

Grades 9-12

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 9-12. For additional presentations please visit the **Online Conference Planner** at www.nctm.org/denver.

Billy Bob's Road Kill Cafe: Exploring Triangle Congruency

Thursday, October 7 • 10:30 am - 12:00 pm

Engage your students with triangle congruency, measurement, and patterns. Join us in Billy Bob's Road Kill Cafe, where we serve a delicious menu of sandwiches including Spicy Skunk Sausage (SSS), Awesome Sizzling Armadillo (ASA), and many more. This colorful, fun, hands-on activity also reviews measurement with rulers and protractors.

Geometry in Construction: Linking Geometry to Construction

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

A math and construction technology education teacher designed a rigorous geometry course taught through a relevant application of building a house. State test scores, enthusiasm, and attendance are up. Activities will be shared for classroom use.

From Informal to Formal with a Click: Using Technology to Facilitate Progressive Formalization in Algebra

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

Students bring a wealth of intuition to Algebra 1. This intuition should be leveraged, and students should be guided to mathematize their informal ideas into formal algebra. This presentation will summarize this process of “progressive formalization” and provide attendees with Web applets designed to support such a process.

Dynamic Mathematics: Make Mathematics Come Alive

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

Experience ready-to-use lessons that integrate Sketchpad into mathematics instruction. Incorporate dynamic mathematics into your middle and high school content, and provide students the opportunity to learn, explore, and expand their mathematical understandings as you address curriculum and state standard requirements.

America's Idol? How the Contestant Most Voted for Doesn't Always Win

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

Participants will engage in an interactive presentation where they will calculate means, expectations, biases, and proportions to determine if the winning *American Idol* competitor, who got the most “counted” votes, was the contestant who actually received the most “attempted” votes, due to a flawed and biased voting scheme.

So Your High Schoolers Don't Know Their Math Facts?

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

Identify the facts students do and don't know, then pinpoint which of the two addition and five multiplication strategies they need. These strategies build foundations for algebraic manipulations that students often lack. Come play games that build a students' ability to compose and decompose numbers, ultimately relating to variable expressions.

Thoughts on Rationalizing Algebra in Ways That Serve Kids, Not Universities

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

This session is designed to provoke thinking about revisions to the traditional Algebra 1 and 2 courses to ensure relevance, rigor, and fairness, including what topics continue to merit inclusion and how the shift the typical show-tell-do instructional model. We'll pose some common-sense, albeit controversial, answers.

Vocabulary in Geometry and Algebra: Strategies for Instruction and Assessment

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

Geometry and algebra contain lots of vocabulary words that are related to students' understanding of important concepts. This session will share strategies that have been used as both instructional tools and assessments along with algebra and geometry students' work in grades 6 through college.

Activities to Help the Lower 50 Percent of High School Students Reach Algebra Standards

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

Looking for methods and activities that will engage and reach the reluctant learner? If so, this workshop is for you. You will be presented several activities that will engage your students as they learn difficult algebraic concepts. Concepts will include solving equations, writing linear equations from data, systems of equations, and others.

Algebra: Connections with Multiple Representation

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

Participate in activities that help find the connections between a rule, graph, table, and context. Learn ways to help students move from each representation to the others, developing deep understanding of multiple ways to solve problems. Teachers will receive ideas and materials that they can use in their own algebra classrooms

The Thrill of the Calculus of Roller Coasters

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

Did you ever think about calculus while riding your favorite roller coaster? From the track shape to the train motion, the roller coaster provides an outstanding context for teaching calculus concepts. With hands-on activities and technology explorations, using Geogebra and other software, participants will make thrilling calculus connections.

Using Manipulatives and Investigations in Geometry

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

Participants will use hinged mirrors, rubber bands, patty paper, string, and other manipulatives and investigations to develop geometry concepts such as similarity and triangle congruences, transformations, central angles and polygons, area, heights of triangles, and more.