

KATM BULLETIN

Kansas Association of Teachers of Mathematics

Kansas Association of Teacher of Mathematics Presents:



-Kansas Math-
Minds Under Construction

KATM Annual State Math Conference

October 23, 2009 at Hays High School in Hays, Kansas

8:00 AM–3:30 PM

Keynote Speaker

Dr. Rhonda Meyer from Dinah-might Adventures.

Break-out sessions throughout the day will be grade level and standards driven.

Conference Registration has been reduced to \$50 which includes registration, lunch, and snacks. Registration deadline is October 1.

Please visit the KATM website at www.katm.org for more information. Online registration is available through Southwest Plains Regional Service Center at www.swprsc.org.

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Jerry Braun
Math Coach/Teacher
USD 489

President's Letter

Brought to you by Jerry Braun

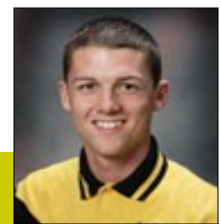
Another school year is upon us and hopefully the transition from summer to students has been a smooth one. I'd like to take this opportunity to introduce myself as your new KATM president. After serving numerous years as the Zone 1 representative to the KATM board, I have moved into the president's position. I am enjoying the start of my 14th year in mathematics education in Kansas, my 12th as a middle school math teacher at Felten Middle School in Hays.

In an environment of tight budgets, we are all doing more with less. As KATM's new president, I am here to say that we are trying to help as much as we can in these difficult times. KATM provides a network across the state for teachers that are all in the same situation. Various opportunities exist for sharing ideas, expertise, challenges and successes. One option for face-to-face collaboration is the Annual Fall Conference. This year the conference will be held at Hays High School in Hays, Kansas on Friday, October 23rd. The conference is shaping up to be an excellent opportunity for teachers at all grade levels to receive standard-specific professional development tailored to your grade level. Experts in the field have been secured for this challenge. Joan Purkey from Newman University, Leanne Coester from Washburn University, and Keith Dreiling and crew from Fort Hays State University have signed on to share their expertise. In addition, Dr. Rhonda Meyer from Dinah-Might Adventures is coming to us from Texas to share how to use Foldables® for math instruction at various grade levels through three different keynote presentations. In light of the state of the economy, KATM has decided to reduce the conference registration fee to \$50.00 in hopes that more people will be able to take advantage of this opportunity. Check the KATM website at www.katm.org for more information and links to online registration through Southwest Plains Regional Service Center.

Be sure to take advantage of the various scholarship opportunities provided by KATM. Scholarship winners are recognized at the Annual Conference each year. Congratulations to this year's recipients: the Capitol Federal Scholarship winner is Caprice Shaffer from Berryton Elementary School - Shawnee Heights district and the Cecile Beougher Scholarship winner is David Fernkopf from Logan Elementary School - Seaman district, both in the Topeka area.

KATM has also taken the initial step toward a virtual dialogue through a KATM community on Facebook. If you already have an account, join us. If you don't, ask your students to help you set up an account. They will think you are cool!

I am looking forward to a great year as your KATM president. If you have suggestions or comments, please share them with me. I am always open to your feedback. May you all have a great school year. I am certain that each of you will make a difference in some child's life. That's what makes Kansas Math teachers the best in the Nation!



Kellan Adams
Middle School
USD 489

Getting to Know Your KATM Treasurer

Kellan Adams - Hays, KS

Graduate of FHSU (Fall 2007) - B.S. - Business Education

Currently completing M.S. in Educational Administration - FHSU

Mathematics(8th Grade) & Multimedia (7th & 8th grade) Instructor @ Felten Middle School - USD 489-Hays

Head Boys Track Coach & Assistant Volleyball Coach @ FMS

2nd year in the district

Adjunct Instructor - FHSU (Department of Teacher Education)

Mathematics for the Elementary Teacher

Brought to you by Angie Kisner

One thing that we have done this year for math center time is to play basketball. The way we play this game is to give them math facts, number cards, shapes, etc. and if the student gets the answer correct, they get to shoot a basket at the trash can with a nerf ball. Then you can have the students keep track of points made and you can even make a three point arc. The use of tally marks can also be incorporated.



Angie Kisner
Kindergarten teacher
Copeland Elementary

Who Wants to be a Mathematician??

Notice of National "Who Wants to Be a Mathematician":

The American Mathematical Society is organizing a nationwide *Who Wants to Be a Mathematician* contest for high school students with a first prize of \$5,000 for the top student and \$5,000 for the math department of the student's school. The contest will take place in San Francisco on January 14, as part of the Joint Mathematics Meetings. There is no registration fee to take part. The AMS will reimburse each contestant and one parent/guardian for travel to San Francisco, as well as room and board for two nights.

If you'd like to participate, email paoffice@ams.org with the subject line "National WWTBAM" and the AMS will email you more details about the contest along with the qualifying test. In the body of the message, please include your:

Name
School
Phone number and
Courses taught this semester.

Deadline for return of the qualifying test: Oct. 20.

The webpage for the national contest is <http://www.ams.org/wwtbam/nationallindex.html>

Best wishes,
Mike Breen
AMS Public Awareness Officer and
Host of *Who Wants to Be a Mathematician*



Keith Dreiling
Fort Hays State

Getting to Know Your KATM Vice President.

My name is Keith Dreiling, and I am the new Vice-president for college programs on the KATM Board. I am an Assistant Professor in the Department of Mathematics & Computer Science at Fort Hays State University where I am beginning my eleventh year. I previously taught grade 7 - 12 mathematics for sixteen years at Healy, KS. My primary responsibility on the KATM Board is to coordinate the attendance of pre-service mathematics teachers at the KATM annual conference.

Good Questions: Great Ways to Differentiate Mathematics Instruction,

by Marian Small

Most language arts teachers recognize that different students need different reading material, depending on their reading level, however, it seems much less likely that mathematics teachers vary the material they ask their students to work with. Perhaps this is because **differentiating instruction** in mathematics is a relatively new idea. We all know that **STUDENTS IN ANY CLASSROOM** differ in many ways, so regardless of the subject we teach we must remember that **ONE SIZE DOES NOT FIT ALL!** Differentiated instruction in the classroom can be a challenge, especially when teaching mathematics and many books that focus on differentiating mathematics instruction for grades K-6, seem to be what I call “fluffy”. That is, expectations are too low, concepts are not developed and examples are not aligned to state or national standards. However, this book has specific strategies and examples for grades Kindergarten - 8 that include high expectations for **ALL STUDENTS** and are organized around NCTM’s content strands: Number and Operations, Geometry, Measurement, Algebra, and Data Analysis and Probability.

Each task in this book focuses on **Big Ideas** in mathematics, **Choices** for students, whether in content, process, or product, **Open Questions** that encourage and promote a variety of responses and **Parallel Tasks**, usually 2 or 3 that are designed to meet the needs of students at different developmental levels, but that get at the same big idea and are close enough in content that they can be discussed simultaneously. This book contains almost 300 questions and tasks that teachers and coaches can adopt, adapt or use as models to create their own. This is the best book that I’ve found on differentiating mathematics instruction that includes “*high expectations and strong support for all students*” (NCTM, 2000)

Book review by Melisa Hancock (E-mail questions to melisa@ksu.edu)

MATH ACTIVITY

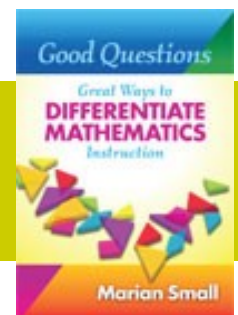
Submitted By Melisa Hancock

***BIG IDEA:** By classifying numbers, conclusions can be drawn about them.

Option 1: Ian had some markers. When he put them in groups of 3, there were 2 left over. If he had fewer than 15 markers, how many could he have had?

Option 2: Andrea had some markers. When she put them in groups of 3, there was 1 left over. When she put them in groups of 4, there were 3 left over. If she had fewer than 20 markers, how many could she have had?

In both cases, students have the opportunity to see that knowing how a number can be broken into groups provides a lot of information about the number. Students who choose **Option 2** will need to work with two pieces of information simultaneously (the only numbers leaving a remainder of 1 when divided by 3 and remainder of 3 when divided by 4 are 7 and 19), whereas students who choose **Option 1** have a simpler but



equally worthwhile task (5, 8, 11, and 14 are options).

Questions such as the following would be valuable no matter which task students completed:

- Could your number have been 5? 15?
- How did you decide what numbers you could try?

How did you begin to solve the problem?

KANSAS LEARNING FIRST ALLIANCE

News and Notes: News Release

May 27, 2009

Topeka: Givens steps in as new KLFA chair; Planning continues on 21st Century initiative

Sue Givens, El Dorado USD 490 superintendent, stepped into the chair of the Kansas Learning First Alliance at the conclusion of its meeting May 27. She succeeds Dr. Blake West, a Blue Valley USD 229 math teacher, who currently serves as the president of the Kansas National Education Association. Givens is the sixth person to serve as chair of the of the organization, which was formed in January, 1999. No chair-elect was announced at the meeting but one will be at the Aug. 28 meeting. Both positions are two-year terms.

Since its inception, KLFA, an affiliate of the Learning First Alliance, which is a partnership of 18 leading education associations with more than 10 million members dedicated to improving student learning in America's public schools, has used three working groups to achieve its mission. The three groups are working toward 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 our work to influence practitioners.

KLFA will increase its visibility among policy makers.

KLFA will strengthen and increase its organizational capacity.

In March of 2008, after being vetted through all 27 KLFA organizations, the following vision and mission statements were adopted:

KLFA's **vision** is an outstanding system of public education that empowers each student to succeed in the 21st century.

KLFA's **mission** 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.

KLFA has focused its efforts recently in supporting the Partnership for 21st Century Skills initiative, which Kansas joined in April, 2008. The Governor's P-20 Education Council, which met for the first time in July, 2008, serves in an oversight role for the Partnership initiative. Dr. West and Pam Robinson, KASB president and KLFA participant, serve on the P-20 Council, which helps KLFA plan activities that will allow the Partnership to play a more powerful and visible role in Kansas education.

Sneaky Snake

Submitted by Debbie Thompson

Targeted Standards/Indicators:

Number and Computation - add and subtract facts to 18 efficiently and accurately

Materials needed:

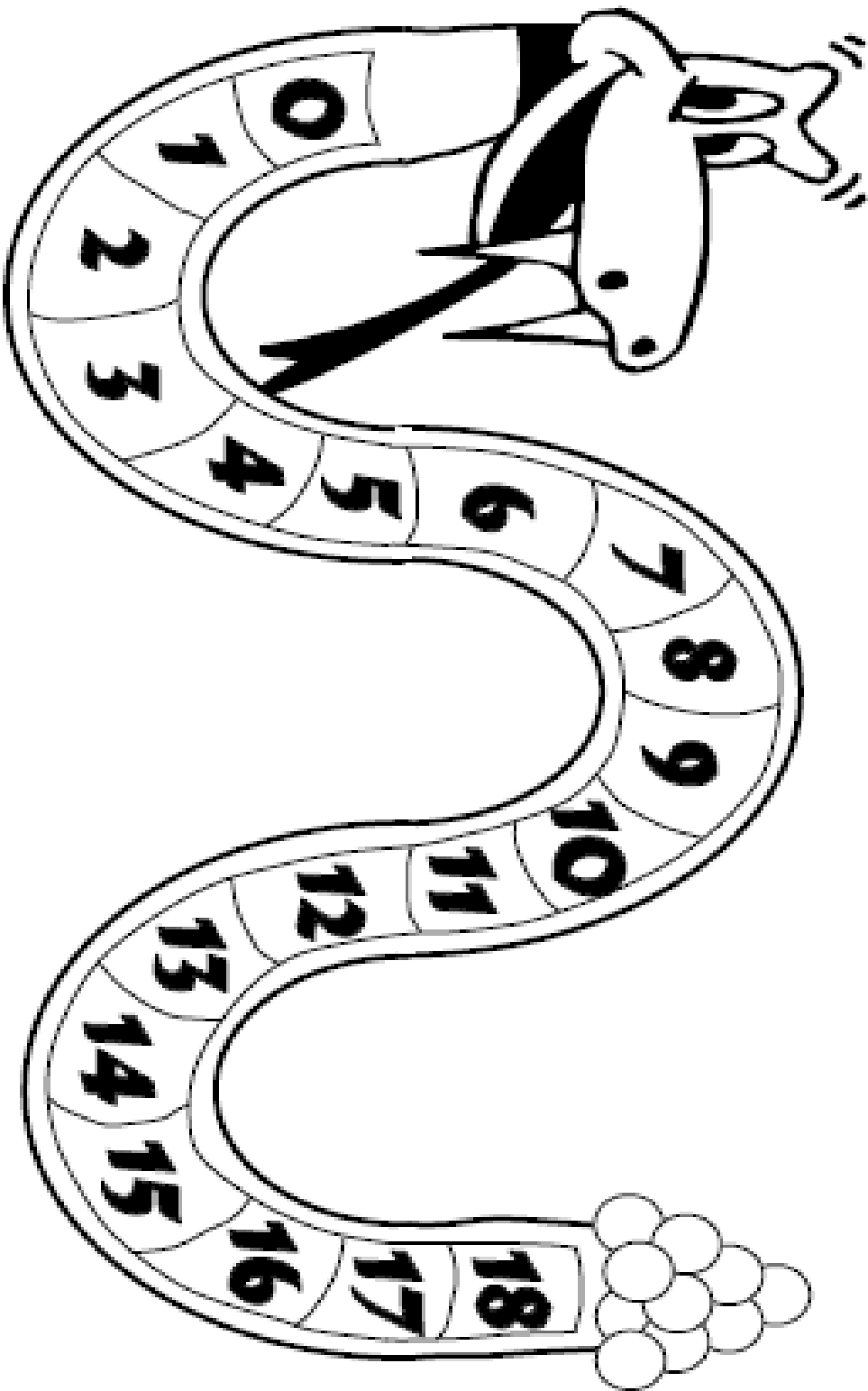
- Game board for each player (can be printed on different colors of Bristol and laminated)
- Two 10-sided dice with numbers 0 - 9
- Counters or cubes for each player as markers to cover up the numbers on the game board

Directions:

1. Each player needs a game board and some counters or cubes as markers for the game board.
2. The youngest player will begin the game and play will continue clockwise from that player.
3. All players take turns by rolling the dice and covering up either the sum or the difference on their game board.
4. When a player rolls the dice and the sum and the difference has already been covered on the game board, the dice passes to the next player.
5. The first player to cover the entire board is the WINNER!

Sneaky Snake

Each player gets a game board. Two 10-sided dice are rolled and the player either adds or subtracts the numbers. The sum or difference is covered on their game board. The player who covers their board first - WINNS!



Zone News

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

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

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

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

The MOKAN Area Council of Mathematics Teachers celebrated our last meeting of the school year Monday April 6th at the Keltoi Vineyard between Pittsburg, KS and Joplin, MO. Erv and LeeAnn Langan, owners of the vineyard, welcomed us for our dinner meeting. Erv presented a program about the operations process at the winery.

We also elected officers for the school year 2009-10. The results were: President - Kelli Blackford, University of Arkansas, Vice-President - Dr. Hazel Coltharp, Pittsburg State University and Treasurer - Dr. Tim Flood, Pittsburg State University.

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

SCKATM (South Central Kansas Associations of Teachers of Mathematics) is hosting its 4th Annual Math at the Zoo Event. Teachers are invited to attend and receive ready to use ideas for their classrooms from fellow colleagues. Time will be available to network with other teachers and great door prizes will be won by many! Be sure to mark your calendars for Saturday, October 3rd. Registration begins at 9:00, followed by two sessions of your choice. Afterwards, enjoy a day at the zoo with your family, compliments of SCKATM!

If you have any questions, send them to board@sckatm.org or sign up to attend by emailing your name, grade level, and number of zoo tickets needed to membership@sckatm.org. We hope to see you there!

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

Websites to Try!

Illuminations

<http://illuminations.nctm.org/>

This NCTM website contains activities and lessons based on the NCTM standards. Many of the activities work well on SmartBoards.

K – 2: Check out “Bobby Bear”

3 – 5: Try the “Factor Game”

6 – 8: Look at the “Pan Balance”

9 – 12: “Nim Games” are fun to try

National Library of Virtual Manipulatives

<http://nlvm.usu.edu/en/nav/vlibrary.html>

This NSF supported project has worked to bring quality electronic manipulatives to educators and students. This site provides an engaging link between the concrete manipulatives and their pictorial representations. Try the “Fill and Pour” activity in the Measurement standard.

Figure This!

<http://www.figurethis.org/>

This site was created for families of middle school students to work on challenging problems together, but teachers have found this site to be a wonderful resource for problem solving. Explore and see if you can use this in your classroom or with your families.

National Math Panel Report

<http://www.ed.gov/about/bdscomm/list/mathpanel/index.html>

On March 13, 2008, the National Mathematics Advisory Panel presented its Final Report to the President of the United States and the Secretary of Education. Copies of these ground-breaking reports, rich with information for parents, teachers, policy makers, the research community, and others, are provided on this website. Access a video clip of the panel chair discussing the highlights of the report.

A Maths Dictionary for Kids

<http://www.amathsdictionaryforkids.com/>

This is an interactive dictionary for kids. This dictionary has the students actually perform the skill after it is explained. Jenny Eather is the author of this website and she is a classroom teacher in New Zealand. She is very quick to email you back when you have a question or a comment about her websites. (She also runs Rainforest Maths!)

Font Freak

<http://www.fontfreak.com/fonts-a.htm>

For those educators that like to spice up their classroom newsletters, this site has dozens for free fonts that are fun to use. Click on the letters at the top of the page to see the different types of fonts. I liked the "Cactus Sandwich" font!

National Center for Education Statistics

<http://www.nces.ed.gov/>

The purpose of the National Center for Education Statistics' website is to provide clear, complete information about NCES' mission and activities, and to serve the research, education and other interested communities. (description taken from their website)

The NCES also has a kids website called Kids' Zone: <http://www.nces.ed.gov/nceskids/>

National Mathematics Advisory Panel

www.ed.gov/mathpanel

Check out this site to find a summary of the final report of the National Math Advisory Panel. It includes the findings and recommendations on what children need to know, a synthesis of the research, which instructional strategies work best, and the impact of teacher knowledge on student learning. It also includes new resources for teachers, as well as information that can be shared with parents.

Book Reviews

Literacy Strategies for Improving Mathematics Instruction

by Joan M. Kenney

ISBN 141660230-5

This resource explores how mathematics instruction can be made deeper and more stimulating through skill-building in reading and writing. This book describes common ways in which students misinterpret the language of mathematics, and shows teachers what they can do to ensure that their students become fluent in that language. It includes examples of student struggles, provides the research on mathematics literacy, and explains how teachers can use a variety of literacy strategies to help students better understand the language of mathematics. The abundance of research, helpful resources, and student-centered strategies would be beneficial for math teachers at all levels.

Principles and Standards for School Mathematics Navigations Series

Are you looking for a resource to help students develop conceptual understanding and make connections in meaningful ways? This supplemental teaching resource is designed with the teacher in mind. Each book includes an introduction emphasizing the foundations and characteristics of the concepts students are expected to learn. In addition, each chapter begins with a brief overview of the "big ideas" included in the lesson. Each lesson then contributes to the development of those concepts through various student-centered activities. Books range in grade level from Pre-K to Grade 12 and include geometry, measurement, algebra, connections, data analysis and probability, problem solving & reasoning, and number & operations. Each book includes a CD-ROM with excellent articles for teacher background, as well as student blacklines. The *Navigations* books expand upon and illustrate the vision of mathematics instruction outlined in NCTM's *Principles and Standards for School Mathematics*, which identifies six principles that form the foundation of a quality program of mathematics instruction. If you or your school has any money to invest in math curriculum materials, this would be well worth it! If you or your school doesn't have the money, try applying for a grant to purchase these materials!

KATM EXECUTIVE BOARD MEMBERS

President	Jerry Braun
President Elect	David Barnes
Past President, NCTM Rep, and Community Relations	Christine Staab
Secretary	Mary Krehbiel
Treasurer	Kellan Adams
Vice President, Elementary	Angie Kisner
Vice President, Middle School.....	Fred Hollingshead
Vise President, High School	Debbie Sylvester
Vice President, College	Keith Dreiling
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Publications	Lanee Young
Coordinator Zone 1	Kathy Desaire
Coordinator Zone 2	Deb Nauerth
Coordinator Zone 3	Pat Foster
Coordinator Zone 4	Karla Childs
Coordinator Zone 5	Jennifer Weilert
Coordinator Zone 6	Tracy Newell
Webmaster	Allen Sylvester
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KSDE Representative	Sid Cooley & David Barnes
Regional NCTM Representative	Tom Muchlinski