



Wahpe Woyaka pi

(Talking Leaf)

South Dakota Council Teachers of Mathematics Newsletter

Presidential Ponderings

My encore term as SDCTM president is rapidly drawing to a close. I have truly enjoyed representing South Dakota's finest educators: you! It has been a great ride, and I'm sorry to see it come to an end. As I ride off into the sunset, I owe a debt of everlasting gratitude to all members of the executive board, and so many others who have worked selflessly and tirelessly to promote the improvement of mathematics education in South Dakota. I once received some great advice from SDCTM past-president Chuck Holmstrom. He said, "Surround yourself with good people and they will make you look good." I did, and they did. A heartfelt thank you to all. It has been an honor to associate with such a great group.

A special thank you goes to Jean Gomer. As conference coordinator, Jean makes it all work in Huron each February. This year's 25th annual conference was another outstanding event. If you attended, you heard fantastic speakers, attended great sessions, and connected with friends both old and new. Conference photos for 2017 are online now at www.sdctm.org. A new feature this year, the opening *Ignite* session was well attended. Larry Browning talked about the Co\$ of Personal Power, and I shared Leadership Lessons from NCAA Basketball. We would appreciate some feedback from those who attended. What did you think? Should we continue an opening session? Did you like the Ignite format? Do you have suggestions for speakers? Or maybe you would like to jump into the arena yourself?

For me, Brad Fulton's banquet keynote, *Teach With All Your Heart*, was the highlight of this year's event. I know there were several times that you couldn't find a dry eye in the house during his message based on *The Velveteen Rabbit*. I aspire to become a "real" teacher. If you attended the banquet, you know what I mean. If you missed it, put February 8-10, 2018 on your calendar and vow to attend next year.

Exciting events loom on the horizon. South Dakota has now transitioned away from the Common Core (CCSSM), and begun the hard work of creating and adopting our own state mathematics standards. SDCTM officers and members have been active at all levels of standards development. Leading the work, we welcome SDDOE math specialist Nicol Reiner to the team. (nicol.reiner@state.sd.us). Nicol is already working on plans for professional development once the new standards are approved and implemented. SDCTM plans to work closely with Nicol and DOE to make the transition as smooth and successful as possible. Please consider the role that you can fill in the upcoming transition. South Dakota's math educators have a big stake in the outcome. Let's get involved in the process. It is critical for SDCTM members to be included in the posse.

It has been an honor to represent you, the outstanding math educators of South Dakota. Next month, I will hand over the reins to incoming SDCTM President Allen Hogie from Brandon-Valley High School. There's a new sheriff in town.

Giddy-up!

Cindy Kroon
SDCTM (Past) President



SPRING 2017

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Calendar Notes:

- *SDCTM Summer Symposium*
July 12, 2017
- *PAEMST Nominations Due*
April 1, 2017
- *PAEMST Applications Due*
May 1, 2017
- *SDCTM/SDSTA Conference*
February 8-10, 2018



Presidential Ponderings - in the making

Wow! What a great conference. The SDCTM/SDSTA conference held in February provided a professional development opportunity that rivaled many regional and national conferences. I happened to provide “taxi” service to and from the conference for one of our featured speakers, Brad Fulton. On the trip back to the Sioux Falls airport we had a great conversation regarding the quality of conferences such as ours. As a presenter who has traveled to many different states, Mr. Fulton was impressed with the number of sessions we offered, the breadth of topics covered and the quality and attendance of each of the sessions. This impression is due to the hard work of many people behind the scenes as well as the many people who “stepped up to the plate” to share a piece of their practice with others by presenting a session. For that, I want to say Thank You!

Are there specific topics or a technology you would like to have an opportunity to learn more about when attending our conference? This April I will be traveling to San Antonio for the NCTM Annual Meeting. One of my assigned tasks is to network and find featured speakers to enhance our own conference. If you are traveling to San Antonio as well (or somewhere else) and come across a topic or presenter that would be a good fit for our conference, please feel free to contact me. I welcome your suggestions.

As we move forward into the last quarter of the school year please consider attending our summer symposium entitled “Collaborative Classrooms In Action” on July 12, 2017. More information is provided in this newsletter but it promises to be another great opportunity to enhance one’s teaching practice.

Thank you for all you do in providing a quality mathematics education for each of your students. I wish you the very best as this school year comes to an end. Finish strong!

Allen Hogie

SDCTM President-Elect

SDCTM Election Results

Elections for the SDCTM Officers were held during the business meeting held February 4, 2017 (at the SDCTM/SDSTA joint conference). You selected the following to be your leadership:

President Elect - Crystal McMachen

Vice President - Steve Caron

Secretary - Amy Schander

Treasurer - Jay Berglund

NCTM Representative - Mark Kreie



“Thank you for all you do in providing a quality mathematics education for each of your students.”

Appointed Positions

Webmaster - Cindy Kroon

Newsletter Editor - Sheila McQuade

Public Relations - Leah Branaugh

Conference Chairperson-
Jean Gomer

Liaisons

Post-Secondary -
Dan Van Peuresem

Secondary - Lindsey Brewer

Middle School - Sarah Gross

Elementary - Merideth Wilkes



K-5 Corner

Guided Math Groups

It is typical and almost expected to see guided reading groups in an elementary classroom. However, it may not be as common to see guided math groups. Working with students in a small group setting has shown to be very successful when working on strengthening a skill or concept for a child. This setting also lends itself to the opportunity to work on student goal setting and progress monitoring. This was a goal of mine this year, and so far the result has been wonderful.

As I started guided math groups I started grouping students based on a specific standard. Some were working on counting to 100, others were working on number recognition and writing numbers, and some were working on adding within 5. As we began, each day I would have a new task or activity to work on with students to help them with their specific need. As time went on, my students began to take more ownership of their work, and that is when the learning began to happen.

As I would teach a game a student would say, “Can I put this in my busy binder to work on during my free time?” This would then get other students excited to do the same thing. After several chances to practice, students would come to their math group and challenge me to play a game. As we played they felt they were showing off their new skills, and I was able to assess them and determine our next steps. This challenge of theirs grew again into students wanting to track their learning and figure out what they have learned and what the next step would be. They would come to group and ask what they needed to do so they could play a specific game or work on a specific skill...thus leading us to individual goal setting.

Now, students are not only working at their level and challenging themselves to learn new skills, they are setting math goals and expressing in words exactly what they need to do to reach that goal. Not only are they excited to learn math, they are proud of themselves and learning that the only person that can really lead them to success is themselves.

Starting guided math groups was something that felt a little overwhelming, and quite frankly I wasn't even sure how to go about it exactly. It was absolutely worth diving into, and I would encourage any elementary teacher to consider adding guided math groups into the classroom. If you are interested in hearing about this more in detail, or have questions please reach out and I would love to chat!

Merideth Wilkes
SDCTM Elementary Liaison

Professional Development Opportunities

Be sure to check the SDCTM website for professional development opportunities. One earmark of an excellent teacher is their desire to continually expand their knowledge. Opportunities for teachers found at <http://www.sdctm.org/profdevel/prof-devel.htm> currently include our own SDCTM Summer Symposium, Transforming Your Classroom workshops presented by SDCTM members Lindsey Brewer and Lori Keleher, Robotics Training presented by Christine Wood at SDSU Extension, and Computational Astronomy classes presented by SDSMT. Opportunities for students are also posted. Check back regularly as information is updated as it is received. Please contact the webmaster, Cindy Kroon, at cindy.kroon@k12.sd.us with information you like us to share on additional opportunities.



“Now ... they are setting math goals and expressing in words exactly what they need to do to reach that goal.”





6-8 Highlights

Happy Spring Everyone!

I do not know about you, but spring can be overwhelming. Different sports are winding down as others are getting started. Dance recitals and state competitions are happening. As a math teacher, I feel the crunch to get in as much content as I can before testing starts. Spring is also my time for reflection. What has worked this year? What would I do differently? What can I still try now to get the most out of this school year? If you ever ponder these things as I do, maybe I can give you a couple quick ideas you can use this year.

I love showing quick little videos in math class. One of my favorite go-tos is by Vi Hart. Sometimes I find that I have a couple of minutes of downtime in math class. In those cases, I will use her videos. They are very fast-paced, you only see her hands, and she talks over the heads of many middle school students but in a fun way. She does topics such as Pi, the Pythagorean Theorem, and the Fibonacci sequence. My students find her to be a genius and a little bit fruity, but they ask to watch her videos anyway. I usually just search for her on YouTube, but she also has a website. <http://vihart.com/>. On her website, she has the list of videos that she has created. One of my favorites is the “Origami Proof of the Pythagorean Theorem” but there are many others. Check them out!

Kahoot is another quick resource. A friend of mine, Shana Ward, introduced me to it and my students love it! Think old school Jeopardy without hours spent creating your own PowerPoints, Flipcharts, or game cards. You will need three things:

- A computer hooked to a projector
- A free Kahoot account
- Devices for your students (computers, tablets, or smartphones)

First, you will go to <https://getkahoot.com/>. You will need to set up your free account. After you are in, you will have access to countless quiz games. The website is easy to navigate and you can search by concept. After you find the game you like and have previewed it to make sure it fits with what you want to cover, you will hit play.

Then, choose if you would like your students to be in teams or work as individuals. Kahoot will then give you a code that the students will need to type in. The students will need to have a device where they can get onto the internet and they will go to kahoot.it or download the app. After typing in the code, they pick a nickname. After all students are in, you hit start and you are set to go!

Projected from your computer are the questions and multiple-choice answers. The only thing the students see on their devices are colorful shapes that correspond to the choices that are projected. There are time limits for each question and the program automatically scores the questions for you.

The great thing about Kahoot, is once you are in, it is super easy to use. It tracks points, shows who is having a hot streak, and gives you a bar graph to show the frequency of chosen answers. You will know who has it correct or incorrect because their computer screens will turn either red or green. This is great for review or as a formative assessment. Since there are countless games already created, I have not needed to make my own quiz, but that is always an option!

I hope these two resources will come in handy for you. I picked them because they are quick to use and the students seem to enjoy them. Kahoot gets the students engaged, while Vi Hart exposes students to math topics in a fast-paced, interesting way. Enjoy!



“My students find her to be a genius and a little bit fruity, but they ask to watch her videos anyway.”



9-12 Spotlight

Fourth quarter and Spring are right around the corner. Where did the 2016-2017 school year go? My year has just flown by, they say “time flies when you are having fun.” I believe that to be true. Teaching is fun, at least it should be. If you are bored by your teaching, how do you think your students feel? Trying new activities and making “old” activities better is the number 1 way I make teaching and learning fun!!! Also, if I expect my students to challenge themselves and grow I must do the same myself. This past year I challenged myself to utilize Twitter to communicate what is going on in my classroom with students, parents & the community. This was a big step out of my comfort zone. I had no idea when I started tweeting the positive feedback I was going to receive. As the year progressed, not only has the number of my followers increased and the frequency of retweets, but I have loved running into people outside of school who comment or ask questions about the activities they saw me post! Twitter has also opened up a whole new word of professional growth for me – I follow other high school math teachers, I follow professional organizations like SDCTM & NCTM, I participate in EdChats, and continually find new ideas for my classroom. If you haven't checked out Twitter, I encourage you to do so. For those of you that have been utilizing Twitter for...years - Kudos to you! In April, I will be heading to the NCTM Annual Meeting as a co-presenter in San Antonio, Texas - follow me on Twitter @LindseyBrewer to see the motivating keynote speaker highlights and all the ideas I bring back to SD to share. Check out the website: www.TransformYourClassroom.net if you are looking for professional development opportunities. Wishing you all a GREAT rest of the school year.

Lindsey Brewer
SDCTM 9-12 Liaison

Higher Ed Viewpoint

We are now well into the spring semester and many of us are getting ready for the new crop of freshman to come to campus later this spring and summer. Among other things, our incoming freshman will be setting up their schedule of courses for their first year. As such, I would like to encourage each of your schools to consider including the results of their Smarter Balance assessments in the 11th grade testing on their transcripts as it could be an easy way for them to place into Math 102 (College Algebra) and higher when they get to campus. Recall that students that earn a level 3 or 4 on the Smarter Balance math portion do not have to take remedial math courses on campus and this results in a savings of time and money. This is only one way campuses do placement but it would help us out greatly if these scores were included on their transcripts. Without the Smarter Balance scores, their placement will default to the math index score which is a weighted average of their Math ACT score and cumulative GPA. Please pass this on to your guidance counselors and other officials that can make this happen.

I hope that you have all been able to avoid any illnesses. There has been a lot of flu going around lately so hopefully the warmer weather and students dispersing a bit more may put an end to that. Here is to wishing you all a very productive race to the end of the school year and a relaxing summer.

Sincerely,

Dan Van Pender

SDCTM Liaison to Higher Education
Professor and Dept. Chair
The University of South Dakota



“If you are bored by your teaching, how do you think your students feel?”



“I would like to encourage each of your schools to consider including the results of their Smarter Balance assessments in the 11th grade testing on their transcripts...”



A Word from Nicol

Finally! Warm weather is becoming more prevalent, and summer is just around the corner. I am so ready for the nicer weather and better roads. As we work our way through spring, I want to alert you to some of the opportunities and resources that exist at the Department of Education. As always, let me know if you have any questions as you check out the following opportunities.

The **South Dakota Mentoring Program** will be moving into its second year in 2017-2018, and the process of connecting new teachers and mentors is already starting! Through this program, new teachers in South Dakota receive support from a mentor for a period of two years. At the completion of the program, new teachers and their mentors meet the requirements to renew their certificates and can purchase up to six graduate credits! The Department of Education is currently taking applications for the 2017-18 school year for new teachers and mentors. If you are interested in applying to be a mentor, go to <http://doe.sd.gov/mentoring/> to learn more about the program and submit an application. Applications for new mentors are due by May 1st. If you know other educators that would be good mentors or that are going to be new to the profession, please send them to the website, too, so that they can get the details and apply for the program. This is an excellent opportunity for first-year teachers to receive directed support and for experienced South Dakota teachers (current and retired) to share their skills to help guide beginning teachers.

In January, I began working to grow the **DOEMath email list** to try to create more effective communication with K-12 educators across the state who teach math. Each week I send out a Top 5 Friday post that lists the top 5 resources or opportunities that came across my desk or email during the week or that I heard about while out in the field. I have also created a Google Doc to archive each week's posts for folks to reference or see what they may have missed. Join us so you can access the shared ideas, resources, opportunities, and archive. We started the year with 168 members in the group, but now are up to 233 members! I challenge you to go to <http://www.k12.sd.us/MailingList/DOEMath> and get signed up so that you will not miss any shared resources or opportunities, and tell all of your friends to join us, too! Let's make the DOEMath email list a place where we can connect, share, and support each other.

At the beginning of the summer, on June 6th, 2017 the Math Standards Work Group will be reconvening in Pierre to review the feedback from educators across the state on the **newly proposed K-12 South Dakota State Math Standards**. Have you submitted your feedback, yet? We need your expertise! You can find the newly proposed South Dakota State Math Standards at the following website: <http://doe.sd.gov/contentstandards/math-review.aspx>. The number of feedback surveys received so far is low, and we are really hoping to have many teachers from diverse areas across the state review the standards and share what they appreciate about the newly proposed standards and/or what changes they feel need to be made. Feedback from educators can be submitted until May 15th, 2017 at this website: <https://www.surveymonkey.com/r/mathresponses>. The Department of Education will be soliciting community feedback after any needed revisions are made in June from the educator feedback. Please make time to check out the standards and make your voice heard. The more expertise we tap into, the better math standards we will have for all students across the state of South Dakota. Please email me if you have any questions or need help with the websites or reviewing the standards. Thank you!

I would like to offer one blog post for you to ponder as my last little contribution to this newsletter. I have been reading more of Robert Kaplinsky's blog about math and teaching. He often has some really interesting ideas and questions to ponder. On Pi Day, he wrote a post about one of Stephen Covey's 7 Habits of Highly Effective People, called "**Sharpening the Saw**." It offers a great analogy to think about what we do as educators and an opportunity to explore why circular thinking and actions can make it so difficult to effect change in our classrooms and educational systems. I encourage you to check the post out at <http://robertkaplinsky.com/sharpening-the-saw/> and talk about it with your colleagues. Collaborative reflection can be so beneficial as we grow in our profession!

I hope the spring weather and blooms revive and sustain you to the end of the school year! Let me know if you have any needs or questions.

Nicol Reiner
SD State Math Specialist
Nicol.Reiner@state.sd.us



"I challenge you ... get signed up so that you will not miss any shared resources or opportunities, and tell all of your friends to join us, too! "



McCann Scholarship

A scholarship in memory of long time SDCTM member and officer Diana McCann has been established for the benefit of college students preparing to become a math teacher. Rising seniors studying math education at any post secondary institution in South Dakota are eligible. The scholarship will be awarded at the annual SDCTM/SDSTA Conference.

Donations to the McCann Scholarship can be sent to Security State Bank 1600 Main Street, Tyndal SD 57066. One hundred percent of all donations will be used to fund the scholarship.



Presidential Awards Nominations

**Know a Great 7-12 Mathematics Teacher?
Nominate him or her to receive the Presidential Teaching Award!**

We're looking for outstanding 7-12 mathematics and science teachers for the 2017 Presidential Awards for Excellence in Mathematics and Science Teaching. The awards are sponsored by the White House and administered by the National Science Foundation.

Every year up to 108 National Awardees each receive a \$10,000 award, a paid trip for two to Washington, DC to attend a week-long series of networking opportunities and recognition events, and a special citation signed by the President of the United States.

The program will be accepting nominations of 7-12 teachers for the nation's highest honor for mathematics and science teachers beginning October 1, 2016. Anyone can nominate an outstanding teacher. Teachers should submit completed application materials by May 1, 2017.

For more information, including nomination and application forms, please visit www.sdctm.org and click on the Presidential Awards link. Teachers may also visit the PAEMST website at www.paemst.org for more information.

Allen Hogie
SD PAEMST Mathematics Coordinator



South Dakota Council of Teachers of Mathematics

July 12, 2017

SDCTM 2017 Summer Symposium

Collaborative Classrooms In Action

Guest Presenter: Chris Mikles



Director of Teacher Education; CPM Educational Program; chrismikles@cpm.org

Wednesday

July 12, 2017

Cost:

SDCTM Members

\$25.00

Nonmembers

\$50.00

Registration: 8:00 am

Session 8:30-4:00

DWU Graduate credit
is available (+\$70)

**Registration
deadline: May 30**

Activities will be
applicable for grades
6-12.

**Bring your laptop or
tablet computer.**

SDCTM is an Affiliate of the National Council of Teachers of
Mathematics. (www.NCTM.org)

Name _____

E-mail address _____

Home/Summer Address _____

Home phone _____

School _____

Teachers report challenges in implementing the strategies that make students college and career ready in the 21st century.

- How do you keep students engaged on interesting math problems?
- How do you make sure students are discussing rich, mathematical concepts and ideas?
- How do you shift the teaching focus from covering topics to deepening students' understanding of the mathematics in each course?

In this workshop, teachers will experience the excitement of engaging mathematical lessons while discussing the mathematics with colleagues. Participants will learn how to adjust lessons to promote mathematical discourse while also experiencing strategies they can use to facilitate discussions as students grapple with engaging problems. This seminar is appropriate for grades 6 -12 teachers.

- Location: DWU Campus Mitchell, SD
- Registration: \$25 for SDCTM members or \$50 for nonmembers.
- Questions about registration? Contact Steve Caron: steve.caron@k12.sd.us

Don't delay! Registration is limited to a maximum of 32 participants (first come basis) for the session. Minimum 16 participants required.

To register for the symposium:

- Complete this form and mail with payment
\$25 (SDCTM member)
\$50 (nonmember)
- Please send this form and check payable to SDCTM to:
**Steve Caron 907 South 16th ST
Aberdeen, SD 57401**
- Questions: email steve.caron@k12.sd.us
- Not a member yet? Join now! Go to
<http://www.sdctm.org/joinsdctm.htm>

• DWU Graduate credit

Please do not send payment for DWU credit with your registration. You will register and pay for credit (\$70) when you arrive on campus July 12.



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

Jay Berglund
204 S. Exene Strert
Gettysburg, SD 57442

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
- _____ Retired \$5.00
- _____ Student \$5.00
- _____ Other \$20.00

We now offer the option to use PayPal to pay your dues for a minimal processing fee of \$1.00. The processing fee will cover the processing fees incurred by SDCTM and fees charged for having checks cut by PayPal.

Instructions can be found online at:
<http://www.sdctm.org/joinsdctm.htm>



SDCTM Newsletter
C/o Sheila McQuade
OGHS
3201 S. Kiwanis Ave
Sioux Falls, SD 57105

2015-2017 SDCTM Executive Board Members

SDCTM President
Allen Hogue
Brandon Valley High School
(605) 585-3211
allen.hogie@k12.sd.us

SDCTM Past President
Cindy Kroon
Montrose High School
(605) 363 - 5025
cindy.kroon@k12.sd.us

President-Elect
Crystal McMachen
Rapid City SouthWest Middle School
(605) 394-6792
crystal.mcmachen@k12.sd.us

Vice-President
Steve Caron
Aberdeen Central High School
(605) 725-8208
steve.caron@k12.sd.us

Secretary
Amy Schander
Yankton High School
ASchander@ysd.k12.sd.us

Treasurer
Jay Berglund
Gettysburg High School
(605) 765-2436
jay.berglund@k12.sd.us

Conference Coordinator
Jean Gomer
(605) 629-1101
jeanann@itctel.com

Webmaster
Cindy Kroon
Montrose High School
(605) 363 - 5025
cindy.kroon@k12.sd.us

Elementary Liaison
Merideth Wilkes
Black Hawk Elementary
(605) 484-5726
merideth.wilkes@k12.sd.us

Middle School Liaison
Sarah Gross
North Middle School
(605) 394-4042
sarah.gross@k12.sd.us

Secondary Liaison
Lindsey Brewer
Huron High School
(605) 458-2243
lindsey.brewer@k12.sd.us

Post-secondary Liaison
Dan VanPursesem
USD
dan.vanpursem@usd.edu

SDCTM Public Relations Representative
Leah Branaugh
Huron Middle School
(605) 353-6900
leah.branaugh@k12.sd.us

NCTM Representative
Mark Kreie
Brookings High School
(605)-696-4236
mark.kreie@k12.sd.us

Newsletter Editor
Sheila McQuade
Sioux Falls O⁺Gorman High School
(605) 336 - 3644
smcquade2@sfcss.org



www.sdctm.org