

## Grades 6–8

NCTM 2010 Regional Conference & Exposition • Baltimore, MD • October 14-15, 2010

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The NCTM Regional Conference and Exposition in Baltimore will offer 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/baltimore](http://www.nctm.org/baltimore).

### **Sense-Able Symbols: Algebra for All Students**

*Thursday, October 14 • 8:00 am - 9:00 am*

Once found only in high school, algebra is now essential to mathematics education at all grades. This interactive session will explore effective teaching practices and rich mathematical tasks that offer opportunities for all students to develop meaningful use of symbolic notation and algebraic reasoning. Useful handouts will be available.

### **Math Explorations through Links to Literature**

*Thursday, October 14 • 8:30 am - 10:00 am*

Want to intrigue and inspire your students to delve into math explorations? Experience the magical mix that math and literature create. Characters and themes from popular book series are the springboard for standards-based problem scenarios, games, and puzzles. Get ready for mathematical adventure with all content and process standards.

### **Problem Solving and Technology Implementation in an Inclusion Classroom**

*Thursday, October 14 • 9:30 am - 10:30 am*

Learn how a middle school math teacher and a math coach create a problem-solving environment in classrooms that include English language learners and special-education students. The speaker will share problems and accompanying activities—some of which involve Sketchpad, applets, and other technology—that can help turn students into problem solvers.

### **Building Lessons for All Students**

*Thursday, October 14 • 12:30 pm - 2:00 pm*

Are all your students the same? Never! Learn to develop lessons to meet the needs of the full range of students in a class. Work on strategies in all aspects of lesson development, including questions, activities, assignments, technology, and assessment. Start developing strategies you can use to get everyone engaged and learning math.

### **Using Math Games to Encourage and Enhance Students' Learning**

*Thursday, October 14 • 2:30 pm - 4:00 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 workshop will focus 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 14 • 3:30 pm - 4:30 pm*

Assessment, activities with manipulatives, and research-based strategies will prepare middle school students for success in algebra. Differentiated instruction in fractions and integers for Response to Intervention, English language learner, special-ed, basic, and below-basic students will be demonstrated. Participants will receive handouts.

### **Successful Hands-On Math Investigations**

*Thursday, October 14 • 3:30 pm - 4:30 pm*

Do your students need some hands-on activities to help develop their mathematical concepts and to help actively engage them? Discover the benefits of using manipulatives in your class to help students better understand math, as well as some ways to use a variety of manipulatives.

### **Probable or Possible?**

*Friday, October 15 • 11:00 am - 12:00 pm*

Probability tends to be extremely counterintuitive. This presentation will discuss some probability examples, including the classic birthday problem, and how the answer is often not what you expect. The speaker will discuss a simple way to compute the odds against an event occurring and will debunk many myths of probability.

### **Adding, Subtracting, Multiplying, and Dividing Fractions Using NCTM Resources**

*Friday, October 15 • 12:30 pm - 1:30 pm*

Have you ever wondered about the math of changing gears on your bicycle? Gear ratios are just one application of operating on fractions that you will explore in this workshop. You will gain hands-on experience investigating multiple ways of making operations on fractions more engaging for students, by using applets, games, and writing prompts.

### **Patterns to Algebraic Thinking: Effective Strategies for Making Connections**

*Friday, October 15 • 12:30 pm - 1:30 pm*

Explore how to promote the development of algebraic thinking for your students. Multiple representations of concepts, technology, and problem solving will be used to create a rich learning environment for making connections between patterns and algebraic thinking from numbers and operations to data analysis. CD and resource materials included.

### **Are You Interested in Differentiation in Your Math Class, But Not Sure Where to Begin?**

*Friday, October 15 • 2:00 pm - 3:00 pm*

This interactive session will get you started. Use NCTM resources, state standards, and advanced courses to develop anchor activities, challenges, and tiered assignments. Design lessons and activities that create a challenging, engaging learning environment for students with different readiness levels and learning styles.

### **Using Origami to Explore Proportional Reasoning**

*Friday, October 15 • 2:00 pm - 3:00 pm*

The success of students in mathematics and science depends on developing a deep understanding of proportionality. Participants will investigate proportional and nonproportional relationships of origami paper cups using three guided-discovery lessons appropriate for middle grades students.

### **Constructivist Lessons: How to Incorporate Them into Mathematics Classrooms**

*Friday, October 15 • 3:30 pm - 4:30 pm*

Learn how to incorporate hands-on, constructivist lessons to make math come alive in your classroom. Participate in sample lessons and problems that use manipulatives to build a deep understanding of mathematical concepts. Teachers will receive ideas and materials that they can use in their own classrooms.