



May 2011

Celebrate with us this month! Two elementary teachers who focus on mathematics have received high honors. Brian Freiss, Highland ES, was named the MCPS teacher of the year. Josepha Robles, Rolling Terrace, is the Maryland recipient of the 2010 Presidential Awards for Excellence in Mathematics Teaching. We are honored to serve with these excellent examples of our profession. They exemplify the great work you all do every day.



### Tools for the Common Core State Standards

This [blog](#) about the Common Core State Standards (CCSS) highlights new tools that support its implementation, as well as other developments related to the CCSS. Posts have included

- Draft of progression on Number and Operations in Base Ten
- Another project for professional development on the Standards
- Curriculum analysis tools for the mathematics Standards
- Technical manual for the Common Core

In particular, check out the [linked PDF of the CCSS](#). Typeset in TeX, this download features links at the bottom of each page for navigating to grade levels, and from the grade level overviews for navigating to domains.



Author Bill McCallum teaches math at the University of Arizona, where he also chairs the advisory board of the university's Institute for Mathematics and Education.

### Avoid Last Minute Cram Sessions



Test prep is like lifting weights. Do enough bicep curls and eventually you have big biceps. But without cross training, you may not have the agility, flexibility or overall conditioning to put your big biceps to use.



This is a good metaphor to remember when test time rolls around this year. You've provided your students with a strong math program based on standards and designed to build their confidence and competence with math.

When they face the test, they will be flexing all of their mental muscles to [demonstrate their mathematical understanding](#).

### Final Exam Reviews



All final exam reviews and keys for semesters A and B can be found on the main [MCPS math website](#). Please arrange for copying and delivery through [CopyPlus](#).



### From NCTM

#### Math Vocabulary Bingo (G3-5)

This lesson provides students an opportunity to assess their understanding of mathematical vocabulary as they relate to key concepts from the five content areas. Through the use of a familiar game format, Bingo, students will identify numbers 0-75 that correspond to mathematical descriptions from math vocabulary clue cards.



#### Equations of Attack (6-8)

Students will plot points on a coordinate grid to represent ships before playing a graphing equations game with a partner. Points along the y-axis represent cannons and slopes are chosen randomly to determine the line and equation of attacks. Students will use their math skills and strategy to sink their opponent's ships and win the game. After the game, an algebraic approach to the game is investigated.



#### Chances are You'll Probably Love This (4-8)

Roll, spin, and flip your way to a win with our newest game, Prime Time. Visit Calculation Nation and see if you can tilt the odds in your favor. Hint: Knowing your prime numbers would be favorable. This is a great game to get students thinking and talking about strategies!

### From Math Forum

#### Forum Resources, Grade by Grade

Go straight to the [grade band you want](#) for Ask Dr. Math, professional development opportunities, PoWs, the Internet Mathematics Library, T2T, and other Forum resources and services.

#### Start Problem Solving in YOUR Classroom

Learn how to create an environment that supports problem solving in your classroom. [Download the PDF to read more](#)

### From Dreambox Learning

#### Math Growth Chart



Share the [learning development chart](#) with parents to help them track their child's math development. When parents know what to expect at each stage, they can provide activities to further their child's learning. This one page chart is packed with information, like math skills by age, and teaching tips for games and activities to help children learn.



## Congratulations to Two Tremendous Educators!



Brian Freiss, a math teacher at Highland Elementary, was named Teacher of the Year for Montgomery County Public Schools. In addition to winning MCPS' Teacher of the Year, Mr. Freiss was also recognized by the Dr. Marian Greenblatt Education Fund.

Beginning his educational journey in inner-city Pittsburgh before coming to MCPS, Brian Freiss has helped Highland reach the status of a National Blue Ribbon School. His devotion to children extends beyond the math classroom to include afterschool sports programs and parent nights. His ten years of commitment to students has earned him the respect of his peers and the PTA, responsible for nominating Mr. Freiss for the award.

The title of MCPS Teacher of the Year includes a \$1000 prize for Mr. Freiss and Highland Elementary, as well as a year's car lease sponsored by the Montgomery County Business Roundtable for Education and United Healthcare.

Good luck to Brian Freiss as he competes for recognition as Maryland's Teacher of the Year!

Josepha Robles, a math teacher at Rolling Terrace Elementary, is Maryland's 2010 winner of the Presidential Award for Excellence in Mathematics Teaching. The winners are selected by a panel of distinguished scientists, mathematicians, and educators following an initial selection process done at the state level.

Ms. Robles has nearly thirty years in education, her most recent responsibility being that of math content coach at Rolling Terrace. She frequently presents at local and national conferences on a variety of topics. Ms. Robles is a published author, contributing to *Teaching Children Mathematics*. Most recently, she co-authored the book, *Introduction to Reasoning and Proof*, published by Heinemann.

Winners of this Presidential honor receive a \$10,000 award from the National Science Foundation to be used at their discretion. They also receive an expense-paid trip to Washington, D.C., for an awards ceremony and several days of educational and celebratory events, including visits with members of Congress and the Administration.



## An Inspiration in a Time of Increasing Class Size



It's a few minutes after 7 a.m. on a drizzly Friday morning and math teacher Jonathan Winn is standing just outside his first period classroom yelling at the top of his lungs, his voice reverberating across campus. "How does that go?!" He's not so much yelling *at* his students as yelling *for* them, exhorting them to shout out the answer to a complex calculus problem, in unison. A few minutes later, Winn is dressed in a wig and a white ruffled shirt, playing 18th-century mathematician Gottfried Leibniz doing calculus in Paris.

This is how they roll in [Winn's AP calculus class](#) on the campus of Crawford High Educational Complex in San Diego, California. Teaching the most popular class on campus, Winn fills every one of the **100 seats** in the school's theater -- and there's a waiting list to get into his class. One in ten of the students are native English speakers and 95 percent of them receive free or reduced lunch. While Winn's extracurricular antics are entertaining, he says they are part of a collection of proven techniques to get the most from his students. And according to Winn, they are beginning to see results: About 80% of seniors who have gone through the Crawford's math program curriculum have received at least one acceptance letter to a four-year university.



## Math Mentors for Girls

The goal of the new Association for Women in Mathematics (AWM) [Mentor Network](#) is to match mentors, both men and women, with girls and women who are interested in mathematics or are pursuing careers in mathematics. The network is intended to link mentors with a variety of groups: recent PhD's, graduate students, undergraduates, high school and grade school students, and teachers. Matching is based on common interests in careers in academics or industry, math education, balance of career and family, or general mathematical interests.

## Word to your Math-er



**GET THE MATH** is a convergent media project designed to help middle and high school students develop algebraic thinking skills for solving real world problems. Drawing on conventions of popular reality TV shows, video segments begin with profiles of young professionals, who then pose challenges connected to their jobs to two teams of teens. At that point viewers are encouraged to try the challenges themselves using interactive tools provided on the [GET THE MATH website](#), before returning to the video to see the teams' solutions. Students can further explore the same algebra concepts through additional interactive challenges on the website.

## Mothers Matter!

How mom's early beliefs affect adolescent STEM abilities

## The Grand Challenges Contest

Many of the world's greatest challenges can be seen as engineering problems. The National Academy of Engineering has identified 14 such challenges, from harnessing solar energy power to providing access to clean water.

The contest is simple. Just prepare a 60 second presentation explaining your science or engineering solution to one of these three grand challenges. Then come to the USA Science & Engineering Festival to record your presentation.

- Harnessing solar power
- Providing access to clean water
- Restoring urban infrastructure

Middle and High School students: Prizes will be awarded for 1st, 2nd and 3rd place winners in each of the 3 grand challenge categories.

- First place prize in each category - \$1,000
- 2nd & 3rd prizes are \$500 plus USA Science & Engineering Festival and ENGINEERING.com swag



## Who Wants to Be a Mathematician?

In the [American Mathematical Society contest](#) "Who Wants to Be a Mathematician," eight area high school students will compete at the 2nd USA Science & Engineering Festival Expo by answering multiple choice mathematics questions in a competitive quiz show format. The highest ranking 8 students will be pre-selected for the final round from written pre-qualification tests administered at area schools. The top prize is \$5000 for the winning contestant and \$5000 for the math department at the contestant's school.



## Opportunities for Teachers – Conference Spectacular!

### Maryland's 2011 Educator Effectiveness Academies

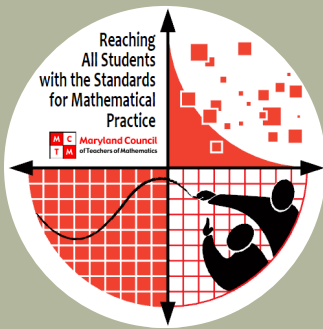
This summer, representatives from every school will be attending [MSDE's Academy](#) to learn about the Common Core and its impact on classrooms. The principal and building leaders from Math, English, and STEM will take part in designing a professional plan to lead staff through the transition to new instructional practices and curriculum.



July 28–30, 2011 | Orlando, Florida

**Infusing the Classroom with Reasoning & Sense Making**

AN NCTM INTERACTIVE INSTITUTE ON HIGH SCHOOL MATHEMATICS



### Maryland Council of Teachers of Mathematics

The Maryland Council of Teachers of Mathematics (MCTM) will hold the 2011 Annual Mathematics Conference at Reservoir High School in Fulton, MD on October 21, 2011. The MCTM annual membership meeting and Teacher of the Year banquet will be held on October 20, 2011 at Turf Valley Resort in Ellicott City, MD. For more information, please visit <https://www.marylandmath.org/events/conference>.



**NCTM 2011 REGIONAL CONFERENCE & EXPOSITION**

ATLANTIC CITY, NJ  
October 19–21, 2011

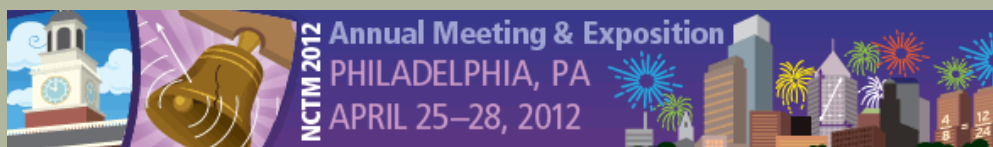
### USA Science and Engineering Festival Washington, DC April 27-29, 2012

#### Transportation Grants

For the special "Sneak Peek" Friday, we have a limited number of grants available to help provide transportation for field trip groups, so teachers should not delay in signing up! To access a registration form, teachers can [Click here](#)

#### School Exhibitor Grants

We are highly encouraging K-12 math, science and engineering teachers and their students and science clubs in the Greater Washington DC region to be exhibitors in the Expo -- the largest celebration of science and engineering in the US! To help in the creation of their interactive, hands-on exhibits, the Festival is providing K-12 schools a limited number of \$250 grants (plus free exhibit space) to offset the cost of materials. To learn more and to apply for an exhibitor grant, teachers can [Click Here!](#)

**NCTM 2012 Annual Meeting & Exposition**

PHILADELPHIA, PA  
APRIL 25–28, 2012



## Have a Question or an Idea To Share?

Contact us at 301-279-3161 or by email—email is usually quicker☺

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