



## ( T a l k i n g L e a f )

South Dakota Council Teachers of Mathematics Newsletter

### Presidential Ponderings

Teachers have a great job of working with students. It really is the greatest profession in the world. However good teachers bring their life experiences into the classroom. I hope you are creating some life experiences in the classroom.

As we reached the dog days of summer and the heat became unbearable, it wasn't that far from starting school. I don't understand why we keep starting school earlier and earlier during August. I noticed some schools without air-conditioning started school during the middle of August. I had hoped there would be a cold-spell in the middle of August for those of you in this situation. If I had the choice we would start at the end of September rather than the end of August. Time to get off my soapbox.

During this summer, I hope you spend a little time and ACT for the new school year. By ACT, I mean *Assess* where you are right now, *Consider* trying something new and *Take* away a valuable lesson. I heard this in a presentation from Barbara Blackburn this summer.

I took this to heart this summer. I have always loved music but unfortunately can't carry a tune with a bucket nor can keep rhythm. That was my assessment of myself at the beginning of this year. I decided to try something new. After years of procrastinating, I finally went down to the local music store and purchased a guitar with the intent of learning to play it. They even have CD's now to help you learn. On top of that there are free lessons on YouTube. I thought this was going to be a piece of cake. My youngest daughter wanted to be a music teacher and I thought we would learn together. This was my *Consider* something new part.

It's funny how as we get older that we look through rose-colored glasses at our youth. It is when I started trying to learn that reality started to come back into play. My daughter can now play the guitar with some rudimentary songs but no longer wants to teach music. I am pretty sure it has everything to do with her trying to teach me. I also realized why I didn't do this earlier; I am basically totally uncoordinated. As I would watch my daughter go from one chord to the other chord, I would spend the entire time trying to make my fingers into the first one. I still don't understand how she can do it so easily. She was gone for three weeks this summer and I thought I would really impress her when she came back. When I showed her she said nice things, but her face said, "I can't believe how much you suck!"

I have taken away many valuable ideas from this experience. The first and most obvious is watching my nonverbal communication when I deal with students next year. Another lesson is that what may be considered fun for everyone else, may not be fun for you. Struggling isn't fun, overcoming the struggle is the fun part. I haven't gotten to that point yet. We have all had students that have struggled with their mathematics not only just for a few months but for years and they deserve to be treated with grace and mercy. As I have struggled with my hobby this summer, I have gained a new empathy for my struggling students. I can quit my new hobby, my students can't.

Bill Gripentrog

FALL 2007

### Wahpe Woyaka pi

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#### Calendar Notes:

- *SDCTM/SDSTA Joint Conference February 7-9, 2008*
- *PAEMST Applications due May 1, 2008*



## Combinatorics Activity

The Fundamental Counting Principle, also called the Basic Counting Principle, describes the number of ways items can be arranged. The general rule states that if a choice can be made in  $x$  different ways, and for each of these choices a second choice can be made in  $y$  different ways, then the choices can be made in  $xy$  different ways.<sup>1</sup>

Example: If choice A can be made in 3 different ways, and choice B can be made in 5 different ways, the number of arrangements of A and B would be  $(3)(5)$  or 15.

Students struggle with the abstractness of this description. Hands-on activities can illustrate the idea.

### A Face Only a Mother Could Love!

(Or the Past, the Present, and the Future)

1. Cut out each photograph<sup>2</sup> below.
2. Divide each photo into three sections along the indicated dotted lines. You now have three choices per photo: hair, eyes/nose, and mouth.



Chuck Holmstrom  
(SDCTM Past-President)



Bill Gripenrog  
(SDCTM President)



Cindy Kroon  
(SDCTM President-Elect)

3. Divide students into teams of two or three.
4. Give each team two of the cut-up pictures. Have them investigate how many different faces can be made using one hair, one eyes/nose, and one mouth. (8) Encourage a systematic method of counting and recording their results.
5. Discuss results.
6. Give students the third cut-up picture. How many faces can be made using three photos? (27) The number of choices increases dramatically! Now it is time to introduce the Fundamental Counting Principle.
7. Some of the combinations are quite interesting. Just for fun, vote to choose the most horrifying combination.<sup>3</sup>

1) Mathematics Dictionary and Handbook © 1999 Nichols Schwartz Publishing

2) Or use student and/or faculty photos scanned or photocopied from the school yearbook. (These were taken at the 2007 SDCTM/SDSTA Joint Conference banquet.)

3) Conan O'Brian's *Late Night* on NBC uses a similar idea in his "If They Mated" segment.

Cindy Kroon  
Montrose High School  
cindy.kroon@k12.sd.us



## Nominate an Outstanding Elementary Teacher Today!

Nominations and applications are currently being accepted for elementary teachers for the 2008 Presidential Awards. Nomination forms are available at [www.paemst.org](http://www.paemst.org).

Established by Congress in 1983, and administered for the White House by the National Science Foundation, the PAEMST program identifies outstanding mathematics and science teachers from each of the 50 states and four U.S. jurisdictions. The jurisdictions are Washington, DC, Puerto Rico, Department of Defense Schools, and the U.S. territories as a group (American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the U.S. Virgin Islands). Each state and jurisdiction can select up to three mathematics and three science teachers as state finalists. From this field of state finalists, a maximum of 108 Presidential Awardees are selected. Recipients of the 2007 Presidential Awards will be announced during a week of celebratory events this in Washington, DC.

Awardees will receive a citation signed by the President, a paid trip to Washington, DC, to attend a week-long series of recognition events and professional development opportunities, and \$10,000 from the National Science Foundation. More information can be found at [www.paemst.org](http://www.paemst.org).

## 2007 PAESMT Finalists Not Yet Announced

There has been a delay in the announcement of the state finalists for 2007. The South Dakota PAEMST Committee has been told by the NSF that they cannot announce the names of the finalists until the national selection committee gives their okay. As of now, the national committee has not met.

## SDSU Honors Cindy Kroon, SDCTM President Elect

Dean Lewis Brown and the SDSU College of Engineering honored Cindy Kroon for her outstanding work in mathematics education by presenting her with the SDSU College of Engineering K-12 Teacher of the Year Award at the Distinguished Engineers Banquet last April! Congratulations Cindy!

### ***Share the Wealth!***

*South Dakota Teachers have so much to offer one another! Please share an activity that "works" for you with SDCTM members!*

*Email submissions to: [smcquade2@sfcss.org](mailto:smcquade2@sfcss.org)*

*Diana McCann  
State PAEMST  
Coordinator  
[dm57062@valyou.net](mailto:dm57062@valyou.net)*

# 2008 SPEAKER / PRESENTER PROPOSAL FORM

*Joint Conference of South Dakota Council of Teachers of Mathematics (SDCTM) and South Dakota Science Teachers Association (SDSTA)*

Huron South Dakota February 7-9, 2008.

OFFICE USE ONLY:

Session No. \_\_\_\_\_

Day \_\_\_\_\_

Time \_\_\_\_\_

*Submission of this form constitutes acceptance unless otherwise notified.*

**All South Dakota speakers must also register for the conference. Use the registration form at [www.sdctm.org](http://www.sdctm.org) .**

\_\_\_\_\_  
(First Name) (Middle initial) (Last Name)

\_\_\_\_\_  
(First Name) (Middle initial) (Last Name)

\_\_\_\_\_  
(Name of School/Affiliation)

\_\_\_\_\_  
(Name of School/Affiliation)

Preferred Address: (circle one) work home

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(City) (State) (Zip Code)

\_\_\_\_\_  
(Work Phone) (Home Phone)

\_\_\_\_\_  
(Email)

### A-V equipment requested:

\_\_\_\_\_ Overhead projector

\_\_\_\_\_ LCD projector

\_\_\_\_\_ TV

\_\_\_\_\_ DVD player

\_\_\_\_\_ VCR player

One screen will be provided for each room.  
Speakers are expected to bring their own computer and software.

*The conference does not guarantee compatibility of electronic components.*

Title of presentation: \_\_\_\_\_

Description (max. 50 words): \_\_\_\_\_

Circle grade level:      **K-2**                      **3-5**                      **6-8**                      **9-12+**

Length of presentation:    \_\_\_\_\_ one hour                      \_\_\_\_\_ two hours

Day of presentation:    \_\_\_\_\_ Friday                      \_\_\_\_\_ Saturday                      \_\_\_\_\_ Either day                      \_\_\_\_\_ Both days

***Speakers are requested to provide handouts for 30 on a first come, first served basis.***

Please return this form by **October 31, 2007** to:

Jean Gomer

Box 96

White, SD 57276

email [jean.gomer@k12.sd.us](mailto:jean.gomer@k12.sd.us)

fax (605) 629-3701

I agree to comply with the guidelines in the "Minimum Safety Guidelines for NSTA Presenters and Workshop Leaders:" during my presentation. NSTA Minimum Safety Guidelines are located online at <http://www.nsta.org/coru/safety.html>

Signature \_\_\_\_\_

Date \_\_\_\_\_

Modified  
3/03/07  
CK

Contact SDCTM with any special needs requests as defined by ADA by emailing Jean Gomer at [jean.gomer@k12.sd.us](mailto:jean.gomer@k12.sd.us) before October 31, 2007

**All South Dakota speakers must also register for the conference: Use the form at [www.sdctm.org](http://www.sdctm.org)**

Conference program information and booklets will be available for download from [www.sdctm.org](http://www.sdctm.org) .

# SDCTM/SDSTA JOINT SPRING CONFERENCE

Crossroads Events Center, Huron South Dakota  
February 7-9, 2008

Conference information and program booklets will be available online at [www.sdctm.org](http://www.sdctm.org) and [www.sdsta.org](http://www.sdsta.org)

## ADVANCE REGISTRATION (Postmark by January 20, 2008)

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City, State, Zip \_\_\_\_\_  
E-mail \_\_\_\_\_ School \_\_\_\_\_  
Home phone \_\_\_\_\_ School Phone \_\_\_\_\_

*Please check the appropriate categories for membership, conference registration, and payment.*

### 1. SDCTM/SDSTA MEMBERSHIP(s) and DUES

*Please check the appropriate categories. You may join one, both, or neither organization.*

<b>Begin/renew SDCTM (math) for one year</b>	<b>Begin/renew SDSTA (science) for one year</b>
_____ Elementary \$5	_____ Elementary \$5
_____ Middle School \$20	_____ Middle School \$10
_____ High School \$20	_____ High School \$10
_____ Post-Secondary \$20	_____ Post-Secondary \$10
_____ Student \$3	_____ Student \$3
_____ Retired \$5	_____ Retired \$5
_____ Other \$10	_____ Other \$10

### 2. CONFERENCE REGISTRATION

*Please check the appropriate categories. Noon luncheon is included for each day that you register.*  
**NOTE: The Friday night banquet is NOT included. Banquet tickets may be purchased for \$20 each.**

I will attend the conference on (check one): \_\_\_\_\_ Friday \_\_\_\_\_ Saturday \_\_\_\_\_ Both days

<b>SDCTM or SDSTA Member</b>	<b>Non-Member</b>	<b>Student</b>
_____ One day \$40	_____ One day \$70	_____ One day \$15
_____ Two days \$60	_____ Two days \$90	_____ Two days \$25

**College credit will be available; information/registration available at the conference registration table.**

### 3. PAYMENT

*All checks/vouchers should be made payable to SDCTM. Purchase orders will NOT be accepted.*

Membership SDCTM	\$ _____
Membership SDSTA	\$ _____
Registration	\$ _____
Friday Night Banquet (\$20 each)	\$ _____
<b>TOTAL ENCLOSED</b>	<b>\$ _____</b>

*Requests for refunds must be received by January 20, 2008*

### 4. SEND THIS FORM WITH PAYMENT

**Steve Caron**  
907 South 16<sup>th</sup> Street      School phone (605) 725-8208  
Aberdeen, SD 57401      Home phone (605) 226-2292

Email: [Steve.Caron@aberdeen.k12.sd.us](mailto:Steve.Caron@aberdeen.k12.sd.us)

*Advance registration must be postmarked by January 20, 2008*

Please check here if you have also submitted a speaker proposal form for the 2008 Conference.



Print a copy of this form. Mail with check payable to SDCTM to:

**Diana McCann**  
**41876 Apple Tree Road**  
**Springfield, SD 57062**

Name \_\_\_\_\_

School Name \_\_\_\_\_

Subjects or Grades Taught \_\_\_\_\_

Addresses

Home \_\_\_\_\_

\_\_\_\_\_

School \_\_\_\_\_

\_\_\_\_\_

Mailing Address: \_\_\_\_\_ Home \_\_\_\_\_ School

Home Phone \_\_\_\_\_

School Phone \_\_\_\_\_

Fax Number \_\_\_\_\_

E-mail \_\_\_\_\_

Membership categories (Check only one)

- \_\_\_\_\_ Elementary School \$5.00
- \_\_\_\_\_ Middle School / Junior High \$20.00
- \_\_\_\_\_ High School \$20.00
- \_\_\_\_\_ Post Secondary \$20.00
- \_\_\_\_\_ Student \$3.00
- \_\_\_\_\_ Retired \$5.00
- \_\_\_\_\_ Other \$10.00



SDCTM Newsletter  
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[www.sdctm.org](http://www.sdctm.org)

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