

KATM BULLETIN

Kansas Association of Teachers of Mathematics

What is New with KATM?

∞ A Call for Nominations!

∞ The KATM Board is currently working to fill the following positions. Please email Christine Staab, President, with nominations or questions about the positions.

- ∞ President-Elect
- ∞ Treasurer
- ∞ Vice President of Middle School
- ∞ Vice President of College
- ∞ Coordinators for Zones 1, 3, and 5

We look forward to your nominations!

- ∞ Check out KATM on Facebook. More info on page 4.
- ∞ Check out MINDSET – a workshop this summer for high school teachers. Information on page .
- ∞ Are you interested in joining a book study??? KATM will be studying Flatland by Edwin Abbot. Check out the website for more details.
- ∞ KATM Conference 2009 is scheduled for FRIDAY, OCTOBER 23 2009. This will be a one-day conference in HAYS, KS. Mark your calendars and check the website and bulletin for details. Scholarships will also be awarded at this time. Check out page 5 and 9 for application information.
- ∞ If you are interested in presenting at KATM 2009, please contact **Jerry Braun @ jbraun@usd489.com!**
- ∞ Check the KATM website for ZONE NEWS for information about what is going on in your area.

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Christine Staab
Louisburg High School

President's Letter

Brought to you by Christine Staab

With all the talk of budget cuts and financial crisis, it is hard to keep a positive outlook on things. Don't forget the importance of what we do each day! We teach the problem solvers of tomorrow.

"The significant problems we face cannot be solved at the same level of thinking we were at when we created them." -Albert Einstein

We need to think outside the box to get our students to do the same. Many of you have probably heard about the 21st Century Skills, but have you incorporated any of the ideas into your lessons? Check out www.21stcenturyskills.org and find the initiatives for Kansas. There are 277 resources posted for mathematics alone.

So try something new to pep yourself up. Remember, even if we can't afford paper, we can still teach and students can still learn.

MINDSET

A workshop for high school mathematics teachers

Teachers will learn basic Industrial Engineering and Operations Research principles through real-world examples in order to incorporate these concepts and real world mathematical applications into their advanced high school mathematics courses.

DETAILS:

Hosted at the Conference Center of the Kauffman Foundation in Kansas City, Missouri.

Dates: June 10-19, 2009 (No session on Sunday June 14th, OPTIONAL half day is planned for Saturday June 13th).

Time: 8:30 am - 12:00 Noon and 1:00pm - 4:30 pm. each weekday Lunch (Noon to 1:00pm) and Morning Snack provided every day

Graduate Credits: In Math Education from UMKC if successfully finishing the workshop (successfully completing the workshop means submitting a final project and 100% attendance)

Participant Stipend: Not available.

Materials Provided: Content provided in electronic format and with a link to a website for online assistance in answering questions during the implementation phase after the workshop

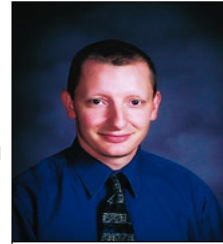
Application: Interested participants must submit a resume showing experience in teaching Algebra II or above, a college degree in math education or certification to teach school mathematics, and one letter of recommendation. Special consideration will be given to teachers who have had experience in teaching students who have enrolled in a fourth-year high school mathematics course.

Submit Application in writing **ON OR BEFORE MARCH 31, 2009** to:

Mario Eraso, Ph.D.
Ewing Marion Kauffman Foundation
4801 Rockhill Road

Mathematics for the Middle School Teacher

Brought to you by Fred Hollingshead



Fred Hollingshead is a 7th and 8th grade math teacher at Shawnee Heights Middle School in Tecumseh, KS

In the last *Bulletin*, I wrote to you about 21st century skills, a buzzword that is sweeping through education nationally, and Kansas has been no exception. I hope you took time to familiarize yourself with the websites I mentioned and the documents that are available there. Staying current on educational literature is key to our role as professional educators. While some of us tire of buzzwords and the “next new thing,” it’s also important to realize 21st century skills is a movement that is here to stay, no matter what name we refer to it as in the years to come. Rather than resist, we need to embrace the movement and begin to reflect on our own practices and seek to implement these skills into our own classroom instruction and look for them from our students.

KSDE has recently published its Profiles of the 21st Century Learner and Learning Environment (which was approved by the Board of Education in December). In it, KSDE promotes Ten Unifying Themes for the Learner and Five Unifying Themes for the Learning Environment (to see the list and read about the Profiles in more depth, visit www.ksde.org/learn21 and click on the Profiles link near the top of the page). These themes are already in place in some form for almost (probably all) of us in our classrooms. But we should all examine our practices closely and, with an unbiased eye, reflect on how well we are satisfying all of the themes. I know I find myself in a constant state of development when it comes to my own teaching - as I use the Profiles to examine my own instructional practices, I feel I come up short more often than I care to admit.

As these skills begin to take hold in our professional culture and we move away from thinking of 21st century anything as buzzwords and towards not only accepting them, but *embracing* them, we will begin to master both the art and science of our 21st century teaching. We must no longer settle for environments that are only conducive to learning (buzzword), and strive for environments that encourage and foster collaboration, creativity, and rigor. To achieve this, we must not accept mediocrity from, first and foremost, ourselves, and we must not accept it from our students. This, however, is a difficult task. The greater question from this statement is: How do we foster these things in *all* of our students and not just our very best?

Of course, we must thoughtfully examine what our expectations are for every student as we work to help each of them become proficient in mathematics. Perhaps more importantly, we must consider each student’s growth academically as they progress; doing so will help to ensure that they are given opportunities to collaborate, demonstrate their own creativity, and work through a curriculum that is rigorous to them. Response to Intervention (RtI) is one model that districts across the nation are employing to meet these demanding needs. In Kansas, RtI is referred to as Multi-Tiered System of Supports, or MTSS. MTSS models are starting up across our state - perhaps yours is already deep into implementation.

Many others, however, have either never heard of MTSS or are just beginning the process now. For those of us already involved with MTSS, kansasmtss.org and KSDE workshops have been invaluable resources to aiding our plans. Unfortunately, very little is currently available to schools trying to tier their math instruction. Plenty of research can be found supporting various interventions for reading from K-12, but research in math is conflicting. Yet, in our current high-stakes testing system, we cannot continue to wait for someone else to develop the answers. It is becoming increasingly necessary that we band together and share our ideas with each other.

As our spring assessments approach and your time becomes even more precious, please take a moment to reflect on your school and district interventions that you use to reach all of your students. The kansasmtss.org website offers numerous documents that you can read to learn more about MTSS - how do your interventions fit in such a model? As you consider the different ways you try to reach every learner, try to also think about how the interventions help to promote 21st century learning. Remember: We must help *all* of students learn to explore and find new knowledge, validate, synthesize and leverage it, and communicate, collaborate, and problem solve with it, and do so while giving them instruction that is rigorous and meaningful to *them*.

KATM Going Hi-Tech with Facebook

Jerry Braun – President Elect

On the heels of a successful Facebook group for math teachers in Southeast Kansas, KATM is trying this online social network to reach teachers in Northwest Kansas as well. Zone 1, which includes 21 counties in Northwest Kansas, has created a Facebook group to share teaching strategies, educational ideas, helpful hints and information with math teachers across the state but primarily in that 21 county area. Great physical distance between schools along with a large number of teachers who are “the math department” in their school provided the catalyst for this move. KATM is willing to try anything to promote a true learning community for Kansas teachers regardless of physical location. As the numbers of younger, more tech-savvy teachers enter the career, Facebook seems like the perfect avenue to reach our teachers.

Currently the Facebook group is open to anybody who would like to learn more about KATM or participate in educational discussions. At some point, the group may be closed to active KATM members only, but at the current time it is not. We are hoping that as teachers see the benefits of belong to our organization, they will be interested in joining. So....if you have a Facebook account, come join our group! If you do not have a Facebook account, sign up to get one (I'm sure your students would be glad to help you!) Hope to see you all...Online.

Mathematics for the High School Teacher

Brought to you by Debbie Sylvester

Have you ever tried to create your own test or worksheet for your students and lost valuable planning time searching the web for a suitable math graphic? Or found yourself literally cutting and pasting a printed picture on the paper? Or fumbling through the drawing tools on your word processor that won't work quite right? Or even worse yet, using your own limited artistic abilities to draw a figure?

After trying in vain to create a number line using the drawing tools on my word processor, I found a handy website. Clipart ETC is a site sponsored by the Educational Technology Clearinghouse of Florida. <http://etc.usf.edu/clipart/> This is a free site boasting over 44,000 pieces of clip art designed for all disciplines. Clicking on the math link on the main page, you will find over 7000 pictures sorted into 13 main categories from counting, currency, and clocks to tools, thermometers and trigonometry.

Need a great big graphic of Pi to advertise your school's Pi Day celebration? You will find it under Math Tools in the Flashcards subheading along with many other hard to type symbols. Looking for a grid for students to represent a net of a cube on an assessment? You will find a variety of sizes under Math Tools. There you will also find labeled coordinate axes with and without grids, number lines, protractors, and rulers. Want a picture to assist your students in understanding what happens to the volume of a cylinder when you multiply the radius and height by a factor of 3? You will have 52 from which to choose including pairs and trios of similar cylinders. The probability section has ready-made number cubes, spinners and bags of marbles in various configurations. In the trigonometry and analytic geometry section, you will find unit circles labeled and ready-to-label, function graphs and grids, polar coordinate grids as well as conic section graphics and many right triangles.

All of this is free for student or teacher use! Perusing the license agreement, you will find that you may use up to 50 items of clip art in any non-commercial project without special permission. Using these items on your own website requires you to post a link to Clipart ETC so that others may also find the site. See the license page for specific details on other uses.

Check out the site, browse the collection, and enjoy your next worksheet or assessment construction!

Mathematics for the Elementary Teacher

Brought to you by Angie Kisner

Nonstandard Measurement

Measurement is a difficult skill for younger students to grasp. A fun way to measure objects besides using the conventional ways to measure is using nonstandard items. Measurement is introduced by using rulers, yardsticks, tape measures, etc. Then we talk about using items that you wouldn't normally consider using to measure. I try to find items that will go with units or themes that I am teaching.

Here are some examples: Bug unit - flies, spiders, fishing worms Fall unit - silk leaves, plastic bats, pumpkins December - candy canes, snowflake erasers

You are only limited to your imagination. I have found many of my manipulatives in the Oriental Trading Catalog. Many times you can get a gross of small erasers that work wonders. Patterning is another great activity for the erasers.



Angie Kisner teacher kindergarten at Copeland Elementary.

CAPITOL FEDERAL MATHEMATICS

TEACHING ENHANCEMENT SCHOLARSHIP

Capitol Federal Savings and KATM provides 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 fall KATM conference. The scholarship will be 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, 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 2009-2010 school year.

Be present to accept the award at the 2009 KATM Conference

APPLICATION:

To be considered for this scholarship, the applicant needs to submit the following no later than **June 1, 2009**. 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, 2201 SE 53rd Street Topeka, Kansas 66609

Phone: (785) 862-9433

FAX: (785) 339-4325

News and Notes: News Release **January 8, 2009**

21st Century Skills - the focus of KLFA work

With a continuing eye to the Kansas State Department of Education 21st Century learner and learning environment profiles, and the Partnership for 21st Century Skills initiative, the Kansas Learning First Alliance moved forward on its 2008-09 objectives at its meeting Jan.8. Thirty-seven representatives from 22 of its member organization attended the meeting.

Most of the meeting was spent in the three workgroups that are used to carry out KLFA work. The three groups work towards improving student achievement; strengthening the professional development of educators; and engaging the public in school improvement and student achievement efforts. To focus their work, three general goals offer guidance. They are:

- KLFA will broadly disseminate its work to influence practitioners.
- KLFA will increase its visibility among policy makers.
- KLFA will strengthen and increase its organizational capacity.

The Professional Development focused its efforts on creating and implementing models that would promote the five components of the learning environment and the 10 learner skills KSDE identified and were approved by the State Board in December. The Student Achievement group grappled with making the Partnership resources available to school personnel. The Public Engagement group continued with plans to partner with KTWU and bring to public television an opportunity for the public to better understand of how the new world economies and demographics will affect Kansas schools, families and business.

As part of the general session, the group heard a review of how the Kansas Plan for the implementation of 21st Century teaching and learning was created. The document was put together by KSDE and, after approval by the State Board, was submitted to the national 21st Century Partnership. The group was then asked to identify models currently in use in the state that showcased 21st Century skills. Examples cited were the Library/Media department at Topeka USD 501 and the service learning grants through KSDE.

The mission of KLFA is to unite the education community to improve our outstanding public education system, pre-K through higher education, to empower each Kansan to succeed in the diverse, interdependent world of the 21st century.

**TO LEARN MORE ABOUT THE 21ST CENTURY SKILLS GO TO THE NATIONAL WEBSITE
(www.21stcenturyskills).**

NOTICE THAT KANSAS IS ONE OF ONLY A FEW FORMAL STATE PARTNERSHIPS GRANTED THUS FAR. 21ST CENTURY SKILLS WILL PLAY A VERY IMPORTANT PART IN OUR STATE'S VISION FOR EDUCATION AND THUS HAVE AN IMPORTANT ROLE IN UPCOMING KANSAS CURRICULAR STANDARDS REVISIONS.

**USE THE WEBSITE TO BEGIN TO BECOME FAMILIAR WITH THESE SKILLS.
BE SURE TO CHECK OUT THE "ROUTE 21" SECTION WHEN YOU VISIT THE SITE!!!!**

Baldwin High School Team is the Kansas Winner Of the Real World Design Challenge

On Tuesday, February 16, 2009, Governor Kathleen Sebelius announced the winner of the Governor's Cup State Level Challenge. Baldwin High School was the Kansas winner of the Real World Design Challenge (RWDC). The winning team members were Carson Barnes, Lauren Barnes, Colin Busby, and Colby Soden. Their coach was Pam Davis.

Runner-up was Wichita Northeast Magnet High School Team 3 whose members were Adam Galicia, Paco Herrera, Shajjad Sarfraz. Their coach was Troy Criss.

The Kansas winner will now advance to the National Challenge. They and their coach will receive an all expense paid trip to Washington DC to present their solution to the National Challenge March 20 - 22, 2009. The National Challenge will be issued on February 23, 2009.

This is the first year of the RWDC, which is sponsored by the United States Department of Energy in cooperation with numerous corporations. The RWDC is a unique contest that tests both science and math skills of contestants, as well as their ability to work well as part of a team. It is an annual event that provides high school students, grades 9 - 12, the opportunity to work on real world engineering challenges in a team environment. Each year, student teams will be asked to address a challenge that confronts one of our nation's leading industries. Students will utilize professional quality computer-aided design software to develop their solutions and will generate presentations that convincingly demonstrate the value of their solutions. The RWDC provides students with opportunities to apply the lessons of the classroom to the technical problems that are being faced in the workplace.

The precise nature of the Challenge will change from year to year, but the underlying design principles will remain constant. Each year, a new challenge will be issued focusing on a different area of engineering. This year's Challenge focused on aeronautics and energy usage. The Challenge this year was to design a wing for a twin-engine jet airplane that met assigned cruise speed and stall speed requirements.

Engineers from Kansas-based Cessna Aircraft Company led a national group of experts from education and the aviation/aerospace industry in developing the curricula for this aviation-themed design project. Other contributors include the Federal Aviation Administration, the U.S. Department of Energy's Office of Science, Build-A-Plane and many others.

To participate in the program, teachers who were to be coaches had to attend a two-day training course to learn to use the software. Cost of the training course was free to Kansas teachers, compliments of Cessna Aircraft Company. Participants completing the training each received more than \$900,000 worth of the CAD software to use in their classrooms and in the Real World Design Challenge.

Students working on the project were able to collaborate online with mentors from the aviation/aerospace industry; Department of Energy laboratories across the country; and scientists from the Oakridge National Laboratory in Tennessee. Local mentors were also available to provide in person assistance.



Carson Barnes, Lauren Barnes, Pam Davis (Coach), Dr. Alexa Posny (Commissioner of Education), Governor Kathleen Sebelius, Colin Busby, Colby Soden, and Sandy Barnes (Coach).

Zone News

ZONE 1: Kathy Desaire (kdesaire.usd269@ruraltel.net)

Greetings from your Zone 1 coordinator. My name is Kathy Desaire. I am a kindergarten teacher in Palco, Kansas, a small 1A school in Western Kansas. I have been teaching for 8 years and thoroughly enjoy teaching. Even at the kindergarten level we are aware of the upcoming state assessments. We are constantly collaborating with the teachers in our district to assure that we are teaching the same curriculum. Remember that you are not alone. All math teachers in the state are in that panic mode. There is help on the way. KATM is the organization to be a member of. We are developing new ideas to help out our math family. We are looking at reorganizing our website for more information and setting up a support group for teachers in the Northwest Kansas area. I would like to meet once a month for a soda and sharing. This will give you time to share ideas and enjoy a soda. I was thinking about the soda shop in Northwest Office Supply on Main Street in Hays. Let me know if you would be interested in setting up this activity by emailing me at kdesaire.usd269@ruraltel.net.

Exciting times are coming to Hays in the fall. The KATM conference will be held in Hays this year. We are planning a one-day conference on Friday October 23, 2009. You can check out our website for more information in the upcoming months. A fun day for all who attend is planned with exciting break out sessions and an awesome keynote speaker.

Good luck to all of those teachers who have to administer the state assessments. We all are standing behind you and wishing you the best.

ZONE 2: Deb Nauerth (DEBN@manhattan.k12.ks.us)

Greetings from Zone 2! We hosted a one-day conference on Saturday, January 10, where fifty K-12 teachers from all over the state enjoyed the "Finding Your Rainbow" math sessions focusing on rigor, relevance, and relationships. A HUGE thank you is in order to Melisa Hancock and David Allen, who both ceaselessly create valuable learning opportunities for math teachers throughout Kansas, such as this conference!

The Manhattan Young and the Rest of Us mentorship group is kicking off project S.O.A.R. (Sharing Outstanding Action Research) where participants choose something they have learned from attending Y&R sessions such as differentiated instruction strategies, cooperative learning strategies, or math lessons, etc. and will implement these in their classrooms and share their results.

Lunch-to-Learn is a Professional Learning Community that will be implemented at Amanda Arnold School. It will be offered to all teachers, including student interns, who want to learn about differentiated instruction strategies and take them back to their classrooms to try them out. Then we will reflect on how this is going and/or discuss how to tweak the strategy to make it more effective for them. It's great to see such commitment from teachers who are volunteering to give up their lunch and learn new strategies to positively impact student achievement.

ZONE 3: Pat Foster (pfoster@usd341.org)

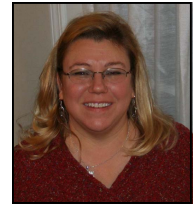
Join the Northeast Kansas Association of Teachers of Mathematics on March 3, 2009 for the annual Pi Day celebration. The festivities will be held at Seaman Middle School in Topeka. The fun begins at 7:00 P.M. Practical strategies will be shared that provide ideas on how to teach the concept of pi as well as other mathematical topics. There will also be a little pie tasting. All are welcome! Pi Day shirts will also be available for purchase! Come ready to learn and share!

Teachers in Zone 3 continue to search for colleagues with ideas on how to implement the MTSS model for math. If your school is using MTSS, please post a message on the Zone 3 website or contact Zone 3 coordinator, Pat Foster at pfoster@usd341.org.

ZONE NEWS

ZONE 4: Karla Childs (kchilds@pittstate.edu)

The MOKAN Area Council of Mathematics Teachers met Monday, January 5th in Joplin, Missouri. Dr. Cynthia Woodburn, Professor of Mathematics at Pittsburg State University, was the featured speaker. The title of her presentation was "Math for Drummers and Poets". It was a mathematical look at rhythm in drum patterns of various dance music and in the meter of Sanskrit poetry with guest appearances by the Fibonacci sequence and Pascal's Triangle.



Cynthia Woodburn

ZONE 5: Jennifer Weilert (jweilert@usd259.net)

SCKATM (South Central Kansas Association of Teachers of Mathematics) will be hosting a "Spring Social" in April. Teachers are invited to come and network with others, as well as enjoy good food and enter to win some fabulous door prizes, including memberships to KATM.

We look forward to having people take the opportunity to interact with other professionals in a more casual setting! For more information, you can send an email to publications@sckatm.org.

ZONE 6: Tracy Newell (tnewell@gckschools.com)

KATM Cecile Beougher Scholarship

ONLY FOR ELEMENTARY TEACHERS!!

A scholarship will to be awarded to a practicing Kansas elementary (K-6) teacher for professional development mathematics education. This could include attendance at a math conference/workshop or enrollment fees for course work. The value of the scholarship is \$500, plus a possible addition of \$118 in memberships to KATM and NCTM.

Upon selection: up to \$400.00 cash award to defray the costs of registration fees, substitute costs, etc.

Upon verification of attendance at a conference or enrollment college credits :

- up to \$100.00 cash award for the purchase of materials/resources for teaching mathematics (an itemized list of the use of these funds will be required along with receipts),
- for those receiving college credits there are two additional incentives:
 - an NCTM Membership (value \$78), a three year KATM membership (value \$40)

Upon competition of conference/workshop or course work an itemized list of funds required.

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)

APPLICATION:

To be considered for this scholarship, the applicant needs to submit the following by June 1, 2009.

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.

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

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

SUBMIT MATERIALS TO:

Betsy Wiens

2201 SE 53rd Street

Topeka, Kansas 66609

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