



MONTANA MATHEMATICS

A PUBLICATION OF MONTANA COUNCIL OF
TEACHERS OF MATHEMATICS

March 2012

Volume 45

Issue 4

Montana Learning Center at Canyon Ferry Lake (MLC) *Sound Too Good to be True???*

Daily e-mails arrive describing a supposedly long-lost foreign acquaintance who left you with an inheritance or you've won some intriguing British lottery. Usually the bounty is touted to be more than \$ 10 million. (If the "generous" offer involved \$10,000, the claim might be a bit more believable). The usual response is, "IF IT SOUNDS TOO GOOD TO BE TRUE, IT PROBABLY IS!"

How would you react to an e-mail that says, "I know where you can engage in exciting immersion learning experiences for youth and adults in STEM subject areas. You'd reside in a variety of comfortable buildings on a lush 10-acre campus on the shores of a lovely lake with many fun aquatic and land recreational opportunities. Bonding over a few days of mental stimulation with like-minded people will be refreshing and stimulating." IS SUCH A PLACE TOO GOOD TO BE TRUE? NO!!! IT'S THE MONTANA LEARNING CENTER AT CANYON FERRY LAKE. In fact, there is not only Good News, but Better and Best News!

Good news!

MLC has established a 25 year record of providing learning opportunities for youth and adults - that tradition continues. Youth programs include:

July 23-26 & July 30-Aug. 2 Camp Discovery (Gr. K - 3)

July 22-26 & July 29-Aug. 2 Young Naturalist Adventures (Gr. 4 - 6)

July 22 - 27 Innovations in Math and Science (Gr. 7 -9)

*** July 27 - 29 Family Camp (ALL ages)**

*** July 29 - Aug. 2 Science Fair Projects Camp (Gr. 6 - 10)**

Partial scholarships available for all camps!

Also, MLC will be hosting day groups like all Helena School District 3rd grade classes and overnight groups such as Sacajawea MS 7th & 8th (Bozeman) and Silver Bow Montessori School. In addition, MLC hosts other organizations like the National Forest Service Youth Mentoring Program and the Montana Outdoor Science School (Bozeman).

Article	Page
President's Message	4
Lesson Plans	5
Membership Report	5
Common Core-ner	6
NCTM Representative's Report	7
OPI Math Curriculum Specialist	8
MCTM Teacher Scholarship	10
Dean Preble Award	11
Lure of the Labyrinth Challenge	12
2012 MEA-MFT Educator's Conference	12
MCTM Elections Information	13
MCTM Board Meeting Update	13
Candidate Biographies	14-17
Common Core Professional Development Academies (K-5 & 6-12)	18-19
Improving the Mathematics Curriculum	20
MCTM Math Contest Writing Course	22
Jokes and Quotes	23

MONTANA MATHEMATICS



Adults programs from which to choose:

April 13 – 15 Springtime in the Rockies Conference - “Implementing Common Core Standards with Embedded Technology” [**Deadline: April 1**; registration info. at www.montanalearning.org]

***July 30 – Aug. 2 Science Fair Professional Development Workshop** (Teachers Gr. 6 – 12) – **Scholarships available.**

***Sept. 2 - 8 Adult Service Projects “Camp” (39 years +)**

BLoSSoM Project [B&B Lesson Study and STEM in Montana for MS math teachers] – an OPI MSP grant]

Century Link Math/Science Leadership Project [formerly Qwest Project – for MS and HS STEM teachers]

MLC hosts other adult groups such as MCTM Professional Development Academy [June 24 - 26], OPI STEM/Common Core Seminar [Aug. 12 - 17], AmeriCorp, OPI Librarian Boot Camp [July 16 – 20], and Family Seminars (family reunions with an educational focus)

Facilities and infrastructure upkeep is a constant challenge. Within the last two years, the dining hall/kitchen capacities have been expanded and made more functional, and bathroom vanities/kitchen sinks have been replaced in houses.

Better News!

All of the Good News could not continue without a dedicated Board and strong leadership by Executive Directors. In fact, the Board has just hired a new Executive Director – no wait, **full-time co-directors, Olivia and John Le Tellier**. They take up residence at MLC the last week in March. Their very impressive resumes are too long to mention more than a few specifics:



John, a native of Lewistown with a degree from MSU-Bozeman, has served as an elementary and middle school teacher, high school principal and created the first outdoor science education program for the Cherry Creek SD, Englewood, CO. He is engaged as an education consultant providing professional development and writing curriculum for various clients including the Quantum Learning Network.

Olivia earned a bachelor’s degree from the University of Denver and has managed several businesses. At one time she served as the Retail Association Coordinator for the Moscow (ID) Downtown Association. She has been a “mover and shaker” in many volunteer groups.

MONTANA MATHEMATICS

Readers might have missed the significance of the (*) by some of the programs previously mentioned. The number of weeks of student camp offerings have expanded from the Summer 2011 programs to include a brand **NEW Science Fair Projects Camp**. The **NEW Science Fair Professional Development Workshop** for teachers will run simultaneously, providing teachers with a practical environment to learn about the science fair processes and techniques for mentoring students. **Family Camp**, initiated only last summer, was a smashing success. The **Adult Service Projects Camp** evolved from previous Elderhostel/Roads Scholar programs but is now run by MLC.

MLC staff is aggressively expanding outreach to other local and state organizations to hold their educational events and planning retreats at MLC. Our website now features current weather station data generated on-site. An osprey cam connection is in the works. This spring, two houses that were basically dormant for 5 years are being activated.

Best News!

A year-long Strategic Planning process of inward evaluation and futuristic vision has lead to an MLC Business Plan for Sustainability that includes:

- expanding the science, technology and math focus to include engineering (STEM)
- committing to full-time Ex. Director leadership
- enhancing Board representation, including adding members from business and philanthropy communities
- creating more year-around programs with less dependence on short-term grants
- developing a Businesses/Corporate Team to advise/assist MLC in matters of program, facilities and outreach [April 19 reception hosted by Gov. Schweitzer and First Lady will jump-start this effort]
- initiating an Adopt-a-House opportunity for businesses and organizations as part of a STEM learning process that includes assessment and improvement of facilities
- investing \$232,000 over time in facilities upgrades that include expanding the Blue House meeting space, lakeside deck off of the dining hall, better handicap access and basic infrastructure projects like replacing the deteriorating underground water pipe system.

Thank you, MCTM

MCTM continues to be a strong and consistent supporter of MLC programs. Your Board invested dollars into the 2004 reorganization of MLC in its transition from the Montana Science Institute. Spring board meetings find members contributing sweat equity on needed facilities improvements. Those efforts are very much appreciated. In addition, individual teachers participate at the lake as volunteers, instructors, attend workshops/conferences and annually donate dollars.

Oh, one more way you can participate – **Honor One of Your Students with a Nomination!** A student of yours would be encouraged and pleased to be recognized as excelling in one or more STEM subjects. Or maybe a student has undeveloped potential and needs a positive “push.” Send the name of a student and her/his parents contact information to executivedirector@montanalearning.org. We will mail a personalized letter to that home, indicating that you have honored their student and suggest MLC camps that will further develop her/his interests. No “arm twisting” involved. **Scholarships are available.**

See you soon at Canyon Ferry for “Learning at the Lake”!

MONTANA MATHEMATICS

MCTM President's Message

I love a good game of basketball. The hours spent practicing, perfecting that 3-point shot from the corner or improving one's free throw percentage, come together in the competition of the game. Actually playing the game is essential for the cycle of practice, playing, and reflecting. And here it is again, March, basketball mania.

As teachers, we get to play a game so to speak everyday, all day. How often do we get to concentrate on practicing or reflect on that teaching? It is my hope we can set aside some time as we are reading this to register for a conference, professional development activity/workshop, or course that gives us that necessary time to address our game. MCTM is pleased to announce two summer professional development workshops (PDA) focused on understanding the implementation of the new 2011 [Montana Common Core Standards: Mathematical Practice and Content](#) by grade level. These PDAs are a collaborative effort between OPI and MCTM. We are offering a combined K-5 PDA at the Montana Learning Center at Canyon Ferry Lake and a combined 6-12 PDA at the Hilton Garden Inn, Billings, each about two days, June 25 and 26. At each site, we have excellent presenters to help guide us. Melissa Romano and JoEllen Moon, both teachers at Four Georgians Elementary School in Helena, lead the K-2 group. Angel Zickefoose and Mandy Bighorn, both teacher/leaders from Billings, lead the 3-5 group. Our 6-8 group is led by Rodd Zeiler of Laurel and Leanne Yenny from Bozeman, and our high school grades 9-12 by Cliff Bara from Troy and Terri Dahl from Great Falls. These PDAs will focus on the changes in content by grade level, the upcoming changes in assessments, and the eight mathematical practice standards for all grade levels. We should come away with new information on how to move our Montana students forward towards continued success learning mathematics. Look for the appropriate registration form in this newsletter, share with several colleagues, and mail yours in today. Jean Howard, OPI Mathematics Specialist, and I look forward to visiting with you this June.



Dreambox Learning is a relatively new endeavor focused on adaptive learning technologies. Through technology, it is possible to help tailor an individualized learning environment for students that provides motivation for success. Supported by NCTM Past President Skip Fennell and other distinguished mathematics educators, they hope to provide millions of students the entrance to their vision of learning how to learn through success in mathematics. Check out their introductory free offer for up to 3 classrooms in a school: http://www.dreambox.com/three-for-free?x_lf_kt=2&x_lf_kvid=7e51a898-c53c-43eb-bf07-1dafa8aab17c

In the January newsletter, I shared our collective grief over the loss of several mathematics educators. Here is an address to contribute to the Sherry Arnold Scholarship Fund, c/o Cheryl Steffan, Stockman Bank, 101 S. Central Ave., Sidney, MT 59870.

May your March have been successful; may it bring a new level to your game.

David Erickson, President MCTM

MONTANA MATHEMATICS

Complete lesson plans are available at www.montanamath.org

Elementary Lesson Plan

Dividing the Cookies

Elementary Lesson Plan

Submitted by [Mandy Bighorn](#)

As an introduction to division, the story *The Doorbell Rang* by Pat Hutchins provides a creative and fun way for the students to relate multiplication and division.

Middle School Lesson Plans

Probability and the Game of Sticks

Grades 6 - 8

Submitted by [Rodd Zeiler](#)

This is a lesson I adapted from NCTM's publication, "*Changing the Faces of Mathematics: Perspectives on Indigenous People of North America*". I expanded it and spent time creating worksheets that guide the group through a probability game. It brings about conversation of what is a permutation, combination, experimental, theoretical probability and how they are interrelated. This also contains a spreadsheet that exemplifies this relationship even further using 10000 trial simulation.

High School Lesson Plan

Visualizing Similarities in Right Triangles with a 3x5 Card

Submitted by [Marcia Anderson](#)

Using a 3 x 5 card or any rectangular piece of paper, the altitude is drawn to the hypotenuse of a right triangle. The triangles are cut out and placed on top of each other to show the correspondences between the vertices, which allows for the geometric means to be set up to solve the triangles. I got this idea from the February 1996 edition of the *Mathematics Teacher* in an article entitled "The Incredible Three-by-Five Card!" by Dan Lufkin.

Membership Report

Hello All! Currently MCTM has 418 members, 163 that are due to renew. Earlier this year, I emailed you to remind you of your renewal. I will do this once again. If you receive an email from me please either renew, or let me know that you would like to be dropped from the list. Thanks everyone and I hope that your spring is wonderful!

Submitted by Lisa Wood, MCTM Membership Chair

MONTANA MATHEMATICS

Common Core-ner

The internet has certainly changed our daily lives. It has also changed our teaching lives. With Montana's new adoption of the Montana Common Core Standards, many districts are beginning to look at their current curriculum and textbooks to see how it is aligned with the new standards. Fortunately for us, there are a lot of resources on the web from the creators of the Common Core State Standards, as well as from other states. Below are a few of those sites.

[The Illustrative Mathematics Project](#) provides explicit examples of activities and assessments for the Common Core Standards. The standards are broken into 2 areas, [K-8](#) and [High School](#). Rather than wait until all standards are illustrated and all capabilities are functional, Illustrative Mathematics is posting additional tasks on a weekly basis, so be sure to check back frequently!

Also referenced on this site is Jason Zimba's article ["Examples of Structure in the Common Core State Standards' Standards for Mathematical Content"](#). This article emphasizes the need to keep the standards intact as we are teaching them, and not allow them to become a "checklist of objectives", as has happened so often in the past with math curriculum. Jason states, "As long as the entire system factors by individual standard, the coherence of the Standards as a whole will be hard to leverage for achievement gains. And yet, coherence seems like a difficult lever altogether for raising mathematics achievement, because the connections in the Standards that aim to promote coherence are not always easy to see."

[Smarter Balanced Assessment Consortium](#) has recently published [Content Specifications for the Summative assessment of the Common Core State Standards for Mathematics](#) Review Draft. In this document, the consortium has stated that there will be a Total Mathematics score, which will be a weighted composite based on the student's performance across the four domain-specific claims. The Total mathematics scores will be vertically scaled across grades. The claims include:

- **Mathematics Claim #1: Concepts and Procedures** —Students can explain and apply mathematical concepts and interpret and carry out mathematical procedures with precision and fluency.
- **Mathematics Claim #2: Problem Solving** —Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies.
- **Mathematics Claim #3: Communicating Reasoning** —Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others. ||
- **Mathematics Claim #4: Modeling and Data Analysis** —Students can analyze complex, real-world scenarios and can construct and use mathematical models to interpret and solve problems.

Also in this document in Appendix A, is the Grade Level Content Emphases. For each grade level, the consortium has broken the standards into major clusters and additional & supporting clusters. The major clusters should make up 75-80% of instruction in a school year.

Submitted by
Angel Zickefoose

MONTANA MATHEMATICS

NCTM Representative's Report

Seeking Manuscripts for MT 2013 Focus Issue

The editorial panel of Mathematics Teacher (MT) is looking for your manuscript for its 2013 Focus Issue, "Beginning Algebra: Teaching Key Concepts." To learn more, see a recent issue of MT, or visit [online](#) for more details. The deadline for submission is May 1.

Have You Registered for the 2012 Annual Meeting?

Go to Philly and learn from and with fellow educators at the nation's premiere math education event. Choose from nearly 700 presentations targeted to grade levels and special topics. Whether you're a classroom teacher, administrator, or preservice teacher, you'll have plenty of choices and opportunities:

- Participate in hands-on workshops, and collaborate with like-minded educators.
- Collect free activities to engage and excite your students.
- Explore an exhibit hall packed with excitement, learning, and giveaways.
- Test the latest education resources, and learn from industry leaders.

Register by March 16 to take advantage of Early-Bird discounts of 36% or more.

Calling All High School Teachers to ...

[NCTM's Interactive Institute on High School Mathematics](#), offering activities and tactics to transform your classroom into an environment rich in reasoning and sense making—giving your students better opportunities to examine, interpret, and think critically about math concepts. Earn credit and begin a full year of sustained professional development at the High School Institute on Reasoning and Sense Making in Los Angeles, July 24–26. Find out more on the NCTM website.

STEM Teacher Scholarships Available

The Armed Forces Communications and Electronics Association (AFCEA) Educational Foundation is offering scholarships of \$5,000 to students actively pursuing an undergraduate degree, graduate degree, or credential/licensure for the purpose of teaching STEM (science, technology, engineering, or mathematics) subjects at a U.S. middle or secondary school. [Find out more](#) by visiting the website.

Call for PAEMST Nominations

The Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST) is the highest honor bestowed by the United States government specifically for K–12 mathematics and science teaching. Anyone—principals, teachers, parents, students, or members of the general public—may nominate exceptional mathematics or science teachers who are currently teaching grades K–6 for the 2012 award year. You need only the teacher's name and contact information. Teachers may also apply directly. To apply or nominate. The nomination deadline is April 1. The [application deadline](#) is May 1 for elementary school teachers (grades K–6). Secondary school teachers (Grades 7–12) are eligible to apply during the 2012–2013 academic year.

Submitted by Lisa Wood, NCTM Representative

MONTANA MATHEMATICS

News from OPI Math Curriculum Specialist

Greetings MCTM members:

I am thrilled that OPI and MCTM are collaborating on the summer PDAs in June. Included in this newsletter are the Montana Common Core Professional Development Academy for K-5 and 6-12 details. I hope you take advantage of the MCTM summer PDAs that will provide the opportunity for you to immerse yourself in the new standards for Mathematical Practice and Content as well as enjoy time with colleagues.

OPI is putting together a Montana Common Core Standards and Assessment (MCCS) Webinar series of 30 minute sessions on updated and focused information: Overview II, Next Steps and ELA and Mathematics content specific sessions. A Montana Common Core Standards ELA and Mathematics online course will be available this summer. Stay Tuned.

Remember to always visit the [Montana Common Core Standards and Assessment Webpage](#) also located on OPI home page, left-hand menu bar. Additional resources from a variety of sources are continually added on the [wiki space](#) (recently added links, tools, articles and documents, e.g., “Eye on Common Core” Video Series, vocabulary lists, posters for Mathematical Practices and a presentation from Jere Confrey on Mathematics Common Core).

Have you noticed that assessment is included in the title, Montana Common Core Standards and Assessment? This is in part due to the fact formative assessment is the foundation for transition to the new standards as well as Montana being a member of the Smarter Balanced Assessment Consortium. Please visit the new the Smarter Balanced Assessment Consortium website at www.smarterbalanced.org. The site showcases the innovative work of the Consortium and provides frequent updates on activities, milestones, and events. Visitors are able to explore an interactive timeline of activities by school year, download new fact sheets and resources, and sign up for a monthly e-newsletter. View the [DRAFT Math Item specification](#) that contains a few sample assessment items.

If you subscribe to the [Content Standards Informer](#) (CSI) e-newsletter from the OPI curriculum specialist, you will receive news and opportunities including the ones below.

Spring Common Core Workshop: May 25 – 27 New Orleans, La

Join teachers, administrators, and district personnel from across the country as we explore together “Focus in the Common Core State Standards in Mathematics.” This conference will feature Bill McCallum and his team of Common Core facilitators, including teacher leaders from every grade band. Many of the breakout sessions will be run by teacher experts, leading the way in developing PD for fellow teachers implementing CCSSM. Time in the conference will also be devoted to small group focus on the major work in specific grade bands. [Register](#) by the end of March to receive the discounted registration fee!

MONTANA MATHEMATICS

Participate In a Survey to Be Used For Implementation of Common Core

Jeffrey Choppin, Associate professor of Mathematics Education at University of Rochester is looking to recruit districts to participate in an online survey around teachers' perceptions of (1) the Common Core State Standards for Mathematics (CCSSM) and (2) local efforts to prepare for the CCSSM, in terms of curriculum and professional development. I am able to offer a small payment for participation to compensate teachers for their time. As an incentive for districts to participate, he will provide summaries of the survey results as well as summaries of findings from other districts that participate in the survey. In these summaries, we (the research team) will use measures to protect the confidentiality of the participants. These results will hopefully be useful to districts as they prepare for the implementation of the CCSSM and related assessments. If you work in a district that you think may be interested in participating, please contact Jeffrey jchoppin@warner.rochester.edu directly so that you can discuss the process of obtaining permission at the district level.

Free Resource for Teachers: Videos of Common Core Lessons

There are over 70 [free videos related to Common Core instruction available on the Teaching Channel](#). The videos provide lesson ideas, an overview of the ELA and Math standards, and demonstrations of teaching practices. Videos vary in length from five to thirty minutes.

Communicating Locally: Frederick County (MD) Public Schools Produces “Eye on Common Core” Video Series

For an example of communicating with local parents and community members on the Common Core State Standards, visit Frederick County Maryland's new TV series, “Eye on the Common Core.” [The first episode of the series](#), which focused on how the Common Core Standards will affect the district's Secondary Math curriculum, recently aired on the district's local public access channel.

Thank you all for your dedication to mathematics education in Montana. My job is easier and more fulfilling with your support.

Jean Howard
OPI Mathematics Curriculum Specialist
jhoward@mt.gov
406-444-0706



MONTANA MATHEMATICS

MCTM TEACHER SCHOLARSHIP

Remember, MCTM has put aside \$2000 per year for members to attend math conferences. The scholarships are \$200 for in-state math conferences and \$400 for out-of-state math conferences. The intent is to encourage our membership to participate in conferences and to help defray some of the expenses in attending conferences. As of Jan 16th, none of the 2012 money has been allocated. Thus, there is \$2000 just waiting to be spent so that MCTM members can attend math conferences.

Any teacher who is an MCTM member is eligible to receive the scholarship except for current MCTM Board members unless that member received an MCTM scholarship in the previous year. The application for a scholarship must be submitted at least **thirty** calendar days prior to the starting date of the conference. The recipient must also write an article for the newsletter on a useful idea acquired at the conference. This article should be mailed to the Chairperson of the Scholarship Committee within **thirty** calendar days of the end of the conference. The chair will then submit the article to the newsletter and authorize the issuance of a check to the scholarship recipient. Scholarships will be limited to the applicants each calendar year that:

1. Submit a completed application to Jim Hamling, scholarship chairman.
2. Receive confirmation that the scholarship has been awarded.
2. Attend the conference.
3. Submit an article to the scholarship chair for the newsletter.

The scholarship chairperson / committee will screen the applications as necessary. Incomplete or late applications will not be considered. After the chairperson/committee has approved an application, a letter will be sent out to the applicant restating the above requirements and timelines. When the newsletter article is received by the scholarship chair, it will be submitted to the newsletter editor. The chair will then authorize the MCTM treasurer to issue a check for the appropriate amount.

If you are interested, please fill out the application that appears in this newsletter or log onto : montanamath.org for an application. You may either send a completed application to Jim Hamling 1110 W. Water Lewistown MT 59457 or email at : hamling@midrivers.com Jim's phone is 406-535-3263.



MONTANA MATHEMATICS

The Dean Preble Award

The Dean Preble Memorial is awarded annually to a Montana educator who has made significant contributions to the teaching and learning of mathematics and who has consistently assumed a leadership role among math educators. Teacher-leaders at all levels, kindergarten through university, are eligible.

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 for all were unparalleled.

One of Dean's wishes was to establish an annual award to recognize outstanding teachers and leaders of mathematics in Montana. In keeping with his wish, MCTM created the Dean Preble Memorial Award. The award consists of an inscribed plaque, a \$300 stipend, and a lifetime membership in MCTM. The award is presented at the MCTM annual meeting in October.

Award Criteria

Any member of MCTM may submit a nomination. Current members of the MCTM Board of Directors 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 have a substantial record of participation and leadership in professional activities involving mathematics education.

Nomination Procedure

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

Deadline for submissions for the Dean Preble Memorial Award is June 15 annually. Nominations may be sent or e-mailed to:

Cliff Bara
Box 610
Troy - MT - 59935
cuda11235@gmail.com

Lure of the Labyrinth Challenge April 1 – June 15!

The Education Arcade at the Massachusetts Institute of Technology (MIT) is pleased to announce the Lure of the Labyrinth Challenge—a free online math challenge for grades 6–8. While playing Lure of the Labyrinth, students use mathematical thinking skills to progress through a compelling graphic-novel story.

Funded by a Next Generation Learning Challenges Grant, the Challenge invites groups of 4–6 students to collaborate in a safe, teacher-moderated environment to strategize and problem-solve with others. Students and educators have many chances to win regional prizes such as Lenovo ThinkPad Tablets, books, and technology tools like subscriptions to BrainPop just for playing. Ultimately, the Challenge will help us all learn more about the role of gaming in the instructional process.

There is no cost involved to participate in the challenge, which runs from April 1 – June 15. Since the game is web-based, students can play at home or at school, in the classroom, computer lab, library, or after-school program. Teachers have the option of integrating corresponding lessons into their classroom activities but it is not required. Students can play as little or as much as they want—and best of all, they will have continued access to the game over the summer to help avoid that inevitable “brain drain.”

The Education Arcade's own Scot Osterweil will run a free webinar on March 28 to talk more about the role of gaming in education and to give more information on the Challenge. [Sign up](#) to participate.

And don't forget to [pre-register](#) for the Challenge!



2012 MEA-MFT Educator's Conference

The Montana Educators Conference is October 18 and 19 in Billings Montana. MCTM is looking for teachers to present. If you are interested in presenting, go to the MEA-MFT website at www.mea-mft.net and fill out an application. Each year, MCTM proudly provides a large percentage of the presentations. This is impressive as the presentations provide quality and well as quantity! We are calling for all grade levels. You must have a favorite activity or lesson, a discovery in technology, or just something that you want to share. Present at the conference! If this is your first presentation and you are nervous, ask a colleague to co-present with you. You know how much you appreciate all you glean from these conferences, be the presenter that provided teachers from around the state a new favorite lesson. Let's provide so many sessions that people have a tough time deciding what to go to. Applications to present must be completed by April 30th. Now is the time to start thinking about what you can do for your fellow teachers! See you at the conference!

Lisa Wood

IT'S TIME FOR MCTM ELECTIONS

According to the Montana Council of Teachers of Mathematics Bylaws (Article III, Section 1) “the membership of the Council shall elect from its members eight (8) directors. The term of office for each director shall be three (3) years. These directors shall be elected in such a way that each of the five regions shall always be represented by at least one representative. The directors shall also be elected in such a way that each level, elementary (K-4), upper elementary (5-8), secondary (9-12), and higher education (13-up) shall be represented by no less than one director at all times. No member of the MCTM may serve more than one elected term unless a time of five years has elapsed between terms.”

It is now time to elect three new members for three-year terms on the Board of Directors.

Three current Board members have terms that expire this June:

Marcia Anderson, Great Falls, Region II, 9-12
Beth Burroughs, Bozeman, Region III, 13-up
Jim Hirstein, Missoula, Region I, 13-up

These remaining directors will continue to serve next year:

Laura Ascheman, Townsend, Region III, 5-8 (2014)
Mandy Bighorn, Billings, Region IV, K-4 (2013)
Marie Booth, Ashland, Region V, 9-12 (2014)
Melissa Romano, Helena, Region III, 5-8 (2013)
Rodd Zeiler, Laurel, Region IV, 5-8 (2014)

The ballot lists five candidates. Three will be elected. You can vote for up to three candidates. We must elect representatives for Region I, Region II, and grade level 13-up. Candidate descriptions and statements appear in this newsletter on the following pages. This year the vote will be taken with an [online ballot](#). Please vote by April 16, 2012.

Montana Council Teachers of Mathematics Board Meeting Update January 26, 2012 – Bozeman, Montana

The Board worked with Jean Howard from OPI to discuss ideas for MCTM to help promote and organize the Montana Common Core Standards through PDAs. We also continued to discuss the budget and accounts, as well as worked on ideas the upcoming MEA-MFT conference to be held in Billings during the fall of 2012. The next MCTM Board Meeting will be held on June 8th and 9th at the Montana Learning Center.

Submitted by Mandy Bighorn
MCTM Secretary

Darrel Van Dusen

Region #: 1

City: Missoula

School: Hellgate Elementary

Current Teaching Assignment: First Grade

I am currently a First Grade teacher with the Hellgate Elementary School District. I am in my fifth year of teaching after having graduated from the University of Montana. Prior to this I retired from the US Army where I spent over six years as an engineer instructor/trainer for both the US and foreign military units. I am now working on a M.Ed. in Learning and Technology.

My work in the primary grades has strengthened my belief that the core academic disciplines, especially mathematics, are crucial in the development of the critical thinking skills so necessary in today's learning environment. Towards this end, I have been part of a team that is developing mathematics instruction and assessment models using electronic student response systems in Kindergarten and 1st grade classrooms.

I look forward to MCTM taking an active role in transitioning to the Montana Common Core Standards and would like to be a big part of that effort. I feel I have skills as a facilitator with an understanding of the balance between maintaining certain ideals while working with the reality of today's educational environment. The Montana mathematics community is going to have an exciting and challenging next three years and I am glad to I am going to be a part of it.

Hilary Smith Risser

Region #: 3

City: Butte

School: Montana Tech

Current Teaching Assignment: Undergraduate mathematics and preservice teacher education

Educational Background: I have a Ph.D. and a Masters in mathematics and a teaching certificate in secondary mathematics.

Other Teaching Experience: I taught secondary mathematics in Texas and both undergraduate and graduate mathematics and mathematics education at Texas Woman's University. I have also instructed for and led programs designed to help minority students transition to college.

MCTM Activities: I have presented at the Science and Math Leadership conference and at MEA/MFT conferences.

Any Other Information (activities, awards, organizations): I am a member of The American Educational Research Association, The American Mathematical Society, and NCTM. In service to these organizations, I review articles for both Mathematics Teaching in the Middle School and Mathematics Teacher and regularly present at professional meetings.

I see MCTM's role as: supporting mathematics teachers in the state by providing opportunities for teachers to interact, innovate, and learn from one another

My best positive traits are: my passion for mathematics and mathematics education, my energy, and my commitment to supporting public education.

Don Hicketier

Region #: I

City: Kalispell

School: Flathead Valley Community College

Current Teaching Assignment: Differential Equations, Linear Algebra, FVCC Scholars Math/Art, Division Chair, Science and Math Division

Educational Background:

- Ph.D. Mathematics, Oregon State University, 2010
- M.S., Mathematics, Oregon State University, 1990
- B.S., Mathematics, Montana College of Mineral Science and Technology, 1987
- B.S., Computer Science, Montana College of Mineral Science and Technology, 1987

Other Teaching Experience:

1990-1992, U.S. Peace Corps Secondary Math and Physics Instructor, Ganze Secondary School, Ganze, Kenya

1993, Mathematics Instructor, Western Montana College, Dillon, MT

1994-2000, Mathematics Instructor, College of the Redwoods, Eureka, CA

2010, Adjunct Math Instructor, College of Great Falls, Kalispell, MT

2000-Present, Mathematics Instructor, Flathead Valley Community College, Kalispell, MT

MCTM Activities: No recent activities

Any Other Information (activities, awards, organizations):

- FVCC Mathematics Department Chair, 2004-2011
- FVCC Scholars Steering Committee, 2004-Present
- MUS Math Proficiency Steering Committee, 2005-2007
- MUS Transfer Initiative, Math FLOC, 2008-2009
- MUS Math Placement Committee, 2011
- MAA Project NExT Fellow, 2011-2012
- PNW Project NExT Fellow, 2011-2012
- Montana NASA EPSCoR Faculty Connection Program, 2012

I see **MCTM's role** as a guide for the future of math education in Montana from grade school through university. With the adoption of the Common Core State Mathematics Standards as well as the recent Montana University Transfer Initiative the mathematics community in Montana has the opportunity to put together a consistent and comprehensive path for all students from grade school through university. MCTM has always been, and will continue to be, a valuable resource and leader in providing the information and guidance for the entire Montana mathematics community.

In addition to my passion for mathematics and math education, my **best positive traits** are my wide variety of experience and knowledge in K-16 math education. For the past 20 years my career has been dedicated to honing the craft of teaching mathematics at nearly every level. As a community college instructor for the past eighteen years I have had the opportunity to teach adults mathematics from an elementary school level through the first two years of college. The last twelve years at FVCC have provided me with an ideal position to observe students as they graduate from high school and begin college as well as prepare students for the transition to university. As a member of the MCTM Board of Directors I will use this experience as a bridge between high school and post-secondary mathematics education in Montana.

Troy Voeller

Region #: 2

City: Fairfield, MT

School: Fairfield High School

Current Teaching Assignment: High school math, chemistry, and physics

Educational Background: BS in mathematics and physical science teaching from Montana State University, over 30 additional graduate credits from various institutions

Other Teaching Experience: My twenty years of teaching experience have all been for Fairfield Schools.

MCTM Activities:

Curriculum Consultant for MPAW (Mathematics Performance Assessment Writing Project)

Participant in Big Sky STARS (Student/Teacher Assessment Resources)

Participant in two BITL workshops (Before It's Too Late)

Any Other Information (activities, awards, organizations):

Fairfield High School Teacher of the Year Award. (twice)

Selected for the NASA LiftOff program in Houston, Texas. (1998)

Principal Cup, Science Bowl, and Science Olympiad coach.

I have attended both a regional and national NCTM conference, as well as a national AP conference.

I have attended two NCCE (Northwest Council for Computer Education) conferences.

I initiated having both AP Calculus and Physics of Space offered at my school.

I am particularly proud of the fact that three of my former students are now math teachers themselves.

I see MCTM's role as:

Personally, MCTM has given me invaluable opportunities to meet and collaborate with other teachers across the state. This is a benefit to all teachers within the organization, but especially to those from the more rural school districts. There are many teachers in small schools across the state where the math "department" consists of three or less teachers. Without taking advantage of opportunities provided by organizations such as MCTM, these teachers run the risk of isolation and professional stagnation. The activities that I have participated in over the years have helped maintain my excitement for math education, and I have been fortunate enough to learn from some outstanding individuals. As long as we are wise (and humble) enough to always recognize that our students can do better and that we can learn more, MCTM will have the responsibility to continue providing the best training opportunities run by the best people. Especially with our upcoming transition to Common Core, the need for this training will be great.

My best positive traits are:

I am a dependable hard worker with a sincere interest in my students and their education. My professional strengths lie in technology, application of mathematics to other disciplines, my knowledge of mathematics, and in writing curriculum/assessment materials.

Deb Wickum

Region #: 2

City: Chester, Montana

School: Chester-Joplin-Inverness aka CJI

Current Teaching Assignment: My teaching assignment has changed each year, but I am currently teaching 7-8 mathematics & science as well as Algebra 1, Algebra 2, Geometry, and Advanced Math

Educational Background:

- Bachelor of Arts in Elementary Education (emphasis in Mathematics) from U of M
- Masters of Science in Mathematics - Education from MSU (which also included course work for a Mathematics minor)

Other Teaching Experience: I have taught departmentalized mathematics 4-6, a one room rural classroom (k-8), a two room rural classroom (5-8), self-contained 6th grade, and mathematics classes 7th through Calculus.

MCTM Activities: I have had the honor of serving Montana educators through the following activities:

- Director of the Poster & Writing Contest
- Board of Directors 2000-2003
- Membership Chair 2002-2005

Any Other Information (activities, awards, organizations):

- Participate in the MCTM Mathematics Contest
- eMSS - Mentor
- MPAW - I just love that acronym!
- Golden Triangle Curriculum Cooperative - Mathematics
- NCTM
- STARS

I see MCTM's role as:

I see MCTM acting as a leader and support system for Montana educators. The support can come through training, mentoring, guidance, and networking, but it is not limited to only these methods. Now that Common Core has been adopted by our state, MCTM has the opportunity to help Montana educators learn how to adjust their curriculum to fit the new expectations.

My best positive traits are:

I am happy to say that I am a life-long learner...and when you add Mathematics into that learning, I am a very pleased person! I find it exciting to share with others how mathematical concepts are connected, so I would have to say that enthusiasm is one of my positive traits. As I look back through my years of teaching, I see that flexibility, another positive trait, has been very useful! Finally, I can't forget dedication. Whether this dedication is to MCTM, CJI, my students, classes, family, and/or friends, I am here to help in any way I can.



Montana
Office of Public Instruction
Denise Juneau, State Superintendent

Mathematics Common Core in Montana: A Professional Development Academy **K-5**



Sponsored jointly by the Montana Council of Teachers of Mathematics and the Montana Office of Public Instruction

What: A two-day workshop to learn mathematics content and pedagogy for implementing the new 2011 Montana Common Core Standards: *Mathematical Practice and Content* in grades K-5. Groups will split to focus on K-2 Standards and 3-5 Standards with presenters Melissa Romano, JoEllen Moon, Angel Zickefoose, and Mandy Bighorn leading breakout group sessions. 15 OPI renewal units available and one UM college credit optional for additional fee.

Where: Montana Learning Center at Canyon Ferry Lake, 7653 Canyon Ferry Road, Helena, MT 59602

When: June 24-26, 2012. Sunday evening, Monday, and Tuesday through 3:30 PM. Arrive by 5 PM for check-in and soon to follow dinner.

Registration: \$75 includes two nights lodging on the lake and meals and snacks from Sunday evening through Tuesday afternoon. You will need to provide your own transportation to and from the workshop.

Send registration information below as soon as possible. We hope for an overflow crowd to enjoy the beautiful setting on the lake, mathematics learning, and collegial conversations around the campfire.

Name:

Address:

City: State: Zip:

Email:

School: Grade:

Food Restrictions (if any)

Mail this form and \$75 registration fee to
Cliff Bara, MCTM Treasurer
PO Box 610
Troy MT 59935-0610

For additional information, please contact
David Erickson, President MCTM
406-243-5318 or david.erickson@mso.umt.edu
or
Jean Howard, Mathematics Specialist, OPI
406-444-0706 or JHoward@mt.gov



Montana
Office of Public Instruction
Denise Juneau, State Superintendent

Mathematics Common Core in Montana: A Professional Development Academy 6-12



Sponsored jointly by the Montana Council of Teachers of Mathematics and the Montana Office of Public Instruction

What: A two-day workshop to learn mathematics content and pedagogy for implementing the new 2011 Montana Common Core Standards: *Mathematical Practice and Content* in grades 6-12. Groups will split to focus on 6-8 Standards and 9-12 Standards with presenters Rodd Zeiler, Leanne Yenny, Cliff Bara, and Terri Dahl leading breakout group sessions. 15 OPI renewal units available and one UM college credit optional for additional fee.

Where: Hilton Garden Inn, 2465 Grant Road, Billings, MT 59102

When: June 25-26, 2012. Monday through Tuesday 3:30 PM. Arrive for 9 AM sharp start.

Registration: \$75 includes Monday night lodging double occupancy and meals and snacks from Monday noon through Tuesday afternoon. You will need to provide your own transportation to and from the workshop.

Send registration information below as soon as possible; we hope for an overflow crowd.

Name:

Address:

City: State: Zip:

Email:

School: Grade:

Food Restrictions (if any)

Roommate for Double Occupancy Request

Mail this form and \$75 registration fee to

Cliff Bara, MCTM Treasurer

PO Box 610

Troy MT 59935-0610

For additional information, please contact

David Erickson, President MCTM

406-243-5318 or david.erickson@mso.umt.edu

or

Jean Howard, Mathematics Specialist, OPI

406-444-0706 or JHoward@mt.gov

IMPROVING THE MATHEMATICS CURRICULUM (THE COMMON CORE STANDARDS)

Instruction in the teaching of mathematics will require the best curriculum possible for pupils in the school setting. The common core standards emphasize college/career readiness, starting with the primary grade levels. Each level of achievement will build upon what pupils have acquired previously in going from the known to the unknown in a sequential manner. Upgrading the mathematics curriculum to a more challenging level is desirable when motivating learners to make optimal progress.

Motivating Pupil Achievement

Beginning with the kindergarten level, the mathematics teacher needs to emphasize background learnings which will provide a sturdy foundation in whole numbers, the four basic operations, fractions, and decimals. This will provide subject matter, necessary to understand increasingly more complex facts, concepts, and generalizations. Teachers need to be certain that each pupil attaches meaning in each sequential step of learning. It is vital that learners understand and can demonstrate that objectives have been attained.

If rote learning occurs only, then pupils are not ready for the ensuing activity in mathematics. With careful observation of achievement, the teacher might well ascertain if an objective has been attained by each pupil. This will assist learners to achieve more optimally in the common core standards. Pupil interest needs to be developed/maintained throughout each lesson so that active engagement in learning is in evidence. No pupil should fall through the cracks, but rather assisted where difficulties and problems are faced.

Perseverance is a salient trait for pupils to attain. Too frequently, a pupil may desire to give up when a difficulty is faced in an ongoing lesson. Wise encouragement must be meted out by the teacher for pupils to achieve success. Here, the concept of scaffolding becomes significant. The mathematics teacher then helps a pupil to build on what is known and then assists in realizing an objective which seemingly is too complex at the present time. This is done with questions raised by the teacher and brief explanations provided to guide the learner in achieving the more complex objective. Pupils like to realize they can "stretch their minds" with more challenging learnings in mathematics. Well prepared math teachers possess diverse strategies and content in guiding sequential learner achievement when scaffolding is utilized in teaching and learning situations. Scaffolding aids pupils to persevere and progress in attaining common core learnings.

Readiness for attaining ensuing objectives needs careful consideration. Having high quality experiences in mathematics is needed for pupils to achieve well in concepts stressing algebra, geometry, probability, as well as statistics. Mathematics teachers must pay careful attention to the order of learnings presented so that a seamless curriculum comes about. If this is lacking, diagnosis and remediation might be necessary since pupils will experience more difficulties at specific points in a lesson presentation. Teachers should provide ample opportunities for pupils to meet in small groups to discuss problems faced in mathematics. This provides facets of inservice education for teachers. Additional procedures of inservice mathematical education include workshops, departmental meetings, attending state and national conventions, doing an independent study, taking college/university courses, and participating in seminars. A competent teacher can do much to assist pupils in attaining, growing, and achieving. Readiness for learning indicates a pupil might well benefit much from new learnings presented, and challenging mathematical subject matter in the common core might well be acquired through scaffolding.

When subject matter is too complicated, pupils might become frustrated and put forth little effort. Thus, a knowledgeable teacher will observe pupils carefully to notice negative effects of selected endeavors. Good and positive attitudes toward mathematics are salient. Quality attitudes aids in achieving relevant common core objectives. There is an attitudinal dimension which must be fostered and this is resilience. When supervising university student teachers in the public schools, the writer observed pupils who give up readily, particularly in problem solving experiences. By giving sequential assistance and encouragement, pupils are assisted in bouncing back (resilience) to complete each problem. The assistance may remediate a lack of meaning attached to the problem when it just does not make sense. It is good if the math teacher takes time to guide learners in perceiving relevance in the problem and how these are useful learnings in society. Life consists of difficulties faced and these need to be solved as problems not as situations involving abandoning a task. Math teachers and pupils must look at these situations as room for growth, rather than despair; learnings accrue from problematic occurrences. Thus, pupils need to develop feelings of resilience instead of hopelessness. Common core objectives, then, have a better chance of their achievement.

Interest in learning is paramount and makes for wholehearted engagement in mathematical tasks. Learning experiences involving thinking makes for interest in achievement. Thus, for example, a collaborative endeavor in which a small group of pupils engage in solving a problem in mathematics might well reveal the following kinds of thinking:

- logical thought which is a major category in math
- critical thinking- separating facts from opinions, important from unimportant ideas, as well as relevant from irrelevant content
- creative thinking in coming up with unique, new ideas, for example, in determining a more suitable algorithm
- structural subject matter as in the commutative, associative, and distributive properties
- perceiving patterns as in the set of counting numbers
- inferential thinking as in generalizing for a given set of data
- formative evaluation should be utilized to ascertain what pupils have left to learn within daily lessons or units of study. It provides feedback in providing quality sequence in achievement. Summative evaluate is end of unit appraisal to notice how well pupils have done when culmination occurs. Plans then need to be made to make modifications and necessary changes in the math curriculum within the completed unit of study.

In Conclusion

There are a plethora of facts, concepts, and generalizations which might well be inherent in a quality mathematics curriculum. Accurate subject matter knowledge is a necessity for teachers. Inservice education is needed to keep abreast with the latest content. Appropriate methodology must be utilized to assist pupils to attain more optimally; each pupil needs to achieve well and not fall through the cracks. Salient technology must be available and used appropriately in teaching and learning situations. Technology should be useful to guide/propel progression, and not utilized for its own sake. Technology needs to be embedded in the math curriculum which fosters specific and generalized learning. A variety of learning opportunities assists in providing for individual differences among learners. Optimizing success for each pupil ensures more adequate motivation, as well as provision made for diverse styles of learning. The common core standards must guide pupils to do well in mathematics.

Submitted by Dr. Marlow Ediger, prof emerita, Truman St University

MCTM Math Contest Writing Course

A great summer professional experience on a great deck in Billings.

June 23-24, 2012

Registration Deadline, May, 31

Please mail your completed form to:

Linda Horst

2221 Lyndale Lane

Billings, MT 59102

OR

Email Linda @: lhurst.54@gmail.com

___ YES, I want to help write the 2013 Math Contest Tests (OPI Renewal Unites Available or 1 Graduate Credit through MSU-Bozeman)

___ YES, I will be willing to proof-read completed tests. (Tests would be mailed to you to proof sometime in July and due back to the state contest director by mid-August.)

Name _____

Email: _____
(This should be active during summer as well as during the school year.)

Summer Mailing Address: _____

Phone number(s): _____

Current Teaching Assignment (2011-2012)

Course Title _____ Grade level: _____

Course Title _____ Grade level: _____

Course Title _____ Grade level: _____

Hotel stay for Saturday night will be paid directly by MCTM. Meals will be provided. The course runs from noon - 9 p.m. on Saturday and Sunday 8-5. Sign-up for college (MSU) or OPI credit Saturday, June 23. A \$250 stipend will be mailed to each writer upon completion of the course. Mileage and per diem will be reimbursed. Meals will be provided for Saturday evening and Sunday lunch.

Carpooling will be REQUIRED when possible.

___ Yes, I will need hotel accommodations.

___ No, I will make other housing arrangements with the understanding that any charges will be my responsibility.

THANK YOU FOR HELPING MAKE THE 2013 MCTM MATH CONTEST POSSIBLE!

Jokes and Quotes

JOKES:

If I had only one day left to live, I would live it in my statistics class; it would seem so much longer.

Q: What do you get when you cross a sherpa and a mountain goat?

A: Nothing; you can't cross two scalars.

Q: Why do you rarely find mathematicians spending time at the beach?

A: Because they have sin and cos to get a tan, so they don't need the sun!

Q: What does a mathematician call his dog?

A: Cauchy - because it leaves a residue at every pole...

The Birthday Study:

It is proven that the celebration of birthdays is healthy. Statistics show that those people who celebrate the most birthdays become the oldest. -- S. den Hartog, Ph D. Thesis University of Groningen

QUOTES:

"Zero is the number of objects that satisfy a condition that is never satisfied. But as never means "in no case", I do not see that any progress has been made." Henry Poincare (1854-1912)

"I have made this letter longer than usual, because I lack the time to make it short." Blaise Pascal (1623-1662)

Submitted by Marie Boothe

MCTM Membership Form

<input type="checkbox"/> New Member	<input type="checkbox"/> Renewal	Annual Dues (January - December)
Grade Level: Check all that apply		<input type="checkbox"/> Regular (1 year) \$20
<input type="checkbox"/> Elem	<input type="checkbox"/> MS	<input type="checkbox"/> Regular (2 years) \$30
<input type="checkbox"/> HS	<input type="checkbox"/> College	<input type="checkbox"/> Regular (10 years) \$150
Name: _____		<input type="checkbox"/> Life Time \$200
Address: _____		<input type="checkbox"/> Student \$10
_____		<input type="checkbox"/> Retired Educator Free
Phone #: _____		<input type="checkbox"/> MCTM and MSTA \$40
E-mail: _____		

Send form to:

Lisa Wood, MCTM Membership Chair
woodl@billingssschools.org
2963 Spring Meadow Court
Billings, MT 59102

2010-2011 MCTM Board of Directors

Member	School	Grade Band	Region	Title	E-mail Address	Term
David Erickson	University of MT	13 - 16		President	david.erickson@mso.umt.edu	2009 - 2013
Angel Zickefoose	Billings Public Schools	K - 8		President-Elect	zickefoosea@billingsschools.org	2011-2017
Lisa Wood	Billings Senior	9 - 12		NCTM Rep	woodl@billingsschools.org	2005 - 2011
Cliff Bara	Troy High School			Treasurer	cudal1235@gmail.com	
Jim Hirstein	University of MT	13 - 16	I	Director	hirsteinj@mso.umt.edu	2009 - 2012
Marcia anderson	C.M. Russell High School	9 - 12	II	Director	marander@bresnan.net	2009 - 2012
Beth Burroughs	Montana State University	13 - 16	III	Director	burrough@math.montana.edu	2009 - 2012
Melissa Romano	Helena	K - 8	III	Director	mromana@helena.k12.mt.us	2010 - 2013
Laura Ascheman	Townsend	5 - 8	III	Director	lascheman@townsend.k12.mt.us	2011 - 2014
Mandy Bighorn	Newman Elem. Billings	K - 4	IV	Director	bighornm@billingsschools.org	2010 - 2013
Rodd Zeiler	Laurel MS	5 - 8	IV	Director	rodd_zeiler@laurel.k12.mt.us	2011 - 2014
Marie Boothe	St. Labre HS		V	Director		

Editor: Angel Zickefoose

Montana Mathematics is a newsletter published for all member of the Montana Council of Teachers of Mathematics. The publication comes out 5 times/year and is free to all member of the MCTM. Any information pertaining to MCTM can be sent to Angel Zickefoose at 18 S. Santa Fe Drive; Billings, MT 59102 or e-mailed to zickefoosea@billingsschools.org. All entries will be reviewed.

