

19th Annual

Joint Conference

South Dakota Science Teachers Association
South Dakota Council of Teachers of Mathematics

February 3, 4, & 5, 2011
Crossroads Convention Center
Huron, SD

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Graduate Credit is available through DWU-Mitchell.

Next year's conference will be February 2, 3, & 4, 2012.

Featured Speakers

BANQUET SPEAKER—Paul Kuhlman



Paul Kuhlman has taught high school science and math at Avon, South Dakota for 18 years. Previously he taught science at Hosmer and Waubay. He graduated with a B.S degree in Biology Education from North Dakota State University and holds a Master Degrees in Secondary Administration as well as Natural Science both from the University of South Dakota. Paul has worked as a consultant for the SD Department of Education, a judge for “Wal-Mart’s Earth Day Every Day School Challenge” and has worked on a variety of projects for the University of South Dakota’s School of Education. He has been recognized several times for his teaching including the 2006 American Chemical Society’s Midwest Region Award for Excellence in High School Chemical Education, the 2008 SD Outstanding Physical Science Teacher, and the 2009 SD Teacher of Year. Paul and his wife Benita, a 1st grade teacher, make their home in Avon.

OTHER FEATURED SPEAKERS

Mariann Dolnick is a fifth grade teacher at Pickett’s Mill Elementary in Acworth, Georgia. Mariann has 27 years of teaching experience in grades 4 through 8. She holds a BA in Elementary Education from Mercyhurst University in Erie, PA and a Masters in Early Childhood Education from Kennesaw State University in Kennesaw, Georgia. Her specialty is working with at risk students in Georgia’s Early Intervention Program. Mariann will present ideas for creating an interdisciplinary unit that will excite and motivate your students. Although she grew up in Pennsylvania and has spent her adult life in Georgia, Mariann traces her roots back to SD where she was born in Brookings.

Peggy Norris is the Deputy Director for Education and Outreach at Sanford Underground Laboratory at Homestake. Peggy grew up in West Texas, attended Rice University in Houston (B.A. in physics and chemistry) and Columbia University in New York (M.A. and PhD in chemical physics) and then moved to northern California. She spent 25 years at Lawrence Berkeley National Lab in California as a research scientist specializing in nuclear and accelerator physics, with a strong side interest in physics education. In 2009 she relocated to Lead, South Dakota to help realize the vision for the Sanford Center for Science Education at DUSEL, and is greatly enjoying her role in translating the science of DUSEL to educators and students across the state.

Julie Nurnberger-Haag has been a mathematics educator for fifteen years and is certified to teach 6th-12th grade mathematics as well as K-12 learning disabilities. While teaching 7th-12th grade mathematics, she developed methods for teaching math with movement in order to help her students learn more difficult topics in ways that would make sense to them. Julie has shared these ideas with teachers at regional, state, and national conferences as well as through articles in *Mathematics Teaching in the Middle School* and *The Mathematics Teacher*. Julie has also taught mathematics for elementary teachers and other collegiate math courses. More recently she has facilitated teacher professional development of math and science at the Northwest Ohio Center of Excellence in Science and Mathematics Education, the National Science Foundation GK-12 PRISM program, and as a consultant with local schools. Julie is currently pursuing a Ph.D. at Michigan State University in order to become a professor, with the goal of teaching future teachers and conducting research to discover in what ways and for what topics representing mathematics through movement helps students learn.

Ed Sobey created the Northwest Invention Center to serve schools and museums with hands-on programs and exhibits, and to help inventors. Ed directed museums for nearly twenty years, served as the first director of the National Inventors Hall of Fame in Akron, Ohio and founded the National Toy Hall of Fame at A. C. Gilbert’s Discovery Village in Salem, Oregon. He also directed the South Florida Science Museum, the Museum of Science & History in Jacksonville, and the Fresno Metropolitan Museum. Ed taught museum management at the University of Washington and was elected President of the Ohio Museums Association. In addition to directing museums, Ed created and hosted a television show on inventing (“The Idea Factory,” KFSN-ABC) and co-hosted a science series (“Blow the Roof Off”) for the Ohio Public Broadcast Network. He has written fifteen books on subjects from backpacking to robots and kids science projects. At California State University, Fresno, Ed worked with Professor Tim Stearns to launch Kids Invent Toys. He holds a Ph.D. in oceanography from Oregon State University. He is a Fellow of the Explorers Club and serves as the Chairman of the Pacific Northwest Chapter.

2011 Spring Conference

South Dakota Science Teachers Association
South Dakota Council of Teachers of Mathematics

The meeting rooms for all sessions are in
The Crossroads Hotel/Huron Events Center

Program

Thursday, February 3, 2011

7:00 PM - 9:00 PM	Evening Sessions	(See Program)
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Friday, February 4, 2011

7:00 AM - 4:20 PM	Registration Open	Pre-Function Area
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8:00 AM - 5:00 PM	Exhibits Open	Pre-Function Area
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8:30 AM - 11:20 AM	Morning Sessions	(See Program)
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11:45 AM - 1:10 PM	Friday Luncheon (included in registration fee)	Prairie Ballrooms
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1:30 PM - 4:20 PM	Afternoon Sessions	(See Program)
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4:30 PM	SDCTM Business Meeting SDSTA Business Meeting	Dakota C Dakota G
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6:30 PM	Friday Evening Banquet (Cost is \$20)	Prairie A, B, C
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Saturday, February 5, 2011

7:00 AM - 11:20 AM	Registration Open	Pre-Function Area
7:00 AM - 8:00 AM	Breakfast Meeting Presidential Awardees (Past & Present)	Salon

8:30 AM - 11:20 AM	Morning Sessions	(See Program)
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12:00 Noon - 1:00 PM	Saturday Luncheon (included in registration fee)	Prairie A, B, C
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1:00 PM - 3:50 PM	Afternoon Sessions	(See Program)
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4:00 PM	Joint SDCTM & SDSTA Executive Board Meeting	Boardroom
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Program for 2011 Joint Conference

Special thanks for helping with our technology needs go to : TIE for the projectors, Connecting Point for the Promethean Equipment and Brian Lee/Workplace Technology Center for the SmartBoard Equipment.

Thursday

7 pm

Friday

8:30 am

7:00-9:00 pm

Dakota C

Session: 1

Feb. 3, 2011

Grade Level: All

Facilitator: Cindy Kroon
SDCTM President

Math Sharing Session

Sharing lessons and activities will be the focus of this session. Bring 25 copies of your favorite activity or lesson. Or just come!

7:00-9:00 pm

Dakota G

Session: 2

Feb. 3, 2011

Grade Level: All

Facilitator: Brenda Murphey
SDSTA President-elect

Science Sharing Session

Sharing lessons and activities will be the focus of this session. Bring 25 copies of your favorite activity or lesson. Or just come!

8:30-10:20 am

Prairie C

Session: 3

Feb. 4, 2011

2 hours

Grade Level: 6-12+

Featured Speaker

Ed Sobey

Northwest Invention Center
Redmond, Washington

Electric Motor Science & Math

Get revved up to use inexpensive electric motors in your classroom. Yes, it is safe and easy, and it gets immediate student buy in. You can teach a broad swath of physical science content by having kids make models that engage their interest. Zoom! Zoom!

Do you have a banquet ticket?

**The speaker is Paul Kuhlman,
2009 SD Teacher of the Year.**

Friday 8:30 am

8:30-9:20 am Session: 4
Dakota A Feb. 4, 2011

Exhibitor

Grade Level:

Speaker: Nola Redmond
Connecting Point

Are you ready to take your Promethean Flipcharts to a higher level? Learn about creating Flipcharts with your own sound recordings as part of the pages. Learn how to engage your students in recording their own poems and stories. The possibilities are endless! Come and see for yourself.

8:30-9:20 am Session: 5
Dakota B Feb. 4, 2011

Grade Level: 3-12+

Speaker: Dave Martin
Cheyenne-Eagle Butte High School

Smartboard Games to Engage Students

Smartboards provide an engaging tool to involve students in activities to review and reinforce key math concepts. Come to explore, share, and get involved with SmartBoards.

**Next Year's Conference is
February 2, 3, and 4, 2012!**

Friday 8:30 am

8:30-9:20 am Session: 6
Dakota C Feb. 4, 2011

Repeat of #97

Grade Level: 9-12+

Speaker: Kelly Riedell
Brookings High School

Hands on Biology Activities

Experience a variety of role plays, labs, games, and other hands on learning activities which can be used to introduce new concepts, reinforce understanding, and enhance student performance for all students in your classroom. Participants will take home a CD with instructions and handouts in classroom-ready form.

8:30-9:20 am Session: 7
Dakota D Feb. 4, 2011

Grade Level: 9-12+

Facilitator: Matthew Miller
SDSU

Expectations of universities in SD for the skill level of incoming students in biology and chemistry

This one hour panel session is one of two offered to discuss the skills that South Dakota higher education institutions expect high school students to already know when they enter that institution. This session focuses on biology and chemistry; the other one will focus on mathematics and physics. All teachers are welcome to attend either session.

Friday

8:30 am

8:30-9:20 am
Dakota E

Session: 8
Feb. 4, 2011

Grade Level: 6-8

Speaker: Jennifer Fowler
SD Project Learning Tree

**Green Schools
and Project Learning Tree**

Green Schools! Provides a blueprint for educators, students, school board members, parents and interested community members to teach, learn, and engage together in creating a more green and healthy learning environment at their school. It combines environmental education, service learning and leadership opportunities for students to help turn their school into a model green school.

8:30-9:20 am
Dakota F

Session: 9
Feb. 4, 2011

Grade Level: 9-12+

Speaker: Andrew Shiers
DSU

**Using GeoGebra
in the Trigonometry Classroom**

GeoGebra is downloadable or web-accessed freeware that allows users to graph, analyze, and manipulate algebraic and trigonometric functions (among other mathematical uses)--essentially a quick function grapher, with a spreadsheet view of values if desired. This presentation will introduce basic GeoGebra graphing techniques and manipulations for a high school trigonometry course. (See GeoGebra.org to get started.)

Friday

8:30 am

8:30-9:20 am
Dakota H

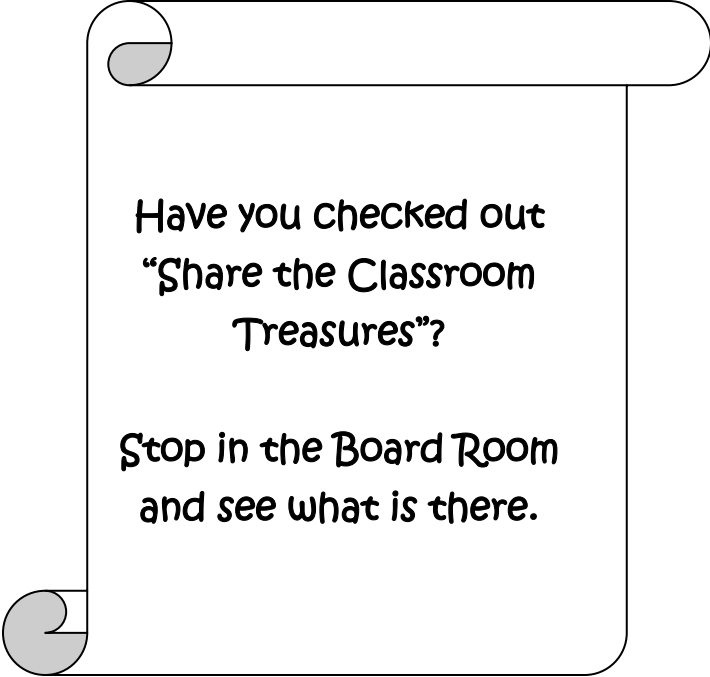
Session: 10
Feb. 4, 2011

Grade Level: 6-12+

**Speakers: Chris Larson,
Judy Vondruska,
& Sharon Vestal**
SDSU

**M²S: Sharing and Lessons
Learned**

The participants from M²S will meet and discuss technology, ideas, and lessons they have used this school year, focusing on what has worked well and what changes should be made.



**Have you checked out
"Share the Classroom
Treasures"?**

**Stop in the Board Room
and see what is there.**

Friday

9:30 am

9:30-10:20 am
Prairie A

Session: 11
Feb. 4, 2011

Grade Level: 6-12+

Featured Speaker
Julie Nurnberger-Haag
Michigan State University

Math on the Move:
Integer Operations

Come prepared to move! Understanding and operating on integers is a topic that children experience initially in upper elementary school and continues to be a challenge for students when they use integers even in advanced algebra. I will share a multisensory unit for operations on integers that students across the country have found helpful.

**Banquet tickets are available
until Noon today.**

**The speaker is Paul Kuhlman,
2009 SD Teacher of the Year.**

**Remember the banquet
starts at 6:30 pm.**

Friday

9:30 am

9:30-10:20 am
Prairie B

Session: 12
Feb. 4, 2011

Repeat #76

Grade Level: All

Featured Speaker
Margaret (Peggy) Norris
Sanford Underground Lab/BHSU

**The Vision for the Sanford Center
for Science Education at DUSEL**

The Sanford Center for Science Education will be the public face of the DUSEL laboratory. Plans are underway for the design of the facility and its programming, which includes exhibits, onsite interactive exhibits and opportunities to experience authentic science, offsite programs and opportunities to experience authentic science, and virtual programming. Preliminary plans in all these areas will be discussed.

9:30-10:20 am
Dakota A

Session: 13
Feb. 4, 2011

Grade Level: 9-12+

Speaker: Kristi Lutgen
Deubrook Area Schools

Students Watch Lectures--At Home
Students absent? Teacher absent? No problem! Class can go on as scheduled. Using ActivInspire and Camtasia software I produce a video of my lectures for the students to watch. I will show what I have done in my Advanced Algebra class to

reduce frustration over homework. Come and see if this would work for you.

Friday 9:30 am

9:30-10:20 am Session: 14
Dakota B Feb. 4, 2011

Repeat of #70

Grade Level: 3-8

Featured Speaker

Mariann Dolnick

Pickett's Mill Elementary
Acworth, Georgia

Mush ON!

Learn how to create an interdisciplinary unit implementing The Last Great Race on Earth: The Iditarod. Lots of ideas you can use for this year's race March 5! Then join us for a snack later today working with fractions, decimals, and percents in our companion session, Munchies on the Iditarod Trail.

9:30-11:20 am Session: 15
Dakota C Feb. 4, 2011

2 hours-Repeat of #80

Grade Level: 3-12+

Speaker: Elizabeth A. McMillan

Flandreau Middle School

HIGHS & LOWS of Weather

Learn modules from Project Atmosphere: tracking tornadoes & high and low pressure fronts. Discover wonderful weather websites - be the first to know what's coming. Learn about opportunities to travel to Kansas City, Maryland, or earn Graduate

Credit all for free through Project Atmosphere and Project DataStreme.

Friday 9:30 am

9:30-11:20 am Session: 16
Dakota D Feb. 4, 2011

2 hours

Grade Level: 9-12+

Speaker: Steven Shaffer

EMC Insurance Companies

School Chemical Clean-out (SC3)

This presentation addresses chemical management and risk reduction strategies for biology and chemistry classrooms. These areas can pose the greatest risk schools and are frequently out of compliance with EPA regularions. Topics include, identification and removal of legacy chemicals, EPA definitions of hazardous waste, and chemical management strategies.

9:30-10:20 am Session: 17
Dakota E Feb. 4, 2011

Repeat of #103

Grade Level: 9-12+

Speaker: Sheila E. McQuade

O'Gorman High School

Hands-on Geometry

Everyday items can make HS Geometry concepts more "real" to students. I will share some of the activities I use in my classroom to increase student understanding.

Next Year's Conference is

February 2, 3, and 4, 2012!

Friday 9:30 am

9:30-11:20 am Session: 18
Dakota F Feb. 4, 2011
2 hours—Repeat of #72

Grade Level:

Speaker: Dawn E. Ottman
KidWind/WindSenator

**Renewable Energy: Curriculum
& Workshop Development:
Wind & Solar, Energy
Conservation**

This presentation is designed to help science and math teachers to add renewable energy and energy conservation to their classroom curriculum and help is also offered to aid in the development of classroom workshops in solar and wind energy.

9:30-10:20 am Session: 19
Dakota G Feb. 4, 2011
Repeat of #101

Grade Level: 6-12+

Speaker: Judy A. Vondruska
SDSU

**Imaging and Image Processing
with the NASA Micro-
observatory**

Participants will learn how to use the NASA Micro-observatory to take multiple colored filter images and then post-process the images to create colored gif images. Bring a laptop if you can.

Friday 9:30 am

9:30-10:20 am Session: 20
Dakota H Feb. 4, 2011

Grade Level: 6-12+

Speaker: Christine L. Larson
SDSU

M²S: Using Algebra Tiles

Algebra Tiles will be used to solve and simplify a variety of problems. These problems will be applied problems with science applications.

9:30-10:20 am Session: 20.5
Symposium Feb. 4, 2011

Grade Level: 9-12+

Speaker: Robin L. Cochran-Dirksen
Lead-Deadwood HS

**Teaching Cell Cycle and Cancer
Using Inside Cancer.org**

How to use the resources from the DNA Learning Center at Cold Spring Harbor Lab's InsideCancer.org to teach the mechanisms of cancer.



Friday

9:30 am

9:30-10:20 am
Salon

Session: 21
Feb. 4, 2011

Grade Level: 6-8

Speaker: Kristen L. Rhoades
West Central Middle School

Differentiating Daily Math
Assignments

This presentation will show how pre-testing, using achievement series, can help to simplify daily differentiation. The focus will be on daily differentiation by allowing three different daily assignments. Students are placed in a group for each section rather than for the entire chapter.

Friday

10:30 am

10:30-11:20 am
Dakota A

Session: 22
Feb. 4, 2011

Grade Level: K-2

Speakers: Glenda Knuth &
Lanesha Underberg
Hartford Elementary-West Central

Number Sense Activities

Practical activities for number sense for Kindergarten, 1st or 2nd grade.

Friday

10:30 am

10:30-11:20 am
Dakota B

Session: 23
Feb. 4, 2011

Grade Level: 6-12+

Speakers: Paul R. Kuhlman
& Danielle Peterson
Avon HS & Beresford HS

SmartBoard Science Share Session

Come share your best ideas for using a SmartBoard in the science classroom. The presenters will share a few of their ideas as well.

10:30-11:20 am
Dakota E

Session: 24
Feb. 4, 2011

Grade Level: 6-12+

Speaker: Michael T. Catalano
DWU

Quantitative Literacy: What Is It and
How Do We Achieve It?

This session will include a brief history of the Quantitative Literacy (QL) movement, some examples of QL sources that are out there, and some discussion why QL is important and how to achieve it. We'll include some information on the National Numeracy Network.

Friday 10:30 am

**10:30-11:20 am Session: 25
Dakota G Feb. 4, 2011**

Grade Level: 6-12+

Facilitator: Kurt D. Cogswell
SDSU

**Roundtable Discussion—Reducing
the Need for University Level
Math Remediation**

The need for math remediation at universities exacts a huge financial and human cost. Can South Dakota K-12 and university math faculty working together improve the situation? Emphasis will be on identifying causes and constructing a concrete plan of action to address those causes.

**10:30-11:20 am Session: 26
Dakota H Feb. 4, 2011**

Grade Level: 6-12+

Speaker: Judy A. Vondruska
SDSU

**Exploring PhET Interactive
Simulations**

An opportunity will be provided to explore the large variety of free interactive tutorials developed by the university of Colorado-Boulder. Activities for physics, chemistry and mathematics. Bring a laptop if you can.

Friday 10:30 am

**10:30-11:20 am Session: 26.5
Symposium Feb. 4, 2011**

Grade Level: All

Facilitator: Jay Berglund
Gettysburg HS

Common Core Standards Overview

This is a brief overview of the Common Core Standards in Mathematics which were approved by the SD State Board of Education in November and a discussion of how it will affect SD teachers.

**10:30-11:20 am Session: 27
Salon Feb. 4, 2011**

Grade Level: 3-8

Speaker: Jan Martin
SD Department of Education

**Science Results for Grades 4 & 8—
National NAEP Comparisons**

South Dakota's results for science from NAEP 2009 will be presented. A comparison between state standards and the NAEP framework will be explored along with implications for NAEP 2011 and TIMSS 2011.

**Next Year's Conference is
February 2, 3, and 4, 2012!**

Friday

NOON

**Noon-1:00 pm
Prairie A, B, C**

**Session: 28
Feb. 4, 2011**

Grade Level: All

Speakers: Cindy KroonSDCTM Pres.
& **Molly TenBroek**SDSTA Pres

LUNCH

Presidential Awardees

Math--Lori Keleher, Huron HS
Science--Angie Hejl, Yankton HS

Grants presented by Tom Durkin and Edward Duke:

Robotics Materials award-\$5000
Kelly Lane Earth and Space
Science award (\$5000)

**Awards
Announcements
Door Prizes**

Do you have a banquet ticket?

Special honorees will be the current Presidential State Finalists.

Friday

1:30 pm

**1:30-2:20 pm
Dakota A**

**Session: 29
Feb. 4, 2011**

Grade Level: All

Facilitator: James Stearns
Groton HS

Promethean Science Share Session

Come share your best ideas for using a Promethean Board in the science classroom. The presenter will share a few of his ideas as well.

**1:30-3:20 pm
Dakota B**

**Session: 30
Feb. 4, 2011**

2 hours

Grade Level: 3-8

**Featured Speaker
Mariann Dolnick**

Pickett's Mill Elementary
Acworth, Georgia

Munchies on the Iditarod Trail

Teachers will learn how to help their students see the connections between fractions, decimals and percents. Participants will collect, display and analyze data using bar graphs, circle graphs and data charts. Your students will love this hands-on activity.



evidence of impact on both experienced and new teachers.

Friday 1:30 pm

1:30-2:20 pm Session: 31
Dakota C Feb. 4, 2011

Grade Level: 6-12+

Speakers: Julie Olson
& Tricia Neugebauer
Mitchell High School

Evolution Principles and Activities
Activities to illustrate evolutionary principles such as survival of the fittest, artificial selection, and designer dogs.

1:30-2:20 pm Session: 32
Dakota D Feb. 4, 2011

Grade Level: All

Speakers: Marlene Rothermel
& TTSN Teacher Leaders
TIE

SD Teacher to Teacher Support Network (TTSN)
The overarching goal of TTSN is to establish a multi-level online environment for SD educators that enhances professional practice and impacts new teacher retention through e-mentor support. During this session, TTSN leaders will provide an overview of the network and

Friday 1:30 pm

1:30-2:20 pm Session: 33
Dakota E Feb. 4, 2011

Grade Level: 9-12+

Speaker: John D. Hollingsworth
University Center

Allocation Problem with the Electoral College
We will compare the Hamiltonian Method to the Jeffersonian Method. This problem was the subset of the 1st Presidential Veto

1:30-2:20 pm Session: 34
Dakota F Feb. 4, 2011

Repeat of #71

Grade Level: All

Speaker: Kenneth Graupmann
SD Discovery Center

NASA Educational Materials
Learn about NASA educational materials and activities provided by a NASA Solar System Educator.



M²S: Newton's Law of Cooling

We will use the Vernier temperature probe and software to explore Newton's Law of Cooling and discuss its applications in the real world.

Friday 1:30 pm

1:30-2:20 pm Session: 35
Dakota G Feb. 4, 2011

Alternate Session #91

Grade Level: 6-12+

Facilitator: Matt Miller
SDSU

Preservice Mathematics and Science Teacher Forum

Two different sessions will allow veteran teachers to meet this year's class of student and prospective teachers. Students from SDSU and USD involved are Brandon Blide, Jessica Eich, Katie Graves, Robyn Johnson, Chelsey Loney, Sara Otteman, Sam Peterson, Sheri Rochel, Cassandra Shull, Laura Sorensen, and Melanie Zinter. The forum will provide the new teachers an opportunity to ask veteran teachers questions about what to expect during those first years. Please come and meet the new teachers and offer your advice.

1:30-2:20 pm Session: 36
Dakota H Feb. 4, 2011

Grade Level: 9-12+

**Speakers: Sharon S. Vestal
& Judy Vondruska**
SDSU

Friday 1:30 pm

1:30-2:20 pm Session: 36.5
Symposium Feb. 4, 2011

Exhibitor

Grade Level: K-8

Speaker: Maggie J. Lindsey
SD Game, Fish and Parks

What Game Fish & Parks Has to Offer for Teachers

A show & tell of our educational loaner kits, programs, and other resources such as Growing Up Wild and Project Wild.

1:30-2:20 pm Session: 37
Salon Feb. 4, 2011

Grade Level: 6-12+

Speaker: Gloria J. Vavra
Wessington Springs High School

Writing, Notetaking, and Reading in Math

Using windows journal writer, one note, or Word with tablets, students take notes, journal and share math reading ideas.

Next Year's Conference is

February 2, 3, and 4, 2012!

**Special Thanks go to
our 2011 technology
partners:**

Friday

2:30 pm

**2:30-3:20 pm
Prairie A**

**Session: 38
Feb. 4, 2011**

Grade Level: 6-12+

**Featured Speaker
Julie Nurnberger-Haag**
Michigan State University

**Math on the Move: Number and
Operation Foundations for Algebra**

In this session, participants will have the chance to try multisensory ways of teaching number and operations topics that begin in upper elementary school and continue to be relevant through advanced algebra. Topics we will address include order of operations, inverse operations, Greatest Common Factor & Least Common Multiple (including with variables), and other tips using what I call "cheap friends."

Friday

2:30 pm

**2:30-3:20 pm
Prairie B**

**Session: 39
Feb. 4, 2011**

Grade Level: 6-12+

**Featured Speaker
Margaret (Peggy) Norris**
Sanford Underground Lab/BHSUU

**Waste Water Treatment at the
Sanford Underground Lab:
Opportunities for Classroom
Activities**

The Waste Water Treatment Plant at the Sanford Underground Lab uses filters and biological agents to clean the water pumped from the underground. This process enables educational opportunities in physical science, earth science, life science and engineering, and is an excellent example of multi- and inter-disciplinary approaches to environmental remediation. Classroom activities and ties to state standards will be discussed.

TIE Connecting Point Workplace Technology Center

Promethean Math Share Session

Come share your best ideas for using a Promethean Board in the math classroom. The facilitator will share a few of her ideas as well.

Friday 2:30 pm

2:30-4:20 pm Session: 40
Prairie C Feb. 4, 2011

2 hours

Grade Level: 3-8

Featured Speaker

Ed Sobey

Northwest Invention Center
Redmond, Washington

Design, Build and Test Boat Designs

Ahoy! Launch your science lessons by making and testing boats. Power them with balloons, rubber bands, or electric motors to cover much of the physical science curriculum, while having a splashing good time. In this two-hour workshop you will work in small teams to design, build and test boat designs.

Friday 2:30 pm

2:30-3:20 pm Session: 42
Dakota C Feb. 4, 2011

Grade Level: 3-8

Speaker: Micheline Hickenbotham

BHSU

There Is More to Estimation than Rounding

Find out the five estimation strategies that work with whole and decimal numbers.

2:30-3:20 pm Session: 43
Dakota D Feb. 4, 2011

Grade Level: 6-12+

Speakers: Sharon Rendon, Becky Umentum & Sally Heberlein

Rapid City School District

Fractions I--Multiple Methods of Multiplying

Explore multiplication of fractions, whole numbers, and mixed numbers by using models, diagrams, and number lines.

2:30-3:20 pm Session: 41
Dakota A Feb. 4, 2011

Grade Level: 9-12+

Facilitator: Kristi Lutgen

Deubrook Area Schools

In an effort to make our program better, we are trying something different. Sessions 43 & 54 were designed to be a two hour session that has been reworked into two stand alone one hour sessions that complement each other. Go to either or both and let us know how you like this format. See also Sessions 81 & 90. Thank you Sharon, Becky and Sally for trying this out.

Friday 2:30 pm

**2:30-3:20 pm Session: 44
Dakota E Feb. 4, 2011**

Grade Level: 9-12+

**Speakers: Penny Smith
& Stephanie Sierks**
USD

Go Teach South Dakota

Go Teach South Dakota is a partnership aimed towards developing and retaining high quality teachers for rural and high needs areas. We are looking for high school students interested in pursuing a career in education and for educators to help spread the word. Door prizes!

**2:30-3:20 pm Session: 45
Dakota F Feb. 4, 2011**

Repeat of #99

Grade Level: 3-8

Speaker: Jennifer Fowler
SD Project Learning Tree

**Teaching about Nature,
Project Learning Tree**

PLT is an award winning, multi-disciplinary environmental education program for educators, providing the tools educators need to bring the environment into the classroom and their students into the environment. PLT meets state and national education standards.

Friday 2:30 pm

**2:30-3:20 pm Session: 46
Dakota G Feb. 4, 2011**

Grade Level: 9-12+

Facilitator: James Stearns
SD-AAPT

SD-AAPT Photo Contest

Final voting and judging will be taking place on the photos and essays that have been submitted. Check out the photos in the hall Thursday night and/or Friday and put in your two cents worth. Vote by putting in a penny for your top choice or two.

**2:30-4:20 pm Session: 47
Dakota H Feb. 4, 2011**

2 hours

Grade Level: 6-12+

Speaker: Christine L. Larson
SDSU

A Deeper Understanding of Algebra

Participants will have an opportunity to look at basic concepts in Algebra, such as simplifying expressions, writing algebraic expressions, and solving algebraic

equations from a hands-on, problem solving perspective.

about our students and how they compare nationally in math.

**Don't forget the business meetings: Science-Dakota G
Math-Dakota C**



Friday 2:30 pm

**2:30-4:20 pm Session: 47.5
Symposium Feb. 4, 2011**

2 hours

Grade Level: K-2

Speaker: Sandy K. Ullrich

Aberdeen School District-
O. M. Tiffany Elementary

Understanding Number Sense

K-2 teachers lay the foundation for mathematics and understanding number sense is the key element. Learn how and what to teach to ensure a deep understanding of number sense.

**2:30-3:20 pm Session: 48
Salon Feb. 4, 2011**

Grade Level: 9-12+

Speaker: Jan Martin

SD Department of Education

So How Do South Dakota High School Graduates Stack Up?

In 2009, South Dakota was one of eleven states to participate in a grade 12 state NAEP pilot. Discover what was learned

Friday 3:30 pm

**3:30-4:20 pm Session: 49
Prairie A Feb. 4, 2011**

Grade Level: 3-12+

**Featured Speaker
Julie Nurnberger-Haag**

Michigan State University

Math on the Move: Geometry

Come prepared to move! In this session we'll focus on multisensory ways students can explore properties of polygons and angles formed by parallel lines. Potential topics include: concavity/convexity, variations of polygons (getting kids to release their prototypical images), vertical angles, angles formed by parallel lines, polygon angle sum theorems, and so forth.

**3:30-4:20 pm Session: 50
Prairie B Feb. 4, 2011**

Grade Level: 6-12+

**Featured Speaker
Margaret (Peggy) Norris**

Sanford Underground Lab/BHSU

A Conceptual Modern Physics

Course Highlighting Underground Science

A one semester Conceptual Modern Physics class has been designed by a team of physics teachers and college faculty and piloted in two Sioux Falls high schools in the Fall of 2010. The course, which only requires Algebra as a pre-requisite, has been designed with learning outcomes well aligned with state science standards. Successes and challenges will be discussed.

Friday 3:30 pm

**3:30-4:20 pm Session: 51
Dakota A Feb. 4, 2011**

Grade Level: 9-12+

Speaker: Dave Martin
Cheyenne-Eagle Butte High School

4 Representations

Explore piecewise equations to develop the four representations of a function--equation, table, graph and word description. Applications to linear equations will be made.

**3:30-4:20 pm Session: 52
Dakota B Feb. 4, 2011**

Grade Level: 9-12+

Speaker: Teresa Timmerman
Brandon School Division--Manitoba

Factoring for All!

Factoring can be engaging, interactive and meaningful for all students. Find out how to develop foundational factoring skills, use manipulatives (physical and virtual) and

progress to a sound algebraic understanding of factoring. Participants will leave with a toolkit of strategies and resources to make factoring accessible to all learners.

Friday 3:30 pm

**3:30-4:20 pm Session: 53
Dakota C Feb. 4, 2011**

Grade Level: 3-8

Speaker (s): Micheline Hickenbotham
BHSU

Divisions through Students' Eyes

This session looks at students' work to make sense of long divisions. Sharing and comparing various ways/strategies to solve long divisions.

**3:30-4:20 pm Session: 54
Dakota D Feb. 4, 2011**

Grade Level: 6-12+

Speakers: Sharon Rendon, Becky Umenthum & Sally Heberlein
Rapid City School District

Fractions II-Alternative Approaches to "Just Invert and Multiply"

Explore division of fractions, whole numbers, and mixed numbers by using models, diagrams, and number lines

3:30-4:20 pm Session: 55

Dakota E **Feb. 4, 2011**

Repeat of #88

Grade Level: 9-12+

Speaker: Sheila E. McQuade

O'Gorman High School

Fun Websites for Teachers (and Students). . . And They're Free!

I will share some of the websites that I've found useful for my Geometry classes.

Please share any you have found as well.

Friday 3:30 pm

3:30-4:20 pm Session: 56
Dakota F Feb. 4, 2011

Grade Level: K-12+

Speakers: Julie Olson
& Tricia Neugebauer

Mitchell High School

Candy Science

Ever want to use that leftover candy from Halloween, Christmas, or Easter?

Something for all levels. Hands on!

3:30-4:20 pm Session: 57
Dakota G Feb. 4, 2011

Grade Level: 9-12+

Facilitators: SD-AAPT Officers

AAPT Meeting

All interested Physics or Physical Science teachers are invited to attend. This is the annual meeting of the South Dakota chapter of the American Association of Physics Teachers.

Friday 3:30 pm

3:30-4:20 pm Session: 58
Salon Feb. 4, 2011

Grade Level: 3-8

Speaker: Steven M. Rokusek
SDPB

Biz Kid\$

Biz Kid\$ is the fun, fast-paced education resource where kids teach kids about money. The young business owners featured in each episode teach the importance of saving, budgeting, investing and giving back to the community.

Friday 4:30 pm

4:30-5:30 pm Session: 59
Dakota C Feb. 4, 2011

Grade Level: All

Facilitator: Cindy Kroon
SDCTM President

SDCTM Business Meeting



GO!

4:30-5:30 pm

Dakota G

Session: 60

Feb. 4, 2011

Grade Level: All

Facilitator: Molly TenBroek

SDSTA President

SDSTA Business Meeting

Friday

6:30 pm

**6:30
Prairie A, B, C**

**Session: 61
Feb. 4, 2011**

Grade Level: All

BANQUET

Speaker: Paul Kuhlman
2009 Teacher of the Year

The movie "Waiting for Superman" has created some great discussions about the education of our children. Regardless of your opinion of the movie, the one undisputed fact is that all our students deserve a "Superman" in their classroom. The good news is that our superhero is already present within you, all you need to do is find a phone booth (hard to do these days) and let him/her out! This presentation will provide some ideas of how you can avoid kryptonite in the classroom and become Superman for all your students.

**See you tomorrow
for more great speakers.**

**Presidential Awardees—see
you at breakfast.**

Saturday

7:00 am

**7:00-8:00 am
Salon**

**Session: 62
Feb. 5, 2011**

Grade Level: All Awardees

**Facilitators: Diana McCann
& Ramona Lundberg**
Presidential Award Program Coordinators

Presidential Awardee Breakfast

All past and present math and science awardees including this year's finalists are invited to join us for breakfast.

Saturday

8:00 am

**8:00-8:30 am
Dakota H**

**Session: 63
Feb. 5, 2011**

Grade Level:

Facilitator: Larry Browning
SDSU

Registration for Cosmic Math

This is a registration for the people who attended the Cosmic Math Workshop in the summer of 2010.

**Next Year's Conference is
February 2, 3, and 4, 2012!**

Saturday

8:30 am

**8:30-9:20 am
Prairie B**

**Session: 64
Feb. 5, 2011**

Grade Level: 9-12+

Speaker: Steven M. Rokusek
SDPB

NOVA: Making Stuff

In NOVA's new four-hour series, "Making Stuff," we take a tour of the material world we live in, offering viewers a behind-the-scenes look at scientific innovations that are ushering in a new generation of materials that are stronger, smaller, smarter, and cleaner than anything we've ever seen.

**8:30-9:20 am
Prairie C**

**Session: 65
Feb. 5, 2011**

Grade Level: 6-12+

Speaker: Dave Martin
Cheyenne-Eagle Butte High School

Are You a Greedy Pig?

Using dice games, students become actively involved in collecting data and using the data to make decisions. Descriptive statistics and various graphical representations of data will be presented.

**Next Year's Conference is
February 2, 3, and 4, 2012!**

Saturday

8:30 am

**8:30-9:20 am
Dakota A**

**Session: 66
Feb. 5, 2011**

Grade Level: 6-12+

**Speakers: Matthew Miller,
Jane Hamze & Spencer Cody**
SDSU, West Central HS & Hoven HS

**Action Research in the Classroom:
Examples of Classroom
Change to Engage Students**

Several examples of classroom activities conducted by South Dakota high school teachers to engage students will be discussed along with the data which assessed the outcome. The discussions will focus primarily on the activities utilized in the classroom but an overview of how to conduct classroom research will be presented.

**8:30-9:20 am
Dakota B**

**Session: 67
Feb. 5, 2011**

Grade Level: 9-12+

Speaker: Teresa Timmerman
Brandon School Division--Manitoba

Assessment For, As and Of Learning

Assessment is an important part of regular activity in the classroom. Assessment OF learning is only one part of the feedback cycle. Get practical tips and concrete ideas on how to use assessment FOR learning and assessment AS learning in a continuous feedback cycle that promotes student learning, understanding and growth.

Saturday 8:30 am

8:30-9:20 am **Session: 68**
Dakota C **Feb. 5, 2011**

Exhibitor

Grade Level: 6-8

Speaker: Lonnie A. Bellman
CPM Educ. Program

Using Tiles and Gems to Teach Math in Grades 6-8

Participants will be actively engaged in using manipulatives (Integer Tiles), playing games and doing activities to enhance the learning of math concepts. The Integer Tiles will be used to introduce and practice integers and their operations. Games will be played that deal with integers, order of operations, graphing and writing.

8:30-9:20 am **Session: 69**
Dakota D **Feb. 5, 2011**

Grade Level: 3-8

Speaker: Sheryl E. Larson
Chamberlain School

Fold It, Act It, Say It

Activities that activate the whole brain will be shared. Get your students folding, shouting, and moving.

Saturday 8:30 am

8:30-9:20 am **Session: 70**
Dakota E **Feb. 5, 2011**

Grade Level: All

Speaker: Mike Barondeau
Edmunds Central School

BB Board Molecular Demonstrator for Science

This is a make it and take-it session where you construct an acrylic BB-Board demonstrator for atomic/molecular motion. This session is limited to the 1st seven attendees and materials are free. To see what you are making, go to:
<http://mb045.k12.sd.us/Ideas/Bbboard.htm>

8:30-9:20 am **Session: 71**
Dakota F **Feb. 5, 2011**

Repeat of #34

Grade Level: All

Speaker: Kenneth Graupmann
SD Discovery Center

NASA Educational Materials

Learn about NASA educational materials and activities provided by a NASA Solar System Educator.

Saturday

8:30 am

8:30-10:20 am

Dakota G

Repeat of #18

Grade Level:

Speaker: Dawn E. Ottman

KidWind/Wind Senator

**Renewable Energy: Curriculum
& Workshop Development:
Wind & Solar, Energy
Conservation**

This presentation is designed to help science and math teachers to add renewable energy and energy conservation to their classroom curriculum and help is also offered to aid in the development of classroom workshops in solar and wind energy.

8:30-9:20 am

Dakota H

Session: 73

Feb. 5, 2011

Grade Level: 6-12+

Speaker: Christine L. Larson

SDSU

Cosmic Math: Using Algebra Tiles

Algebra Tiles will be used to solve a variety of problems, both linear and quadratic.

Saturday

8:30 am

8:30-10:20 am

Symposium

Grade Level: 6-12+

Speaker: Nicol A. Reiner

Sioux Falls School District

**Using Algebra Tiles to Enhance
Conceptual Understanding**

Learn how to use algebra tiles as concrete representations that build conceptual understanding and help transition students to abstract algebraic concepts.

8:30-9:20 am

Salon

Session: 74

Feb. 5, 2011

Grade Level: All

Facilitators: Diana McCann

& Ramona Lundberg

Presidential Award State Coordinators

Tips for Winning Money

Would you like to receive \$10,000? Every year South Dakota is able to give two \$10,000 awards, one in science and one in math. The Presidential Award is sponsored by the White House and the National Science Foundation.

Saturday

9:30 am

9:30-10:20 am

Prairie A

Session: 75

Feb. 5, 2011

Grade Level: 3-12+

Speaker

Julie Nurnberger-Haag

Michigan State University

**Math on the Move: Multisensory
Math Your Students Need**

This session will be most beneficial if you attended at least one of the previous Math on the Move Sessions, but all are welcome. You will have the opportunity to collaborate with your colleagues across the state to infuse more multisensory methods into your mathematics teaching. Feel free to bring topics with which your students struggle, and I'll facilitate a session that helps you develop some ways to address these difficult topics in multisensory ways.

Saturday

9:30 am

9:30-10:20 am

Prairie B

Session: 76

Feb. 5, 2011

Repeat of #12

Grade Level: All

Featured Speaker

Margaret (Peggy) Norris

Sanford Underground Lab/BHSUU

**The Vision for the Sanford Center for
Science Education at DUSEL**

The Sanford Center for Science Education will be the public face of the DUSEL laboratory. Plans are underway for the design of the facility and its programming, which includes exhibits, onsite interactive exhibits and opportunities to experience authentic science, offsite programs and opportunities to experience authentic science, and virtual programming. Preliminary plans in all these areas will be discussed.

**Have you met our featured
speakers?**

Mariann Dolnick

Julie Nurnberger-Haag

Peggy Norris

Ed Sobey

9:30-11:20 am

Prairie C

Session: 77

Feb. 5, 2011

2 hours

Grade Level: 3-8

Featured Speaker

Ed Sobey

Northwest Invention Center

Redford Washington

Rocket Powered Science & Math

Launch yourself into fun creative, hands-on teaching with these rocket activities. No explosives, no fancy equipment--just stuff you have or can easily get. Broadly applicable and loads of fun, these activities will generate curiosity, interest, and understanding.

Saturday 9:30 am

9:30-10:20 am Session: 78
Dakota A Feb. 5, 2011

Grade Level: 9-12+

Facilitator: Matthew Miller
SDSU

Expectations of Universities in SD for the Skill Level of Incoming Students in Mathematics and Physics

This one hour panel session is one of two offered to discuss the skills that South Dakota higher education institutions expect high school students to already know when they enter that institution. This session focuses on mathematics and physics; the other one will focus on biology and chemistry. All teachers are welcome to attend either session.

9:30-10:20 am Session: 79
Dakota B Feb. 5, 2011

Repeat of #14

Grade Level: 3-8

Featured Speaker

Mariann Dolnick

Pickett's Mill Elementary
Acworth, Georgia

Mush ON!

Learn how to create an interdisciplinary unit implementing The Last Great Race on Earth: The Iditarod. Lots of ideas you can use for this year's race March 5! Then join us for a snack later today working with data collection and probability in our companion session, Who Will Be the Next Iditarod Champion?

Saturday 9:30 am

9:30-11:20 am Session: 80
Dakota C Feb. 5, 2011

2 hours - Repeat of #15

Grade Level: 3-12+

Speaker: Elizabeth A. McMillan
Flandreau Middle School

HIGHS & LOWS of Weather

Learn modules from Project Atmosphere: tracking tornadoes & high and low pressure fronts. Discover wonderful weather websites - be the first to know what's coming. Learn about opportunities to travel to Kansas City, Maryland, or earn Graduate Credit all for free through Project Atmosphere and Project DataStreme.

9:30-10:20 am Session: 81
Dakota D Feb. 5, 2011

Grade Level: 6-12+

Speakers: Sharon Rendon, Becky Umentum & Sally Heberlein
Rapid City School District

Algebra Tiles I

This session will offer a journey through a middle and secondary curriculum illustrating AREA is the foundation model for whole number multiplication, fractions, and polynomials. Participants will use algebra tiles and the generic rectangle as a basis for multiplying and factoring polynomials.

Saturday 9:30 am

9:30-10:20 am Session: 82
Dakota E Feb. 5, 2011

Grade Level: 3-8

Speaker: Gregory T. Diersen
Great Plains Lutheran HS

Diersen's Dirty Dozen

If you only have this dozen. . . Twelve activities that will not only get your students active in body and mind, but may get their hands dirty. These activities are easy to prepare, vital to curriculum concepts (grades 3 and up) and inexpensive.

9:30-11:20 am Session: 83
Dakota F Feb. 5, 2011

2 hours

Grade Level: K-8

Speaker: Janet L. Briggs
BHSU

Why Is It Always Eleven Below in Huron in February?

Inquiry-based activities investigate multiple reasons for seasons on Earth: why our winters are so cold & our summers so warm, what happens world-wide on the equinox, how the atmosphere is heated and why distance isn't the answer. Activities can be adapted for K-8 classrooms.

Saturday 9:30 am

2 hours

9:30-11:20 am Session: 84
Dakota H Feb. 5, 2011

Grade Level: 6-12+

Speaker: Larry M. Browning
SDSU

Angle Bows to Measure Stars and Cars

Participants will construct Angle Bows-- instruments to measure angles--for their classrooms, and then use them to measure cars, constellations, and other things.

9:30-11:20 am Session: 85
Salon Feb. 5, 2011

2 hours

Grade Level: 9-12+

Speaker (s): Dave Martin
Cheyenne-Eagle Butte High School

Using Multi-sided Die to Explore Fairness

Through Construction of multi-sided dies, the participants will explore theoretical versus experimental probabilities. Construction projects will include fair and non-fair die.

**Next Year's Conference is
February 2, 3, and 4, 2012!**

Saturday

10:30 am

10:30-11:20 am
Prairie A

Session: 86
Feb. 5, 2011

Grade Level: 3-12+

Featured Speaker
Julie Nurnberger-Haag
Michigan State University

**Math on the Move: Multisensory
Math Your Students Need
Part 2**

This session will be most beneficial if you attended at least one of the previous Math on the Move sessions, but all are welcome. You will have the opportunity to collaborate with your colleagues across the state to infuse more multisensory methods into your teaching. Feel free to bring topics with which your students struggle.

Saturday

10:30 am

10:30-11:20 am
Prairie B

Session: 87
Feb. 5, 2011

Grade Level: All

Featured Speaker
Margaret (Peggy) Norris Sanford
Underground Lab/BHSUU

**The Deep Underground Science and
Engineering Lab (DUSEL):
An Update**

DUSEL, planned to be constructed in the former Homestake Mine in Lead, SD, is in the preliminary design phase by the National Science Foundation. The multi-disciplinary science and engineering research to be pursued by the hundreds of scientists awaiting DUSEL completion is a natural hook to interest K-12 and undergraduate students in science and engineering courses and careers.

**Don't forget to fill out your
evaluation of the conference!**

**We need your input to make
next year even better!**

10:30-11:20 am
Dakota A

Session: 88
Feb. 5, 2011

Repeat of #55

Grade Level: 9-12+

Speaker: Sheila E. McQuade
O'Gorman High School

**Fun Websites for Teachers (and
Students). . . And They're Free!**

I will share some of the websites that I've found useful for my Geometry classes. Please share any you have found as well.

Saturday 10:30 am

**10:30-11:20 am Session: 89
Dakota B Feb. 5, 2011**

Grade Level: All

Facilitator: Jay Berglund
Gettysburg HS

SmartBoard Math Sharing Session

Come share your best ideas for using a SmartBoard in the math classroom. The facilitator will share a few of his ideas as well.

**10:30-11:20 am Session: 90
Dakota D Feb. 5, 2011**

Grade Level: 6-12+

Speakers: Sharon Rendon, Becky Umenthum & Sally Heberlein
Rapid City School District

Algebra Tiles II

This is an extension of Algebra Tiles I where participants will continue to use algebra tiles to complete the square and develop an alternative to long division of polynomials.

**Next Year's Conference is
February 2, 3, and 4, 2012!**

Saturday 10:30 am

**10:30-11:20 am Session: 91
Dakota E Feb. 5, 2011**

Alternative to #35

Grade Level: 6-12+

Facilitator: Matthew Miller & Students
SDSU & USD

Preservice Mathematics and Science Teacher Forum

Two different sessions will allow veteran teachers to meet this year's class of student and prospective teachers. Students from SDSU and USD involved are Brandon Blide, Jessica Eich, Katie Graves, Robyn Johnson, Chelsey Loney, Sara Otteman, Sam Peterson, Sheri Rochel, Cassandra Shull, Laura Sorensen, and Melanie Zinter. The forum will provide the new teachers an opportunity to ask veteran teachers questions about what to expect during those first years. Please come and meet the new teachers and offer your advice.

**10:30-11:20 am Session: 92
Dakota G Feb. 5, 2011**

Grade Level: K-5

Speakers: Julie Olson & Marica Shannon
Mitchell High School

Art and Science

Art and science come together for elementary grades using everyday art supplies.

Saturday

NOON

**Noon-1:00 pm
Prairie A, B, C**

**Session: 93
Feb. 5, 2011**

Grade Level: All

Facilitators:

Molly TenBroek, SDSTA Pres.
& **Cindy Kroon**, SDCTM Pres.

LUNCH

**Announcements
Door Prizes**

Saturday

1:00 pm

**1:00-2:50 pm
Dakota B**

**Session: 95
Feb. 5, 2011**

2 hours

Grade Level: 3-8

Featured Speaker

Mariann Dolnick

Pickett's Mill Elementary
Acworth, Georgia

**Who Will Be the Next Iditarod
Champion?**

This session will provide a hands-on activity to help students determine the probability of predicting the winner of the 2011 Iditarod. Data will be collected during this session and then analyzed.

Saturday

1:00 pm

**1:00-1:50 pm
Dakota A**

**Session: 94
Feb. 5, 2011**

Grade Level: 9-12+

**Speakers: Angela M. Hejl
& Jama Mathison**

Yankton High School

**Teaching Genetics
with Bears and Beans**

For some students, abstract ideas concerning genetic variation and allele frequency are difficult. With a few items from the grocery store, you can provide students an opportunity to gather and analyze authentic data to deepen understanding.

**1:00-2:50 pm
Dakota C**

**Session: 96
Feb. 5, 2011**

2 hours

Grade Level: 6-12+

**Speakers: Matthew Miller
& Larry Browning**

SDSU

**Chemistry and Physics—
Demonstration and Laboratory
Make and Take Session**

We propose a 2 hour session during which example demonstrations and laboratory activities will be discussed and practiced; equipment will be shown and some materials will be available to be taken home. Specific demonstrations and laboratory activities will be announced prior to the conference.

Saturday 1:00 pm

1:00-1:50 pm Session: 97
Dakota D Feb. 5, 2011

Repeat of #6

Grade Level: 9-12+

Speaker: Kelly Riedell
Brookings High School

Hands on Biology Activities

Experience a variety of role plays, labs, games, and other hands on learning activities which can be used to introduce new concepts, reinforce understanding, and enhance student performance for all students in your classroom. Participants will take home a CD with instructions and handouts in classroom-ready form.

1:00-1:50 pm Session: 98
Dakota E Feb. 5, 2011

Exhibitor

Grade Level: 9-12+

Speakers: Mike Limmer
& Leo Keiser
Pearson

Never Correct Another Math Paper with Math XL for School

Teachers quickly create, edit, and assign online homework and quizzes which are automatically graded to rapidly assess student understanding. Students get self-paced assistance on problems through guided solution, step-by-step examples, video clips and animations, receive immediate feedback and personalized study plans based on quiz test results.

Saturday 1:00 pm

1:00-1:50 pm Session: 99
Dakota F Feb. 5, 2011

Repeat of #45

Grade Level: 3-8

Speaker: Jennifer Fowler
SD Project Learning Tree

Teaching about Nature, Project Learning Tree

PLT is an award winning, multi-disciplinary environmental education program for educators, providing the tools educators need to bring the environment into the classroom and their students into the environment. PLT meets state and national education standards.

1:00-2:50 pm Session: 100
Dakota G Feb. 5, 2011

2 hours

Grade Level: All

Facilitator: Julie Olson
Mitchell High School

Iron Science Teacher Competition

Just like the Iron Chef series, competing teachers will be challenged to come up with and briefly demonstrate labs/activities/demonstrations when given a set of supplies.

**Next Year's Conference is
February 2, 3, and 4, 2012!**

Saturday 1:00 pm

1:00-1:50 pm Session: 101
Dakota H Feb. 5, 2011

Repeat of #19

Grade Level: 6-12+

Speaker: Judy A. Vondruska
SDSU

**Imaging and Image Processing with
the NASA Micro-observatory**

Participants will learn how to use the NASA Micro-observatory to take multiple colored filter images and then post-process the images to create colored gif images. Bring a laptop if you can.

1:00-2:50 pm Session: 101.5
Symposium Feb. 5, 2011

2 hours

Grade Level: 3-5

Speaker: Sandy K. Ullrich
Aberdeen School District-O. M.
Tiffany Elementary

Fun with Problem Solving

Lessons will be shared that make problem solving fun. The lessons include many math skills and various strategies can be used to solve.

**Next Year's Conference is
February 2, 3, and 4, 2012!**

Saturday 1:00 pm

1:00-1:50 pm Session: 102
Salon Feb. 5, 2011

Grade Level: 3-5

Speaker: Jan Martin
SD Department of Education

Problem Solving and Communication

Building on NAEP data including student and teacher data, strategies for problem solving across the math curriculum will be explored. Ways to improve written communication about problem solving will be presented.

Saturday 2:00 pm

2:00-2:50 pm Session: 102.5
Dakota A Feb. 5, 2011

Grade Level: 9-12+

Speaker: Robin L. Cochran-Dirksen
Lead-Deadwood HS

**Teaching Local and Global
Resources Using Problem-
Based Learning**

Description and reflections on the development of a water quality and indigenous plants curriculum that won a 2010 Toyota Tapestry Large Grant Award.

Saturday 2:00 pm

2:00-2:50 pm Session: 103
Dakota D Feb. 5, 2011

Repeat of #17

Grade Level: 9-12+

Speaker: Sheila E. McQuade
O'Gorman High School

Hands-on Geometry

Everyday items can make HS Geometry concepts more "real" to students. I will share some of the activities I use in my classroom to increase student understanding.

2:00-2:50 pm Session: 104
Dakota E Feb. 5, 2011

Grade Level: K-5

Speaker: Brenda Danielson
Scotland Elementary

Fraction Action

Do your students struggle with fractions? How can we move from shortcuts to true understanding? Activities and strategies for fraction practice will be presented.

Next Year's Conference is
February 2, 3, and 4, 2012!

Saturday 2:00 pm

2:00-2:50 pm Session: 105
Dakota F Feb. 5, 2011

Grade Level: 6-12+

Speaker: Jean Gomer
Independent Consultant

Using Puzzles to Teach Problem Solving Strategies

This session will include George Polya's problem solving method, a variety of problem solving strategies and activities to introduce or reinforce the use of these strategies.

2:00-2:50 pm Session: 105.5
Dakota H Feb. 5, 2011

Exhibitor

Grade Level: 6-12+

Speaker: Marie L. Steckelberg
Yankton Rural Area Health Education Center

Guts in a Box

Explore the "Bag o' Guts", gut disorders, energy balance, be a health professional, and more! Learn about this "In a Box" curriculum, and the "Brain in a Box" and "Ear in a Box" curriculums available to educators. Everything is included, even the batteries!!

Saturday 2:00 pm

2:00-2:50 pm Session: 105.75
Salon Feb. 5, 2011

Exhibitor

Grade Level: 9-12

Speaker: Jami Stone
Learning Power-BHSU

Learning Power in SD

Learning Power is a South Dakota initiative which provides eligible educators with the opportunity to enhance classroom experiences for high-level learners and to increase participation and pass rates for AP courses in South Dakota. This session will feature current Learning Power mathematics teachers who will explain how they have implemented the LTF materials within their current mathematics curriculum to meet the needs of high level learners and engage all learners in mathematics .

Saturday 3:00 pm

3:00-3:50 pm Session: 106
Dakota C Feb. 5, 2011

Grade Level: All

Facilitator: Molly TenBroek

Science Follow Up

This is a chance to share your reflections on the sessions you attended at the conference.

Saturday 3:00 pm

3:00-3:50 pm Session: 107
Dakota F Feb. 5, 2011

Grade Level: All

Facilitator: Cindy Kroon

Math Follow Up

This is a chance to share your reflections on the sessions you attended at the conference.

4:00-???? Session: 108
Board Room Feb. 5, 2011

Grade Level:

Facilitator: Jean Gomer

Joint Board Meeting

Check out the "Sharing the Classroom Treasures" in the Board Room.

At 4:30 all treasures will become trash.

Representatives will be exhibiting on Friday from 8:00 AM until 5:00 PM. These include:

Connecting Point Computer Centers	Nola Redmond & Dave Lewis
CPM Educational Program	Bob Petersen
First in Math®	Tony Morrow
Glencoe – McGraw – Hill	Carol Heisel
Great Source Rigby Steck-Vaughn	Sandy Raike
Holt McDougall	Matt Misialek
Learning Power / TIE	Mary Lou McGirr
Pearson	Mike Limmer
Sanford Research	Peter Vitiello/Jill Weimer
SD Cooperative Extension and 4-H/Youth Development	Will Kennedy
SD Health Career Connections Network & SD Healthcare Workforce Center	Marie Steckleberg
SD Discovery Center (Pierre)	Anne Lewis
SD GFP-Outdoor Campus West	Chad Tussing
SD Public Broadcasting	Steven Rokusek
SDSU-Dept of Teaching Learning & Leadership	Kenneth Emo
US Army Corps of Engineers	Gene Bormann
Wildlife Experiences, Inc.	Maggie Engler & Julia Avison
Workplace Technology Center	Brian Lee
Youth Programs & Continuing Education	Darla VanZuidam

Name Tag Lanyards are compliments of SD Game Fish & Parks

South Dakota Science Teachers Association Business Meeting will be held in Dakota G
at 4:30 pm on Friday, February 4, 2011

SD Council of Teachers of Mathematics Business Meeting will be held in Dakota C
at 4:30 pm on Friday, February 4, 2011

Graduate Credit

Conference credit will be offered through Dakota Wesleyan University. You may register for one hour of credit at the 499 or 599 level.. Attendance at a sharing session is required to earn graduate credit from Dakota Wesleyan University. There will be personnel available to register you for the credit on Thursday night from 6:30 to 9:00 pm, and on Friday morning from 7:30 to 8:30 am. Check in the hotel lobby for the DWU table. A syllabus listing course requirements will be available at the time of registration. For more information, contact Rocky Von Eye at (605) 995-2625.

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The 2011 Conference Committee would like to offer a Special Thanks to ...

Dakota Wesleyan University and Rocky Von Eye for handling the credit.

Pepsi for helping provide refreshments throughout the conference.

Work Place Technologies / Brian Lee for helping provide morning refreshments.

All speakers for their dedication to the future of mathematics and science education.

All exhibitors for their enthusiastic participation.

The Huron Area Chamber of Commerce, The Huron Convention and Visitors Bureau, for a great deal of help and cooperation—especially with the pheasants.

The Huron Events Center & Crossroads Hotel for their help and generous hospitality.

All the conference participants who make all of our efforts worthwhile and without whom there would be no conference.

**A SPECIAL THANKS GOES TO
TIE for helping us with projectors--!
Connecting Point for providing the Promethean Equipment
Work Place Technologies/Brian Lee for providing SmartBoard Equipment**

Next year's conference will be **February 2, 3, & 4, 2012.**

The 2011 Spring Conference is a joint venture of the South Dakota Science Teachers Association (SDSTA) and the South Dakota Council of Teachers of Mathematics (SDCTM)

Note: There is a common registration form for the conferences. One form is used to register for all activities, including SDSTA and SDCTM memberships.

ONE-day (SDCTM or SDSTA members) includes the Noon Luncheon for that day	\$50	Non-members	\$100	Students \$15
TWO-day (SDCTM or SDSTA members) includes the Noon Luncheon for both days	\$75	Non-members	\$125	Students \$25

The Friday Night Banquet is **NOT** included in the registration fee. A ticket for the banquet may be obtained at an additional cost of **\$20**.

Because of a limited printing budget, the program was available in advance at the SDCTM website [www.sdctm.org] or SDSTA web site [www.sdsta.org]. Printed programs were not mailed, but were distributed on site with the registration materials.

**2011 Mathematics and Science Conference
SDSTA & SDCTM**

Please take time to respond to the following questions concerning the conference. This information will help the program committee take steps to improve future conferences. Circle one in each group:

Content Area:	Math	Science	Both
Grade Band:	Elementary	Middle School	High School

What presentation or presentations did you feel were the most useful or helpful?

What made it (or them) good?

Were there any presentations that disappointed you?

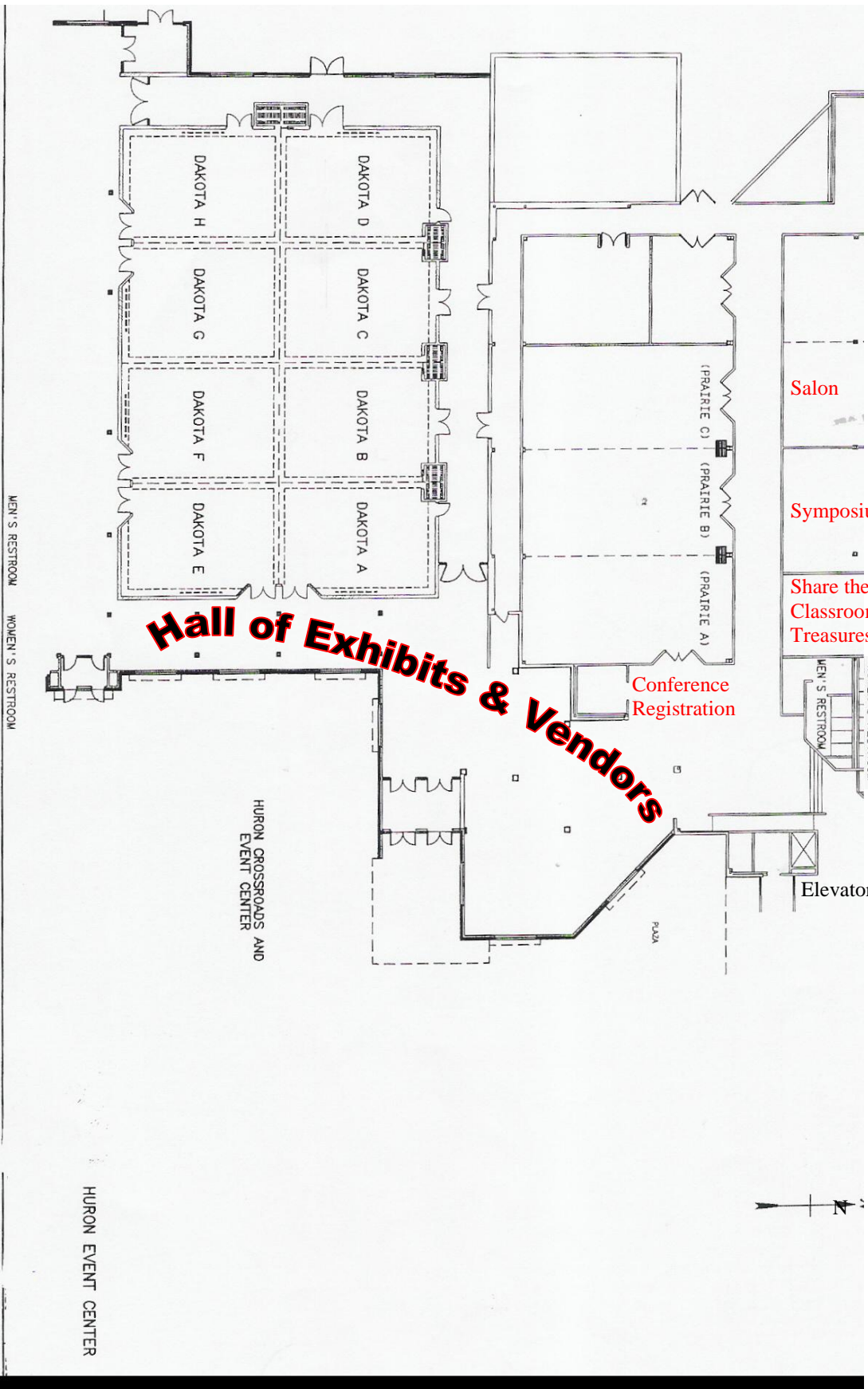
Please give us your overall assessment of the conference along with any comments you would like to share.

Detach and fill in the following for a final prize to be sent after the conference. To register for the prize turn in this entry along with your evaluation form.

Name

Address

City, State, Zip Code



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Symposium

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WOMEN'S RESTROOM

MEN'S RESTROOM

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