

## **2011 AATM Conference Pre-Conference Guide** **Saturday, September 17<sup>th</sup> at ASU Memorial Union**

The following is a brief summary of speakers for the conference.

(There may be some variation of schedules and times.)

- Speaker: Sue Norton-Scott                      Time: 11:00 - 11:50  
Room: Apache                                      Audience: 6th-8th
- Title: "There's More than One Road to X"
- Summary: The focus of this session is on problem-solving. Using non-routine problems from the Math Olympiad program, the value of generating numerous strategies to "get to X" will be explored. Students think in different ways, and "Dynamic Group Presentations" celebrates their diverse thought processes. Even students who solved a problem incorrectly become successful, active participants in this review strategy. Handouts include detailed tips for fostering curiosity, lateral thinking, and innovative teaching presentation techniques in the math classroom.
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- Speaker: Kimberly Rimbey                      Time: 11:00 - 11:50  
Room: Cochise                                      Audience: 1st-5th
- Title: Making Math Meaningful: Games and Activities That Connect Properties With Number Sense and Operations in Grades 1-5
- Summary: The Common Core State Standards emphasize that students "use strategies based on place value, properties of operations, and relationships between operations," and the 2008 AZ Standards include specific properties objectives, as well. Join us as we explore the critical role of the properties of operations and fun ways for emphasizing them in grades 1-5. Each participant will receive ready-to-use activities, including games and activities for integrating properties into your existing mathematics program.
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- Speaker: Tom Hibbs                                Time: 11:00 - 11:50  
Room: Coconino                                    Audience: 6-HS, general
- Title: Problem Solving is an Algebra Skill
- Summary: This session uses the TI-Nspire CX to solve both modeling and real world problems. Participants will be asked to present as they would in their classrooms while using the TI-Nspire Navigator system. Would you want to become a millionaire? What would it really take to succeed?
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- Speaker: Shannon Ferguson                      Time: 11:00 - 11:50  
Room: Copper                                      Audience: General
- Title: Resources to help implement the new 2010 AZ Math Standards/Common Core Standards
- Summary: The new common core standards have been adopted as the 2010 Arizona mathematics Standards-so what next? This general session will share and discuss resources that are available now that teachers and administrators can access, explore, and start using as they prepare their transition.

Speaker: Donna Henry Time: 11:00 - 11:50  
Room: Gold Audience: 3rd-5th  
Title: "envision" 2 Big Ideas in Algebraic Thinking: Prediction and Making Generalizations  
Summary: Come see what is happening in Pearson's enVisionMATH program as we transition to the Common Core State Standards for Mathematics. Working with patterns and functions is an application of the Common Core State Standard for Mathematics: "Look for and make use of structure". Participants in this Grades 3-5 workshop will use prediction to extend patterns, as well as make and test generalizations. Games to practice the concepts from Pearson's enVisionMATH program will be utilized AND each participant will receive the bag of manipulatives needed to play the games.

Speaker: Dora Barrio Time: 11:00 - 11:50  
Room: Graham Audience: K-5th  
Title: Using SEI Strategies to Teach Math Vocabulary  
Summary: Participants will be presented several SEI strategies to ensure that students make key math connections and use math vocabulary knowledge which is essential to learning mathematics curriculum. Knowledge of math vocabulary will help students visualize and verbalize what they understand about mathematics. The strategies will be interactive and include: pre-teaching math terms, using math word walls, modeling math vocabulary, and activities to consistently review terminology.

Speaker: Kimberley Thomas Time: 11:00 - 11:50  
Room: La Paz East Audience: HS  
Title: In Search of a Mathematical Model  
Summary: "Model with mathematics" is one of the mathematical practices stated in the AZ 2010 Math Standards. There are 12 different functions listed that Algebra 2 students are expected to graph. This session will take experimental data and match it to an appropriate model. Participants will use TI-Nspire handhelds to explore the data numerically, graphically, abstractly. Participants will be given the data sets used in the session for classroom use with any type of appropriate mathematical tool.

Speaker: Matthias Kawski Time: 11:00 - 11:50  
Room: LaPaz West Audience: HS  
Title: Math Circles: Doing math after school because it is fun  
Summary: Math Circles have a long tradition in Bulgaria and Russia. In the last decades they have began to proliferate in numbers and many different formats in the US, too. In some sense they are comparable to other after school activities such as piano, dance, debate, chess, and sports clubs -- only that the activity is doing math. This fall the Math Circle at ASU Tempe will be in its second year. Its focus is on connecting motivated high-school age students with research faculty. Sessions address topics that are largely orthogonal to school curricula, which generally have minimal formal prerequisites, but often lead to open problems. Supported by the National Association of Math Circles and the School of Mathematical & Statistical Sciences at ASU, the Math Circle at ASU Tempe is inviting students to join. For more information visit <http://math.la.asu.edu/~mathcircle/>

Speaker: Marcia Corby                      Time: 11:00 - 11:50  
Room: Mojave                      Audience: 6th-HS  
Title: Belates II: A Hands-On Approach to Making Algebra Fun  
Summary: 7th-10th grade teachers will experience a variety of new ideas to add to their algebra "tool belt." Topics include graphing linear and quadratic inequalities, slope, the quadratic formula, box-n-whisker plots, and more!

Speaker: Sara Jenkins                      Time: 11:00 - 11:50  
Room: Navajo                      Audience: 6th-8th  
Title: Math Lessons for a World of 7 Billion  
Summary: The world population reaches 7 billion in 2011, offering a teachable moment to help students understand the meaning of large numbers, growth patterns and the vital statistics that shape the global family. Engage in several hands-on activities that use math concepts and skills to understand social studies and science content. Free CD-ROM of activities.

Speaker: Jason Mitchell                      Time: 11:00 - 11:50  
Room: Pinal                      Audience: General  
Title: Singapore Math: Building the mathematical foundation for student success in algebra and beyond  
Summary: Join us in a discussion about Singapore Mathematics, and how this rigorous and methodical curriculum prepares students for success in algebra by teaching students how to represent math problems symbolically. In addition to building a strong foundation, the Singapore approach to math will help improve students' confidence and attitudes towards math by teaching skills and concepts to mastery. This session will also highlight how students become fully engaged in math because of the extensive use of hands-on materials and the visual approach to learning math. This unique approach has a significant positive impact on student achievement because students have a deep understanding of mathematical concepts and are rigorously prepared with the skills and tools necessary for solving complex problems and algebraic equations.

Speaker: Chris Confer                      Time: 11:00 - 11:50  
Room: Santa Cruz                      Audience: K-2  
Title: The Power of Operations and Algebraic Thinking for K-2  
Summary: The new AZ State Standards for Operations and Algebraic Thinking ask young children to think in powerful ways. Join us for videos and discussions that reveal how students in kindergarten through grade 2 reason about number. Learn simple, engaging ways to release the mathematical potential that lies within all students.

Speaker: Brian Burns                      Time: 11:00 - 11:50  
Room: Yuma                      Audience: 6th-8th, general  
Title: Connecting Math and Science  
Summary: How are the Arizona State Standards for Math and Science connected? The standards are more connected than one might think! This presentation is not only about how to integrate the two contents, but actually learning how to use them to enhance student understanding. The participant will leave the presentation with a better understanding of how to create lessons that incorporate both Math and Science standards to enhance student understanding, learning, and thinking.

Speaker: Mike Hughes                      Time: 1:00 - 1:50  
Room: Coconino                      Audience: PreK-HS

Title: Will Your Students be "First In Math"?

Summary: In this fast-paced session, attendees will discover why over 1.2 million students (and growing) across the U.S. are willingly practicing (and mastering) basic math facts, patterns, elapsed time, money, fractions, decimals, integers and algebraic expressions. They are choosing these math games over Xbox, Wii and other video games and competing for bragging rights in their classroom, school, district and the entire nation. Last year's AZ champion was from the Osborn District. Will your student be the next AZ champion? Appropriate for grades K to Algebra. Attendees will be eligible for a FREE trial subscription.

Speaker: Erin Gonzales                      Time: 1:00 - 1:50  
Room: Copper                      Audience: 3rd-5th

Title: Exploring Fractions Content and Engagement

Summary: This hands-on session will explore fractions content from the 2008 and 2010 Arizona Math Standards in grades 3-5. Participants will learn how to increase the rigor, thinking skills, and deep content knowledge within a fractions mini-lesson through a variety of thought provoking and engaging activities. We'll prove that learning fractions can be fun and meaningful!

Speaker: Patti Launi                                      Time: 1:00 - 1:50  
Room: Graham                                      Audience: K-2

Title: Let's Give Them Math to Talk About!

Summary: Come and experience the motivating style of Kim Sutton through Kim's Consultant, Patti Launi as she teaches strategies to make algebraic thinking meaningful through literature, songs, dance and "hands on" activities. You will leave understanding why "number chats" will change the number sense in your classroom! You will be thrilled by all that you are treated to during this session!

Speaker: Bob Gilby                                      Time: 1:00 - 1:50  
Room: La Paz East                                      Audience: HS

Title: Teaching Properties of Logarithms Using Pendulum Data

Summary: Participants will collect period data from pendulums of various lengths. These data will then be analyzed using logarithms to generate Newton's pendulum equation. TI-84 calculators will be provided.

Speaker: Janelle Chisholm                                      Time: 1:00 - 1:50  
Room: La Paz West                                      Audience: 6th-8th

Title: Word Problems Don't Have to BE a Problem

Summary: Come and see how we use model drawing to solve word problems involving ratio, percent and rational expressions. Your students will love this strategy and they will BEG for more word problems. Drawing a model of the problems unlocks the mystery for many students.

Speaker: Patricia M Quadlin                      Time: 1:00 - 1:50  
Room: Navajo                                      Audience: 6th-8th  
Title:                                      Focusing on Proportionality in the Middle School Classroom  
Summary: Starting with an overview of the new Common Core State Standards participants of this session will then work through and discuss classroom tasks that focus on the big idea of proportionality as it threads through grades 6, 7, and 8. These tasks will connect the understanding of ratios and proportionality to solve problems about similar objects as well as graph proportional relationships. The idea of unit rate will be introduced informally as a measure of the steepness of the related line, called the slope will also be discussed.

Speaker: Mandy Bachali                              Time: 1:00 - 1:50  
Room: Pinal                                      Audience: general  
Title:                                      Introducing PBS LearningMedia! A FREE Educator Resource  
Summary: PBS LearningMedia, a new, free public media education platform is a next-generation digital media platform for PreK-16 classrooms to help re-imagine classroom learning, transform teaching, and more creatively engage students. In May of 2011, As America's largest classroom, PBS and WGBH along with other PBS member stations launched PBS LearningMedia, a new public media education platform available to every teacher and student across the country in time for the 2011-2012 school year. This resource brings together the best available high-quality media from 1500 public media producers and more than 350 local PBS stations. Come learn how to access this great new educational tool.

Speaker: Brian Beaudrie                              Time: 1:00 - 1:50  
Room: Santa Cruz                              Audience: general  
Title:                                      Developing Quantitative Literacy  
Summary: The speaker will begin by discussing the concept of quantitative literacy, its definition, components, and why it is so important in today's world for all students to be quantitatively literate. Then, he'll work through several different activities that will help teachers in a variety of grade levels and courses develop quantitative literacy in their students.

Speaker: Jannifer Marquez                              Time: 1:00 - 1:50  
Room: Yavapai                                      Audience: 3rd-5th  
Title:                                      Math through Project Based Learning Projects  
Summary: Using the BizWorld program I show a fun way to teach students about percents, averages, multiplication, division, and estimating all while they are working as team. The students are grouped into manufacturing companies and go through the process of applying for jobs and running the company, getting funding, designing, manufacturing, marketing and selling their product. There are balance sheets, price point calculations and learning about the expenses, revenue and profit. The lesson objectives are flexible and in alignment with NCTM standards.

Speaker: Ravae Johnson                      Time: 1:00 - 1:50  
Room: Yuma                                      Audience: K-8

Title:                      Harness the Power of Play - Bring Recreational Math Games into Your Class!

Summary: Improve test scores and increase the “fun” in your classroom this year by learning how to use recreational math games. Engaging the mind through play is a natural way to increase a student’s mathematical skills. Students learn best when they enjoy what they are doing. Classroom exposure to math games provides students with rich problem solving opportunities. Math games allow students to discover math patterns and make connections with concepts. Games provide a perfect forum for children to share their ideas and discoveries. Recreational math games provide a meaningful experience with math which can reach all skill levels. This class will provide you with math games which provide powerful results with minimal materials and directions. Come enjoy a moment of play!

Speaker: Kimberly Rimbey                      Time: 1:00 - 2:50  
Room: Cochise                                      Audience: K-5

Title:                      First Things First: Prioritizing Place Value Strategies in Grades K-4

Summary: The Common Core State Standards emphasize that students "use strategies based on place value, properties of operations, and relationships between operations." Join us as we explore the critical role place value plays in learning number and operations concepts. This double session will focus on place value strategies to help students make the connections between place value, operations (+, -, x, ÷), and other number work in the K-4 classroom. Each participant will receive ready-to-use activities, from counting to ten through long division. THIS SESSION WILL BE A 90-MINUTE SESSION.

Speaker: Mary Knuck                      Time: 1:00 - 2:50  
Room: Gold    Audience: 3rd-5th

Title:                      Modeling That Works: Helping Students Organize Their Thinking – Grades 3-5

Summary: Are you searching for a different way for your students to demonstrate their mathematical thinking? In this session, participants will have the opportunity to explore model drawing. This method will support all students in understanding and representing quantitative relationships and solving multi-step problems. THIS SESSION WILL BE A 90-MINUTE SESSION

Speaker: Suzi Mast                      Time: 1:00 - 2:50  
Room: Mojave                                      Audience: 6th-8th

Title:                      Reasoning with Ratios and Rates in 6th grade

Summary: Using ratio and rate reasoning to solve real-world problems creates the foundation for student understanding of proportional reasoning. Come explore the use of different types of representations related to the use and “understanding” of ratios and rates. The focus of this session will be on the 6th grade Ratios and Proportional Relationship (RP) standards and the key representations teaches can utilize to model reasoning with ratios and rates. THIS SESSION WILL BE A 90-MINUTE SESSION

Speaker: Sandi Cimino                      Time: 2:00 - 2:50  
Room: Coconino                      Audience: general

Title:                      Forget the Rainforest...Save my Classroom!!

Summary: Teachers have an ever-growing list of responsibilities they are required to attend to on a daily basis. Visit this session to discover how to utilize common sense, research-based classroom management tips and techniques that can be implemented into your classroom tomorrow with positive and observable results. Learn how to diffuse discipline problems before they become an instructional disruption in your classroom. Discover how a simple teaching technique can “refocus” the energies of a trouble student, integrating them back into the classroom so instruction can continue. You will leave this session with valuable tools from a nationally acclaimed program knowing you will have more “Time to Teach”!

Speaker: Syd Hoffman                      Time: 2:00 - 2:50  
Room: Copper                      Audience: PreK-2

Title:                      Introducing Addition and Subtraction to children ages 4-7 with Ignite

Summary: "Ignite" is a hands-on tool to make the transition from counting to arithmetic a painless one. It provides children with visual and kinesthetic learning opportunities to master and really understand the crucial concepts of addition and subtraction. And....it's simple and fun to use! (To see Ignite, please go to [www.MathFireOnline.com](http://www.MathFireOnline.com). It's amazing!)

Speaker: Patti Launi                      Time: 2:00 - 2:50  
Room: Graham                      Audience: 3rd-5th

Title:                      Creating Meaning of Mathematics Through Simple Math Tools!

Summary: This session will share with teachers of grades 3-5, powerful math tools from Kim Sutton for algebraic thinking that are simple, inexpensive and meaningful with students. Patti Launi will bring a wealth of experience using Kim Sutton philosophy for making algebraic thinking a powerful part of your classroom. You will leave with meaningful ideas for place value, number properties, fractions and multiplication. Come and experience the fun of teaching mathematics.

Speaker: Veronica Carlson                      Time: 2:00 - 2:50  
Room: La Paz East                      Audience: HS

Title:                      Nspiring the Algebra 1 Classroom

Summary: Participants will learn how to use the TI-Nspire handheld and TI-Nspire Navigator System along with Math Nspired Resource Center lessons to improve the understanding of algebra concepts. Participants will leave with ready-to-use and ready-to-access lessons to incorporate into the Algebra 1 classroom.

Speaker: Janelle Chisholm                      Time: 2:00 - 2:50  
Room: La Paz West                      Audience: 6th-HS

Title:                      Using Algebra Tiles to Solve Problems

Summary: Come and see how to use algebra tiles to solve problems with integers, one and two-step equations, and factor polynomials. These tools make algebra accessible for all learners. There is nothing expensive to buy, and you will walk away ready to use them with your students on Monday.

Speaker: Patricia M Quadlin                      Time: 2:00 - 2:50  
Room: Navajo                                      Audience: HS

Title:                      High School tasks to promote Reasoning and Sense Making

Summary: Starting with an overview of the new Common Core State Standards participants of this session will then work through and discuss classroom tasks that focus on the mathematical practices as defined in the CCSS. These NCTM classroom tasks will include analyzing the structure of algebraic expressions and a graph to determine what information readily contributes to the flight of a horseshoe. This task is particularly relevant to students who are studying (or have studied) various quadratic expressions (or functions). Another task will use mathematical reasoning to determine appropriate numerical measures and patterns in fuel consumption to inform consumer choice for vehicle purchasing. A calculator is recommended.

Speaker: Silvia Llamas-Flores                      Time: 2:00 - 2:50  
Room: Pinal                                      Audience: 3rd-5th

Title:                      Multiplying and Dividing Fractions Conceptually

Summary: Explore multiplication and division of fractions using various models, which are based on conceptual understanding. Participants will have the opportunity to explore fractions from a hands-on perspective, as well as investigate how and why the traditional algorithms work when multiplying and dividing fractions.

Speaker: Snehal Patel                      Time: 2:00 - 2:50  
Room: Santa Cruz                      Audience: PreK-5th, general

Title:                      Can Students Game Their Way to Math Achievement?

Summary: Your students are struggling with and lacking interest in math, but spend hours playing online games. Discover how elementary students are learning to love math and improving their tests scores by spending minutes a week playing an online math social learning game.

Speaker: Marco Ramirez                      Time: 2:00 - 2:50  
Room: Yavapai                                      Audience: PreK-2

Title:                      Algebraic Thinkers from the Start

Summary: Join us in examining how children are working from a young age algebraically. We will be looking at student work and activities that promote algebraic reasoning and the dialog necessary to move mathematical tasks into algebraic thinking.

Speaker: David Villarreal                      Time: 2:00 - 2:50  
Room: Yuma                                      Audience: 3rd-12th, Gen, Sup

Title:                      The Ultimate Differentiated Math Class: (Grades 3 – 12)

Summary: Attendees will learn about differentiated math instruction and meeting student's needs by addressing them at their instructional level. ALEKS helps to assess students quickly and ACCURATELY by avoiding multiple choice responses. ALEKS also identifies concepts that they are most ready to learn. Attendees will learn how to incorporate the secrets of Artificial Intelligence, Knowledge Space Theory, and Precedence Relationship into student's learning. Utilizing these techniques will result in increased engagement and motivation.

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Speaker: Kim Rimbey                      Time: 9:30 - 10:45  
Room: Cochise                              Audience: K - 2nd

Speaker: Vicki Ross                        Time: 9:30 - 10:45  
Room: Graham                               Audience: K - 2nd

Title:    Navigation Series

Summary: Algebraic thinking is intricately connected to the number and operations work with which young children engage in grades K-2. Join us as we explore these connections and engage in activities that increase student understanding of algebraic concepts in the early years. We will address algebraic notions from both the 2008 Arizona Mathematics Standard (current version) and the 2010 Arizona Mathematics Standards (Common Core version) throughout the session. The first 30 participants in each session will receive a copy of the NCTM book, Navigating Through Algebra in Prekindergarten - Grade 2. Come join in on the fun!

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Speaker: Amy Rushall                        Time: 9:30 - 10:45  
Room: Yavapai                                Audience: 3rd - 5th

Speaker: Donna Henry                        Time: 9:30 - 10:45  
Room: Yuma                                    Audience: 3rd - 5th

Title:    Navigation Series

Summary: The important ideas of algebra, including patterns, variables, equations, and functions, are the focus of this book. Student activities that introduce and promote familiarity with these ideas include constructing growing patterns using isosceles triangles, analyzing situations with constant or varying rates of change, and observing and representing various patterns in an array. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.

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Speaker: Kimberly Range-Glenn            Time: 9:30 - 10:45  
Room: Apache                                Audience: 6th - 8th

Speaker: Gae Johnson                        Time: 9:30 - 10:45  
Room: Navajo                                 Audience: 6th - 8th

Title:    Navigation Series

Summary: This book shows how middle school students can use mathematical models and represent and analyze mathematical situations and structures to explore the concept of function. The activities and problems require students to use representations related to work with functions, and they highlight some of the interactions that may occur among these representations. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers .

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Speaker:	Sandee Trevino	Time: 9:30 - 10:45
	Room: Coconino	Audience: 9th - 12th
Speaker:	Shannon Guerrero	Time: 9:30 - 10:45
	Room: La Paz East	Audience: 9th - 12th
Speaker:	Deb Schmidt	Time: 9:30 - 10:45
	Room: La Paz West	Audience: 9th - 12th

Title: Navigation Series

Summary: This book focuses on algebra as a language of process, expands the notion of variable, develops ideas about the representation of functions, and extends students' understanding of algebraic equivalence and change. In the activities, students apply properties of functions by using median salary data, explore the meaning of equivalent equations, and use recursive or iterative forms to represent relationships. The supplemental CD-ROM features interactive electronic activities, master copies of activity pages for students, and additional readings for teachers.

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