

NOTES TO NERDS

The official newsletter of the Math Collaborative



"Step up" and join us for engaging professional learning. Register now!

IN THIS ISSUE:

DIRECTOR'S NOTES:

"AN APOLOGY AND
SHARPENING THE SAW"

UPCOMING PROFESSIONAL DEVELOPMENT

MATH MASTERS 2024

COOL TEACHER STUFF

MAKE IT COUNT
NEEDS YOUR SCHOOL!

CONTACT US



What is our 'Why'?



We imagine a world where an appreciation for and understanding of mathematics is not just a subject in school but a magnificent tool that empowers individuals to unlock their full potential.

The Mathematics Collaborative is on a fantastic odyssey to empower educators and students to embrace mathematics as a force for growth, problem-solving, and self-discovery.







DIRECTOR'S NOTES



by Peter Anderson CRMC Director

"AN APOLOGY AND SHARPENING THE SAW"

I crossed a solemn line this past week.

As someone who supports teachers, I showed up to conduct a professional development session that directly conflicted with what teachers felt was needed. I don't blame the teachers, the administrators, or the scheduling. What I do blame is the need for a clear and shared goal. I sincerely apologize to those teachers- they know who they are.

This Director's note is for you in particular but resonates with our wider community:

Of course, a teacher's day is full of working with students and other responsibilities. It becomes difficult to manage priorities and time. Planning periods - a prized tool teachers need to be most effective - are unreasonably encroached upon for a myriad of reasons. Some of those reasons are good but many are dubious. As a result, time is so filled, educators become very good firefighters and improvisers instead of solid engineers and planners. Firefighting is necessary and important but not sustainable. We need to be purposeful planners for the productivity and success of our students and ourselves.

It is incredible how unproductively busy we have become in our daily lives and education. We do a lot of things. We check off boxes on big old lists but make little or no progress on the essential things.

As a professional educator, I can do better. Indeed - we can do better.

I ask this question:

When was the last time you reflected on what you were doing?

It's been over 20 years since I read Stephen Covey's book The Seven Habits of Highly Successful People. One of the things that stuck with me and still sticks with me today is the idea of sharpening the saw and essentially taking care of yourself so you can take care of others. One of its critical components is reflecting on the different roles you carry out in your life.

continued...

DIRECTOR'S NOTES

For educators, it starts with reflection. Development (not training!) will come later. Teachers and administrators must realize that the school will not burn down, and students will not fall further behind if educators take a day to reflect on their practices. The return on investment (ROI) will be higher if a teacher attends professional development (PD). For starters, you get a rested and focused professional who has had the opportunity to reflect and consider not just the next day's lesson but the direction of the studies for the next few weeks or months.

Recently, after pouring over two years of responses to professional development surveys of teachers attending our day-long and half-day sessions, not one of the evaluations remarked that the time was not well spent! Even the very few teachers who gave us poor Likert score results, at some point indicated a worthwhile benefit!

Development for teachers must be an investment over time. While one-off PD is okay, its effect is short-lived, and the impact is relatively small. Sustained PD over two years or more provides growth for the teacher (and HELLO admins - improved test scores and teacher retention!)

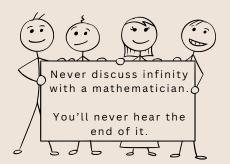
Finally - and this is the most challenging obstacle to overcome for most teachers - it has to be a professional development that the educator chooses. Teachers benefit most from the PD they choose.

Circling back to the beginning and my apology, I challenge myself and you to make time to develop professionally. Training is good and necessary. But for your professional health and effectiveness, nothing can compare to your investment in your development, where you have time to reflect, build relationships and content knowledge.

Hey - We have been doing that at the Math Collaborative for the last 35 years - Consider this is an invitation to join us.

Happy Maths,





Professional Development

MATH COLLABORATIVE SPRING SEMSTER 2024 LINE-UP





"Differentiation" with Carlie Oelke

1.18.24 Geometry & Measurement

2.15.24 Guided Math

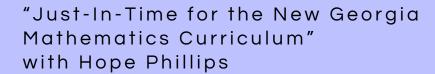




"From Calculators to Thinkers" with Karen Hensen

1.24.24 Problem Solving with Fractions & Decimals

2.28.24 Problem Solving with Geometry





1.9.24: Exploring Area & Volume

1.16.24 Systems of Linear Equations

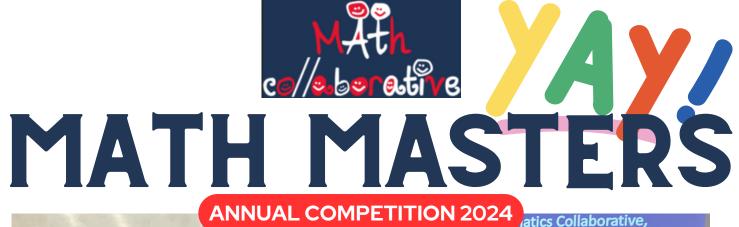
2.22.24 Together & Apart

"How Do We Teach Using Math Modeling Tasks?" with Peter Anderson



1.23.24 How Do We Put the Lesson Pieces Together?

3.5.24 What Have We Learned and How Do We Get Better?





MARCH 16, 2024

THE ANNUAL MATH MASTERS COMPETITION: A MIDDLE-GRADES MATH CHALLENGE THE CRMC, THE DEPARTMENT OF TEACHER EDUCATION, AND THE DEPARTMENT OF MATHEMATICS HAVE COME TOGETHER TO CREATE A STIMULATING MATH COMPETITION TARGETING MIDDLE-GRADE STUDENTS. THIS COMPETITION AIMS TO CHALLENGE AND SUPPORT STUDENTS' INTELLECTUAL GROWTH BY PROVIDING TASK-BASED MATH PROBLEMS THAT REQUIRE TEAM COLLABORATION TO SOLVE.

WHY PARTICIPATE?

Naturally, it's all about snagging a shiny trophy...but the real crème de la crème is testing yourself with difficult challenges, sharing with teammates, and learning from others!



COOL TEACHER STUFF



Contributed by Peter Anderson CRMC Director

Multiplicity Lab: Look, Think, Talk

Quick! Before you go further...list three things you notice about this picture!:



I was struck by the beauty of the picture first. Then my math teacher-mind noticed the lines. So many lines!

- Are they parallel? How do I know? Some are but some are not.
- What about the quadrilaterals?
- and the arches? Could we write an equation for them?

...that was in the first 30 seconds!

When I asked this of a high school geometry class, we had a list of 30 ideas and questions that served as a springboard for our lesson. It served as a formative assessment for me with a group of students with which I was unfamiliar. It allowed me to develop and sharpen vocabulary using the students' own words and connecting the mathematical terms. The students and I had a moment to connect and learn about each other's experiences. The cognitive load was placed on the students and set the tone for the next part of the lesson.

Here is an ask I lay humbly at your feet - look through these images and find an opportunity to use them in your class to connect students with beautiful and interesting images...as well as the beautiful and interesting mathematics in those images.

This image collection can be found <u>here</u>. My favorite images are 93, 97, 100 and 108. Can you guess why?



<u>Multiplicity Lab</u> was founded at Northwestern University's School of Education and Social Policy to support the teaching of mathematics as an ambitious, expansive, and just pursuit. They connect research in the learning sciences and mathematics education to the daily practices of teaching by providing resources, routines, and tasks worthy of students' and teachers' time.

COOL TEACHER STUFF



Contributed by Karen Hensen CRMC Resource Specialist 3-5



Spotlight on: Generation Genius



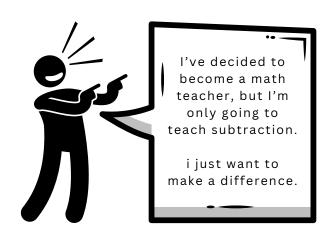
Hey, fellow educators! Let's face it, kiddos these days can't get enough of their videos, amiright? So, why not join the hype and give them the gift of learning with a side of fun?

That's where <u>Generation Genius</u> comes in! These math wizards have cooked up some seriously cool content for grades K-8, including videos, reading materials, and quiz games that will ignite a love for math like never before! Plus, they've got the National Council of Teachers of Mathematics (NCTM) on speed dial, so you know they're the real deal.

So, why settle for textbooks when you can blast off into a world of math-tastic adventures? Get ready to take your students on a wild ride with Generation Genius!







VOL. 87



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Math Magic Going!

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