WAHPE VOGLAI

SDCTM FALL 2002 NEWSLETTER

Message from the President

Greetings! School is starting and once again we start a roller coaster ride that has a definite goal. Each year through the ups and downs of working with students, we know that at the end, we will have made a difference in the lives of our students. As the year begins, we see the enthusiasm in the faces of our students as they accept the challenges that we present to them.

This year I have the privilege of seeing the wonder of small children just beginning this adventure through the eyes of my 5-year-old great-niece. Two afternoons a week she comes to my classroom after a hard day at kindergarten to spend the hour and a half until her Mama comes home from work. She is so excited about everything that she has done during the day. Thanks to a great teacher, number concepts and relationships have been a part of every conversation. Sam's only disappointment so far is that I still have to read the story we share with our after-school snack. I wish that we could bottle that and give high school students a dose each day.

It would also be nice if we could portion out that excitement to teachers on an "as needed" basis. SDCTM does its part by providing several opportunities for teachers of mathematics to renew their own passion for teaching and mathematics that led them to this profession.

Another professional growth opportunity is applying for the Presidential Award. Applications can be accessed through the SDCTM website. Please consider applying. We had another inspiring Symposium in August. Claire Heideman and Randi Johnson from McREL did an excellent job of dealing with the issue of Geometry and Statistics in the elementary school. The people who were there gained not only some terrific activities to use in their classroom, but some insight into what they were already doing in those areas. I think too often elementary teachers don't attach the words to the good things they are doing, so they think they don't do algebra or geometry, etc. Please recognize that you do these things and usually do them well.

Coming up are some other opportunities to grow professionally which are supported by SDCTM. On October 4, some members will be presenting math sessions at SDEA's Professional Development Conference. In December, others will be helping with the Title I School Improvement Math Clinic. And, of course, in February will be the Joint SDCTM and SDSTA Conference in Huron. Please think about sharing your enthusiasm and expertise there. We are currently looking for speakers at all levels. The speaker form is on our website www.sdctm.org and is due October 15. This conference is a good place to begin if you have never presented before. The people attending are interested in what you have to say and are eager to listen. Each one of you has something that is worthy of sharing with your peers.

Mentors are available to help you through the process. Every time we do not have enough applications, the state and you lose money. I know we have good teachers out there--Stand

up and be recognized.

I would like to close by encouraging you to visit the website. We want this to be a good resource for our membership. If you have any comments or suggestions to make the website more useful to you as a math teacher, contact Cindy Kroon at Cindy.Kroon@k12.sd.us. Cindy has done a great job at maintaining the website. I hope you all have a great year.

Mathematically yours,
Jean Gomer, President

Presidential Award
State Finalist

Roxie Ahlbrecht, second grade teacher at Robert Frost Elementary in Sioux Falls, has been named as a state finalist for a Presidential Award for Excellence in Mathematics Teaching at the elementary level. A veteran of 28 years, Ms. Ahlbrecht has been involved in many organizations both professionally and personally, and she has been very active in attending conferences to improve her knowledge of mathematics. Congratulations to Roxie and best wishes on the national level.

PAESMT Applications Sought
by Diana McCann

It is time to get started on your application for the next Presidential Award cycle. If you are interested in applying, you can download the application by going to the SDCTM website (www.sdctm.org) and clicking on the Presidential Awards site. We need people to apply! We have very good people in South Dakota teaching mathematics, and they are not getting the recognition they deserve because they don't take the time to apply for the Presidential Award. We are all busy. However, the time spent on this award will come back to you many times over. If you are interested, a mentor who is a PAESMT awardee will be provided to help you with the application. Contact Diana McCann at dm57062@valyou.net to have a mentor assigned to you. Give yourself the recognition you deserve and apply for the award this year.

FREE NASA Distance Learning Programs Connect Classrooms to "Real World" Mathematics and Science

Research- and Standards-Based Programs Introduce Students to Inquiry and Proportional Reasoning

Thomas E. Pinelli, Ph.D.
Director, NASA Center for Distance Learning

For the past seven years, the NASA Center for Distance Learning (**http://dlcenter.larc.nasa.gov**)has been offering educators and students a unique opportunity to learn about mathematics, science, technology, and NASA. The model that shapes the development of the Center's programs is inclusive of technology; provides for interactive learning; and used technology to help develop inquiry, scientific thinking, proportional reasoning, and problem-solving skills. These multimedia instructional distance learning programs are research- and standards-based and use NASA programs, facilities, and researchers to establish a "connection" between the mathematics, science, and technology concepts taught in the classroom and the mathematics, science, and technology used every day by NASA researchers. These FREE and "not copyrighted" programs use technology to support new instructional models of teaching and learning such as project-based and problem-based learning. The two programs listed below include a tele-presence, to which broadcast and off air rights to these programs are unlimited and granted in perpetuity; a printed curriculum guide, which introduces and reinforces specific learning objectives and outcomes; and web-based activities, which include student experiments and help build vocabulary, problem-solving skills and further student understanding of mathematical, scientific, and technical concepts. However,

educators are required to register for the NASA SCIence Files™ and NASA CONNECT™. Visit the respective web-sites for on-line registration, satellite coordinates, and the 2002- 2003 program schedules.

NASA SCIence Files™
URL: **http://scifiles.larc.nasa.gov**

The NASA SCIence Files™ is a research- and standards-based, Emmy® award-winning series of 60-minute instructional (television and web-based) programs for students in grades 3-5. Programs are designed to introduce students to NASA; integrate mathematics, science, and technology through the use of Problem-Based Learning (PBL), scientific inquiry, and the scientific method; to motivate students to become critical thinkers and active problem solvers; and to introduce students to careers requiring proficiency in math, science, and technology. The series includes an instructional broadcast, a companion educator's guide, an interactive web site featuring a PBL activity, plus a wealth of instructional resources. The NASA SCIence Files™ airs nationally on Cable Access, ITV, and PBS-member stations and can be taped for later use. **Requires Teacher Registration**

NASA CONNECT™
URL: **http://connect.larc.nasa.gov**

NASA CONNECT™ is a research- and standards-based, Emmy® award-winning series of mathematics-focused, instructional (television and web-based) programs for students in grades 6-8. The series includes a 30-minute instructional broadcast, a companion lesson guide, and an interactive web-based application. Programs are designed to establish a connection between the mathematics, science, and technology concepts taught in the classroom to those used every day by NASA researchers. The lesson guide, containing a hands-on activity and the web-based application reinforce and extend the objectives presented in the program. NASA CONNECT™ airs nationally on Cable Access, ITV, and PBS-member stations and can be taped for later use. **Requires Teacher Registration**

Both the NASA SCI Files™ and NASA CONNECT™ are closed captioned and their corresponding web sites are 508 compliant.

NASA Resources for Educators

Additional resources for NASA-related materials to support educators are provided on the following Web sites:

- http://www.education.nasa.gov
- http://www.nasa.gov/enterprises.html
- http://edu.larc.nasa.gov
- http://ksnn.larc.nasa.gov
- http://live.larc.nasa.gov
- http://destination.larc.

Television Broadcasts

You can get the television broadcasts of the NASA SCI Files™ and NASA CONNECT™ programs by:

- Checking your local PBS and ITV station listings for broadcast times;
- Down linking the broadcast;
- Viewing of the program on the Web through NASA's Learning Technologies Channel (**http://quest.arc.nasa.gov/events/sci/index.html** and **http: / /quest.arc.nasa.gov/events/connect/index.html**);
- Obtaining video copies of the broadcast from NASA Educator Resource Center in your state (**http://education.nasa.gov/ercn**) and from NASA Central Operation of Resources for Educators, **http://core.nasa.gov**. Contact NASA CORE for a catalog of multimedia educational materials at NASA CORE, 15181 State Route 58 South, Oberlin, OH 44074, phone: (440) 775-1400, fax: (440) 775-1460, E-mail: nasaco@leeca.org

nasa.gov
- http://spacelink.nasa.gov
- http://quest.nasa.gov

The NASA Center for Distance Learning

The NASA Center for Distance Learning is the home for some of the Agency's most exciting and inspiring K-12 instructional/educational programs. Created in 1996 and located in Hampton, VA at the NASA Langley Research Center's Office of Education, the NASA Center for Distance Learning is committed to enhancing and enriching the teaching and learning of mathematics, science, and technology. The Center offers a variety of distance learning programs that (1) combine the power and strength of several educational technologies to inspire educators and students in grades K-16 and (2) help inspire the next generation of explorers "as only NASA can".

As part of its program of continuous improvement, NASA's Center for Distance Learning is always looking for feedback from educators. If you are a registered user, let us know what you think about our programs. If you want to learn more about our program, visit our web site (**http://dlcenter.larc.nasa.gov**); call us at (757)864-6100.

NCTM Launches New Journal in Cyberspace

(taken from NCTM News Bulletin, October 2002)

Building on the success of its teaching journals and electronic

ON-*Math* is scheduled to be published three times a year and will be available free of charge to individual members during the first volume year. The success of ON-*Math* depends on the contributions of readers and authors alike. NCTM encourages you to sample ON-*Math* for yourself and let us know what you think through the online feedback section of ON-*Math*. This school year, use ON-*Math* and other NCTM resources to make mathematics come alive for the students you reach.

resources, NCTM proudly announces the launch of ON-*Math, the Online Journal of School Mathematics.* Through its innovative e-journal, the Council presents a broad range of ideas for teaching and learning mathematics.

Each article will be accompanied by electronic enhancements such as interactive applets (short computer programs designed to run within your browser), streaming video, downloadable software, and links to other Web sites. Mathematics educators for grades pre-K through 14 will find helpful strategies for using technology to teach mathematics, time-saving ideas for lesson plans, and enriching activities.

The premier issue of ON-*Math* is currently available to everyone online at nctm.org/onmath. Feature articles include, "Promoting Mathematical Discourse about Rational Number Relationships," by Hollylynne Stohl, which includes an applet to help elementary school students build an understanding of fractions, decimals, and percents. Middle school teacher Suzanne Alejandre guides readers through her own experience using a Web-based learning tool in "Developing Algebraic Thinking." Daniel Scher engages readers in a classroom experience related to "Maximizing the Area of a Triangle." Alfinio Flores connects wonderful animations with mathematically beautiful parabolas in "Interactive String Parabolas."

Team America Rocketry Challenge

Do the students and teachers at your local or former school know about the Team America Rocketry Challenge, the first national model rocket competition for U.S. high school and junior high school students?

Five winning student teams will share a total prize pool of $59,000. In addition, three of the top ten

teams are eligible to win $2500 grants, including travel expenses, to launch an advanced rocket with NASA, and attend Space Camp. Each of the top 25 teams' schools will be invited to send one teacher on an all expenses paid trip to attend an advanced NASA rocketry workshop, meet with NASA scientists and engineers, and tour the Marshall Space Flight Center.

This event is sponsored by the Aerospace Industries Association and the National Association of Rocketry. Our partners include NASA, the US Airforce and numerous educational organizations.

We challenge you to design, build, and fly a model rocket carrying two raw eggs as close as possible to 1500 feet. The top 100 teams will compete in a fly-off in Northern Virginia in May 2003.

The deadline to enter the contest is November 15, 2002.

For more information and an application, visit www.RocketContest.org or www.aia-aerospace.org.

MAA to Develop Online Magazine on History of Mathematics and Its Use in Teaching

by Victor Katz
"Reprinted with permission of FOCUS, the newsletter of the Mathematical Association of America (Incorporated)"

The MAA has received a planning grant from the National Science Foundation to demonstrate the feasibility of an online magazine in the history of mathematics and its use in teaching. The target audience is teachers of grade 9-14 mathematics, be they secondary teachers, two- or four-year college teachers, or college teachers preparing secondary teachers. Victor J. Katz, University of the District of Columbia, is the PI for the grant and Frank Swetz, Penn State University Harrisburg, is the co-PI.

The two editors aim to have initial articles posted in the Mathematical Sciences Digital Library, currently available at http://www.mathdl.org, before the end of 2002. Among the types of possible articles are:

Expository articles dealing with the history of various topics in the secondary curriculum. These articles should appeal to multiple audiences. The bulk of the material should be designed to teach practicing teachers some history and how to use it, but some parts of the article could be aimed at faculty who are preparing teachers and other parts could be directly usable by students. Articles should utilize the online medium; they should have some interactivity, some interesting graphics, some animation, or some full-color illustrations. It is not necessary that the author know how to program. We will have experts to do that. The author just needs to describe in some detail what he/she envisions.

Translations of original sources of material accessible to the target audience. For example, translations of some of Euler's articles would be welcome as well as articles by medieval Indian or Chinese authors. We would prefer, where feasible, to post both the original and the translation and include commentary on the context of the material. We would like to have links to other sources dealing with the mathematician involved and, of course, have interactivity or animation if warranted.

Historical problems: these could be problems taken directly from historical sources or could be created to allow students to construct their own knowledge of a particular topic by following the historical development. A comment on the context and source of the problem would be useful, and, again interactivity would be welcome.

If you have already written material that would be appropriate for this magazine, or if you just have an idea for a possible article, please send an email to Victor Katz (vkatz@udc.edu) with as much detail as possible.

Perfect Time to Apply for NCTM's MET Grants

(taken from NCTM News Bulletin, July/August 2002)

Are you a teacher with an idea for enriching the way mathematics is taught in your classroom? Do you have a plan for encouraging students' classroom initiative and participation? Then NCTM invites you to apply for one of the grants available through NCTM's Mathematics Education Trust (MET).

MET grants are awarded to fund projects that enhance the teaching and learning of mathematics. The MET awards range from $1,000 up to $10,000. Proposals for all MET grants, except the Toyota TIME grants, are due by 5 December 2002. See the Web site www.nctm.org/about/met for more information about available MET grants and for applications, or e-mail infocentral@nctm.org; call (703) 620-9840, ext. 2113; or write NCTM's MET, Infocentral Department, 1906 Association Dr., Reston, VA 20191-1502. Proposals for Toyota TIME grants must be received by 8 January 2003.

For more information about Toyota TIME grants, visit www.nctm.org/about/toyota; call (888) 573-TIME; or e-mail toyotatime@nctm.org.

SDCTM/SDSTA Conference

Make plans now to attend the SDCTM/SDSTA conference at the Crossroads Convention Center in Huron, February 6-8. Consider giving a presentation at the conference. Share your successes and your ideas with colleagues. A speaker form is included in this newsletter. If more forms are needed, copy the form or go to www.sdctm.org to download additional forms.

Share Your Expertise in the Newsletter

Included in this newsletter is an activity developed by Cindy Kroon, SDCTM secretary and mathematics teacher at Montrose. If you have any activities that you would like to share, send them in for possible inclusion in the newsletter.

SDCTM MEMBERSHIP REGISTRATION
South Dakota Council of Teachers of Mathematics

Name _____ Date

Mailing Address

__City _____ State _____ Zip

School

Subject(s) Taught _____ Grade

Telephone (Home) _____ School

Please check your teaching level, and enclose a check for the appropriate dues. Check should be made payable to SDCTM.

_____	K-6	$ 5.00
_____	7-12	10.00
_____	Departmentalized Middle School	10.00
_____	Post secondary	10.00
_____	Full-time student	3.00
_____	Retired	5.00

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