Wahpe Woyaka pi

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

South Dakota Council Teachers of Mathematics Newsletter

Presidential Ponderings

Welcome to Spring! I think we are all glad to see the end of Winter. Hope you all had a great PI day. Ours was combined with a late start so it was pretty chaotic discovering PI and eating pie but I think the students were happy with the outcome. This year we had so many pies that we sent some home. Maybe next year we'll have a pie sale.

As we move into spring we also move into the testing season. This year the stress isn't what do they know but how on earth do we schedule all of them. It is nice that this is a practice round however there is a bit of me that thinks my students will spend a lot of time on work that has no results. "Please do your best on this test and I will never tell you how you did." Kind of a mixed bag there. It is also a lot of days with technology unavailable to students because it is used for testing. A delicate balance.

It appears South Dakota's adoption of the Common Core has survived the legislature. No matter how you feel about the adoption, there certainly was a lot of misinformation out there. Even the Rapid City Journal, while praising the Common Core, indicated that they thought CCSS was much better than No Child Left Behind.(?) Hmmm… Just give a deep sigh and move on.

The Shell Center has decided to make some of its books available as free downloads. The site is http://www.mathshell.com/. Check it out and see if you are interested. They are the people who run the Math Assessment Resource Project (http://map.mathshell.org/materials/index.php) which has many good activities for use in your classroom. One of my favorites is their "Interpreting Distance-Time Graphs". It is a great introduction to our graphing unit.

Take time to enjoy our spring weather as you race to the end of the year. So much content to learn…so little time to learn it.

Ellie Cooch
SDCTM President

PayPal

At the February general meeting, it was proposed that we offer members the choice to pay their dues through PayPal. Our webmaster Cindy Kroon was tasked with doing the research to determine the fees associated with using PayPal,. It has been determined that we will be able to offer the PayPal option for a minimal processing fee of $1.00. The processing fee will cover the processing fees incurred by SDCTM as well as fees charged for having checks cut by PayPal. Instructions can be found online at www.sdctm.org/joinsdcmt.htm or on the membership form found on page 11.

SPRING 2014

Wahpe Woyaka pi

Inside this issue:

Calendar Notes:

- *PAEMST Applications Due May 1, 2014*
- *SDCTM/SDSTA Conference February 5 - 7, 2015*

K-5 Corner

Greetings Elementary Educators!

The season of testing is upon us! Are you ready? South Dakota students will embark on the last year of DSTEP accountability testing this spring, and also get a taste of what's to come with the Smarter Balanced Assessment.

There has been a lot of chatter among teachers about this new Smarter Balanced Assessment. Yes, it will be a more challenging test. Yes, it will challenge students to think and reason more they've had to on traditional assessments. Do I think they're up to the challenge? You betcha! We as teachers have worked long and hard on changing our teaching to encourage more thinking and reasoning from students, and our hard work will pay off! One major change on the SBAC however, is that students in grades 3-5 will not be able to use calculators. As a teacher who has worked on these test questions, I can assure you that if your students are used to using reasoning and thinking, rather than reaching for a calculator to find an answer, they will be just fine on the test. The questions are written in a way that encourages more reasoning to find an answer, and less actual calculating.

If you haven't already taken the opportunity, please visit the Smarter Balanced website to view some of the sample questions (http://www.smarterbalanced.org/practice-test/). It may be scary and overwhelming. Change almost always is. But we need to stick to what we know is effective teaching, and have faith in the process. We may not see immediate and favorable responses initially, but with faith and fidelity, I am confident we will get the results we want in the future!

Lori Stverak
1st Grade Teacher, Rapid City Area Schools
SDCTM Elementary Liaison
Lori.Stverak@k12.sd.us

"...the payoff of student success in the end is invaluable!"

The **SDCTM/SDSTA Conference** will be held
in Huron February 5-7, 2015!!
WE NEED YOU!!!
You all have something to share. Think of a fun lesson, or something neat you do in your classroom and SHARE it with other teachers!!!

PLEASE consider presenting.

We need more elementary presenters and attendees.
It's up to you!!!!
See you there!!

9-12 Spotlight

Spring has sprung and if your students are anything like mine spring fever and "senioritis" has already kicked in! Thanks to Lori Keleher (another math teacher at Huron High School) I have a new activity in my bag of tricks: Graffiti Wall!! There are some pictures from my Sheltered Geometry (all ELLs) and my Pre-Calculus classes on page 4. This activity can be used at all levels of mathematics. How it works in my Sheltered Geometry class when we were learning the Pythagorean Theorem: I divided the class into groups of 4 based on their NWEA score (low with low and high with high). I had plenty of white board space for each group, otherwise you could use a large sheet of chart paper for each group at various locations around the room.

As the teacher, I read the first directions for the first step of the problem, in this case "draw a right triangle". I gave the students plenty of time to complete the problem. Then they rotate. The groups rotate clockwise to the next location. The first task is the check the work of the previous group and make any necessary corrections. Then, I read the next part of the problem, for example "label the legs of the triangle with q and r, and the hypotenuse s." I give them more time, rotate, and repeat until the problem is complete. Once the problem is done I rotate one last time for a final check of the work and solution because as I told them the whole class is getting the same grade on this assignment. I check each of the problems. Every mistake results in loss of points, if the same mistake is made on all 5 problems that is 5 points off. I only read and repeat each step of the problem twice, that keeps them all listening.

I have the rule they are only allowed to talk to their group members not any of the other groups. Otherwise I will take points off as well. I did the activity 3 times in Sheltered Geometry this day increasing the difficulty of the problems. First time was solving the hypotenuse with a Pythagorean Triple, second time was solving for a leg of another Pythagorean Triple, and lastly was solving for a hypotenuse as a radical. It is called Graffiti Wall, so I encouraged them to write big and artsy to be creative and have fun.

I modified the activity somewhat with my Pre-Cal class. The topic was "Simplifying Trigonometric Expressions and Verifying Trigonometry Identities". Each group started with a different problem. The group of students were only allowed to do one step of the problem, then I had them rotate. Once rotated they had to first check the work of the previous group(s), and then write the algebraic reasoning or trigonometric identity to justify the previous step. After that, they had to do the next step of the problem. We continued to rotate and repeat until all problems were complete, also checking the final results. This was very challenging for them as each problem needed a different process to complete, which required more process time.

I was very pleased how the activity went at both levels of my classes. It was something different then putting problems up on the board. Providing my students with opportunities to interact with one another, to discuss as they work through difficult problems, requires them to use academic vocabulary, and apply critical thinking skills, which results in a better understanding of the topics. I hope that between now and the end of the school year you can incorporate this activity into your classroom. If you have any questions about this activity please feel free to e-mail me. I would LOVE your feedback and/or suggestions to improve the Graffiti Wall as well!

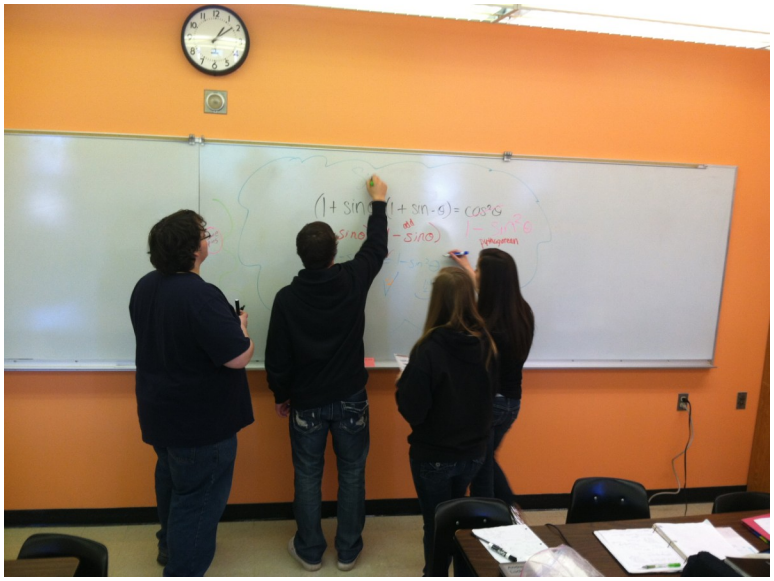
Lindsey Brewer

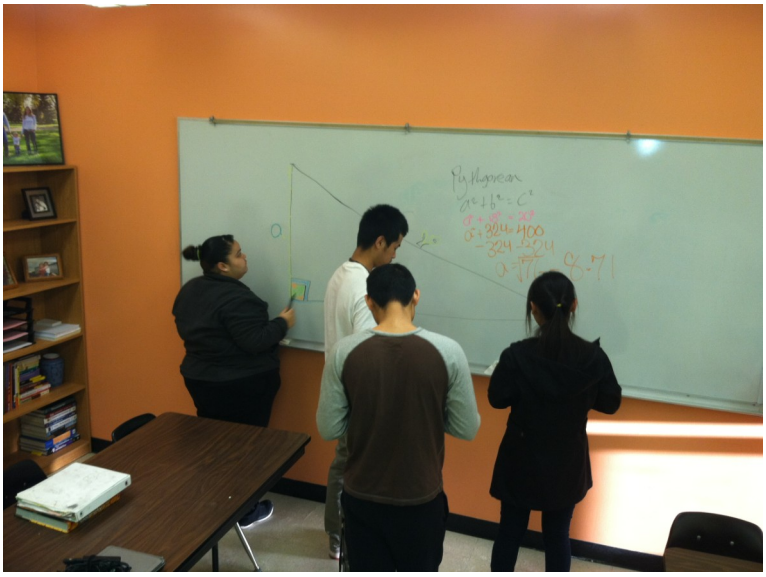
SDCTM HS Liaison

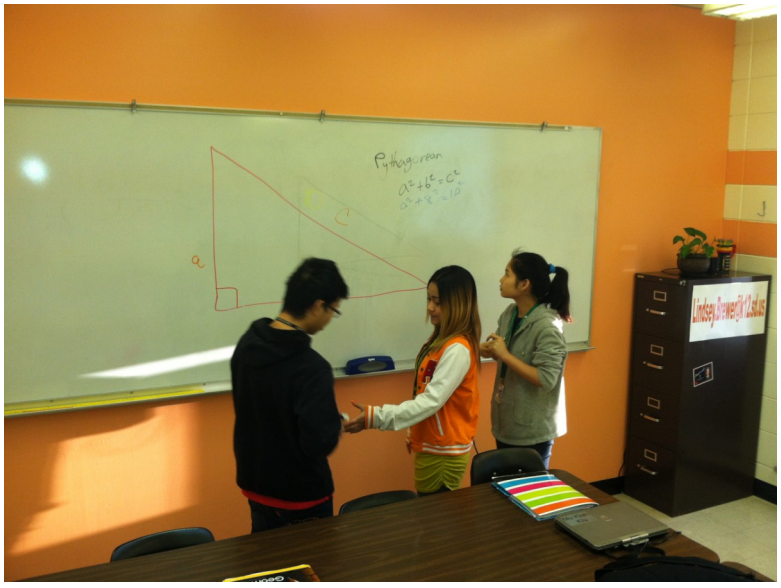
Lindsey.Brewer@k12.sd.us

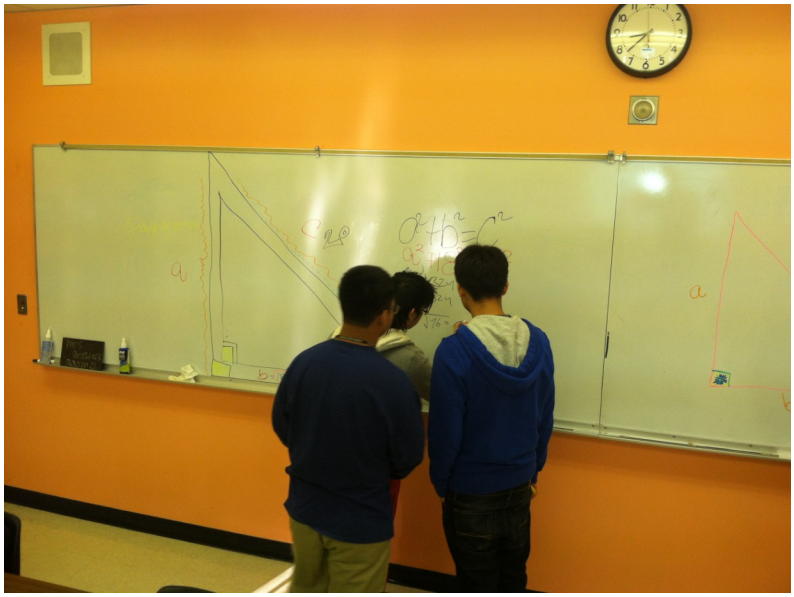
I have a new activity in my bag of tricks: Graffiti Wall!!

Graffi Wall pictures









Higher Ed Viewpoint

It is hard to believe that we are staring at spring. With the weather turning nice our student's minds tend to turn other places than the classroom. Hold fast my friends, we still have two months of some great learning opportunities.

It was good to see many folks in Huron once again this past February. I would like to share some topics from our session with higher education for those of you that couldn't make it to Huron.

The first item I would like to share is about the SMARTER BALANCED exam being used as placement in the universities. Some teachers were wondering about how to motivate students for the SB exam. Typically money will motivate students so they should know that it can be used as an alternative to the ACT for placement in their math courses. If they score high enough, they can go straight to Math 102 and thus save time and money by not having to do the remedial course of Math 095 in college.

"...money will motivate students so they should know that it can be used as an alternative to the ACT for placement in their math courses."

The second item I would like to share is the common question we get asked at the universities of what we would like our incoming students to know. The answer to this has two parts. There is the larger goal of just making sure a student is responsible and motivated. That will go a long way to being successful in college.

The other side of the question has to do with basic skills in the classroom that I also break into two categories. For the student that is taking math as a graduation requirement and is not calculus bound, it seems that the two basic skills preventing them from success would be the ability to work with fractions and knowing their basic facts. If they came to that entry level math class very comfortable with fractions and knowing their basic facts, it would go a long way to their success. Fractions occur everywhere, even in the abstract with variables replacing actual numbers, and they have no hope of factoring if they don't know their basic facts.

For the student going on to calculus, they need to have a better understanding of two main topics. First they need to have a solid understanding of algebra so that they can do the following algebra simplification.

$$\frac{(2x+4)\frac{1}{2}(6x^2-5)^{-\frac{1}{2}}(12x)-(6x^2-5)^{\frac{1}{2}}(2)}{(2x+4)^2}=\frac{(12x+5)}{2\sqrt{6x^2-5}(x+2)^2}$$

You will recognize that this is just simplifying the derivative of a function. For a tenth of a point on the final exam, I'll let you figure out what that function was. However, the main point here is that students have little or no problem getting the first step. They know the quotient rule quite well from high school and after seeing it again in college. However, they struggle dearly with the algebra to make their answer look like the back of the book. I realize I am preaching to the choir here and I'm sure it is the same problems they struggle with in your classes. However, our students are failing calculus because they don't know the algebra well enough, not because they can't learn calculus. The problem really tends to compound itself. The algebra is weak so they struggle with limits, then they struggle with the derivatives, then they struggle with integration, and etc.

continued

Higher Ed Viewpoint *continued*

The second item students going on to calculus need to know is a little more trigonometry. They need to have memorized the basic trig values (*sin x, cos x,* and *tan x*) for the common angles in the first quadrant. They need to know these by heart and not with the aid of a unit circle. They also need to know the basic identities: the three Pythagorean identities, the identity for *sin 2x*, the three identities for *cos 2x*, and the identities for *sin (x+y)* and *cos (x+y)*. I'm pretty sure that if they came to us with these items mastered, we can take them on from there.

I wish you all well as you complete your semesters and that you can all enjoy a relaxing summer. Maybe you'll even enjoy doing some recreational math.

Regards,

Dan Van Peursem

Dan Van Peursem
Higher Ed Liaison for SDCTM
Associate Professor and Dept. Chair
The University of South Dakota
Department of Mathematical Sciences
Dan.VanPeursem@usd.edu

Share the Wealth

I like to include activities in each newsletter. My goal is to include activities/ lesson ideas for each grade level. I know that we have some of the world's best math teachers teaching in the state….and some of the most generous. However, I've come to realize that we are also some of the most modest. You never think what you are doing is "good enough" to include in the newsletter. Let me assure you that it is! If it works for your students, I know that at least one other teacher would find it helpful as well. I challenge you each to submit at least one activity...no matter how small or how large. You can include pictures of your students (and you if you'd like). Past submissions have sometimes included a student worksheet, others have not. It can be as simple or as complex as you are comfortable with. Sometimes, a simple idea (with or without handouts, pictures etc). can be like a gold mine to the teacher that is looking for just the right thing.

Send submissions to: smcquade2@sfcss.org

"Sometimes a simple idea can be like a gold mine ..."

Friend of Mathematics Award

The Friend of Mathematics Award is presented to Technology and Innovation in Education (TIE). We would like to recognize the generosity of the TIE organization. For years we have gone to TIE to borrow the overhead projectors we use during the conference. Without their help, we would be sorely pressed to find enough projectors for our presenters. From their nondescript location in Rapid City they have become a leader both in encouraging the use of technology in education as well as training teachers to use technology in their classrooms. Marcia Torgrude accepted the award for TIE. Thanks again TIE for all you have done for us.

Distinguished Service Award

Our Distinguished Service to Math awardee this year has been teaching at Montrose High School for 34 years and has won numerous math awards including The Presidential Award for Excellence in MathematicsTeaching and the Daktronics Outstanding Math Teacher award. According to her principal Cindy spends endless hours working with her students and is known to stop in and ask, "Do you have time for a consult?" which is an indication to him that they need to talk about the math world.

Cindy is a leader in South Dakota mathematics. She has served on countless committees for the SD Department of Education including among a long list, writing math standards twice, creating questions for both DSTEP and smarter balanced tests, leveling test questions, and setting cut scores.

She has twice served as president of the South Dakota Council of Teachers of Mathematics and is currently our president elect. In addition she is the Webmaster for the Council and makes sure to keep SD math teachers informed of what grants, conferences, and meetings are available to our members. Cindy always presents several sessions at our yearly math conference. Along with presenting high school activities, because she knows we are often looking for presenters in other grade bands, Cindy goes out of her way to provide sessions for elementary teachers. She also encourages younger teachers to get involved in the conference, step up for leadership roles, and mentors them along the way.

I like to say that Cindy suffers from the "Math Curse" because she sees everything as a possible math problem. Years ago Cindy was in a class of mine. At lunch break she pulled a large flower from the ditch and headed to ASCS to see what flower this was. Turns out it was a noxious weed but the person in charge wrote the name of the flower on the back of an information sheet in the office. When Cindy returned to class she turned the paper over, noticed that it had some information on cattle feed and immediately started creating math questions from the information.

This list is just a sampling of all the things Cindy has done both for our organization as well as math teachers in South Dakota. It is my pleasure to present the Distinguished Service Award in Mathematics to Cindy Kroon.

Solving Trigonometric Equations

This lesson offers a puzzle to reinforce the skills of solving trigonometric equations. This puzzle allows students the opportunity to enhance their problem solving skills using special angles on the unit circle and trigonometric identities to solve trigonometric equations. This lesson is adapted from an article by Mally Moody, which appeared in the March 1992 edition of *Mathematics Teacher*.

Prerequisites: Students should be familiar with trigonometric identities and special angles located on the unit circle. The time required will vary according to the level and ability of the students in each group and the amount of discussion generated by both the teacher and students.

Trigonometry Puzzle

Prepare the activity sheet by cutting up the sheets into squares, and ideally laminating them.

Place the sixteen squares in an envelope. Divide students into groups (groups of three work well). Give each group an envelope of squares, and instruct them to match equations to their solutions to create one large square, lining up the equations and their solutions. Students will review trigonometric functions for special angles occurring on the unit circle and will be better prepared to deal comfortably with trigonometric equations in more advanced work. If a group seems to be having difficulty, suggest identifying one of the corner squares to get started. (Note that the arrangement on the original activity sheet represents one possible solution, though students may find others.)

These sheets are "answered" by the correct assembly of the puzzle. Students should be encouraged to present and defend their own ideas and solutions. They should also be encouraged to reflect on and accept the possibilities suggested by classmates.

Learning Objectives

Students will be able to:

- Analyze equations, check for limitations and valid solutions, and examine appropriate methods of solutions using algebraic techniques and trigonometric identities.
- Work in small groups encouraging classmates and communicating thoughts.

Materials

Trigonometric Equations Square, Calculators, Solution Transparency

Allen Hoagie
Brandon Valley High School
allen.hogie@k12.sd.us

$\csc x$ = *undefined*	$\cot 2x = 1$	$\sin x = 1$	$\cos x = 1$	$\csc x + 1 = 0$
$x = 0\ x = \pi$	$\sin x = 0$	$x = \frac{5\pi}{6}\ x = \frac{11\pi}{6}$	$\tan x = \frac{-\sqrt{3}}{3}$	$x = \frac{\pi}{4}\ x = \frac{3\pi}{4}$	$\csc x = \sqrt{2}$	$x = \pi\ x = 0\ x = \pi$
$\cos x = -1$	$\tan x = 1$	$\sin x = -1$	$\tan x = -\sqrt{3}$
$\sec x$ = *undefined*	$x = \pi$	$x = \frac{\pi}{2}\ x = \frac{3\pi}{2}$	$x = \frac{\pi}{4}\ x = \frac{5\pi}{4}$	$\cos x = 0$	$x = \frac{\pi}{3}\ x = \frac{5\pi}{3}$	$x = \frac{3\pi}{2}$	$\sec x = 2$	$x = \frac{\pi}{4}\ x = \frac{5\pi}{4}\ x = \frac{3\pi}{4}\ x = \frac{7\pi}{4}$	$x = \frac{2\pi}{3}\ x = \frac{5\pi}{3}$	$\tan^2 x = 1$	$x = \frac{\pi}{2}\ x = \frac{3\pi}{2}$
$\cos x = \frac{\sqrt{2}}{2}$	$\tan x = \frac{\sqrt{3}}{3}$	$\cos x = \frac{1}{2}$	$\sin x = \frac{-\sqrt{2}}{2}$
$\sec x = \sqrt{2}$	$x = \frac{\pi}{4}\ x = \frac{7\pi}{4}$	$x = \frac{\pi}{6}\ x = \frac{7\pi}{6}$	$x = \frac{\pi}{3}\ x = \frac{5\pi}{3}$	$x = \frac{5\pi}{4}\ x = \frac{7\pi}{4}$	$x = \frac{\pi}{6}\ x = \frac{7\pi}{6}$	$\cot x = \sqrt{3}$	$x = \frac{\pi}{4}\ x = \frac{5\pi}{4}$	$\sin 2x = 1$	$x = \frac{\pi}{4}\ x = \frac{5\pi}{4}\ x = \frac{3\pi}{4}\ x = \frac{7\pi}{4}$	$\csc^2 x = 2$	$x = \frac{\pi}{4}\ x = \frac{3\pi}{4}\ x = \frac{5\pi}{4}\ x = \frac{7\pi}{4}$
$\sin x = \frac{\sqrt{3}}{2}$	$\cos x = \frac{-\sqrt{3}}{2}$	$\tan x + 1 = 0$	$\sin x = \frac{1}{2}$
$\cot x$ = *undefined*	$x = \frac{\pi}{3}\ x = \frac{2\pi}{3}$	$x = \frac{5\pi}{6}\ x = \frac{7\pi}{6}$	$x = \frac{3\pi}{4}\ x = \frac{7\pi}{4}$	$x = \frac{\pi}{6}\ x = \frac{5\pi}{6}$	$x = \frac{\pi}{2}\ x = \frac{3\pi}{2}$	$\cos 2x = -1$	$\sec x = \frac{2\sqrt{3}}{3}$	$\csc x = \frac{2\sqrt{3}}{3}$	$x = \frac{\pi}{2}\ x = \frac{3\pi}{2}$
$x = \frac{\pi}{8}\ x = \frac{5\pi}{8}\ x = \frac{9\pi}{8}\ x = \frac{13\pi}{8}$	$x = \frac{\pi}{2}\ x = \frac{3\pi}{2}$	$x = \frac{\pi}{6}\ x = \frac{11\pi}{6}$	$x = \frac{\pi}{3}\ x = \frac{2\pi}{3}$	$x = \frac{\pi}{2}\ x = \frac{3\pi}{2}$
	$x = \frac{\pi}{2}$	$x = 0$	$x = \frac{3\pi}{2}$

Break-lyn Bridge: Modeling with Spaghetti

"*Itsa gonna be great!*"

SDCTM/SDSTA Annual Conference

Feb. 6-8, 2014

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

Scientific Thinking in Experimental Settings

1. Experimental design
   - Identify and classify experimental variables as independent, dependent, or controlled
   - Make qualitative predictions about the relationship between variables
   - Record the procedure used to gather data
   - Construct and label a data table
2. Data Collection
   - Collect data for the widest reasonable range of independent variable values
   - Use metric units, conversions and prefixes
3. Mathematical modeling
   - Make test plots of data to find linear relationships
   - Provide verbal descriptions of mathematical models
   - Write equations for mathematical models (depending on grade level)
   - Provide interpretations for the physical significance of the slope and y-intercept of a linear model (depending on grade level)

Materials:

- Uncooked long-strand spaghetti
- Disposable plastic cups
- String
- Unit masses: marbles, washers, nickels, etc.
- Ruler
- Graph paper

Spaghetti Bridge Teacher Notes

Introduction:

Students find a relationship between the number of spaghetti strands making a "bridge" and the largest number of masses that can be supported. This activity provides a great environment for discussing independent, dependent and control of variables. Students should also graph their data and write an equation (mathematical or verbal) for the graph.

Pre-lab Discussion:

Show students the experimental setup and ask them what they could measure about the bridge. Record all student suggestions. Most of the items will probably fall into two categories: bridge design factors and measure of bridge strength.

What did you observe?
What could we change?
What can we measure?
What would be worthwhile to investigate?

Students can choose the design factors, therefore those factors are the independent variables. Suggest that the bridge design factor of interest is then number of spaghetti strands. The design of the bridge will determine how many nickels can be supported, therefore the number of nickels is the dependent variable. Ask students to measure and record the value for all of the other variables on the board, which must be held constant, or controlled.

Data Analysis:

Students should graph their data, (which will be pretty linear) draw a best-fit line, and (depending in level) determine an equation or verbal description of the model. The analysis might include discussion of slope and y-intercept.
Have students draw their graph, explanation (or equation) and variables held constant on large whiteboards. Have the class stand in a circle so that they can all see each other's boards. Direct the discussion using questions to specific individuals and feel free to repeat important questions.

Example questions:

Ask students about their experimental procedure: What was your independent variable? What was your dependent variable? What is meant by control of variable? How did you control variables? Why did you control variables? How is a dependent variable different from an independent variable? How did you know you had collected enough data? What is the advantage of doing multiple trials?
Ask students about their graph and equation. Explain why you graphed this variable on the y and that variable on the x. What does the straight-line graph tell you about the bridge? What does the y-intercept mean in terms of your bridge? How do you determine the units of the slope? What does the slope of your graph tell you about your bridge? Why do different groups have different values for their slopes? What would a line with a larger slope look like if it were added to your board? What parts of the equation should have units and what parts of the equation do not have units?

Where to begin:

1. Demonstrate experimental procedure using 1 strand of spaghetti.
2. Ask and record responses:
   "What did you see?"
   "What can you change?"
   "What can we measure?"
3. Discuss: What is worthwhile to measure? What are you going to investigate?
   Independent (what we change) and dependent (responding to change) variables
   Other variables should be controlled (not change)
4. Students design investigation and collect data
5. Students graph data and interpret results
6. Groups share and discuss using whiteboards
   Data table
   Graph
   Explanation (and maybe equation)

South Dakota Council of Teachers of Mathematics

June 19th

SDCTM 2014 Summer Symposium
Dakota Wesleyan University, Mitchell SD

That's Not the Half of It!

Teaching Fractions for Understanding

Thursday,
June 19, 2014

SDCTM Member Cost: $50.00
Nonmembers $100
Registration:
8:00 am
Session 8:30-4:00
Lunch provided

DWU graduate credit will be available for additional $70.00.

(Enroll and pay for the credit when you arrive on campus June 19th

Fraction activities applicable for K-8 students.

SDCTM is an Affiliate of the National Council of Teachers of Mathematics.

Bring a flash / thumb drive to save your work!

Instructors: Lori Stverak & William Kliche, Rapid City School District

One of the major shifts in Elementary Education curriculum with the implementation of Common Core is the teaching of fractions. Teachers in upper elementary classes need to have more than a basic understanding of fractions; rather, they need to know how to teach fractions for meaning, not just for answer-getting. This invokes a sense of fear for many teachers who may have a limited understanding of fractions and their operations.

In this session, we go beyond "Don't ask why, just invert and multiply", to playing, discovering, hypothesizing, and manipulating fractions. We will work to develop an understanding of what a fraction is and how fractions work, starting in the early elementary years and working through to the upper grades. In addition, we will work through all the operations with fractions to build an understanding of how it all works, in order to teach for meaning, not just for answer-getting. This session will add many tools to teachers' toolboxes. They will walk away with ready-to-use lessons, activities, and ideas to implement in their K-8 classrooms.

Registration cost for will be $50 for SDCTM members, or $100 for nonmembers. DWU graduate credit will be available for an additional $70 cost. Questions may be directed to Rocky Von Eye at rovoneye@dwu.edu.

To register for the symposium, fill out form (below) and send with $50 (SDCTM members) or $100 (nonmembers). Make checks payable to SDCTM. Send to: ***Steve Caron 907 South Sixteenth Street Aberdeen, SD 57401.*** Questions about registration may be directed to steve.caron@k12.sd.us.

Don't delay! Registration is limited to a maximum of 25 participants (first come basis) for the session. A minimum of 15 participants is required.

Check www.sdctm.org for symposium information and updates.

Registration deadline: May 30, 2014

Name _____

E-mail address_____

Home/Summer Address _____

Home phone _____

School_____

School phone _____

DWU Graduate credit is available.

Bring a flash drive to save your work!

Note: DWU is offering a Shortcourse "Smart Tools including the Smart Pen" on Wednesday June 18, 2014. Enrollment is limited to 6 participants: cost $50.00. Email Rocky Von Eye at rovoneye@dwu.edu for more information and separate registration.

SDCTM Membership

Fill out and email this form to SDCTM treasurer Diana McCann diana@thecoganhouse.com .
Pay with the PayPal button on the SDCTM website ($1 service charge) www.sdctm.org/joinsdctm.htm

Or

Print a copy of this form and enclose check payable to SDCTM.
Mail to SDCTM Treasurer: Diana McCann 31133 BonHomme Road Tabor, SD 57063

Name _____

School Name _____

Subject(s) or Grade(s) taught _____

Home address_____

City _____State _____Zip_____

School address_____

City _____State _____Zip_____

Preference (select one) ____ Home ____ School

Home Phone _____ School Phone _____

E-mail _____ Fax _____

Membership category (Select one)

- ____ High School $20.00
- ____ Middle School $20.00
- ____ Elementary School $5.00
- ____Post Secondary $20.00
- ____ Retired $5.00
- ____ Student $5.00
- ____ Other $20.00

Revised 2/23/14
CDK

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

2013-2015
SDCTM Executive Board Members

SDCTM President
Ellie Cooch
Spearfish Middle School
ecooch@spearfish.k12.sd.us

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

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

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

Secretary
Samra Trask
Wall School District
(605) 279-2156
samra.trask@k12.sd.us

Treasurer
Diana McCann
(605) 589 - 3320
diana@thecoganhouse.com

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

Elementary Liaison
Lori Stverak
Rapid City Area Schools
lori.stverak@k12.sd.us

Middle School Liaison
Briana Wirth
Mitchell Middle School
briana.wirth@k12.sd.us

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

Post-secondary Liaison
Dan VanPeursem
USD
dan.vanpeursem@usd.edu

NCTM Representative
Allen Hogie
Brandon Valley High School
(605) 582 - 3211
allen.hogie@k12.sd.us

Webmaster
Cindy Kroon
Montrose High School
(605) 363 - 5025
webmaster@sdctm.org

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

www.sdctm.org