

Grades 6-8

NCTM 2010 Regional Conference & Exposition • Denver, CO • October 7-8, 2010

The NCTM Regional Conference and Exposition in Denver offers over 200 presentations focused on mathematics education. The following is a small sampling of the sessions and gallery workshops that will be offered at NCTM's Regional Conference for educators who work with students in grades 6-8. For additional presentations please visit the **Online Conference Planner** at www.nctm.org/denver.

Connecting Number System Multiplication Algorithms Using Area (Pictorial) Multiplication

Thursday, October 7 • 8:30 am - 10:00 am

Using mixed-number multiplication, this presentation will examine multiplication algorithms from two-digit, whole numbers to completing the square in algebra. Participants will use area multiplication as a connecting model for use with whole numbers, mixed numbers, fractions, binomials, and completing the square.

Great Geometry Problems for Grades 3–8

Thursday, October 7 • 11:00 am - 12:00 pm

Geometry problems seem so hard to students. But high school classes and college entrance exams demand solid skills in geometry. These Math Olympiad problems can provide a remedy for both students and teachers. Participants will receive an additional 50 problems.

Assessing and Advancing Students' Learning

Thursday, October 7 • 12:30 pm - 2:00 pm

Formative assessment is an integral part of teaching. This workshop will engage teachers in a rich task, examine students' actual work, and design questions to assess and advance students' learning. Discussion will center on best practices for questioning as formative assessment and ways to move students' learning forward.

Using Math Games to Encourage and Enhance Students' Learning

Thursday, October 7 • 12:30 pm - 2:00 pm

Participants will gain hands-on experience exploring sample games and extensions. They will discuss strategies while reflecting on the mathematical significance of each game. The focus of the workshop will be on number and operations and problem solving as defined in NCTM's *Principles and Standards for School Mathematics*.

Data-Driven, Differentiated Instruction Provides Algebra Readiness in Middle School

Thursday, October 7 • 2:00 pm - 3:00 pm

Assessment, hands-on activities with manipulatives, and research-based strategies will prepare middle school students for success in algebra. This presentation will demonstrate differentiated instruction with fractions and integers for Response to Intervention, English language learner, special-education, basic, and below-basic students.

Activities That Enhance Discourse, Reasoning, and Equity

Thursday, October 7 • 2:30 pm - 4:00 pm

Enhancing discourse and reasoning in a classroom increases opportunities for all students to learn mathematics. This presentation's activities will highlight scaffolding and attend to what students' thinking can look like and sound like while making rigorous mathematics accessible to all students.

Middle School Misconceptions: Verbal, Visual, and Experiential Miscues and Their Unintended Consequences

Thursday, October 7 • 3:30 pm - 4:30 pm

Despite our efforts to anticipate students' thinking, prior knowledge and misconceptions can confound the best of lessons. The way we sequence concepts, use hands-on tools, and communicate can confound early algebraic thinking. The presentation will use students' responses and solutions to discuss the consequences.

Big Numbers: Problems to Interest and Engage Students

Friday, October 8 • 9:30 am - 10:30 am

Ken Griffey's debt payment in pennies, the \$700 billion bailout, and the \$1.27 trillion combined wealth of Forbe's 400 richest. These and other real contexts provide an opportunity to engage students in meaningful exploration of big numbers. Presented problems will integrate decimal operations, place value, metric measures, and scientific notation.

Reinventing a Geometry Course: Sharing Our Work, Learnings, and Reflections

Friday, October 8 • 10:30 am - 12:00 pm

In an effort to improve students' reasoning in geometry, a team of high school teachers and university faculty researchers decided to do things differently. This session will share their struggles to focus on big ideas in geometry, activities developed, the instructional and curricular changes made, what worked, and their current status.

People Count: Math and Demography in the Year of the Census

Friday, October 8 • 12:30 pm - 2:00 pm

In this year of the decennial census, discover timely and innovative, hands-on activities for drawing connections between math and social studies. Students will learn about U.S. demographic trends, past and present, while honing their skills in algebra, data analysis, problem solving, measurement, and more. Receive a free CD-ROM of activities.

A Mathematical Road Trip: Revisiting the Familiar and Exploring the New

Friday, October 8 • 12:30 pm - 2:00 pm

This presentation will take a fresh look at familiar concepts such as fractions and explores new concepts from higher math. Every teacher will get a free, unique fraction manipulative that can visually demonstrate fraction division. This zany, lively talk will use fruits, food processors, fun video clips, and games to engage the audience.

Help! My Students Don't Understand Math: Gaining Insight into the Struggling Learner

Friday, October 8 • 2:00 pm - 3:00 pm

This engaging interactive workshop will provide participants with a greater understanding of struggling math learners—students that failed to master elementary math concepts. Participants will view videos of struggling students and begin to understand the variety of misconceptions held by older students with weak math foundations.