will not be forwarded. Thank you for helping us stay in touch! 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.

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

Please submit items for publication in the Summer issue of *Mathbits* to tlgonske@nwc.edu by May 18, 2009. Email or call 651-631-5228 with any questions. - Teresa Gonske, Editor
