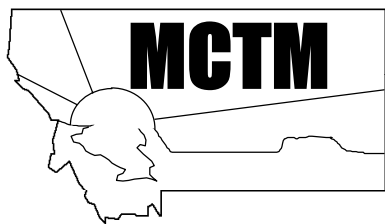


MONTANA MATHEMATICS

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of Teachers
of Mathematics



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Issue 2

President's Message

Did you feel a voltage of renewed energy and ideas after this year's fall conference in the Electric City, Billings? Regular sessions, Poster sessions, General meeting/lunch/regional meetings, Hospitality room, and a thought-provoking Keynote clearly made the conference dynamite.

An electrifying Thank You goes to Jenny Combs, general chair, and Pam Koterba, program chair, for their time and effort in arranging a valuable conference. The success of new exciting events occurred this year because of Jenny and Pam. MCTM appreciates the year's worth of work they put in for this conference to go smoothly. Jenny and Pam must have had the best of times because they agreed to be the program co-chairs for 2004 conference in Helena. Keri Upham, Helena High teacher, will be the general chair.

A special lightning bolt of thanks goes to all those who presented and helped out during the conference. You offered fabulous professional development and support for educators across the state. Your efforts are appreciated. The keynote speaker, Nobel Prize winner in physics Dr. Carl Weiman, gave a superb explanation of the Boise-Einstein Theory using language and examples we all could understand. After the keynote, he spent his time at either the math or science hospitality rooms talking with several people about his work and programs helping students.

The general meeting on Thursday followed a new format that will be continued. A delicious lunch for all members, annual reports and updates on programs, and then regional meetings provided everyone the chance to communicate. I want to thank all the educators who took the opportunity to attend the conference and therefore support MCTM. See you in Helena next year.

I just spent another weekend enjoying the Montana Learning Center at Canyon Ferry Institute. For most it was their first time attending a workshop at the facility and no matter who was in the group, they rave about the scenery, the program, the food, and the people. For those of you who have experienced attending an event at the facility, you know what I mean. For those of you who have not, I hope you registered for one of the many opportunities. STATS on the Lake and The Big Sky STARS assessment workshop are in November and December. There will be programs every month at the Institute and if you are interested in attending and/or helping with the Montana Learning Center visit MCTM website www.montanamath.org.

As MCTM takes into account the needs of Montana teachers due to No Child Left Behind (NCLB), plans and programs are being designed. The Big Sky STARS: Student/Teacher Assessment Resources have been developed and regional workshops are beginning in order to assist teachers with the assessment issues of NCLB. In order to be proactive concerning the NCLB "highly qualified" teacher requirement, MCTM has met with OPI and MEA-MFT and a plan is being designed to provide K-12 teachers with a series of content/pedagogy workshops and tests. Workshops focusing on "adequate yearly progress" are being developed at the Montana Learning Center – Canyon Ferry Institute. To receive up-to-date information on these and other programs check our website www.montanamath.org.

Yes, there are many programs happening and more to come. They are designed to meet yours and your district's needs. Therefore, your district's professional development monies can be used to attend any of these programs. Are there too many things happening? I don't think so. But it is more difficult to decide which opportunities to be involved in and how involved. I hope you decide to be involved in as many as possible but also remember to take time to renew and relax especially during the holidays.

HAPPY HOLIDAYS

to YOU and YOUR FAMILY.

Jean Howard

Math Contest Dates	p.2
Robotics for Teachers	p.3
Ask Barney	p.4
Dean Preble Award	p.6-7
Leadership Conference	p.9-11
No Child Left Behind	p.12
Montana Learning Center	p.13-14
Win a Trip to Philadelphia	p.15

SIMMS Integrated Mathematics Dissemination Project

One of the more rewarding aspects of my job is working with schools who have already adopted the curriculum and are looking for ways to improve the implementation. There are two aspects to that work that are particularly satisfying.

FIRST—there is often the opportunity to work directly with students again. That was the case recently in a trip I made to Heart Butte where Mark Flaherty is using Level 1 with his Algebra 1 students. The excitement in this interaction is seeing how students respond to new ideas and new ways of looking at problems. I always leave such an encounter feeling richer for the experience and reaffirming for myself that ALL students can learn mathematics. It is just our job to unlock the rich potential within each of them.

SECOND—there is the opportunity to interact with teachers. Again, this was the case in Heart Butte. I had lunch with Mark, a science teacher, and a business teacher. The first thing that grabbed my attention in the discussions with these three people was their dedication to the students of Heart Butte. Each of them lives in the community and is clearly engaged in the education of the whole child. This is something I wish the larger public saw more readily for it is so powerful. The second aspect of our visit that engaged me was their desire to grow professionally so they could do their work better.

The above scenes are played out for me in countless classes all across this country. I have known since my first days in the classroom that teachers care deeply about their students and are working hard to become better teachers. I am privileged to see this in action every month somewhere in this country. This month it happened to be Heart Butte but I know it happens across Montana—and the country—in countless classes everywhere.

If there is anything I can do to help in your adoption or implementation plans, please contact me at gbauer@montana.edu or 1-800-693-4060.

Gary Bauer, Director

MATH CONTEST DATES

The following dates have been set for the 2004 MCTM Regional Math Contests:

Great Falls - March 13 (Saturday) 8:30 am
Jody Miles – Director

Glasgow - March 8 (Monday) 3:45 pm
Marie Mavencamp – Director

Billings - March 9 (Tuesday) 4:00 pm
Tony Reihl – Director

Butte - March 16 (Tuesday) 8:30 am
Dawn Rowling – Director

Grass Range - March 15 (Monday) 11:00 am
Sherry Horyna – Director

Sidney - March 16 (Tuesday) 3:30 pm
Yvonne Gebhardt – Director

Belgrade - March 2 (Tuesday) 4:00 pm
Teri Willard – Director

Miles City - March 16 (Tuesday) 2:30 pm
Sharon Carroll – Director

Kalispell, Havre and Missoula will also hold contests in March but have not set the date of the contests yet.



Visit MCTM's website at
www.montanamath.org

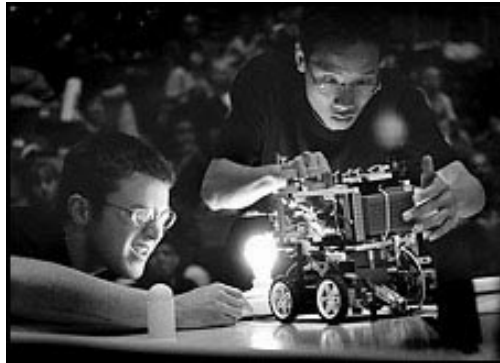
Deadline for January Newsletter is

January 10, 2004

e-mail articles to
terri_dahl@gfps.k12.mt.us

**Montana State University
Office of Extended Studies and Department of Mathematical Sciences**

**Math 580: Robotics for Teachers
(2 Graduate Credits)**



**July 26-30, 2004
Wilson Hall
Montana State University-Bozeman Campus**

Instructor: Ted Hodgson, MSU Department of Mathematical Sciences

Cost: \$400

Description: The FIRST LEGO League (FLL) robotics competition is one of the fastest growing academic competitions in the country. In just seven years, the FLL competition has grown into an international event, with over 3,500 teams and over 300,000 elementary and middle grades participants. Using LEGO Mindstorms kits, FLL students build and program robots to solve problems and complete tasks in a real-world setting.

To prepare Montana's 4-8 students to participate in the FLL, Montana State University will offer its first course *for teachers* on LEGO robotics during summer '04. Math 580 is designed for beginner and intermediate users of LEGO Mindstorms equipment. In the hands-on course, teachers will build and program LEGO robots to accomplish complex missions. Teachers will learn the function of LEGO Mindstorms hardware, gain experience with the Robolab programming language, complete real FLL robotics missions, and explore the use of LEGO robotics to teach concepts in math, science, and computer programming.

Enrollment is limited to 18 teachers. For additional information about the course, contact **Ted Hodgson** (hodgson@montana.edu, (406) 994-5350). To enroll in the course, contact **Anne Angermeyr** of the MSU Office of Extended Studies (annea@montana.edu, (406) 994-6030).

ASK BARNEY

1. Barney. I know this isn't exactly a math question, but you said I could ask anything. What is a preposition?

A preposition is a word that you should not end a sentence with.

2. I heard there was a free lunch at the MCTM general meeting. What's up with that?

Yes. I was there and it was great. The menu was sandwiches, pop, and salad. I think that a lot of people thought that the attendance at the annual meeting is only by special invitation. That is definitely not the case. All paid up MCTM members are welcome. MCTM President Jean Howard conducted an informal and informative business meeting for the first part of the session. After the meeting and lunch, board (not bored) members met with folks from their region to come up with ideas for MCTM to better serve our members. Next year remember, be there or be square.

3. I was anxiously awaiting the announcement of the winner of the Dean Preble award. I have a couple of questions. First, who won? And second, exactly who was Dean Preble?

Unfortunately, nobody won the award. There was nobody nominated, thus nobody could win. This annual award is given to three outstanding Montana math teachers. The three categories are K-6, 7-12 and 12+. The nomination forms are placed in the MCTM newsletter a couple of times before the deadline for the nomination. It is always such a kick to see deserving teachers receive some accolades from their peers. I was bummed this year. We all know some great teachers that are very deserving of this award. But, we need to take some of our time and submit the nomination. I want everybody out there (you know who you are) to start thinking for next year. Make someone's year – nominate!

The answer to the second part of the question takes more space than I have here. The good news is, I have asked my good friend Gary Bauer to expand on Dean Preble. Please read on in this newsletter. Dean was a great teacher and an even better man.

4. I am a middle school teacher. I keep wondering, what exactly do high school teachers expect from us? If you had to boil it down, name two things that I need to concentrate on.

Wow, what a question! I guess I would like to open this up to our membership. Hey you out there. I would like to have readers write me (in care of Terri Dahl at terri_dahl@gfps.k12.mt.us) and answer this question. My first thought would be that HS teachers would like the middle school teachers to instill a love of math in their students. The MS teachers should guide their students to appreciate the beauty and structure of mathematics

I am at my best when ...

The K-16 Montana Mathematics Network recently met at the Montana Learning Center on Canyon Ferry. MCTM president Jean Howard posed the question, “I am at my best (when teaching) when I am like a _____. The results of this questions were so impressive, I thought the math teachers of MT would appreciate seeing the fantastic answers of the participants.

I am at my best when I am like a:

Mom. Caring, ensuring the extra help while in our care, helping all our kids to succeed, being there for our kids when they are at school.

Conductor. A wide variety of classroom skills and abilities all come together to make beautiful harmony in learning.

Light bulb. I bring students from the darkness into light.

Diamond. I have clarity, cut, color and caret.

Paper weight. I am hard, strong and do the job I am supposed to do. But, I have that soft underside that touches important things.

Attentive listener. I hear student concerns rather than the teacher concerns. It allows me to respond to their concerns rather than my perception of the concern.

Parental figure. I am stern, loving, rule setting and a role model.

Onion. The first look can be hard and make you cry. Keep peeling and the layers add to life experiences and taste can change to fun and tasteful.

Bridge. I am strong and sturdy, yet I am flexible. I can withstand great workloads, weather and storms. I am also acting as a way to transport students from where they are to where they need to be. This year I am taking a group from the elementary into middle school. This is a bridging year.

Rock. I am steady, strong and steadfast.

Wind chime. As a wind chime I am at my best (and worst). My best, when I am gently touching the minds of my students and thus making beautiful music. My worst, when I get too windy and the chimes get all tangled up.

Energizer Bunny. Always moving, active. Interacting with my students. (Math is not a spectator sport).

Mother elephant. Gentle and wise. Nudging students forward (with my trunk?), nurturing them as they learn and when they explore their world.

Flexible. You have to be flexible for schedule changes in the day and with your own lesson plans. Sometimes, you just can't get through all you want to do during the day.

Good mattress. It is a time you look forward to each day and it is gently supportive of students as they find their way.

Ping-pong match. There is lots of activity. The activity goes in both directions with lots of back and forth. At times the activity gets off track, but the majority of the time, the action stays on track.

My father. Motivating, rigorous, understanding, caring, helpful and enthusiastic.

Mime. I am quiet but actively encouraging students to learn and to discover.

Diamond ring. I am bright and shiny, but hard and strict. The circle of the ring is teaching these students again in junior high after having them in elementary.

An old red Dodge Dakota. (One of my students told me not to blow a spark plug), so I must be experienced, always dependable, probably make a lot of noise, but still can get the job done.

Dynamo. I am focused, multitasking, prepared and have all of my students involved.

Who Is Dean Preble?

MCTM offers a variety of awards and scholarships to its members. One of those is the Dean Preble Award which is presented annually to an outstanding mathematics educator.

So who is Dean Preble? I address that question both as a colleague and as a friend.

Dean grew up in Great Falls, graduating from C. M. Russell High School. He earned a Bachelor's degree from Rocky Mountain College in Billings and a Master's degree from Washington State University. He taught in Havre, Billings, and Forsyth. He was one of the most mathematically knowledgeable teachers I have ever known. He had understandings of mathematical concepts at a level I have rarely seen. He had a passion for teaching and an ability to relate to a range of students that was simply phenomenal.

In the summer of 1992, MCTM began work on the SIMMS Integrated Mathematics curriculum and Dean was there as a writer. That is where I really got to know the person. Most writers that summer lived in the dorms at MSU-Bozeman for eight weeks. We ate breakfast together, worked together, ate lunch and dinner together, and invariably talked into the night about what we were doing that summer. We challenged one another as to what we believed and what we dreamed could happen with this curriculum.

Dean went on to serve MCTM in a number of capacities including being an Editor for SIMMS IM, serving on the MCTM Board of Directors, and handling the daunting task of being the Treasurer for MCTM and all the SIMMS IM activities.

In the middle of all this 'doing' is the person of Dean. Dean was somewhat quiet by nature, very reflective, and with a degree of insight that continually amazed all of us who knew him. He was one of the kindest, most caring, and sensitive people I have ever known. He epitomized for me the term 'gentle giant'. He listened well and offered suggestions and insights in a manner that made it easier to see a new perspective.

Dean was a man of integrity, purpose, and conviction. If I leave this world with a fraction of what he embodied, I will be blessed.

Dean died much too early and today I still think of those words from that song "... the good they die young"—much too young. He was an incredible colleague, the most wonderful of friends, and the embodiment of a professional teacher. We are a richer world for his presence and a poorer world for his untimely leaving.

Gary Bauer

A large, stylized, black-and-white signature of the name "Dean Preble". The letters are thick and fluid, with a cursive-like feel. The "D" is particularly large and loops around the "e". The "P" is also large and loops around the "r". The signature is centered on the page.

Nominations Sought for the 2003 Dean Preble Memorial Award for Outstanding Teachers of Mathematics

The Dean Preble Memorial Award for Outstanding Teachers of Mathematics is an annual recognition of teachers of mathematics at all levels in mathematics education. MCTM wishes to recognize an elementary (grades K-8), a secondary (grades 5-12), and a collegiate teacher of mathematics who have made significant contributions to the teaching and learning of mathematics.

The Award

This award is given in memory of our colleague Dean Preble, who passed away from cancer in the fall of 1998. Dean was recognized for his unfailing support for mathematics education in the state of Montana. His dedication to the mathematics teaching profession, his love of his students, his involvement in state and national mathematics organizations, and his devotion to the improvement of mathematics education in were unparalleled.

One of Dean's wishes was to establish an annual award to recognize outstanding teachers of mathematics in Montana. In keeping with his wish, MCTM created the Dean Preble Memorial Award for Outstanding Teachers of Mathematics. The award consists of an inscribed plaque and a \$100 stipend for the recognized teachers, to be awarded at the MCTM annual meeting in October.

Award Criteria

Any member of MCTM may submit a nomination. Current members of the MCTM Board may not be nominated for this award.

The nominee must be a current MCTM member.

The nominee must have taught mathematics in Montana.

The nominee must have a record of significant and consistent contributions to the teaching and learning of mathematics.

The nominee must demonstrate a concern for her/his fellow teachers of mathematics.

The nominee must demonstrate a willingness to continue to grow and improve as a teacher of mathematics.

The nominee must demonstrate an extraordinary ability to engage students in the learning of mathematics.

The nominee must have a record of participation in professional activities involving mathematics.

Nomination Procedure

Nominations must be submitted in writing and consist of a maximum of two, double-spaced, typewritten pages. The nominations should directly address the criteria. The name, address, telephone number, and present position of both the nominee and the nominator must be included.

Deadline for submissions for the 2002 Dean Preble Memorial Award is June 15, 2003. Nominations can be sent to the address below or emailed to: cliffbara@hotmail.com

Cliff Bara
231 Sunrise Lane
Troy, MT 59935

FROM THE “JOURNALS” OF MCTM’s GLORIOUS PAST

Dear Lewis,

Discovered some math teachers who want me to join something called MCTM. They are quite persuasive and quite frankly more fun than the Corps. Go ahead without me.

Your friend,

Clark

The first MCTM Leadership Conference was held January 1992 with Ruth Parker speaking on assessment. Over the years since, the topics have varied but developing leaders in mathematics education has been a central focus. In the mid 1990s, MCTM and MSTA came together to plan the conference, providing sessions for math and science teachers. As the Leadership Conference entered its second decade, experts on assessment were again the featured speakers. It’s a topic which never grows stale.

Information taken from History of the Montana Council of Teachers of Mathematics 1981-2003 compiled by Kimberley Girard.

Special Welcome

A special welcome is being extended to all of our new members, but especially to those of you who are a part of the eMSS mentoring program! This fall approximately 20 early career middle and high school teachers were matched with more experienced teachers in an online mentoring program. The mentees and mentors communicate on a regular basis to discuss math topics, issues, and challenges many early career teachers face. MCTM gave the mentees a one-year membership to our organization. We would also like to thank all the folks who have volunteered to be mentors!

Quotes and Jokes from the Classroom Teacher!

“You can’t tell your asymptote from a hole in the graph!” -*Verne Schlepp*

Parent: “Why did you give my child an “F”?”

Teacher: “That is the lowest grade they’ll allow me to give.” -*Russ Hartford*

“Here’s Looking at Euclid!” -*Bess Lovec*

Last week my classroom was painted. As you can imagine, the fumes have been overpowering. The day after it was painted, I was attempting to talk to my geometry class about transformations and isometries. It was the last period of the day, and I was sharing with them how the fumes must be getting to me because I kept confusing my other geometry class earlier in the day. I promised them that I would do my best to keep focused. I was doing great!! I had students excited about transformations!!! (Okay, maybe that was just the fumes making me think that they were excited.)

Anyway, I held up a triangle and showed it being translated with an additional congruent triangle to illustrate the concept of an isometry. I could tell that the lights were going on in every single student in the class. We were leading up to the big moment.....

So I asked the entire class, “Now, are these triangles pregnant?”

Jenny Combs - non-pregnant teacher at Billings Senior High

If you have a quote or joke to share with our membership, please Email them to scottl@billings.k12.mt.us.

Leadership Conference 2004

You are invited to attend the 2004 Math and Science Leadership Conference to be held in Bozeman, Montana January 9-10, 2004. In order to broaden the leadership network that exists in Montana, you are encouraged to invite and bring a fellow educator or administrator.

Registration will begin at 7:30 AM on Friday, January 9, 2004. The conference will start at 8:00 AM and conclude by 12:30 PM on Saturday, January 10. The conference will be held at the Comfort Inn located at 1370 North 7th Ave., Bozeman, MT 59715. Rooms have been blocked for Thursday and Friday nights. Please contact the Comfort Inn at (406)587-2322 to reserve a room in your name. The reservations must be made by January 1, 2004 to assure a conference rate. The single rate is \$58.00 and a double is \$60.00.

The cost for this conference is \$125 for MCTM/MSTA members. Non-member registration is \$150 and will include a two-year membership in either MCTM or MSTA. The registration price includes meals. Renewal credits through OPI will be offered. You can register by email to greenleya@billings.k12.mt.us or mail on the form provided.

The topic of this year's conference is "Assessment Literacy - Key Elements". Dr. Carol Commodore will be returning as the keynote speaker to focus on the five key elements of quality assessment. Dr. Commodore is the founding member of both the Leadership, Learning, and Assessment, LLC and Wisconsin Assessment Consortium as well as an independent consultant with the Assessment training Institute of Portland, Oregon and with the National School Conference Institute of Phoenix, Arizona. As an administrator for the Elmbrook School District in Brookfield, Wisconsin, Dr. Commodore facilitated the development and implementation of a district-wide k-12 balanced assessment program for students. Carol has served as an Assistant Superintendent and has over twenty years of classroom experience from kindergarten to the graduate level. She received her doctorate from Cardinal Stritch University in Milwaukee, Wisconsin with the dissertation *The Impact of Assessment on Learners and their Learning*.

In addition, members of the Montana math and science community will be presenting on a variety of aspects of standards based assessment. The topics will be appropriate for all grade levels. Opportunities will be available for teachers to discuss ideas for presentations at local, state, and national levels. The "State of the State" address for both math and science is always a highlight.

The goals for the 2004 Math and Science Leadership Conference are:

- To encourage leadership by fostering partnerships between math/science teachers, students, and university faculty
- To continue to build a network of colleagues within the K-16 math and science community
- To enhance professionalism by bringing new teachers into math and science leadership roles in Montana.

If you have any questions, please contact Alyson Mike at the address and/or telephone numbers listed below.

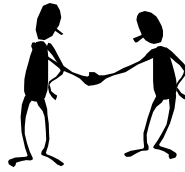
Alyson M. Mike
400 Kalispell/Box 1280
East Helena, MT 59635

amike@initco.net

227-7740 (W) 227-5784 (H & Fax)



Agenda – MSTA/MCTM Leadership Conference



January 9-10, 2004

Friday

7:30am	Registration/Breakfast	CC Lobby
8:00 am	Welcome	Gary Bauer
8:15 am	Topic Title?	Dr. Carol Commodore
10:15 am	Break	
10:30 am	MontCas update	Judy Snow
11:00 am	High Quality Teachers & Licensure	Margaret Bowles
11:30 am	ESEA update	Pat Johnson
12:00am	Lunch	
1:00	Breakout sessions	

Madison Angel Greenley Jenny Combs math assessment	Spanish Peak Bonnie Boggs Elem Science Assessment	Beartooth Kathy Tiefethlaer- Mike Agostinelli Analyzing & Presenting data	Gravelly FayeAnne Cummings Using technology for district assessments
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2:15 pm	MEA/MFT Convention Mentoring	Pam Koterba
3:15 pm	Break	
3:30 pm	Breakout sessions	

Madison Anne Blotkamp Elem Math Assessment Sharing	Spanish Peak Lisa Scott MS/HS Math Assessment Sharing	Beartooth Walt Woolbaugh Elem Science Assessment Sharing	Gravelly Todd Morstein MS/HS Science Assessment Sharing
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4:30 pm Keynote Speaker Dr. Carol Commodore
 5:30 pm Break Leadership Committee Mtg – Gravelly
 6:00 pm Social Hour
 7:00 pm Dinner

Saturday

7:15 am Breakfast Hotel Lobby
 8:00 am Overview of Break-outs Gary Bauer
 8:15 am Breakout Sessions

Madison Professional Develop. Academy Jean Howard Jenny Luebeck Lenne Yenne	Spanish Peak National Board Certification Margaret Bowles Alyson Mike	Beartooth Math Statistics-Science Research & Fairs Jane Frye Sharon Carroll	Gravelly VIMMS-mentoring program Elizabeth Swanson Sue Kocybatentative
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January 9 - 10, 2004
Comfort Inn, Bozeman, Montana

Name: _____

Address: _____

_____ Zip: _____

Phone: (home) _____ Phone: (school) _____

Grade(s) – subject(s) that you currently teach: _____

School Address: _____

E-mail address: _____

The cost for this conference is \$125 for MCTM/MSTA members. Non-member registration is \$150 and will include a two-year membership in either MCTM or MST. The registration price includes meals. District Title II funds may be used to fund your attendance. For an accurate food count, please check if you will attend lunch and/or dinner on Friday.

_____ Lunch _____ Dinner

(Please indicate any food allergies or special needs.)

Please Check One:

- _____ My district will be paying by PO.
- _____ My district will be paying by check.
- _____ I am including a personal check.
- _____ Presenter, registration waived.

Registration Deadline is December 12, 2003

Registrations received after December 12th will be charged \$150/\$175

(Because of motel commitments, we, unfortunately, cannot refund any money for registration if we are not notified **within 72 hours** of the conference.)

Please return this application to:

**Angel Greenley
415 N. 30th #234
Billings, MT 59101**

Work: 247-3818 Fax: 247-3899 E-mail: greenleya@billings.k12.mt.us

No Child Left Behind Has Implementation Problems across Much of the Nation

The No Child Left Behind Act has many worthy idealistic goals that we should all be supporting. None of us should deny that every child should have access to quality mathematics and none of us should deny any child a highly qualified teacher. With these lofty goals, what are the issues for a rural state like Montana? Let us start with the “highly qualified teacher” goal.

With Montana’s current teacher certification for high school teachers being for grades 5-12, every prospective teacher currently being certified should meet that definition. That is, if the teacher has a mathematics major! What if the teacher has a mathematics minor? It is much less clear that the prospective teacher will be designated highly qualified if the prospective teacher has a minor in mathematics. In fact, it is much less clear that a high school mathematics teacher with that level of certification will meet the standard.

What about the middle school teacher? In reality, Montana has no certification for a middle school teacher. We have K-8 teachers certified and we have 5-12 teachers certified, each of whom can be middle school teachers. Would either meet the highly qualified definition? We have already established that the 5-12 certified teacher who does not have a major will not be highly qualified. We are well aware that K-8 teachers typically do not have a major in mathematics and hence also will not be highly qualified as middle school teachers. So where are we? Essentially we are at the stage that the only teachers who could be deemed highly qualified would be those secondary teachers who have a mathematics major and are certified in grades 5-12.

What are we to do in this state to meet that definition and not to have our schools dinged for not having highly qualified teachers? We could do as some of our officials

are doing and simply declare that all of our teachers are highly qualified, or we could think about whether or not that is really true and get at a problem that is a true problem for the state.

The true problem for Montana is that our certification program is not in good shape and has not been since we adopted the current certification. A teacher who is certified to teach K-8 certainly could be considered highly qualified to teach elementary school. Are they adequately prepared to be middle school teachers and to be considered highly qualified in mathematics? The answer is probably no. For sure they do not have the content knowledge that is required in the No Child Left Behind Act. Similarly do the prospective teachers who are certified to teach 5-12 mathematics have the necessary credentials to be highly qualified? The majors have the content knowledge; the minors probably do not; they do not have a knowledge of how students in K-4 learn, and may not have enough content knowledge of the mathematics at that level. In short, we need a change in certification and we need it now from a mathematics standpoint.

We need to develop a middle school certification for mathematics. We all know the arguments why this will not work in rural schools, but it is time to have schools rethink whether or not this will work. One of the primary reasons that this will not work is that we have had mindsets about how the classes have to be taught and who can teach them. We need specialists in many areas in exactly the same way that we have art, music and physical education specialists.

How do the members of MCTM feel about this issue? It is time to take a stand and go to the Board of Education to ask for changes. It is time to push our Superintendent of Schools to address this issue.

Johnny Lott

CONGTATULATIONS
DICK SEITZ
NEW NCTM BOARD MEMBER



Announcing a new institute for mathematics and science ...

The Montana Learning Center at Canyon Ferry Lake

This last spring a group of people representing the Montana Science Institute (MSI), the Montana Council of Teachers of Mathematics (MCTM), The Montana Science Teachers Association (MSTA) and Linda McCulloch's Office of the Montana Superintendent of Public Instruction met to work on a vision of building a premier international institute of learning at Canyon Ferry Lake.

That vision is becoming a reality! The supporting organizations are working at extending the old and developing new programs for teachers and students that will demonstrate the level of excellence that Montana teachers have come to exemplify.

Here is sample of some of the activities that are planned for the institute for this school year.

- A STARS pilot workshop on October 24th and 25th, 2003 will provide a kickoff for a series of 5 workshops and meeting to develop, implement and train teachers on the Montana assessment materials developed by MCTM and OPI.
- A middle school mathematics workshop on November 7th and 8th, 2003 will provide the latest information on assessment, robotics, teaching basic skills. PDA computers, and tinkerplots.
- A planning workshop on November 8th and 9th will provide for brainstorming on professional development for teachers and summer programs for students moving us closer to building a world class program!@
- A STARS dissemination workshop will be offered on December 5th-6th, 2003 and again February 20th-21st, 2004 on assessment for leading math teachers in districts.
- A winter 2004 meeting will be held for selected mathematics gifted and talented teachers to design three new summer institutes in mathematics for students.
- The second annual MCTM Vision & Realities Conference will move to the lake. This Spring 2004 conferences will developing long-range plans for mathematics education statewide.
- A Chemistry with Calculator Based Technology is planned by MSTTA early next year
- Summer of 2004 we will introduce 3 new institutes for students – stay tuned!



We Need Your Help!

The Montana Learning Center at Canyon Ferry Lake is looking for mathematics and science teachers willing to help us build the dream. What can you help us do?

- Can you suggest ideas and programs?
- Can you offer to teach summer classes?
- Can you offer an naturalist or birding workshop?
- Would you like to offer your time to come work on planning summer institutes?
- Would you like to donate to our "Building the Vision" Fund?
- Would you like to attend a "Paint a Building and Catch a Fish" Week-end?
- Would you like to be on our email list for workshops?
- Would you like to offer a class or a field trip at Canyon Ferry Lake?
- Do you have some swell furniture that would be glamorous in a 1959 lake house?
- Do you have fun education or recreation stuff that kids would love?

Please Offer Your Assistance – We Need YOU!

Contact us:

The Montana Learning Center at Canyon Ferry Lake
 c/o Carol Bock – Montana Science Institute
 7653 Canyon Ferry Road
 Helena 59602

[406-475-3638](tel:4064753638)

Email the following information to msi@mt-science.org or rseitz@metnet.state.mt.us or rseitz@helena.k12.mt.us or mail to the address above.

Name: _____

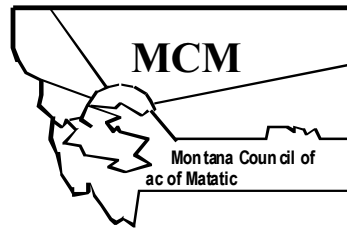
School or Business: _____

Address, City, Zip: _____

Email: _____

T-Shirt size: _____

Thoughts for us: _____



Win a Trip to Philadelphia, PA for the NCTM Convention!

MCTM Membership Drive

MCTM is hosting a membership drive. Every member that recruits a new member will be entered into a drawing for a trip to the NCTM Conference in Philadelphia, PA on April 21, 2004 through April 24, 2004. (See <http://www.nctm.org> for more details about the conference.) Any member who renews their membership will also be entered.

The winner will receive paid registration at the NCTM member rate of \$160, four nights at a hotel at \$120/night, an airline ticket estimated at \$500, and food expenses of \$25/day for four days.

Members copy a registration form for membership to MCTM and hand it out to your colleagues. New members need to write your name on the application as a referral and you will be entered into the drawing. The new member will also be entered.

The winner of the trip to Philadelphia will be drawn at the Leadership Conference in Bozeman on January 10, 2004. The winner will be selected by generating a random number on a TI-92 calculator after it has been randomly seeded. The people entered in the drawing will be listed in a spreadsheet and assigned a number. The number that is randomly generated will select the person assigned to that number as the winner. If the winner is unable to attend the conference, an alternate winner will be determined by another random generation. This will be done at the January MCTM board meeting with all the board members as witnesses. The contest is not transferable. The contest deadline is January 2, 2004.

MCTM Membership Form

PLEASE FILL IN THIS INFORMATION AND MAIL WITH
CORRECT AMOUNT OF MONEY TO:

Lisa Scott, 1102 Anchor St, Billings, MT 59105 scottl@billings.k12.mt.us

ANNUAL DUES PERIOD IS:
September 1 through August 31

Name _____

Address change

Address _____

New membership

Renewal

Phone No. _____ e-mail _____

Contribution to MCTM Endowment (Scholarships & Professional Development Academy): \$5 \$10 \$25

- Regular \$15
- 2 years \$25
- Student \$8
- Retired (no charge)
- MCTM/MSTA \$26
- Institutional \$30
- 10 years \$100
- Life \$150

- College
- High School
- Middle School/Jr. High
- Elementary
- Other _____

Referred by MCTM member _____

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CM Russell High School
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Montana Mathematics is a newsletter published for all members of the Montana Council of teachers of Mathematics. The publication comes out 5 times/year and is free to all members of the MCTM. Any information pertaining to MCTM can be sent to Terri Dahl at CM Russell High School, 228 17th NW, Great Falls, Montana 59404. All entries will be reviewed.