



October 2011

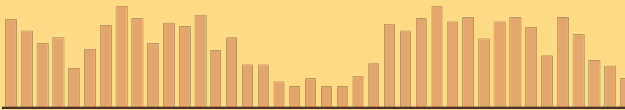
We hope that everyone has enjoyed a productive and enjoyable first marking period and is looking forward to many achievements and wonderful experiences in marking period two. We continue to seek resources to help you implement the Standards for Mathematical Practice in your classrooms, seeking activities that engage students and are built on motivating topics. Please enjoy our end of October newsletter and let us know if you have any ideas you would like to share. Thanks!

Ed Nolan

MCTM Annual Conference

The Maryland Council of Teachers of Mathematics hosted their Annual Conference at Reservoir High School in Howard County on Friday, October 21. Specialists from the Math Office in the Department of Curriculum and Instruction learned more ways to help assist you in your roles as math teachers and instructional leaders.

Colin, Ed, Katie, and Verna also presented at the conference. It was great to see several familiar Montgomery County faces in our audiences.



Colin's session focused on incorporating multimedia into lessons to facilitate the development of the Standards for Mathematical Practice. Participants created video and explored many web tools available for presenting their creations and capturing the subsequent discourse.

Ed's session focused on practical classroom applications to support students with mild disabilities. Participants emphasized building collaborative teams and positive co-teaching mathematical classroom environments. It also provided tools, examples, and opportunities planning for successful co-teaching.

Katie's session focused on using the TI-Nspire to support the Standards for Mathematical Practice. Participants explored activities that use multiple representations and other features to engage all students and build deeper understanding. Activities used in the session are available for free from the TI Website.

Verna's session focused on learning about the Standards for Mathematical Practice through examples of day-to-day routines and tasks to help younger students internalize the practices. She featured video clips of classroom discussions and examples of student products that are available upon request.

Reader Contributions

Have you captured a mathematical moment that you would like to share? Do you have classroom video or student work that demonstrates the Standards for Mathematical Practice?

The Math Office is creating an archive of SMP in action for use as models to share on the web and in face to face professional development.

Please contact Colin Reinhard if you would like to contribute or create content for this project.



Blogtastic Voyage

As always, the comments found on blogs are of individuals wielding free will and do not necessarily reflect the opinions of the Math Office and Montgomery County Public Schools.

SMP in Action

One of the most frequent requests the Math Office gets is for examples of teachers implementing the Standards for Mathematical Practice. The teacher-created blog, [Function of Time](#), may be worth your while if you are looking for examples in instruction. [Continuous Everywhere](#) features examples of formative and summative assessment, as well as a few cathartic teacher ramblings.

Austin: I'm stuck. How do you solve $-x > 2$?
Matt: You multiply both sides by -1 and flip the inequality.
Austin: So you get $x < -2$, and so the answer is $(-\infty, -2)$
Austin: Gotcha... Wait... Um... Why the heck do you flip the inequality? Why does that math trick work?

You're Matt. **What do you say?**

A Historical Perspective

Many of you may be familiar with the [History of Mathematics Archive](#), but [Pat's Blog](#) takes the time to aggregate multiple sources for an extensive daily roll call of mathematicians and great moments in math.

While not a blog, [this quirky site](#) examines the etymology of some of common, and much more uncommon, math vocabulary.

Math Contests



Math competition season is heating up as we move into the second marking period. The [Art of Problem Solving](#) hosts a comprehensive list of national and state contests for all grade levels.

The Benefits of Lecture

We knew this headline would grab your attention! In an effort to represent all opinions, Tom Körner's article, [In Praise of Lectures](#), is sure to spark a conversation in your building. Instructional leaders can post their teachers' thoughts to our [SharePoint site](#).

Cross-Curricular Connections

The Arts

This month we have a plethora of sites devoted to mathematics and art. Some are silly and some are serious, but all can be used to motivate a wonderful class discussion.



- The Mathematical Association of America's [Found Math](#) page features mathematical moments captured while walking about town, village, and jungle.
- Edward Tufte's site features gorgeous prints and posters of [mathematical representations](#) of history, nature, music, and science topics.
- [Mathbun](#) features hundreds of images representing specific mathematical ideas. Don't ask us which concepts, but the sites curator, C. Goodman-Strauss assures us they are.
- Tired of all of these still images? [Smart History](#) includes more than 400 short-form lessons on great works of art and architecture from all periods of civilization. *Warning: This resource was recently acquired by Khan Academy. The Math Office does not support Khan Academy math videos for use as primary instruction or intervention.*



Miscellaneous

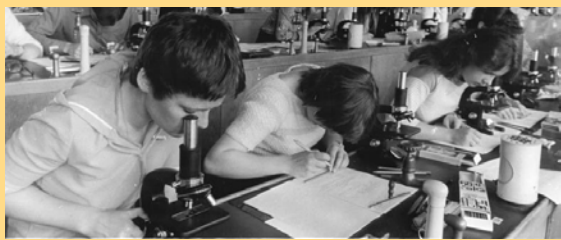
While exploring the web for this month's newsletter, we found a few sites that elude classification. Is it science, is it art, is it technology, or is it just really, really cool? Decide for yourself.

- [The Numbers Guy](#)
- [yofx](#)

Mathematics and the Media Center

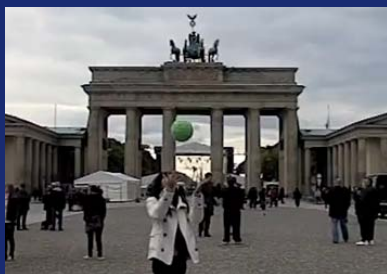
Media specialists from across the county gathered at CTI in October to learn more about the Common Core State Standards. The Math Office from the Department of Curriculum and Instruction had an opportunity to present the CCSS, experience the Standards for Mathematical Practice (SMP), and share ideas on how media specialists can support the math department during and after the transition.

Media specialists learned that the expectation of the Maryland State Department of Education and MCPS is that teachers spend the 2011-2012 school year learning to implement SMP in their classrooms. They participated in a notice and wonder activity using the Discourse Video Pick of the Month from the September 2011 newsletter, learning that one need not be a math content expert to be curious about the mathematics around us.



The remainder of [the presentation](#) was devoted to exploring web resources that can easily incorporate print and digital media available to teachers and students. Additional time was dedicated to highlighting how these resources could model and encourage discourse in the classroom and at home.

DISCOURSE VIDEO PICK OF THE MONTH



(WATCH WITHOUT SOUND)

WHAT DO YOU WONDER?

Featured Technology

LiveScribe Pens

A LiveScribe pen is a device that writes like a typical ballpoint pen, but also captures all writing and audio when used with the companion LiveScribe paper.



Popular with university students for note taking in lectures, LiveScribe pens are finding their way into classrooms to record student discourse and provide evidence of learning.

Jennifer attended a [session](#) at the MCTM Annual Conference to learn more about how middle school teachers were using this innovative technology. The Math Office is excited about the possibility of using student work samples in professional development modules to highlight student habits of mind as they learn with the Standards for Mathematical Practice.

Flip Cameras

The calendar year is coming to a close and that can mean only one thing. Spend the rest of your teacher tax credit! You may have heard that HP will no longer be supporting their Flip cameras. Their cloud hosting service for the movies will be discontinued, making it challenging to move such large files via email.



However, this service is not needed for classroom use. The Flip camera records directly to a QuickTime movie format, meaning you can simply drag the movie from the camera just as you would a document file from a standard thumb drive.



This announcement from HP can also work to your benefit. Prices have been reduced dramatically and Black Friday is only 4 weeks away! Think of all of the great resources you and your team can create to help students as they engage content through the lens of the Standards for Mathematical Practice.

Teacher Opportunities

STEM Teaching Project

Towson University's Baltimore Excellence in STEM Teaching Project (BEST) is now [accepting applications](#) for its 2012-2013 Cohort. The application deadline is **December 19, 2011**.

The BEST Project is a year-long professional development program for secondary-level science, technology, engineering, and mathematics teachers. The foundation of BEST is a 6-week [authentic research experience](#) at a Baltimore-area college, university, or government facility.

Presidential Awards for Elementary Math Teachers

Nominations are now being accepted for Presidential Awards for Excellence in Mathematics and Science Teaching for elementary teachers (K–6). The deadline for nominations is April 1, 2012. The nomination form should be completed early enough to allow the nominated teacher time to meet the [nomination application](#) deadline of May 1, 2012.

Early Career Math Teachers

The [STaR program](#) provides early career faculty in mathematics education with opportunities to network with other new mathematics teacher educators. The program consists of a summer institute (July 15–20, 2012), academic year networking via electronic means, and a regroup session in conjunction with the Association of Mathematics Teacher Educators annual meeting.

Featured Web Resources

It's true, this newsletter already contains so many links that it's impossible to keep up with the updates to all of the sites. Knowing this, we offer a few more for your perusal.

Math for Primates

This series of Podcasts features a fun and casual conversation about some seriously higher order mathematics. Although the concepts may be daunting, Nick and Tom make the math approachable with their anecdotes and banter. The shows last 45 minutes and can be played through the [Math for Primates](#) website or downloaded from [iTunes](#).

Teaching College Math

Although the name of this blog seems to miss the target audience of this newsletter, the content is pertinent to all levels. [Dr. Maria Anderson](#) is a professor of mathematics and futurist who considers the role of technology in education. You will find a great collection of presentations and head scratching videos that are updated every week or two.

Large Numbers

Have you ever had that student who just wanted to count? And count? And count? Perhaps they fill notebooks with numbers. Now, with the help of this [large numbers resource](#), you can actually tell the student that a 1 followed by 57 zeros is octodecillion. Don't you feel better?

Have a Question or an Idea To Share?

Ed Nolan	supervisor
Cathie Peirce	admin. secretary
Brian Crane	content specialist
Katie England	content specialist
Jennifer Hallmark	content specialist
Colin Reinhard	content specialist
Missy Sigley	content specialist
Verna Washington	content specialist

or Contact us at 301-279-3161

FOCUS GROUPS FORMING

- CLASSROOM TEACHERS ARE NEEDED TO REVIEW CASIO CALCULATORS FOR COMPATIBILITY WITH CURRENT AND FUTURE MATH CURRICULUM.
- CLASSROOM TEACHERS ARE NEEDED TO PROVIDE FEEDBACK FOR UPCOMING MATH 6, 7, 8, AND ALGEBRA 1 CCSS CURRICULUM DOCUMENTS

CONTACT COLIN REINHARD FOR MORE INFORMATION!