October Eblast

Hi Everyone: Welcome to Fall in Montana! We hope you are off to a great school year, and hopefully everyone will be in Billings for our annual MEA conference. The Math and Science sectionals have always been exceptional so I'm sure this year will hold true as well.

??Upcoming events in Montana Math and Science Include:??
Oct. 19 – 20 – MEA Conference – Billings?
Nov. 20 – Science Olympiad – Bozeman?
Dec. 7 – 9 – NSTA Regional Conference – Salt Lake City, UT
Jan 12 – 13 – 2007 Leadership Conference – Bozeman
March 29 – 31 – NSTA National Conference – St. Louis?

In this issue you'll find:?

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1. Plan to attend the MEA Conference in Billings

??There are hundreds of math / science sectionals offered over these two days in addition to many sectionals in other curriculum areas. This is a 'state of the art' conference that many leaders in other states are envious of. The emphasis in the MSTA sectionals this year is a focus on elementary teachers of science. Elementary teachers should plan to attend in order to find out some of the latest thinking and strategies in teaching science at the elementary level. MSTA will also sponsor an NSTA 'bookstore' which will feature some of the latest titles of science trade and resource books. Please put this conference on your calendar.?

2. Plan to attend the Leadership Conference

You are invited to attend the 2007 Math and Science Leadership Conference held in Bozeman, Jan 12 – 13, 2007. The goals include fostering leadership by building partnerships (you are encouraged to bring a colleague or administrator), continue to build networks of colleagues in the K-16 community and continue to enhance professionalism through leadership roles and high quality inservice. The theme this year is "Writing in Math & Science" and author Vicki Urquhart is presenting. Our MT message board http://ecommerce.nsta.org/bap/ has a cover letter and registration form or you

could register by email with Angel Greenley at greenleya@billings.k12.mt.us. This conference has been a sell out by Dec., so please register now.

3. 2006 Quest Challenge for Students Grades 5 - 8

NASA's Exploration Systems Mission Directorate presents the 2006 Quest Challenge. To prepare for exploration on the moon and Mars, NASA uses sites on Earth to simulate living and working on extraterrestrial surfaces. Students in grades 5-8, are challenged to design and build a model of an Earth-based research station that will support living adaptively and working efficiently on the moon. Registration is now open. Preliminary designs are due in late October 2006.
The Lunar Research Station Design Challenge Web site:
http://quest.nasa.gov/lunar/outpostchallenge/index.html

4. Partners in Science Program

Would you like some extra money in addition to doing state of the art research? Partners in Science might be perfect for you.

Montana State University has received information regarding a generous grant program from the M. J. Murdock Charitable Trust called “Partners in Science.” The grant provides $14,000 of funds for high school science teachers to do research for two summers under the guidance of a research mentor. It is open to various science fields such as biology, chemistry, physics, environmental science, etc.
If you are a natural sciences teacher who would be interested in learning more about this program, please contact Audrey Thurlow, Pre-Award Services, Office of Sponsored Programs, Montana State University, Bozeman, MT, (406) 994-6240, athurlow@montana.edu
The “Partners in Science” web site is http://www.murdock-trust.org/formal_grants/
Deadline for receipt of applications is December 1, 2006.

5. Have a NASA Presenter come to Your Classroom - FREE

The Space Public Outreach Team (SPOT) program is designed to enhance education by providing teachers with *free* presentations based on current NASA missions. In this program, UM & MSU students from a variety of disciplines are trained to present the latest discoveries in space science to K-12 classrooms. Our student presenters are then dispatched by request to schools and community organizations around the state of Montana with the latest information and materials on NASA programs. Did I mention it's free of charge?

For more information, including contact info, direct your browser to http://spacegrant.montana.edu/SPOT/ or call (406)994-1677.

SPOT is a Montana Space Grant Consortium program jointly managed by members of the MSU Solar Physics group, MSU's Space Science & Engineering Lab, and members of UM's Physics Department.

6. Menthos Demo Galore!

Menthos demos have made the Internet, late night talk shows, etc. It's one of the exciting science demos. Basically 10 – 15 Menthos (a breath mint) are dropped into a 2 liter bottle of diet soft drink and WOW – watch what happens. There are many applicable science concepts that can be talked about (see below web site), and it also makes a good science process open-ended inquiry lesson. Once students see the demo, ask them to create a question around the Demo. For example, would some diet soft drinks work better than others? What about different mints or different techniques of putting the mints into the drink? They might design an experiment around their question, generate hypothesis, etc. At the conclusions, you might show them one of the elaborate displays of Mentho's. Here is a website that has the most elaborate display of Diet Coke and Menthos I could ever imagine: http://eepybird.com/dcm1.html#featured-video
It also explains the current scientific explanation of the phenomenon. Interesting...

7. TOPS Learning Systems

Are you a traveling science teacher who moves from room to room each period? Or is your budget limited so that you can't afford lab equipment for your students? Check out the TOPS materials and ideas at http://www.topscience.org.

For example, try this TOP's activity with your class. Have your students bring in egg cartons. Turn the egg cartons upside down and place a wet paper towel in the bottom, then place 20 radish seeds in two rows on the wet paper towels. Each day open up the egg cartons and check on the radish seeds. Over a five day period your students can watch and graph results as the radish seeds germinate. Listen to the 'Ahs and Ohhs' as students open these up each day, and they will be learning valuable concepts about germination, seed coats, radicals, hypocotyls, etc. TOPS has hundreds of low cost, high impact type activities in all disciplines so be sure to check them out.

8. NSTA Position Papers

Sometimes at your school discussions and policy issues come up related to science positions, and the NSTA position papers might help you. These are developed by outstanding educators, scientists, policy makers, etc and they undergo an extensive review process (it takes over a year for a position paper to be accepted). There are currently over 30 of these and they range from using animals in the classroom, evolution, teaching inquiry-based science, working with parents, assessment etc. These can be very helpful to you working with your

local school board and administration as they bring the credibility of the 55,000 member National Science Teacher's Association, plus their extensive review process. Sometimes showing the one or two page position paper is all you'll need to do to help insure that students in your school are receiving a quality science education. Check these paper topics out at: http://www.nsta.org/position, they are available for all teachers of science.