KATM Bulletin

Kansas Association of Teachers of Mathematics

October
2014

Announcing the 2014 KATM Conference

Raising the Standards over the Rainbow: We are not just common folk

October 13, 2014
Hays, KS
Fort Hays State University

Keynote speaker: Kim Sutton

Inside this issue:

A Message from our President

Another school year has started and I am excited to serve as your President of the KATM Executive Board for this school year. Last year proved to be very challenging for teachers in the State of Kansas. The political landscape changed and tests began the transition from the old standards to the Kansas College and Career Ready Standards. We must not forget about the Cyber attacks that proved more than frustrating to teachers and students within a new testing platform that also changed as our State Board of Education decided to veer away from the Smarter Balanced Consortium mid-year. Through all of these challenges, teachers showed perseverance and modeled for their students how important it is not to give up.

The KATM Board had a busy year last year. We hosted two events with the purpose of informing parents, teachers, administrators, and community members about the development of the Common Core and the process in which Kansas adopted them. KATM members had a seat at the table and were instrumental in this process and wanted to make sure that Kansans were equipped with the correct information. For the last two years, the KCCRS has been under attack in the legislature. Our past Presidents, Fred Hollingshead, Debbie Thompson, and Melisa Hancock all testified in support of the standards and we all worked diligently to clear up misconceptions put out by special interest groups.

So, what is in store for this year? Even though the State Assessments didn't go smoothly, and teachers were not able to receive data on the results, we did get a glimpse of the types of questions our students will be facing this year. KSDE has published on their math listserv that the testing sessions this year will also include a performance task. Know, that as the testing develops, KATM is working to stay informed so that we can pass along information and training to our members. There are several ways we plan to provide support for our members and all mathematics teachers in Kansas.

- Our Bulletin has changed formats, starting this year. - There will be a standards focus (theme) for each edition. Teachers are always encouraged to submit lessons at katm.org so other teachers can see what great math instruction is taking place and learn from those lessons.
- We are hosting our annual Fall Conference at Fort Hays State University on October 13, 2014. For $50, you can receive a full day of professional development on how to incorporate the standards, teach conceptual math, learn more about the upcoming assessments, and many other math related topics. Registration can be completed at katm.org.
- Zone Meetings at our Fall Conference – This year, we will have zone meetings during the conference, where you can meet with other teachers from your region and begin to network with them and share ideas, concerns, collaborate, and make contacts with others to tap into many different resources near you.

- Zone Meetings during the school year – Zone Reps on the board will host mini work sessions, of mini conferences in your region to meet the needs of our members. Contact your Zone Reps, listed at the end of the bulletin, to let them know how they can best serve your needs.

- Become a member of KATM if you aren't already. – Membership is very reasonable. For $15 you can subscribe to a year-long membership. For $40, you can subscribe for a three-year membership. Get involved and join an organization that supports math education in Kansas.

- Serve on our Board – Each year, we put out a call for nominations. Watch future Bulletins, for the announcements of available positions for the 2015-2016 school year.

My hope is to continue to grow this organization so that we can better serve teachers among the state. We have talented teachers all over that we can learn from and encourage each of you to join and stay active members as well work through this most pivotal time in math education since the adoption of state mathematics standards in the late 1990's. It is my honor to serve as President this year and I wish all of you a great school year and look forward to meeting many of you in October.

Stacey Bell

President, KATM

president@katm.org

In the coming issues

Be sure to look for our upcoming series of Bulletin articles highlighting the Standards for Mathematical Practice. We plan to have an in-depth series, highlighting teachers' best ideas and lessons . Each Bulletin will highlight a different standard.

- *December 2014 Bulletin will focus on #5,* ***Use appropriate tools strategically***

When I had my own elementary school classroom, I used to take out the manipulatives we needed for an activity ahead of time so that they would be on the students' desks and ready to be used. As I reflect on my own classroom practices and Standard for Mathematical Practice 5, I realize that I could have been depriving the students of some of the learning and reasoning embedded within the lesson. Students need opportunities to not only explore how to use tools, but also to decide which tool or strategy would work best for a given problem. CCSSI (2010) identifies tools as "pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software" (Standards for Mathematical Practice, para. 6). Students can justify why a tool or strategy is most efficient for the problem rather than being told which tools to use to solve a problem. In order to give students an opportunity to choose their own tool, teachers can provide students with problems that can be solved in multiple ways, then encourage them to choose a tool, and engage in a discussion about the benefits and limitations of the different tools and strategies. Chepina Rumsey

- *February 2015 Bulletin will focus on #4,* ***Model with mathematics***

Model with mathematics. Through this practice, mathematically proficient students create models to represent the relationships among the quantities in a situation. From the models, they gain insight into how to solve the problem, or what pattern they notice so they can create a new model. This is an exciting Practice that really makes the mathematics "visual" for students by using diagrams, tables, graphs, flowcharts, equations and formulas. Students can ask themselves these questions:
"Can I make my life easier by using math to optimize solutions?"
"Is there a way I can demonstrate real world problems using math?"
"Could a mathematical model make the problem situation and potential solution clearer?
(courtesy of Weber State University)

- *April 2015 Bulletin will focus on #3,* ***Construct viable arguments and critique the reasoning of others.***

Teachers who are developing students' capacity to "construct viable arguments and critique the reasoning of others" require their students to engage in active mathematical discourse. This might involve having students explain and discuss their thinking processes aloud, or signaling agreement/ disagreement with a hand signal. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. A middle childhood teacher might post multiple approaches to a problem and ask students to identify plausible rationales for each approach. Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They justify their conclusions, communicate them to others, and respond to the arguments of others. (description courtesy of insidemathematics.org)

CALL FOR SUBMISSIONS

Your chance to publish and share your best ideas!

The KATM Bulletin needs submissions from K-12 teachers highlighting the mathematical practices listed above. Submissions could be any of the following:

- Lesson plans
- Classroom management tips
- Books reviews
- Classroom games
- Reviews of recently adopted resources
- Good problems for classroom use

Email your submissions to our Bulletin editor: wilcojen@usd437.net

Acceptable formats for submissions: Microsoft Word document, Google doc, or PDF.

Have Your Pi and Eat it Too!

This is the first in a series of Pi Day articles.

Dr. Janet Stramel

Everyone knows that Pi Day is March 14. And all true math nerds knows that pi is not just 3.14, but an irrational number which continues infinitely. In the year 2015, a:t precisely 9:26:53 a.m., the longest extended Pi Day in our lifetime will happen. The date will be "3-14-15 at 9:26:53." And days like this come only once every 100 years!

What is pi?

It is the ratio of a circle's circumference to its diameter, and represented by the Greek letter "π." No matter how big a circle is, the value of π is always the same, 3.1415926… Mathematicians borrowed the symbol π from the Greek alphabet; π is the letter "p" in Greek. It is believed that π was chosen because it was the first letter of the Greek word *peripereia*, which means "periphery," or outer edge – or circumference (Beckmann, 1971).

In approximately 200 B.C., Archimedes of Syracuse found that π is somewhere between 3 10/71 and 3 1/7. He figured this out by taking a polygon with 96 sides and inscribing a circle inside the polygon (Castellanos, 1988).

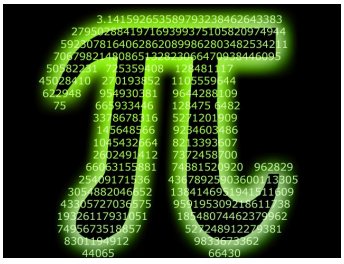
The value of π is very mysterious because its decimal value goes on forever, and therefore impossible to calculate exactly. For thousands of years, mathematicians have been trying to estimate the value of π. One Japanese mathematician made a whole floor of his house into a giant calculating table for that purpose. But now, computers can calculate π to trillions of decimal places. Is there a good reason to use all that computer power? Yes! Computing pi is a stress test for a computer -- a kind of "digital cardiogram" (Butler, 2013).

Here's a way to calculate π:

Take any round object – a "pi" plate, for example. First measure the diameter. Then measure the ! circumference. Divide the circumference by the diameter. How close do you get to the real π?

Plan Now to Celebrate Pi Day!

Pi Day is a day to celebrate mathematics in your school. It gives the perfect way to allow our students to have fun while investigating mathematics concepts. Coming in future issues of The Bulletin will be suggested activities that you can incorporate into your classroom.



References

Beckmann, Petr (1971). *The History of Pi.* The Golem Press, New York.

Butler, Brandon (2013). *28 Facts About Pi That You Probably Didn't Know*. Retrieved from http://www.networkworld.com/article/2164391/data-center/28-facts-about-pi-that-you-probably-didn-t-know.html

Castellanos, Dario. (1988). The Ubiquitous π. *Mathematics Magazine. 61*: 67-98 (April).

Highlighted Resource Review: Inside Mathematics

Review by Jenny Wilcox

Have you checked out the Inside Mathematics website? If not, you're missing out on a great resource!

The website has tons of great videos that serve several purposes. While some videos are interviews with teachers about a variety of topics, other videos are clips from classroom lessons. There are lessons to watch that span a variety of grade levels, and there are printed materials available for the lessons that are shown in the videos.

Inside Mathematics also has a Problem of the Month. The problem for each month has five levels of difficulty, so you should be able to find something to challenge students from primary grades to high school. The problem have teaching tips and are aligned to CCSS content and mathematical practice standards. You can also search past problems of the month organized by strands.

Another section of the Inside Mathematics website has performance tasks for grade 2-High School. These tasks are grade-level formative performance assessment tasks with accompanying scoring rubrics and discussion of student work samples. They are aligned to the Common Core State Standards for Mathematics. You may download and use these tasks for professional development purposes without modifying the tasks.

Inside Mathematics also has a series of videos that highlight the mathematical practice standards. The videos are great, and they have tons of materials that accompany them, including student materials, rubrics, and student work samples. Take a few minutes to check out this awesome resource today!

insidemathematics.org

Capitol Federal Mathematics Teaching Enhancement Scholarship

Capitol Federal Savings and the Kansas Association of Teachers of Mathematics (KATM) have established a scholarship to be awarded to a practicing Kansas (K-12) teacher for the best mathematics teaching enhancement proposal. The scholarship is $1000 to be awarded at the annual KATM conference. The scholarship is competitive with the winning proposal determined by the Executive Council of KATM.

PROPOSAL GUIDELINES:

The winning proposal will be the best plan submitted involving the enhancement of mathematics teaching. Proposals may include, but are not limited to, continuing mathematics education, conference or workshop attendance, or any other improvement of mathematics teaching opportunity. The 1-2 page typed proposal should include

- A complete description of the mathematics teaching opportunity you plan to embark upon.
- An outline of how the funds will be used.

An explanation of how this opportunity will enhance your teaching of mathematics.

REQUIREMENTS:

The successful applicant will meet the following criteria:

- Have a continuing contract for the next school year in a Kansas school.
- Teach mathematics during the current year.

Be present to accept the award at the annual KATM Conference.

APPLICATION:

To be considered for this scholarship, the applicant needs to submit the following no later than **June 1 of the current year.**

- A 1-2 page proposal as described above.

Two letters of recommendation, one from an administrator and one from a teaching colleague.

PLEASE SUBMIT MATERIALS TO:

Betsy Wiens, Phone: (785) 862-9433, 2201 SE 53rd Street, Topeka, Kansas, 66609

Don't be afraid to try...go for it! Submit a proposal for whatever cool thing you've been hoping to do in your classroom!

KATM Cecile Beougher Scholarship
ONLY FOR ELEMENTARY TEACHERS!!

A scholarship in memory of Cecile Beougher will to be awarded to a practicing Kansas elementary (K-6) teacher for professional development in mathematics, mathematics education, and/or mathematics materials needed in the classroom. This could include attendance at a local, regional, national, state, or online conference/workshop; enrollment fees for course work, and/or math related classroom materials/supplies.

The value of the scholarship upon selection is up to $1000:

- To defray the costs of registration fees, substitute costs, tuition, books etc.,
- For reimbursement of purchase of mathematics materials/supplies for the classroom

An itemized request for funds is required. (for clarity)

REQUIREMENTS:

The successful candidate will meet the following criteria:

- Have a continuing contract for the next school year as a practicing Kansas elementary (K-6) teacher.
- Current member of KATM (if you are not a member, you may join by going to www.katm.org. The cost of a one-year membership is $15)

APPLICATION:

To be considered for this scholarship, the applicant needs to submit the following no later than June 1 of the current year:

1. A letter from the applicant addressing the following: a reflection on how the conference, workshop, or course will help your teaching, being specific about the when and what of the session, and how you plan to promote mathematics in the future.

2. Two letters of recommendation/support (one from an administrator and one from a colleague).

3. A budget outline of how the scholarship money will be spent.

Notification of status of the scholarship will be made by July 15 of the current year. Please plan to attend the KATM annual conference to receive your scholarship. Also, please plan to participate in the conference.

SUBMIT MATERIALS TO:

Betsy Wiens
2201 SE 53rd Street
Topeka, Kansas 66609

Go to www.katm.org for more guidance on this scholarship

Ray Kurtz Award

1995 Ray Kurtz
1997 Ruth Harbin Miles
1998 Kim Gattis
1999 William D Hammers
2000 Richard Driver
2002 Ethel Edwards
2004 Coltharp Clan
Forrest, Glenn, Hazel
2006 George Abel, Margie Hill,
Betsy Wiens
2007 Susan Gay, Sue Neal
2011 Melisa Hancock
2012 Allen Sylvester

*Cecile Beougher Award

1995 no applicants
1996 Tonya Polart
Kendra Schoeman
1997 Cheryl Rader
1998 reword
1999-2005 no applicants
2006 Lori Thompson
2007 no applicants
2008 Deb Nauerth
2009 David Fernkopf
2010 Jamie Junker
2011 Marianne Steen
2012 Amy Johnston
2013 no awardee

*Capitol Federal Award

2001 Judy Brummer
2002 Lorey Drieling
2003 Marlene Taylor
2004 Donna Young
2005 Rosabel Flax
2006 Adrianne Miller
2007 Patti Herbster
2008 Kathy Clouston
2009 Caprice Schaffer
2010 Jenny Wilcox
2011 Stephanie Vopat
2012 Washburn Rural Middle
2013 Julie Conrad

KATM Board Meeting
Saturday, June 14th, 2014

Passing of the gavel and welcome to new board members/positions
After introductions, Fred "passed the gavel" to new President Stacey Bell and welcomed new board members/ positions
Board Training I
Stacey Bell walked the Board through the Executive Notebooks, including the Constitution and Policy Manua
Allen Sylvester shared the "new" website with the conference registration link, as well as the KATM secure site.

Committee Work Time and Reports
Membership – Betsy Wiens
Membership Report--
Betsy gave the Membership Report. Except for 3 new memberships and a few renewals since the November 5, 2013 report, there has been NO activity to the membership database. Betsy and Margie will be sending membership reminders through the Zone Coordinators.
Scholarship Report – discussion and vote

Nominations – Fred Hollingshead
There is now an online nomination form. There are two Zones (3 and 4) without a Coordinator.

Finance – David Fernkopf
Treasurer's Report – David emailed the Treasurer's Report to the Board.

Publications – Jenny Wilcox
Themed issues – The Standards for Mathematical Practice
Expand the pool of who is submitting to the Bulletin – asking conference presenters to submit their presentation to the Bulletin

Conference Advisory – Melisa Hancock
Fall 2014 Conference Update – Janet Stramel & Kathy Desaire
Monday, October 13 at Fort Hays State University
The 2015 conference will be held in Wichita with the option to renew that site for multiple years."

KLFA Update – Betsy Wiens
Request for funds $500

Webmaster Update – Allen Sylvester
Conference Registration Update
Registration for individuals, vendors, and presenters are online

Policy Manual Update – Betsy Wiens & ad hoc committee
Fred has made the updates to the Policy Manual, which was emailed to the board today. *Betsy moved, Lisa seconded to approve the updated Policy Manual. Motion carried.*

Zone 3 KCCRS Event Update – Betsy Wiens & committee
Betsy reported on the success of the event. Diane Debacker attended and was presented a gift from the KATM Board.

Zone Work Time – Stacey Bell
Stacey requested of the conference committee a time for Zone Meetings. It was decided that at the fall conference, Zone meetings will be held during lunch.

KLFA Continues Advocacy

KLFA Emphasizes the Importance of Professional Learning

•June 10, 2014•

Kansas Learning First Alliance (KLFA) met June 10th at the Kansas Association of School Boards (KASB) building. Dayna Richardson, KLFA Chair, provided brief highlights of the LFA Conference.

Stephanie Hirsh, Director of Learning Forward and Chair of Learning First Alliance, was our special guest and presented *Why Professional Learning Matters During Times of Complex Change: Becoming a Learning System.* She engaged the group in a dialogue around professional learning (PL), including the Standards of Professional Learning adopted by KSBE.

Why does professional learning matter? (Develop leaders for great schools, increase educator effectiveness, ensure collaboration so that no teacher works alone, many changes happening in our schools, the world is changing, others)

What is the purpose of PL? (Individual, Team/School, and Program Implementation)

What is transformed professional learning? (What do we want more of? Less of?)

Why transform professional learning? (Transformed PL = Transformed Classroom Instruction = Transformed Student Learning)

Dr. Hirsh stressed that all seven Standards of Professional Learning (learning communities, leadership, resources, data, learning designs, implementation, and outcomes) are important and cannot be used in isolation but *learning communities* is the standard that drives the change/innovation. She shared protocols that can be used with educators, focusing on professional learning that matters!

To support professional learning in Kansas, KLFA members brainstormed the following: creating a free web based tool/survey aligned to the standards for educators to evaluate their PL activities as well as gather state wide data, promoting the importance of PL beyond educators, creating some accountability structure to ensure KLFA initiatives are taken back to member organizations, developing a white paper pushing the fulfillment of the promise of the standards to the Board, getting more links on our KLFA website, then getting links on member organizations' websites to KLFA and/or Learning Forward's websites, promoting the free Learning Forward webinars, and collecting Kansas success stories to put on our website.

Dr. Hirsh focused on the creation of a systemic, comprehensive process that results in increased educator effectiveness and learning for ALL students. She challenged us to EXPERIENCE learning!!

Following Dr. Hirsh, the Andover and Lawrence district representatives presented information describing their professional learning work that supports district-wide initiatives. Dr. Angelique Koblar (Assistant Superintendent, Teaching and Learning), Dr. Jerri Kemble (Assistant Superintendent, Educational Technology Programs), and Melissa Stanley (Director, Information Technology Services), shared how Lawrence is implementing a blended classroom model of classroom instruction. It began with a pilot of eight classrooms and will be implemented in 150 classrooms next year. Their goal is to create more learner centric classrooms with increased *emphasis on student collaboration and digital learning tools.* Professional Learning includes district and building support for collaboration that is regular, ongoing, and job-embedded, allowing ample time for collaboration time to plan and access customized district support relative to individual needs.

KLFA Introduced to Rose Standards and Implementation Challenges

•August 26/27, 2014•

Kansas Learning First Alliance (KLFA) met August 26 (webinar) and 27 at the Kansas National Education Association (KNEA) building and via a webinar.

Members of the KLFA discussed the **Rose Standards**, which are a critical component of the Supreme Court's *Gannon* decision and which will play an important role in determining school funding in the future. Dr. John Heim, KASB Executive Director, facilitated a dialogue that allowed small groups to address broad areas about implementing these "capacities" in our Kansas schools. This dialogue was also facilitated with a group of local board members, state board members, legislators and other educational leaders the prior week. The results will be used to determine next steps. The four broad areas are:

Assessments and Accountability

Preparation for Postsecondary Education

Scope of School Responsibility

How Instruction Is Delivered

Other agenda items included professional learning, an update on legislative issues, and the upcoming elections.

In the most emotional moment of the meeting, PTA president **Tammy Bartels** was awarded the ***Karen Godfrey Advocacy Award***, recognizing Tammy's leadership in championing the Kansas College and Career Standards across the state.

On Tuesday evening, via a webinar, State Board KLFA liaison Kathy Busch and Commissioner Brad Neuenswander participated in a webinar with our members. Each of them shared greetings from the State Board and brought up-to-date information of KSDE initiatives:

Our past state assessments show steady growth and narrowing of the gaps among subgroups (with the exception of the past two years when budgets decreased) in spite of the growing numbers represented in those subgroups.

The administration of the state assessment at the high school level will be at the 10th grade, changing the assessment footprint to the student's journey to be "college and career ready."

The state assessment bar is higher, so early test results are anticipated to be lower.

Schools will show improvement in student performance in many additional ways besides just the state assessment.

The latest model of the Leader/Teacher Evaluations includes ongoing efforts to keep those measures relevant to job descriptions.

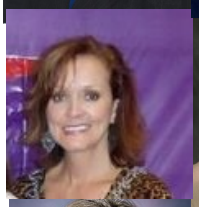
The Commissioner search timeline is established with selection slated for November 12.

KATM Executive Board Members

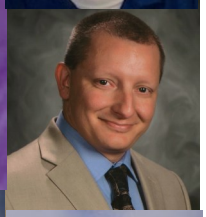
President: Stacey Bell
Instructional Coach, Shawnee Heights Middle School
bells at usd450.net, 785-379-5830

President: Elect: Pat Foster
Principal, Oskaloosa Elementary School
pfoster at usd341.org

Past President, NCTM Rep: Melisa Hancock
Consultant, Kansas State University
melisa at ksu.edu



President: Fred Hollingshead
Instructional Coach, Shawnee Heights High School
hollingsheadf at usd450.net, 785-379-5880



Secretary: Janet Stramel
Assistant Professor, Fort Hays State Univ.
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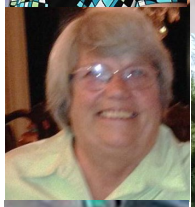

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Secondary Math Curriculum Coach, Wichita Public Schools
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