

23rd Annual

Joint Conference

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

February 5, 6, & 7, 2015
Crossroads Hotel-Huron Event Center
Huron, SD

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Graduate Credit is available through DWU-Mitchell.

Next year's conference will be **February 4, 5, & 6, 2016.**

Featured Speakers

BANQUET SPEAKER — Bill Zubke



Bill was born in South Dakota and grew up in North Dakota and Minnesota (or maybe just grew older...as the up has not yet been achieved!) He graduated with a BS degree (maybe the absolutely perfect descriptor for his style) in speech/theatre/English. Bill started teaching at Fargo North and finished teaching in Watertown 34 years later. He is currently retired, but enjoys an encore career speaking to groups. Bill has one wife that has been with him for 41 years and has had several dogs that have owned them. He was a Christa McAuliff award recipient, SD Teacher of the Year in 2000, and the SD Pork Cookoff King and national finalist thanks to beer and pork chops! (The beer was on the pork chops, but possibly in the judges as well!) Even though he views himself as a work in progress, his objective is to leave a positive legacy. His personal mission statement is "to add value to every circumstance I encounter."

OTHER FEATURED SPEAKERS

Roxie Ahlbrecht - Roxie Ahlbrecht is a second-grade teacher at Robert Frost Elementary School in Sioux Falls, South Dakota, USA. She recently spoke with Nicole Strangman, editorial assistant at ROL, about the Apple Bytes website created by her students. Using her knowledge of technology and interest in art, Roxie helped her class build a fun and exciting site that served to provide valuable writing lessons. "There is nothing like looking at a kid's eyes when they first see their work come up on a computer."

Marie B. Copeland - does extensive EMATHS training. She is bringing her presenting partner to assist with Embracing Mathematics, Assessment & Technology in High Schools. EMATHS professional learning experiences provide secondary mathematics teachers the opportunity to: 1) increase content knowledge and have deeper insights into mathematics, 2) maximize the effective use of technology in instruction, 3) use research-based pedagogy to create models of instruction that incorporate communication, inquiry and investigation; and 4) implement formative assessment for improved instruction in Algebra I, Geometry, and Algebra I.

Cathy Ezrailson - has been an Associate Professor of Science Education at USD for eight years. Cathy earned her Ph.D. From Texas A&M University in Curriculum & Instruction: Physics Education. She has taught high school physics geology, astronomy and geology, was a Physics Teaching Resource Agent and active member of AAPT for 30 years, and has been the managing editor of ThePhysicsFront.org - the Physics/Physical Science Digital Library for 12 year. Her research interests include science safety in the classroom and lab at all instructional levels. In 2000, Cathy was the PAEMST Science Teacher of the Year from Texas. She is currently finishing a book (with her co-author the oceanographer David Shonting) telling the story of the asteroid Chicxulub that hit the Earth 70 million years ago, causing the extinction of the dinosaurs.

SD Highway Patrol – Matthew Peterson, Mike Weber, John Lord w/Aros, and Brian Biehl w/Zara. After a total of 80 years of working for law enforcement, this team will be presenting on a variety of topics at our Math & Science Professional Development Conference. The STEM activities they'll be dealing with include Accident Reconstruction, the Biology of Drug Recognition, and the science of a dog's olfactory system to detect drugs.

2015 Joint Professional Development 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 5, 2015

7:00 PM - 9:00 PM Evening Sessions (See Program)

Friday, February 6, 2015

7:00 AM - 4:20 PM Registration Open Pre-Function Area

8:00 AM - 5:00 PM Exhibits Open Pre-Function Area

8:30 AM - 11:20 AM Morning Sessions (See Program)

11:45 AM - 1:10 PM Friday Luncheon Prairie A, B, C
(cost included in the registration fee)

1:30 PM - 4:20 PM Afternoon Sessions (See Program)

4:30 PM SDCTM Business Meeting Dakota C
SDSTA Business Meeting Dakota G

5:30-6:45 PM Social Hour Pre-Function Area
CASH BAR

7:00 PM Friday Evening Banquet Prairie A, B, C
(Cost is \$25)

Saturday, February 7, 2015

7:00 AM - 11:20 AM Registration Open Pre-Function Area

7:00 AM - 8:00 AM Breakfast Meeting Salon
Presidential Awardees (Past & Present)

8:30 AM - 11:20 AM Morning Sessions (See Program)

12:00 Noon - 1:00 PM Saturday Luncheon Prairie A, B, C
(cost included in the registration fee)

1:00 PM - 3:50 PM Afternoon Sessions (See Program)

4:00 PM Joint SDCTM & SDSTA Boardroom
Executive Board Meeting

SDSTA/SDCTM Joint Conference 2015 Planner

Thursday, Feb. 5, 2015		
	First Choice	Second Choice
7:00 PM	Session #:	Session #:
	Location:	Location:
	Title:	Title:

Friday, Feb. 6, 2015		
Remember to visit the exhibits in the Lobby and Hallways of the Crossroads Hotel.		
	First Choice	Second Choice
8:30 AM	Session #:	Session #:
	Location:	Location:
	Title:	Title:
9:30 AM	Session #:	Session #:
	Location:	Location:
	Title:	Title:
10:30 AM	Session #:	Session #:
	Location:	Location:
	Title:	Title:
Noon	Friday Noon Luncheon in Crossroads Hotel – Prairie A, B, C	
1:30 PM	Session #:	Session #:
	Location:	Location:
	Title:	Title:
2:30 PM	Session #:	Session #:
	Location:	Location:
	Title:	Title:
3:30 PM	Session #:	Session #:
	Location:	Location:
	Title:	Title:
4:30 PM	SDCTM BUSINESS MEETING in Dakota C SDSTA BUSINESS MEETING in Dakota G	
7 PM	Friday Night Banquet in Prairie Ballrooms A, B, C (Banquet Tickets Required-Cost is \$25)	

Saturday, Feb. 7, 2015		
	First Choice	Second Choice
8:30 AM	Session #:	Session #:
	Location:	Location:
	Title:	Title:
9:30 AM	Session #:	Session #:
	Location:	Location:
	Title:	Title:
10:30 AM	Session #:	Session #:
	Location:	Location:
	Title:	Title:
Noon	Saturday Noon Luncheon in Crossroads Hotel – Prairie A, B, C	
1:00 PM	Session #:	Session #:
	Location:	Location:
	Title:	Title:
2:00 PM	Session #:	Session #:
	Location:	Location:
	Title:	Title:
3:00 PM	Session #:	Session #:
	Location:	Location:
	Title:	Title:
4:00 PM	SDCTM & SDSTA JOINT BOARD MEETING IN THE BOARDROOM	

Next Year's Conference will be February 4, 5, & 6, 2016

Program for 2015 Joint Conference

Special thanks goes to TIE for the use of the projectors

Thursday

7 pm

Friday

8:30 am

7:00-9:00 pm

Dakota C

Session: 1

Feb. 5, 2015

Grade Level: All

Presenter: Ellie Cooch

SDCTM

ecooch@spearfish.k12.sd.us

<http://www.sdctm.org>

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. 5, 2015

Grade Level: All

Presenter: Liz McMillan

SDSTA

Elizabeth.McMillan@SanfordHealth.org

<http://www.sdsta.org>

Science Sharing Session

Bring an idea to share with the group. If it is a lab idea, bring 30 copies to pass out to the participants.

8:30-10:20 am

Prairie A

Session: 3

Feb. 6, 2015

Grade Level: 9-12

FEATURED SPEAKERS

Marie Copeland & Michael Lehman

EMATHS-Embracing Mathematics Assessment

Technology in High School

mariecopeland@gmail.com

A Look at the Unit Circle

Let's introduce our students to the study of trigonometry on the unit circle and then build the trigonometric ratios using transformations. This approach naturally leads to a smooth transition to the study of the trigonometric functions and right triangle trigonometry.

Do you have your banquet Ticket?

**You can still buy one
from Steve until Noon**

\$25.00

Speaker-Bill Zubke

7 pm Friday

Friday

8:30 am

8:30-9:20 am
Prairie B

Session: 4
Feb. 6, 2015

Grade Level: K-12

FEATURED SPEAKER

Mike Welter

SD Highway Patrol
mike.welter@state.sd.us

The Biology of Drug Recognition

This session will focus on the effects drugs have on humans and how different human reactions identify the type of drug that has been ingested. Pupil dilation, body temperature and eye convergence are some of the physical characteristics use with a classification matrix to determine the drugs used in the cases presented.

8:30-10:20 am
Prairie C

Session: 5
Feb. 6, 2015

Grade Level: K-5

FEATURED SPEAKER

Roxie Ahlbrecht

pebbles@sio.midco.net

Multiplicative Thinking

Students develop multiplication and division conceptually through building knowledge of units and composites. This session will focus on instructional activities to build student understanding of multiplicative thinking.

Friday

8:30 am

8:30-9:20 am
Dakota A

Session: 6
Feb. 6, 2015

Grade Level: K-12

Presenter: Mark Iverson

Watertown Middle School
Mark.a.iverson@k12.sd.us

Demonstrations to Shock and Amaze

If you have been looking for ways to "spice-up" your lessons, this is for you. I will offer several different demonstrations I have found to capture student attention and take the fear out of using bangs and booms in class.

8:30-10:20 am
Dakota B

Session: 7
Feb. 6, 2015

Grade Level: 6-12

Presenter: Sharon Rendon

CPM Educational Program
rendon@cpm.org
<http://www.cpm.org>

Empowering Students to Make Mathematical Connections

Participate in activities designed to develop a rich understanding of the connections between tables, graphs, rules, and situations. Learn to help students move from each representation to the others while developing a deep understanding of the CCSS mathematical practices. Leave with ideas and materials you can use in your own algebra classes.

Friday

8:30 am

8:30-9:20 am
Dakota C

Session: 8
Feb. 6, 2015

Grade Level: 9-12

Presenter: Emily Koehler
DeSmet HS
Emily.koehler@k12.sd.us

Twitter for Teachers

Come join the wonderful world of Twitter! Teachers across the globe have flocked to Twitter as a source of instant, personal professional development. Come see why teachers say that Twitter is the best place to learn, share ideas, and meet other teachers like you! (All levels, all subjects.)

8:30-9:20 am
Dakota D

Session: 9
Feb. 6, 2015

Grade Level: K-5

Presenter: Sue Brokmeier, Lynda Venhuizen & Larry Browning
SDSU
Sue.Brokmeier@sdstate.edu

To Hands-on--and Beyond!

In order to build physical science content knowledge and confidence in teaching K-5, a number of strategies including hands-on, robotic, concept mapping, and web-based research activities will be discussed. Results from introducing these strategies in higher education and elementary education classrooms will be presented.

Friday

8:30 am

8:30-9:20 am
Dakota E

Session: 10
Feb. 6, 2015

Grade Level: 9-12

Repeat of Session 93

Presenter: Anne Lewis
SD Discovery Center
anne.lewis@sd-discovery.com
<http://www.sd-discovery.com>

GLOBE in South Dakota

GLOBE is a world wide, hands-on, school based science education program. The SD Discovery Center and Outdoor Campus West are partnering to support this exciting opportunity to investigate and monitor environmental systems here in SD. Get a sneak peek at our summer professional development as well as a few GLOBE goodies.

Learning neuroscience should be fun. Seriously.



Try iNeuron® and see for yourself.

- Get iNeuron on the App Store.
- Come to our presentation, play iNeuron. Hijinks may ensue.
- Visit the **Andamio Games** booth. Learn more. Get cool stuff. Geek out about edtech.

adam.gordon@andamiogames.com

iNeuron will present Friday Session #25

Friday

8:30 am

8:30-10:20 am
Dakota F

Session: 11
Feb. 6, 2015

Grade Level: K-5 **Repeat of Session 71**

Presenter: Peggy Norris
BHSU/Sanford Underground Research Facility
pnorris@sanfordlab.org

**SciGirls: Proven Strategies
for Engaging Girls in STEM**

This hands-on workshop will highlight science, engineering, and technology activities designed to engage upper elementary and middle school students in STEM, developed by PBS in conjunction with the SciGirls television program. The SciGirls approach is rooted in research about how to engage girls in STEM. Participants will take home sample kits.

8:30-9:20 am
Dakota G

Session: 12
Feb. 6, 2015

Grade Level: 9-12

Presenter: Olga Stafford
SDSU
olga.stafford@sdstate.edu

Experimenting with a Pipe Flute (Part 1)

A simple pipe flute will be built using pieces of PVC pipe. The flute can be used to measure resonance frequencies of open or closed pipes. The pipe flute allows students in a physics class to study an example of an "edge tone" device that produces discrete sound frequencies.

Friday

9:30 am

9:30-10:20 am
Prairie B

Session: 13
Feb. 6, 2015

Grade Level: K-12

FEATURED SPEAKER

Matthew Petersen
SD Highway Patrol
matthew.petersen@state.sd.us

Accident Reconstruction—

STEM on the Highways of SD

Trooper Petersen has very specialized accident reconstruction skills that require intense training in physics, trigonometry, and engineering. He will immerse participants in investigating crash scenes using examples of actual accidents that he has reconstructed using his skills to determine velocity, speed and impact.

Continue your education as a Coyote!
University of South Dakota School of Education

Undergraduate Teaching Majors

- K-8 Elementary Education
- 7-12 Biology, Chemistry, Earth Science, English, History, Mathematics, Physics, Political Science, Speech Communication, Theatre
- K-12 Art, French, German, Music, Physical Education, Spanish, Special Education*

*Double Major: The Special Education major must be paired with Elementary Education or a 7-12/K-12 teaching major.

Undergraduate Non-Teaching Majors

Kinesiology and Sport Science
(Exercise Science or Sport Management Specialization)



SCHOOL OF EDUCATION STUDENT SERVICES
414 East Clark Street | Vermillion, SD 57069
www.usd.edu/ed | 605-677-5612

Friday

9:30 am

9:30-10:20 am
Dakota A

Session: 14
Feb. 6, 2015

Grade Level: 6-8

Presenter: Dr. Erin Nyren-Erickson
HQC Biosciences, Inc/Great Plains STEM Ed Center
nyrenerickson@hqcbio.com
<http://www.hqcbio.com>

Chemistry Techniques for the 6-8 Classroom
Methods and techniques in chemistry play an important role in a variety of STEM fields. Early introduction to these techniques presents a valuable opportunity for students to be more competitive for STEM jobs. Commonly used techniques, such as chromatography, ELISA, electrophoresis, and more are presented for the middle school classroom.

9:30-10:20 am
Dakota C

Session: 15
Feb. 6, 2015

Grade Level: 9-12

Presenter: Kelly Kukull
& Barb Stoflett
Pearson
<http://pearsonsystemofcourses.com/>

The System of Courses
Looking for a modern digital mathematics solution? We invite you to examine the possibilities with this dynamic new comprehensive program to meet the needs of every student in your classroom. Welcome to the next generation of teaching and learning.

Friday

9:30 am

9:30-10:20 am
Dakota D

Session: 16
Feb. 6, 2015

Grade Level: K-5 **Repeat of Session 90**

Presenter: Danette Jarzab
SD Discovery Center
danettejarzab@sd-discovery.com
<http://www.sd-discovery.com>

Math-Ready to Go!
Our GEMS (Great Explorations in Math & Science) kits are filled with ready-to-go math activities that support state standards. This session will include activities from these math kits: Build It Festival (K-6), Frog Math (K-3), Math on the Menu (3-5), and In All Probability (3-6).

9:30-10:20 am
Dakota E

Session: 17
Feb. 6, 2015

Grade Level: 9-12

Presenter: David Doherty
Bitwixt Software Systems
ddoherty@bitwixt.com
<http://www.bitwixt.com>

Facilitating Students' Understanding of the Structure and Properties of Matter
Progressing from middle to high school, expectations are that students' understanding of the structure and properties of matter will increase in complexity. We will demonstrate inquiry-based curriculum that uses interactive 3D atomic and molecular models, on iPads and laptops, to visually facilitate and empower this growth in students' understanding.

Friday

9:30 am

9:30-10:20 am
Dakota G

Session: 18
Feb. 6, 2015

Grade Level: 9-12

Presenter: Olga Stafford
SDSU
olga.stafford@sdstate.edu

Experimenting with a Pipe Flute (Part 2)

A simple pipe flute will be built using pieces of PVC pipe. The flute can be used to measure resonance frequencies of open or closed pipes. The pipe flute allow students in a physics class to study an example of an "edge tone" device that produces discrete sound frequencies.

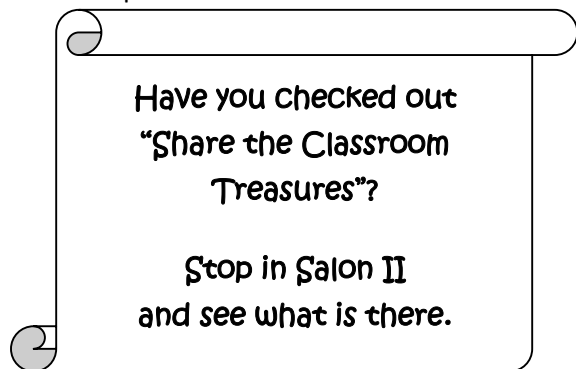
9:30-11:20 am
Dakota H

Session: 19
Feb. 6, 2015

Grade Level: 9-12

Presenter: Nick Restivo
MOEMS
nrestivo@moems.org

Unpacking Geometry from Boxes You Create Transform used greeting cards into boxes, while discovering geometry concepts that rely on definitions associated with parallelograms. Real life, non-routine problems using those properties will be explored.



Friday

9:30 am

9:30-10:20 am
Symposium

Session: 20
Feb. 6, 2015

Grade Level: 9-12

Facilitator: Dan VanPeurse, USD
SD BOR Representatives for Mathematics
Dan.VanPeurse@usd.edu

Discussions with Higher Education

Come and ask questions about policies affecting your students as they transition to higher education. We will also have data on how the first year went with the low tuition and dual enrollment courses.

Friday

10:30 am

10:30-11:20 am
Dakota A

Session: 21
Feb. 6, 2015

Grade Level: 9-12 **Repeat of Session 80**

Presenter: Sheila McQuade
O'Gorman HS
smcquade2@sfcss.org

Using the TI-Nspire in Geometry

As a teacher, my favorite activities lead my students to discover geometry concepts. Participants will use Nspire and work through some of the activities I use with my students. The activities I will present could be re-written to be used with Geometer's Sketchpad, Geogebra, or the Cabri Jr. app on the TI-84. Presenter will have Nspires for participants to use.

Friday

10:30-11:20 am

Dakota B

10:30 am

Session: 22

Feb. 6, 2015

Grade Level: 9-12

Presenter: Sharon Rendon

CPM Educational Program

rendon@cpm.org

Exponential Explorations

Come and explore and investigate problems around the concept of exponential equations. Learn how your students can develop an understanding of this concept through connections to geometric sequences and multiple representations. You will leave with problems you can implement this year.

10:30-11:20 am

Dakota C

Session: 23

Feb. 6, 2015

Grade Level: K-5

Presenter: Kathleen Cotter Lawler

RightStart Mathematics

Kathleen@RightStartMath.com

<http://www.rightstartmath.com>

Place Value: The Foundation of Number Sense

Place value is the foundation, the most important concept, in arithmetic. Place value has a static component, indicating how numbers are recorded, and a dynamic component occurring during an arithmetic operation, involving trading between denominations. We need to teach this right from the start.

Friday

10:30-11:20 am

Dakota D

10:30 am

Session: 24

Feb. 6, 2015

Grade Level: K-5

Repeat of Session 96

Presenter: Danette Jarzab

SD Discovery Center

danettejarzab@sd-discovery.com

<http://www.sd-discovery.com>

Science-Ready to Go

Our GEMS (Great Explorations in Math & Science) kits are filled with ready-to-go science activities that support state standards. This session will include activities from these science kits: Bubble Festival (K-6), Liquid Explorations (1-3), Electric Circuits (3-6), and Space Science (3-5).

10:30-11:20 am

Dakota E

Session: 25

Feb. 6, 2015

Grade Level: 9-12

Presenter: Adam Gordon & Julie S. Mike

Andamio Games

adam.gordon@andamiogames.com

<http://www.andamiogames.com>

Collaborative STEM Games for Mobile Devices

iNeuron, available on the App Store, teaches the basics of neuroscience, first with individualized instruction, then with group challenges, all delivered on classroom mobile devices. We'll demonstrate how serious games and scaffolded, standards-based curriculum can lead to authentic collaboration and effective learning. Then we'll all play iNeuron together!

Friday

10:30 am

FRIDAY

NOON

10:30-11:20 am
Dakota F

Session: 26
Feb. 6, 2015

Grade Level: 6-8

Presenter: Chris Larson, Sharon Vestal
& Gary Hatfield
SDSU
christine.larson@sdstate.edu

**Practicing Mathematical Practices:
Probability & Statistics**

The Practicing the Mathematical Practices workshop will focus on demonstrating the eight Standards for Mathematical Practice while reviewing content standards in 6-8 statistics and probability. We will provide 6-8 teachers with hands-on activities for their classroom while aligning with the CCSS-M statistics and probability standards.

9:30-10:20 am
Dakota H

Session: 26.5
Feb. 6, 2015

Grade Level: 9-12

Presenter: Judy Vondruska & Olga Stafford
SDSU
judy.vondruska@sdstate.edu

Recruiting Girls into STEM

Gender imbalances exist in many STEM fields. Among first-year university students, women are much less likely than men to say they intend to major in STEM. How can this be changed? This session will convey the results of efforts across the country to increase the number of females in STEM. Participants will discuss implications for efforts in SD.

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

Session: 27
Feb. 6, 2015

Grade Level: All

Presenters: Ellie Cooch & Julie Olson
SDCTM & SDSTA Presidents

Lunch

Friday

1:30 pm

1:30-3:20 pm
Prairie A

Session: 28
Feb. 6, 2015

Grade Level: 9-12

FEATURED SPEAKERS

Marie Copeland & Michael Lehman
EMATHS-Embracing Mathematics
Assessment Technology in HS
mariecopeland@gmail.com

Using Data Collection in Algebra

What if we taught functions through modeling? We will explore the use of data collection devices to generate data that can be used by students to understand and write functions without the use of regression. This process engages students in their own learning while at the same time developing a depth of understanding.

Friday

1:30 pm

1:30-2:20 pm

Prairie B

Session: 29

Feb. 6, 2015

Grade Level: 9-12

FEATURED SPEAKER

Cathy Ezrailson

USD

cathy.ezrailson@usd.edu

Pioneer Science (and math) on the Prairie:

Exploring Our Roots

Native Americans and early settlers used creative ways to survive (and often thrive) in our unpredictable climates and terrains. This session will demonstrate some of the uses of science on the prairie and in prairie schools.

1:30-2:20 pm

Dakota A

Session: 30

Feb. 6, 2015

Grade Level: K-5

Presenter: Arnie Lund & Angelo Casaburri

Retired NASA team leader at Kadoka

& NASA Educator PD Specialist

badlander@kadokateko.com

Journeying through the Solar System

Building scale models of the solar system is a challenge because of the vast distances and huge size differences involved. Use a meter of cash register tape to construct a linear scale model of the solar system using Astronomical Units (AU), fractions, ratios, decimals, and percentages. Learn new definitions for a planet and dwarf planet.

Friday

1:30 pm

1:30-3:20 pm

Dakota B

Session: 31

Feb. 6, 2015

Grade Level: 6-8

Presenter: Curt Olson

Augustana College

colson@augie.edu

Exploding Dots: An MTC Activity

Experience an example of an activity enjoyed by middle school mathematics teachers when they attend the Sioux Falls Area Math Teachers' Circle. A brief description of FyIG (the SFAMTC) will be given prior to the joy of doing mathematics together. (Other grade levels may even enjoy the fun.)

1:30-2:20 pm

Dakota C

Session: 32

Feb. 6, 2015

Grade Level: K-5

Repeat of Session 97

Presenter: Kathy Grotta

LEGO education

kathy.grotta@lego.com

<http://www.legoeducation.us>

LEGO More to Math Teachers Grade 1-2

More to Math is a hands-on educational tool for teaching problem solving bridging to mathematical facts. It provides practice in core mathematical competencies such as reasoning, perseverance, precision, modeling and representation through individual and team problem solving experiences.

Friday

1:30 pm

1:30-2:20 pm
Dakota D

Session: 33
Feb. 6, 2015

Grade Level: 9-12

Presenter: Jennifer Dolejsi & Allison Schmitz
NSU
Jennifer.Dolejsi@northern.edu

Labs Are Not Just for Science

Learn about the mathematics laboratory program at NSU and how this model can translate into cooperative group learning in your classroom. There will be several hands-on activities presented and strategies to get students talking when working in groups.

1:30-2:20 pm
Dakota E

Session: 34
Feb. 6, 2015

Grade Level: K-12 Repeat of Session 83

Presenter: Dan Van Peursesem, Matt Miller,
& Sharon Vestal
USD & SDSU
Dan.VanPeursesem@usd.edu

Meet the Future Teachers

Prospective science and math teachers from all South Dakota institutions will be invited to engage in conversation with veteran science and math teachers attending the conference. The goal is to provide support and encouragement for the next generation of teachers by providing advice, encouraging stories, and successful strategies.

Friday

1:30 pm

1:30-2:20 pm
Dakota F

Session: 35
Feb. 6, 2015

Grade Level: K-5

Presenter: Steven Rokusek
SD Public Broadcasting
steven.rokusek@state.sd.us
<http://sdpb.org/learn>

Hands-on Science and Math Activities

During this session participants will learn about science and math activities that will keep the children in their care entertained and educated. The activities will include, but are not limited to, a recycling game called Trash Dash, an ecosystem game called Chomp, Nibble, Grow, Grow, Grow, and more.

1:30-2:20 pm
Dakota G

Session: 36
Feb. 6, 2015

Grade Level: K-12

Presenter: Pat Bruinsma & Joy Korman
USD
joy.korman@usd.edu
<http://www.usd.edu/ed>

USD School of Education M.S. in Technology for Education and Training

Considering a graduate degree? Learn about programs available through USD that will enhance your teaching practice and positively impact student learning. Experience an introduction to instructional tools to bring back to your math and/or science classroom.

Friday

1:30 pm

1:30-2:20 am
Dakota H

Session: 37
Feb. 6, 2015

Grade Level: K-5

Presenter: Chris Larson, Sharon Vestal
& Gary Hatfield
SDSU
christine.larson@sdstate.edu

Practicing Mathematical Practices: Probability & Statistics

The Practicing the Mathematical Practices workshop will focus on demonstrating the eight Standards for Mathematical Practice while reviewing content standards in K-5 statistics and probability. We will provide K-5 teachers with hands-on activities for their classroom while aligning with the CCSS-M statistics and probability standards.

Friday

2:30 pm

2:30-3:20 pm
Prairie B

Session: 38
Feb. 6, 2015

Grade Level: K-12

FEATURED SPEAKERS

John Lord & Brian Biehl

SD Highway Patrol
john.lord@state.sd.us

Police Service Dogs and Drug Interdiction

The troopers will bring their K9 partners (Aros and Zara) to discuss the science of a dog's olfactory system and their ability to detect drugs despite incredible human efforts to conceal them. Along with a live dog demonstration Troopers Lord and Biehl will also educate participants on the officer's skills of observing people under great stress, drug paraphernalia and other warning signs of drug use.

Don't forget the business Meetings from 4:30-5:30.

Science in Dakota G

Math in Dakota C

All members of SDSTA and SDCTM are welcome and are encouraged to attend.

2:30-4:20 pm
Prairie C

Session: 39
Feb. 6, 2015

Grade Level:

FEATURED SPEAKER

Roxie Albrecht
pebbles@sio.midco.net

Place Value: Developing Conceptual Understanding

Traditional models teach positional place value in isolation. This session looks at developing a student's understanding of place value conceptually. We will explore various instructional experiences which will enhance conceptual understandings.

Friday

2:30 pm

2:30-3:20 pm

Dakota A

Session: 40

Feb. 6, 2015

Grade Level: K-5

Presenter: Joan Brooks & Randy Brooks

Core Educational Solutions--NSTA

jbrooks@coresolutions.com

**Using Picture Books to Guide Inquiry
in K-5 Science**

Learn the theory behind using the 5E Model and blending that with using picture books to integrate science into your elementary classroom. Participate in a model lesson and gain exposure to the SDTA series: Picture Perfect Science.

2:30-4:20 pm

Dakota C

Session: 41

Feb. 6, 2015

Grade Level: K-5

Presenter: Kathleen Cotter Lawler

RightStart Mathematics

Kathleen@RightStartMath.com

<http://www.rightstartmath.com>

Math Card Games to Master the Facts

Rote memorization of math facts is daunting. Instead, let's play math card games to master the facts! Games are fun and exciting, provide practice, and most importantly, become an application for newly learned information. Join us for some FUN as we learn addition, clock, money, multiplication, and fraction games.

Friday

2:30 pm

2:30-4:20 pm

Dakota D

Session: 42

Feb. 6, 2015

Grade Level: 9-12

Presenter: Peter Vitiello and Darwin Daugaard

Sanford Research

peter.vitiello@sanfordhealth.org

<http://www.sanfordresearch.org/education>

Protein Biology for the Classroom

Proteins play important metabolic, structural, and communication functions in cells. In this session, Sanford Research scientists will present a protein gel electrophoresis activity to demonstrate how proteins from biological samples are separated and visualized. Participants have access to these materials at no cost through The Sanford PROMISE.

2:30-3:20 pm

Dakota E

Session: 43

Feb. 6, 2015

Grade Level: 9-12

Presenter: Matt Miller

SDSU

Matt.Miller@sdstate.edu

The Ebb and Flow of the Laboratory: Learning in the Lab

In a study of both an undergraduate chemistry teaching laboratory and a research laboratory, certain types of interactions played key roles in learning. This session will discuss the results from the study and how these ideas can be translated to the secondary teaching laboratory.

Friday

2:30 pm

2:30-3:20 pm

Dakota F

Session: 44

Feb. 6, 2015

Grade Level: K-5

Presenter: Kevin Smith

DSU

kevin.smith@dsu.edu

<http://kevindsmith.org>

Kid Cave: A PBL Project to Teach STEM

Come and learn about a PBL project in which students design a "Kid Cave" using an app on the iPad. We'll walk through the steps involved in implementing the project in your class and talk specifically about the STEM content addressed in the project. If you have an iPad, you'll have a chance to play with the app.

2:30-3:20 pm

Dakota G

Session: 45

Feb. 6, 2015

Grade Level: 9-12

Presenter: Sam Glantzow & Larry Browning

Selby Area School & SDSU

sam.glantzow@k12.sd.us

Turn Your Town into a Solar Observatory

Streets and buildings of your town can be used as a solar observatory just as certain rocks at Stonehenge and streets in Manhattan mark the cycles of the sun. This presentation will show teachers how they can turn their town into a "henge" to demonstrate annual solar motion.

Next year's conference is

February 4, 5, 6, 2016

Friday

2:30 pm

2:30-3:20 pm

Dakota H

Session: 46

Feb. 6, 2015

Grade Level: 9-12

Presenter: Judy Vondruska

SDSU

judy.vondruska@sdstate.edu

<http://etfworkshop.wikispaces.com>

Using Conductive Copper Tape to Teach Circuits

Teaching circuits can be a challenge especially if using a setup with numerous wires. Teachers spend more time checking the wiring than helping students learn the underlying circuit principles. Participants in this session will use low-cost copper foil tape with a conductive adhesive to more easily design and analyze basic circuits.

Friday

3:30 pm

3:30-4:20 pm

Prairie B

Session: 48

Feb. 6, 2015

Grade Level: K-12

Repeat of Session 66

Presenter: Mary Colson

NSTA

mcolson@moorheadschoools.org

Professional Learning Resources@NSTA, K-12

The National Science Teachers Association is more than its journals and conferences. A plethora of online resources are available to enhance your teaching and help you as you delve into the ideas and practices of science. We will explore the NSTA Learning Center and NGSS@NSTA hub. Appropriate for K-12 teachers.

Friday

3:30 pm

3:30-4:20 pm
Dakota A

Session: 49
Feb. 6, 2015

Grade Level: K-5

Presenter: Sonya McNamara
Project Lead the Way
smcnamara@pltw.org
<http://www.pltw.org>

PLTW-Launch-Elementary STEM

Learn about this exciting new STEM hands-on program addressing the new Next Generation Science Standards and other national and state standards. Through hands-on learning (project and problem-based learning) for kindergarten through fifth grade, students learn important, future-changing lessons. Taking risks, making mistakes, and employing critical thinking.

3:30-4:20 pm
Dakota B

Session: 50
Feb. 6, 2015

Grade Level: 9-12 **Repeat of Session 98**

Presenter: K-Dog & G-Trog
(withheld to protect the guilty)
cindy.kroon@K12.sd.us

Mathematical Idol: The Reunion Tour!

Due to increasing fan request ($n > 0$), the infamous duo returns! In their words, "We've made fools of ourselves in front of our students for years. Now is the time to do it in front of our colleagues." The ability to carry a tune, sing, dance, or have rhythm is NOT a requirement for this session!

Friday

3:30 pm

3:30-4:20 pm
Dakota E

Session: 51
Feb. 6, 2015

Grade Level: K-5 **Repeat of Session 62**

Presenter: Danette Jarzab
SD Discovery Center
danettejarzab@sd-discovery.com
<http://www.sd-discovery.com>

Getting Kids Eating Fruits and Veggies

Harvest of the Month, an adaptable, easy to use program gets kids excited about eating fruits and vegetables and has them asking their parents for more! We have added kinesthetic activities and created new learning plans. Discover how you can impact your community's health with this free state-wide program.

3:30-4:20 pm
Dakota G

Session: 52
Feb. 6, 2015

Grade Level: 9-12

Presenter: James Stearns & Larry Browning
SD AAPT
James@SDSTA.org
<http://SDAAPT.SDSTA.org>

SD-AAPT Photo Contest & Annual Meeting

All Physics and/or Physical Science teachers are invited to the annual meeting for the final voting and judging of 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. All physics or physical science teachers are invited to this meeting.

Friday

4:30 pm

4:30-5:30 pm	Session: 53
Dakota C	Feb. 6, 2015
Grade Level: All	
Presenter: Ellie Cooch SDCTM	
SDCTM Business Meeting	

4:30-5:30 pm	Session: 54
Dakota G	Feb. 6, 2015
Grade Level: All	
Presenter: Julie Olson SDSTA	
SDSTA Business Meeting	

Friday

7:00 pm

7:00 pm---	Session: 56
Prairie A, B & C	Feb. 6, 2015
Grade Level: All	
Facilitators: Ellie Cooch & Julie Olson SDCTM & SDSTA Presidents	
Banquet	
Speaker—Bill Zubke	

Friday

5:30 pm

5:30-6:45 pm	Session: 55
Vendor area	Feb. 6, 2015
Grade Level: All	
Social Hour	
Come and visit with other science and math teachers. Light snacks will be provided. There will be a cash bar.	

Saturday

7:00 am

7:00-8:00 am	Session: 57
Library	Feb. 7, 2015
Grade Level: Presidential Awardees	
Presenter: Allen Hogie & Ramona Lundberg PAEMST Coordinators	
Breakfast for Awardees and Finalists	

Saturday

8:00-8:30 am

Dakota H

8:00 am

Session: 58

Feb. 7, 2015

Grade Level: 9-12

Presenter: Judy Vondruska & Suzette Burckhard

SDSU

judy.vondruska@sdstate.edu

<http://etfworkshop.wikispaces.com>

Engineering the Future Workshop

Sharing Session

This is a closed session for participants of the summer 2014 Engineering the Future Workshop at SDSU. Session participants will share their experiences implementing activities from this summer as well as sharing new ideas.

Saturday

8:30-10:20 am

Prairie B

8:30 am

Session: 60

Feb. 7, 2015

Grade Level: K-5

Presenter: Nicholas J. Restivo

MOEMS

nrestivo@moems.org

A Problem a Day Keeps the Cobwebs Away

Generate excitement among students by modeling how to take risks in mathematical problem solving. Energize and enrich your students to dialogue with each other. Through the use of problems with multiple solution paths, learn techniques that will help you reduce the need to "cram."

Saturday

8:30 am

8:30-10:20 am

Prairie A

Session: 59

Feb. 7, 2015

Grade Level: 9-12

FEATURED SPEAKERS

Marie Copeland & Michael Lehman

EMATHS-Embracing Mathematics

Assessment Technology in HS

mariecopeland@gmail.com

Rethinking Quadratics

What if we thought of quadratic functions as the product of two linear functions? How would that change our students' understanding of quadratics and factoring? This session will explore this option as an alternative to the "typical" approach to quadratics. Come see where this might lead us.

8:30-9:20 am

Prairie C

Session: 61

Feb. 7, 2015

Grade Level: K-5

FEATURED SPEAKER

Roxie Ahlbrecht

pebbles@sio.midco.net

Structuring: The Gateway to Mathematical Understanding

Structuring is a basic skill which supports and enhances efficiency when solving additive and subtractive tasks. As students compose and decompose numbers, efficient strategies are developed through an understanding of how to structure which builds a student's capacity to mentally compute multi-digit problems with efficiency and accuracy.

Saturday

8:30 am

8:30-9:20 am
Dakota B

Session: 62
Feb. 7, 2015

Grade Level: K-5

Repeat of Session 51

Presenter: Danette Jarzab

SD Discovery Center
danettejarzab@sd-discovery.com
<http://www.sd-discovery.com>

Getting Kids Eating Fruits and Veggies

Harvest of the Month, an adaptable, easy to use program gets kids excited about eating fruits and vegetables and has them asking their parents for more! We have added kinesthetic activities and created new learning plans. Discover how you can impact your community's health with this free state-wide program.

8:30-9:20 am
Dakota C

Session: 63
Feb. 7, 2015

Grade Level: K-5

Presenter: Jan Martin

SD DOE
jan.martin@state.sd.us

Cut scores, descriptors, and more -Smarter Balanced Update

So what will my students be expected to know and do in math? What are the cut scores? What resources are available to help in the classroom? The session will focus on the cut scores, achievement level descriptors, and supporting resources available for Smarter Balanced. A look at score reports will also be provided.

Saturday

8:30 am

8:30-9:20 am
Dakota E

Session: 64
Feb. 7, 2015

Grade Level: K-5

Presenter: Mari Biehl

SD Inovation Lab
mbiehl@sdinnovationlab.org
<http://sdinnovationlab.org>

Designing Learning with Kids

Designing their own learning--that's crazy talk! Or is it? By allowing students to work through the design process they are encouraged to build, modify, and share—a universal attribute of human thinking. Find out how to give kids the tools to think and plan using the design cycle with you as their guide on their learning adventure.

8:30-9:20 am
Dakota F

Session: 65
Feb. 7, 2015

Grade Level: K-8

Presenter: Steven Rokusek

SD Public Broadcasting
steven.rokusek@state.sd.us
<http://sdpb.org/learn>

Engaging Science Activities: The Senses

During this session participants will learn about science activities that will keep the children in their care entertained and educated. The session will include, but is not limited to sight, balance, and skin sensitivity activities.

Saturday

8:30 am

8:30-9:20 am
Dakota G

Session: 66
Feb. 7, 2015

Grade Level: K-12 Repeat of Session 48

Presenter: Mary Colson
NSTA
mcolson@moorheadschoools.org

Professional Learning Resources@NSTA, K-12
The National Science Teachers Association is more than its journals and conferences. A plethora of online resources are available to enhance your teaching and help you as you delve into the ideas and practices of science. We will explore the NSTA Learning Center and NGSS@NSTA hub. Appropriate for K-12 teachers.

8:30-9:20 am
Dakota H

Session: 67
Feb. 7, 2015

Grade Level: 9-12

Presenter: Judy Vondruska & Suzette Burckhard
SDSU
judy.vondruska@sdstate.edu

Using the Human Body to Study Torque and Engineering Design

Many of the muscle and bone systems of the human body act as levers. In this session simple and reproducible models of the human forearm and back will be used to collect data about forces and torques. More complex models will be used to demonstrate the engineering principles associated with these systems.

Saturday

8:30 am

8:30-9:20 am
Salon I

Session: 68
Feb. 7, 2015

Grade Level: K-12

Presenter: Allen Hogie & Ramona Lundberg
PAEMST 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 C

Session: 70
Feb. 6, 2015

Grade Level: K-5

FEATURED SPEAKER

Roxie Ahlbrecht
pebbles@sio.midco.net

Addition and Subtraction: Developing Understanding

Students develop their understanding of addition and subtraction working with concrete materials, moving to representations before they are developmentally ready for the abstract tasks. Let's explore activities to build our instructional toolbox to include concrete materials and representations in our instruction.

Saturday

9:30 am

9:30-11:20 am
Dakota A

Session: 71
Feb. 7, 2015

Grade Level: K-5

Repeat of Session 11

Presenter: Peggy Norris

BHSU/Sanford Underground Research Facility
pnorris@sanfordlab.org

**SciGirls: Proven Strategies
for Engaging Girls in STEM**

This hands-on workshop will highlight science, engineering, and technology activities designed to engage upper elementary and middle school students in STEM, developed by PBS in conjunction with the SciGirls television program. The SciGirls approach is rooted in research about how to engage girls in STEM. Participants will take home sample kits.

9:30-10:20
Dakota B

Session: 72
Feb. 7, 2015

Grade Level: 9-12

Presenter: Chris Larson, Sharon Vestal

& Gary Hatfield
SDSU
christine.larson@sdsstate.edu

**Practicing Mathematical Practices:
Probability & Statistics**

The Practicing the Mathematical Practices workshop will focus on demonstrating the eight Standards for Mathematical Practice while reviewing content standards in 9-12 statistics and probability. We will provide 9-12 teachers with hands-on activities for their classroom while aligning with the CCSS-M statistics and probability standards.

Saturday

9:30 am

9:30-10:20 am
Dakota C

Session: 73
Feb. 7, 2015

Grade Level: 6-8

Presenter: Jan Martin

SD DOE
jan.martin@state.sd.us

**Cut scores, descriptors, and more-
Smarter Balanced Update**

So what will my students be expected to know and do in math? What are the cut scores? What resources are available to help in the classroom? The session will focus on the cut scores, achievement level descriptors, and supporting resources available for Smarter Balanced. A look at score reports will also be provided.

9:30-10:20 am
Dakota D

Session: 74
Feb. 7, 2015

Grade Level: K-5

Presenter: William Kliche & Lori Stverak

Rapid City Schools
william.kliche@k12.sd.us

**Strategies for Teaching Understanding in
Fractions**

We will provide hands-on ideas for teaching fractional understanding.

**Next year's conference is
February 4, 5, 6, 2016**

Saturday

9:30 am

9:30-10:20 am
Dakota G

Session: 76
Feb. 7, 2015

Grade Level: 9-12

Presenter: Darwin R. Daugaard
Dell Rapids Public High School
darwin.daugaard@k12.sd.us
<http://dd045.k12.sd.us>

Doc's Master Plan (Finding Quantum Numbers)

Doc's Master Plan is a model of the electrons around an atom. This model will be introduced and its uses demonstrated. Find quantum numbers, electron configuration notation, and schematics and electron-dot notation can be easier to find using Doc's Master Plan. This is a chemistry topic for regular chem or advanced chem.

9:30-10:20 am
Dakota H

Session: 77
Feb. 7, 2015

Grade Level: 9-12

Presenter: Suzette Burckhard & Judy Vondruska
SDSU
suzette.burckhard@sdstate.edu

The Science and Engineering of Tower Building

Skyscrapers and telecommunications towers are both tall structures supported by a similar internal structure. In this session, participants will build towers in phases using an increasing amount of engineering content while still emphasizing science principles.

Saturday

10:30 am

10:30-11:20 am
Dakota B

Session: 78
Feb. 7, 2015

Grade Level: 6-8

Presenter: Tammy Jo Schlechter
Hermosa School
tammyjo.schlechter@k12.sd.us

Turn Your Classroom into a Habit for Mathematicians

Energize your classroom with best practices discovered by Tammy Jo, Tammy Jo's students and colleagues. This workshop will promote planning and activities that lead to productive dispositions in not only students but their teachers as well. This workshop is listed for middle school, but with a creative perspective, it can apply to K-12 teachers.

10:30-11:20 am
Dakota C

Session: 79
Feb. 7, 2015

Grade Level: 9-12

Presenter: Jan Martin
SD DOE
jan.martin@state.sd.us

Cut scores, descriptors, and more

--Smarter Balanced Update

So what will my students be expected to know and do in math? What are the cut scores? What resources are available to help in the classroom? The session will focus on the cut scores, achievement level descriptors, and supporting resources available for Smarter Balanced. A look at score reports will also be provided.

Saturday

10:30 am

10:30-11:20 am
Dakota D

Session: 80
Feb. 7, 2015

Grade Level: 9-12

Repeat of Session 21

Presenter: Sheila McQuade
O'Gorman HS
smcquade2@sfcss.org

Using the TI-Nspire in Geometry

As a teacher, my favorite activities lead my students to discover geometry concepts. Participants will use Nspire and work through some of the activities I use with my students. The activities I will present could be re-written to be used with Geometer's Sketchpad, Geogebra, or the Cabri Jr. app on the TI-84. Presenter will have Nspires for participants to use.

10:30-11:20 am
Dakota E

Session: 81
Feb. 7, 2015

Grade Level: 9-12

Presenter: Jeff Schneider
SD Innovation Lab
jschneider@pastfoundation.org
<http://sdinnovationlab.org>

Teaching the Common Core Standards in Three Schools at Once!

How I teach a Transdisciplinary Problem Based Learning class in three schools, simultaneously. How I cover all the Common Core Standards. This session will include links to relevant sites/information/resources, an extensive question and answer session, and LOTS of ideas for projects that have been proven in multiple classrooms.

Saturday

10:30 am

10:30-11:20 am
Dakota F

Session: 82
Feb. 6, 2015

Grade Level: K-8

Presenter: Mark Iverson & Chad Lentsch
Watertown Middle School
Mark.a.iverson@k12.sd.us

Science Dojo: Add a Little Kick to Your Lessons.

This sharing session will focus on the hard to teach concepts in your curriculum. Bring your problems, frustrations or failures to have the group slice and dice your lessons into something amazing. Bring your katana and your resources for the good of the group.

10:30-11:20 am
Dakota G

Session: 83
Feb. 7, 2015

Grade Level: K-12

Repeat of Session 34

Presenter: Dan Van Peurse, Matt Miller,
& Sharon Vestal
USD & SDSU
Dan.VanPeurse@usd.edu

Meet the Future Teachers

Prospective science and math teachers from all South Dakota institutions will be invited to engage in conversation with veteran science and math teachers attending the conference. The goal is to provide support and encouragement for the next generation of teachers by providing advice, encouraging stories, and successful strategies.

Saturday

10:30 am

10:30-11:20 am
Dakota H

Session: 84
Feb. 7, 2015

Grade Level: 9-12

Presenter: Suzette Burckhard
SDSU
suzette.burckhard@sdstate.edu

The Science and Engineering of Windmills
Windmills and related machines have been used for centuries to produce power. Modern windmill/wind turbine designs have changed in terms of the tower configuration and the blade design. In this session, participants will design, build, and test a variety of windmills and discuss the underlying science and engineering principles.

Saturday

NOON

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

Session: 85
Feb. 6, 2015

Grade Level: All

Presenters: Julie Olson & Ellie Cooch
SDSTA & SDCTM Presidents

Lunch

Next year's conference is
February 4, 5, 6, 2016

Saturday

1:00 pm

1:00-2:50 pm
Prairie A


Session: 86
Feb. 7, 2015

Grade Level: 9-12

FEATURED SPEAKERS
Marie Copeland & Michael Lehman
EMATHS-Embracing Mathematics
Assessment Technology in HS
mariecopeland@gmail.com

Using Origami to Introduce Geometry
Engage your students on day one. Use origami paper to build three dimensional figures to visualize and explore special right triangles, area and volume. Connections between the size of the paper and the size of the figure we create will be discovered, which explores the ratios of similar figures.

The Sanford PROMISE
Program for the Midwest Initiative in Science Exploration



Inspiring the next generation of scientists

Opportunities for

- Educator Enhancement
- Student Discovery
- Student and Teacher Research Experience at Sanford Research in Sioux Falls or in your classroom.

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Email sanfordoutreach@sanfordhealth.org

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Saturday

1:00 pm

1:00-1:50 pm
Prairie B

Session: 87
Feb. 7, 2015

Grade Level: 6-8

Presenter: Peggy Norris & David Demuth
BHSU/Sanford Underground Research Facility
pnorris@sanfordlab.org

Connect Your Students with Scientists:

The K-12 STEM Series

Connect your students to scientists and modern scientific research, whether it's looking deep into space or deep into molecules. In its second year, Dakota's K-12 STEM Initiative is a collaborative effort among partners across K-12, higher education and research centers across the Dakotas, using technology to connect students with scientists.

Saturday

1:00 pm

1:00-1:50 pm
Dakota A

Session: 89
Feb. 7, 2015

Grade Level: K-5

Presenter: Sonya McNamara & David Hosick
Project Lead the Way
smcnamara@pltw.org
<http://www.pltw.org>

PLTW: STEM Journey

Project Lead the Way is the leading STEM education program in the nation. Now five PLTW programs, a K-12 STEM journey, give students the opportunity to develop world class skills and knowledge preparing them for post-secondary education and the global economy. Learn about the new Launch, Gateway and high school programs.

1:00-1:50 pm
Prairie C

Session: 88
Feb. 7, 2015

Grade Level: 9-12

FEATURED SPEAKERS

Cathy Ezrailson

USD
cathy.ezrailson@usd.edu

Why a Lab Safety Protocol Could Save Your Life

Do you teach science in a classroom or lab? Do you have a method for buying, storing, organizing and using science equipment? Have you ever experienced (or know of a fellow teacher who has experienced) a mishap while teaching or demonstrating in a science class? Perhaps a science safety protocol could help.

1:00-1:50 pm
Dakota B

Session: 90
Feb. 7, 2015

Grade Level: K-5 Repeat of Session 16

Presenter: Danette Jarzab
SD Discovery Center
danettejarzab@sd-discovery.com
<http://www.sd-discovery.com>

Math-Ready to Go!

Our GEMS (Great Explorations in Math & Science) kits are filled with ready-to-go math activities that support state standards. This session will include activities from these math kits: Build It Festival (K-6), Frog Math (K-3), Math on the Menu (3-5), and In All Probability (3-6).

Saturday

1:00 pm

1:00-1:50 pm
Dakota D

Session: 90.5
Feb. 7, 2015

Grade Level: 9-12

Presenter: Chris Larson
SDSU
christine.larson@sdstate.edu

Using Algebra Tiles to Teach HS Algebra

Algebra Tiles can be used to explore a variety of algebraic concepts. Come see how they can be used to teach basic concepts like combining like terms, using the distributive property, and solving linear equations, to more complex concepts like factoring, solving linear inequalities, and solving systems of linear equations.

1:00-1:50 pm
Dakota E

Session: 91
Feb. 7, 2015

Grade Level: K-5

Presenter: Julie Olson
Mitchell Senior High School
julie.olson@k12.sd.us

Simple Research Ideas for Elementary Students

Engage elementary students in research that doesn't require a lot of money, materials, or space.

**Next year's conference is
February 4, 5, 6, 2016**

Have you thought about presenting?

Saturday

1:00 pm

1:00-1:50 pm
Dakota F

Session: 92
Feb. 7, 2015

Grade Level: 6-8

Presenter: Janet Briggs
BHSU
janet.briggs@bhsu.edu

Low-Maintenance School Gardens

Learn about low-maintenance gardens that you and your students can plant and manage, including supporting Monarch butterflies and two of South Dakota's endangered butterflies, planting a xeriscape garden with native plants, and more. Hear how Master Gardener volunteers can assist throughout the process.

1:00-1:50 pm
Dakota G

Session: 93
Feb. 7, 2015

Grade Level: 9-12 Repeat of Session 10

Presenter: Anne Lewis
SD Discovery Center
anne.lewis@sd-discovery.com
<http://www.sd-discovery.com>

GLOBE in South Dakota

GLOBE is a world wide, hands-on, school based science education program. The SD Discovery Center and Outdoor Campus West are partnering to support this exciting opportunity to investigate and monitor environmental systems here in SD. Get a sneak peek at our summer professional development as well as a few GLOBE goodies.

Saturday

2:00 pm

2:00-2:50 pm
Dakota A

Session: 95
Feb. 7, 2015

Grade Level: K-5

Presenter: Sonya McNamara & David Hosick

Project Lead the Way
smcnamara@pltw.org
<http://www.pltw.org>

PLTW-Launch-Encouraging Critical Thinking

Through hands-on learning (project and problem-based learning) for kindergarten through fifth grade, students learn important, future-changing lessons. Taking risks, making mistakes, and employing critical thinking are all part of exciting problem solving activities. Teachers and students learn and discover together, becoming far more engaged.

2:00-2:50 pm
Dakota B

Session: 96
Feb. 7, 2015

Grade Level: K-5 Repeat of Session 24

Presenter: Danette Jarzab

SD Discovery Center
danettejarzab@sd-discovery.com
<http://www.sd-discovery.com>

Science-Ready to Go

Our GEMS (Great Explorations in Math & Science) kits are filled with ready-to-go science activities that support state standards. This session will include activities from these science kits: Bubble Festival (K-6), Liquid Explorations (1-3), Electric Circuits (3-6), and Space Science (3-5).

Saturday

2:00 pm

2:00-2:50 pm
Dakota C

Session: 97
Feb. 7, 2015

Grade Level: K-5

Repeat of Session 32

Presenter: Kathy Grotta

LEGO education
kathy.grotta@lego.com
<http://www.legoeducation.us>

LEGO More to Math Teachers Grade 1-2

More to Math is a hands-on educational tool for teaching problem solving bridging to mathematical facts. It provides practice in core mathematical competencies such as reasoning, perseverance, precision, modeling and representation through individual and team problem solving experiences.

2:00-2:50 pm
Dakota D

Session: 98
Feb. 7, 2015

Grade Level: 9-12

Repeat of Session 50

Presenter: K-Dog & G-Trog

(withheld to protect the guilty)
cindy.kroon@K12.sd.us

Mathematical Idol: The Reunion Tour!

Due to increasing fan request ($n > 0$), the infamous duo returns! In their words, "We've made fools of ourselves in front of our students for years. Now is the time to do it in front of our colleagues." The ability to carry a tune, sing, dance, or have rhythm is NOT a requirement for this session!

Saturday

2:00 pm

2:00-2:50 pm
Dakota E

Session: 99
Feb. 7, 2015

Grade Level: 9-12

Presenter: Julie Olson
Mitchell Senior High School
julie.olson@k12.sd.us

Mitosis in Onion Roots

Fix, stain, and view onion roots then learn how to utilize this procedure to engage your students in research related to cell division, cancer, and mitosis in general. There will be music, on-line resources, and student/teacher worksheets to utilize.

2:00-2:50 pm
Dakota F

Session: 100
Feb. 7, 2015

Grade Level: K-12

Presenter: Mark Iverson
Watertown Middle School
mark.a.iverson@k12.sd.us

Weather Ballooning: Taking Your Teaching Out of this World

If you have ever wanted to start a weather balloon project with your class this session is for you. I am by no means an expert but will offer my experience, resources, fails and accomplishments and get you in contact with the experts that guided me.

Saturday

2:00 pm

2:00-2:50 p m
Dakota H

Session: 101
Feb. 7, 2015

Grade Level: 9-12

Presenter: Matt Miller & Larry Browning
SDSU
Matt.Miller@sdstate.edu

Demonstrations to Spark Their Interest

Come and see if we get it right this year. After melting the carpet and melting chocolate we've learned how to whip our students into shape and teach them about acids and bases.

Saturday

3:00 pm

3:00-3:50 pm
Dakota C

Session: 102
Feb. 7, 2015

Grade Level:
Presenter: Ellie Cooch
Math Wrap UP

3:00-3:50 pm
Dakota G

Session: 103
Feb. 7, 2015

Grade Level:
Presenter: Julie Olson
Science Wrap Up

Saturday

4:00 pm

4:00-????
Boardroom

Session: 104
Feb. 7, 2015

Presenter: Jean Gomer
Joint Board Meeting (for Officers)

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

Activities for Learning	Kathleen Cotter Lawler
Andamio Games	Adam Gordon
Bitwitx Software Systems	Lindi Doherty
Black Hills Raptor Center	John Halvorson & Maggie Engler
Carolina Curriculum	Michelle Reed (Corporate) & Bob Friedel
Core Educational Solutions	Joan Brooks & Randy Brooks
CPM Educational Program	Bob Peterson
Houghton Mifflin Harcourt	Matt Misialek
LEGO Education	Kathy Grotta
McGraw Hill	Carol Heisel
MOEMS-Math. Olympiads for Elem & MS	Nick Restivo
NascoAmy K	Amy Klotz (Corporate) & Kevin Hart
NSTA	Mary Colson
Pearson	Mike Limmer
Sanford PROMISE	Liz McMillan, Jill Weimer & Tamara Ledebor
Sanford Underground Research Facility	Peggy Norris
SD Discovery Center (Pierre)	Anne Lewis & Marie Steckelberg
SD PBS	Steven Rokusek
SDSU Plant Science Dept.	Carl Fellbaum
Technology and Innovation in Education	Mary Lou McGirr
USD	Joy Korman

*Name Tag Lanyards are compliments of SD Game Fish and Parks

South Dakota Science Teachers Association Business Meeting
will be held in Dakota G
at 4:30 pm on Friday, February 6, 2015

SD Council of Teachers of Mathematics Business Meeting
will be held in Dakota C
at 4:30 pm on Friday, February 6, 2015

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 7:00 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.

Next year's conference will be **February 4, 5, & 6, 2016**

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**2015 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

Continue your education as a Coyote!
University of South Dakota School of Education

Curriculum and Instruction

M.A. Elementary Education, Technology,
Secondary Education, Special Education
Ed.S., Ed.D. Curriculum and Instruction

Counseling and Psychology in Education

M.A., Ed.S, Ph.D. Human Development and
Educational Psychology
M.A., Ed.S, Ph.D. Counseling
Ed.S., Ph.D. School Psychology

Educational Administration

M.A., Ed.S., Ed.D. PK-12 Principal, Director of Curriculum
School District Superintendent
Ed.S, Ed.D. Director of Special Education
M.A., Ed.D. Adult and High Education

Kinesiology and Sport Science

M.A. Kinesiology and Sport Science
(Exercise Science or Sport Management Specialization)



SCHOOL OF EDUCATION STUDENT SERVICES
414 East Clark Street | Vermillion, SD 57069
www.usd.edu/ed | 605-677-5612

The 2015 Conference Committee would like to offer a Special Thanks to ...

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

Coke for helping provide refreshments throughout the conference.

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.

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!

Next year's conference will be **February 4, 5, & 6, 2016.**

The 2015 Spring Conference is a joint venture of the South Dakota Science Teachers Association (SDSTA) and the South Dakota Council of Teachers of Mathematics (SDCTM)

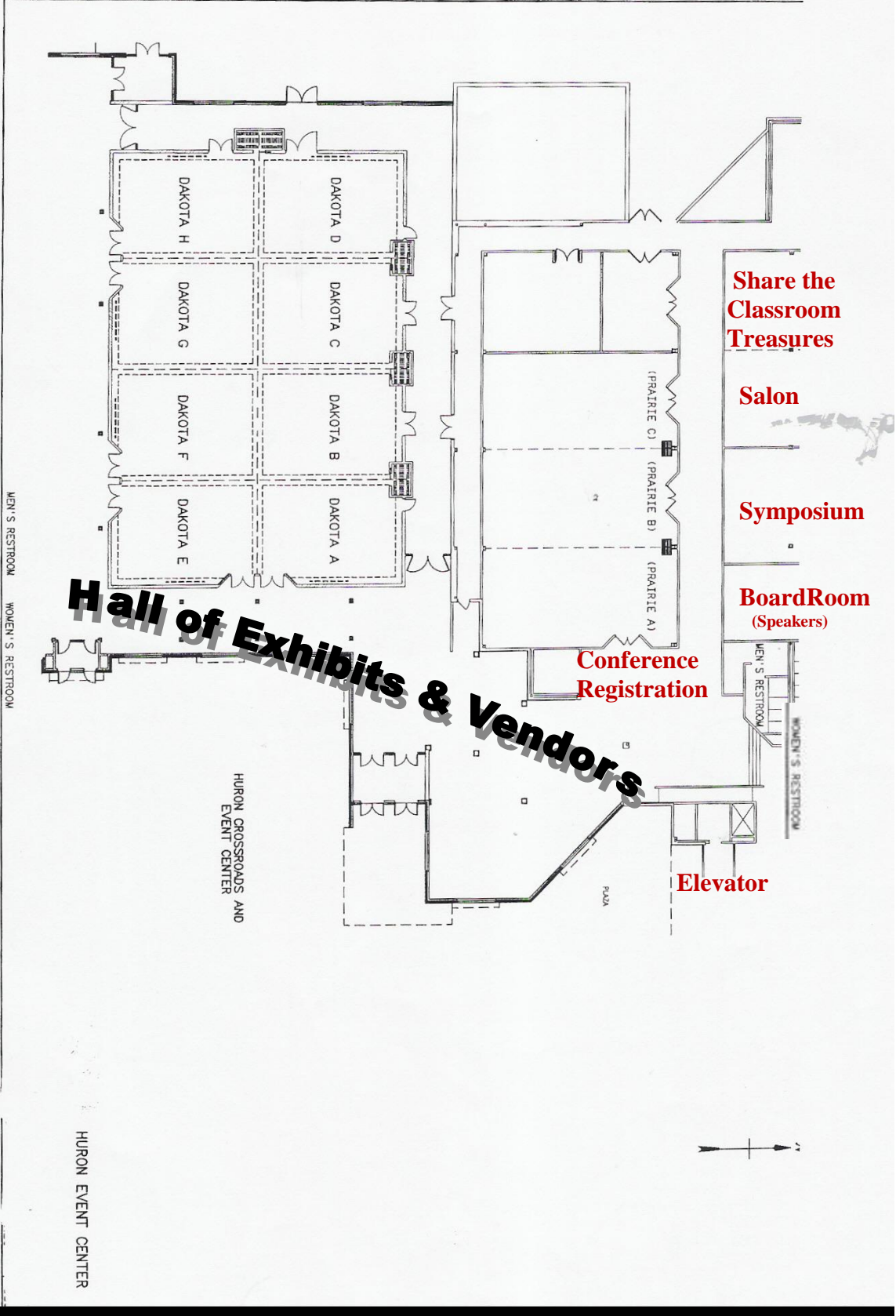
Note: There is a common registration form for the conferences. One form is used to register for all activities, including SDSTA and SDCTM memberships.

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 **\$25**.

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.

Are you planning to attend the NSTA Conference in Chicago in March? Consider sharing an activity with other teachers at Meet Me in the Middle 2:00-4:00 pm on Friday, March 13th. Register for the Share-a-Thon at: tinyurl.com/MMITM2015.



Hall of Exhibits & Vendors

Share the Classroom Treasures

Salon

Symposium

BoardRoom (Speakers)

Conference Registration

Elevator

MEN'S RESTROOM WOMEN'S RESTROOM

MEN'S RESTROOM WOMEN'S RESTROOM

HURON CROSSROADS AND EVENT CENTER

HURON EVENT CENTER

