

Hi Everyone:

Welcome to the New Year! Thanks for passing this information to other teachers of science in your building. We appreciate this work, and look forward to a great new year.

??Upcoming events in Montana Math and Science include:

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Feb 1 ñ 2 ñ Math/Science Leadership Conference ñ Bozeman

Feb 9 ñ Paper Car Challenge - Bozeman

March 13 ñ 15 ñ MEEA Conference ñ Helena

March 13 ñ Montana Tech Science Fair - Butte

March 16-18 ñ Montana State Science Fair ñ Missoula

March 28-29 ñ Science Expo 2008 - Billings

March 27 ñ 29 ñ NSTA National Science Conference ñ Boston

April 9 ñ 12 ñ NCTM National Math Conference ñ Salt Lake City

June 9 -12 ñ Math & Science Integration Workshop ñ Canyon Ferry

June 24 -26 - Upper Marias Watershed Tour ñ Boone & Crockett Club

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1. We still have some openings for the Math/Science Leadership Conference

You can still be a part of this outstanding conference. Go to <http://ecommerce.nsta.org/bap/> and find all this information (if you need help here, contact me ñ walter@montana.com.) As of Jan 1, we still had some openings. This year focuses on Indian Education for All with many outstanding sectionals and presenters.

2. A Sample of Spontaneity in writing - The SNOWFF Series

We asked professional author Carolyn White for some ideas and tips on encouraging students to be more creative in their writing. Her below story on how she created the SNOWFF series is a good example. As teachers of science, we might use similar ideas and approaches as we have our students become more creative. We also might use some of these ideas as we create new and better science lessons in 2008. Now, it's on to Carolyn's wordsÖÖÖ.

I'll have to admit that the SNOWFF Series arrived on the scene through something very much akin to spontaneous writing - no assignment, nothing other than just a moment of inspiration brought about by nature's intrigue.

Before SNOWFF was -

Springtime filled the air as the water of the great Colorado River, in its height of spring run-off, rushed wildly on its downward trek towards the great Pacific Ocean.

On the bank, my husband and I gazed, fascinated by the raging of the tumbling water, accompanied by its deep-throated, no-melody, but awe-inspiring song. The waves, appeared to race one another in their great hurry to be first to reach the ocean.

Mesmerized by the raging water, my mind wandered with thoughts of from whence this water came. During the past grayish days of winter, individual snowflakes had fallen softly across the vast expanse of mountains. Though tiny in size, together, they created a formidable force of nature, weighing heavily on needle-filled branches, leaves and frozen streams. Undisturbed they slept during the seemingly endless days of winter.

With the arrival of spring, new life surged across the peaks and meadows. Sounds of nature beckoned the fallen snowflakes to "awaken" from their long winter's "nap."

Melting, they searched out tiny crevices in which to find their way down the mountain.

From there, they'd twist, turn, leap, bubble and bounce down hill and dale until joined with other melted snowflakes in many rushing, gurgling brooks - all in the name of doing their part in nature's ageless, never-ending cycle of water.

As mentioned in December's, Footprints of the Mind, a seed of thought from the dark recesses of the mind, would soon break forth into light. One special snowflake, one of the innumerable flakes that had fallen, was about to emerge as SNOWFF, the

SNOWFLAKE KID.

SNOWFF becomes real!

Later that evening, Carolyn scribbled out her thoughts. She must hurry before they vanished away, never to return. SNOWFF had been born and thousands of children would now delight and learn through his adventures.

An Important Rule of Thumb: As a writer, when you have thoughts (inspirations), even if in the middle of the night, make notes. Once gone, moments of inspiration, oftentimes, never return.

Creativity: Creativity often strikes at the most unexpected times. Many of the episodes in the SNOWFF Series, including songs, came when walking or enjoying relaxation.

Recently, I read an article about a very large company (one you would recognize) seeking ways to increase creativity in their engineering staff. They came to the conclusion that sitting at an office desk was not the most effective method of enhancing creativity.

Instead, they instituted free time at work, doing fun things such as playing volleyball - times when the mind is at ease! Amazing how the mind works!

Just for the fun of it! (Something to try with your students)

If you want to see how creative your students can be, plant a seed in their minds.

Suggest a topic you'd like for them to write about. Ask them to be creative in their thoughts and give examples of creativity. Sometime later that day,, or perhaps the next day ask them to write their thoughts. You may be in for a big surprise! Also, sleeping on it isn't just a cliché. It works!

If you should choose to try this with your students, I'd LOVE to hear back from you through my website (www.snowff.com). Perhaps we'll include your experience on the webpage!

Creativity cannot be forced - it happens!

Watch children at play - you'll see the creative mind at work!

WOW! 2008! HAPPY NEW YEAR!

3. Science Fair Time in Montana

The spring is the time for Science Fairs in Montana. Even if you've never tried this formally, you may wish to try it informally at your school. You could offer your top winners in each grade the opportunity to go to one of the formal science fairs held throughout Montana, or you could just keep it in your school.

Science fairs can offer students the opportunity to investigate issues they are interested in. It's the opportunity for them to pursue open inquiry utilizing the science process skills that you've taught them. If your curriculum and schedule is such that you can't devote any class time to this, why not hand out a sheet that offers your students the opportunity to do this at home? You could even have a time that students brought in what they've done and report back to the class on their projects. These science symposiums become authentic as this is what happens in the science world. You could also have science fairs as part of your curriculum whereby students need to be at certain points in the project development at certain times, and again reports to either you or the class can be beneficial. If you are a secondary teacher, you might limit the projects to the specific curricular area you are currently studying. So if you are a biology teacher working through a pla!

nt unit, you might limit the project to work on plants. By doing this, you be covering curriculum and standards for your course.

There are four regional science fairs held throughout Montana plus the main science fair held in Missoula. To get more information on the regional fairs and the state science fair, visit the website: <http://www.mtsciencefair.org/>. We hope you'll utilize science fairs as part of your curriculum this year.

4. 2008 Paper Car Challenge

Winter is also that time of year in Montana for the annual Paper Car Challenge. Students would build a paper car out of nothing more than three sheets of typing paper, glue and no more than 12 cm of wire (usually for the axles). The car must hold an eraser and roll down an elevated track. This is a great activity in terms of a design challenge, and teachers of physical science can use this for work on momentum, velocity, acceleration along with other motion topics. It is open for students from grades 4 ñ adult and once again, if you don't have time in your curriculum, this is a wonderful itake-home science project. The contest is held on Feb. 8, and you would mail your cars to Monforton School by Feb. 6. You will want to obtain a copy of the rule sheet which can be found on the BaP website (<http://ecommerce.nsta.org/bap/>) or by contacting Dr John Graves at (graves@montana.edu)

5. Wanted: Curriculum Writers

The San Luis Obispo County Office of Education (SLOCOE) is seeking Statements of Qualifications (SOQ) from highly qualified, experienced writers of 1st-12th grade instructional materials, curricula, and/or textbooks to work on the development of the curriculum for California's Education and the Environment Initiative (EEI). SLOCOE is

undertaking this solicitation under an Interagency Agreement with the California Integrated Waste Management Board (CIWMB) and in cooperation with the California Environmental Protection Agency (Cal/EPA).

The EEI Curriculum will provide K-12th grade teachers, schools and districts with standards-driven instructional materials that help students master California's academic content standards and California's Environmental Principles and Concepts (EP&C). The EEI Curriculum will provide a scope and sequence for teaching the EP&C with clearly defined learning objectives that are targeted at helping students achieve mastery of selected academic content standards at each grade level.

Monday, January 7, 2008 is the deadline for submission of Statement of Qualifications. Please refer to the EEI link found on the CREEC Network website at [http://www.creec.org/stories/storyReader\\$198](http://www.creec.org/stories/storyReader$198) for detailed information regarding the items listed below:

Request for Qualifications with all pertinent details

Application - Statement of Qualifications

Sample unit posted for review

6. For Teachers of Environmental Science

>From our NSTA Region XV representative Sharla Dowding comes the following:

Is your school thinking about offering environmental science for the first time or switching to a new environmental science program in the next two years? If so, then you may be interested in an opportunity for free professional development for environmental science teachers.

The GEODE Initiative at Northwestern University is pleased to offer a free professional development opportunity to a limited number of high school environmental science teachers. This opportunity is available to schools that adopt Investigations in Environmental Science, a new inquiry-based environmental science textbook, and will be implementing it for the first time in 2008-09. The professional development is being offered as part of a research study on professional development sponsored by the National Science Foundation and led by researchers at the University of Michigan.

The study is investigating the relative benefits of face-to-face and online professional development, and teachers selected to participate will be assigned at random to groups receiving different portions of the professional development in a face-to-face summer workshop and online throughout the year.

Teachers selected for the study will receive 48 hours of professional development (valued at \$2000) and a stipend at the completion of each year of the study (total of \$1500 over two years). Accepted teachers and their principals must have purchased (or commit to purchasing) the instructional materials, must commit to participating fully in the summer and academic year professional development workshops, and must commit to participating in the study, including classroom data collection, for two years.

Some other advantages for teachers who are selected for this professional development opportunity:

- * Receive direct access to the developers of the curriculum, both face-to-face and online.
- * The developers of the curriculum designed and are running the professional development.
- * Participate in a collaborative learning environment with other teachers around the country also learning to use the Investigations in Environmental Science curriculum.

Investigations in Environmental Science: a Case-Based Approach to Environmental Systems is a research-based, case-based, inquiry high school environmental science course that was developed by Northwestern University with the support of the National Science Foundation.

* For more information about this opportunity, visit:
<http://www.geode.northwestern.edu/investigations/>

* Or contact: Beth Kubitskey, Eastern Michigan University: 734-487-8798 or e-mail iopd-info@umich.edu

* For information about purchasing Investigations in Environmental Science, contact Its About Time Publishers at
<http://www.its-about-time.com/htmls/investines/inves.html> or (888) 698-8463.

7. New Online Graduate Course on the Solar System From the American Museum of Natural History

Co-authored by Neil deGrasse Tyson and Denton Ebel, the American Museum of Natural History will offer "The Solar System", its latest addition to Seminars on Science, the Museum's online professional development program. The course, intended for K-12 educators, uses original essays, videos and interactive media to address the origin and evolution of the solar system, its rich diversity and extreme environments, the research focus of current space missions, and its eventual fate.

Seminars on Science offers online graduate courses in the life, Earth, and physical sciences to educators throughout the country and abroad. Designed by the Museum specifically for K-12 educators, each six-week course immerses the learner in an area of contemporary research. Educators come away with a deeper understanding of both the science and the tools of scientific inquiry as well as an array of classroom resources. Courses are co-taught and led by Museum scientists and educators and feature rich web-based discussions. Other courses offered by the program include Evolution, Earth: Inside

and Out; The Ocean System; Genetics, Genomics, Genethics and Space, Time and Motion.

Drawing upon the Museum's extensive research and education resources in astrophysics, as well as an array of other web-based resources, "The Solar System" will consider questions such as: What can we tell by looking at the surface of solar system bodies? What is an atmosphere, and how do those of different planets vary? What kinds of space missions are currently active, and what is the focus of research in each case? Register now for the sessions beginning January 28th and March 24th, as well as two summer sessions. Program details and the course syllabus can be found online at: <http://learn.amnh.org/solar>

Please call 800-649-6715 or see the Seminars on Science website for details: <http://learn.amnh.org>

8. Leadership Training for You.

For science leaders in your states who will be traveling to Boston for the 2008 NSTA Conference on Science Education, NSELA has a wonderful PD planned on Wednesday March 26, the day before the NSTA event opens. This might be a perfect way for you to obtain funding from your district to attend. You might present your administrators with the idea of sending you in order to obtain national leadership training which you in turn can bring back to your school.

Information can be found on the NSELA website:
[www://www.nsela.org](http://www.nsela.org)
and
<http://www.nsela.org/calendar/calendar1.html>