Notes 2 Nerds

March 28, 2023

Teacher Development and Consulting

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Upcoming Events:

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Save-the-Date:

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- Professional Development: Teaching with Tasks, Grades 6-8, May 4, 2023
- New GA Math Curriculum Training, May 6, 2023
- Professional Development: Surprise! We Are Not in Unit 1 Anymore, Grades 6-8, May 11, 2023
- Professional Development: Teaching Through Tasks, Grades 9-12, May 11, 2023

Follow Us:

Director's Notes

The New Georgia Math Standards and Taking Out the Trash

My mom still lives in the house she and my dad bought and raised a family. The home has changed a great deal, although the kitchen has remained basically the same. The kitchen garbage can resided in the same place for the better part of 50 years. About eight years ago, as a Christmas gift to my parents, we commandeered a little used cabinet and placed a rollout garbage can under the counter. We no longer had to walk around the garbage can - now tucked aesthetically behind a cabinet door. We had to put a ribbon on the cabinet door to remember where the garbage can stood ready. Frequently, even now when I'm cooking in my mom's kitchen, I take a step toward the old trash can space before realizing the new garbage can is under the counter.

During a workshop this past week, I had lunch with a friend. She relayed to me how difficult it is to change behavior. She explained that she would become frustrated because her teenage son would not take out the garbage even though she reminded him regularly. After a while, she would become so frustrated that she would take the trash out herself. Upon reflection, it occurred to her that she could ask her son 99 times to take out the garbage, and he wouldn't do it - he realized on the 100th asking - his mom would take it out. She would ultimately do it for him even though he was quite capable.

I wonder if we, as educators, don't do the same thing with our students. We present the mathematics to them. We show them how to do the problem. We scaffold the problem. We put the solutions on the board for them to copy into their notes. Then we wonder why they don't do the work or understand the mathematics. Students know that the answer will magically appear if they wait long enough. What is the thing that needs to change on the teacher's side to affect student behavior?

In a positive way, we as teachers must do less for the students. As a rule, the more teachers do, the less students do. Looking through the learning plans for the new Georgia Mathematics Standards, - the state provides us the opportunity to allow students to enter a lesson by piquing their own curiosity. The state standards lean heavily on modeling. The opportunity is there for the students to inquire and make the first move toward learning. If educators can resist the temptation to explain how to solve, the students will fill that space. It won't be efficient - at first. The teacher will have to listen carefully and question students reflectively.

The new math standards have mostly stayed the same. The approach to teaching mathematics in this new curriculum has shifted. Teachers, in general, are used to developing a skill to solve a problem. As we advance, teachers must let the problem teach the mathematics. Educators have to grow teaching tools that rely on listening, questioning, and recognizing multiple pathways to a solution.

I think back to my mom's kitchen. The pull is strong to go to the place where the garbage can used to be. But I have to go to a new place to put the trash away. The way we have always taught has a strong and comfortable pull but is it where we need to go?

Pete

CRMC By the Numbers

MARCH

- On March 11th, the Math Collaborative hosted 3 hours of math challenges for 12 area middle schools, over 100 students, 20 coaches and assistants, 22 Master Teachers, 24 high school assistants from Calvary Christian School, 3 dinosaurs, 7 happily exhausted staff members, and 1 puppy dog (Murray).
- Resource teachers worked with about 20 CSU College of Education students from Dr. Gierhart's class on topics related to lessons they would develop for classes they would teach.
- The CRMC presented 4 one-day long workshops at Frank Brown Hall in the last month: Grades 3-5: Active Thinker Problem Solving; Algebra: Teaching Through Tasks; Middle Grades: Teaching Through Tasks; Grades K-2: Building a Bridge Between Math and Literacy, serving more than 40 teachers!
- Worked with West Georgia RESA in Grantville, Georgia, to provide two-day workshops to almost Fifty educators in grades K-5 and 6-12 on Teaching Through Tasks.
- STEM Nights in 2 elementary schools!
- Worked with about XII schools on supporting and understand the learning plans in the new Georgia Math Standards.
- A 4 hour Saturday session for middle school scholars at East Columbus Middle School.
- Co-taught lessons at 4 area high schools, serving over 80 students in Algebra an Geometry classes.
- A fun-filled 1 HOUR of Thinking Classroom ideas for Harris County High School teachers!
- Delivered a $\frac{1}{2}$ day workshop to educators in Troup County on methods for delivering the new state standards.
- The Middle School Roadshow chugged along, visiting 6 schools in Muscogee, Russell, and Harris Counties!
- Provided 3 full days of professional development directly in 2 area elementary schools.

We are constantly amazed by the good work of our sister centers!

Our classroom hosted the Ivy Center, CQTL 'Go To Teach Day' and Interviews, and a weekly student-teacher classroom management class. Let us know how we can add you to our numbers: Contact Peter Anderson, anderson_peter2@columbusstate.edu.

Professional Learning and Cool Teacher Stuff

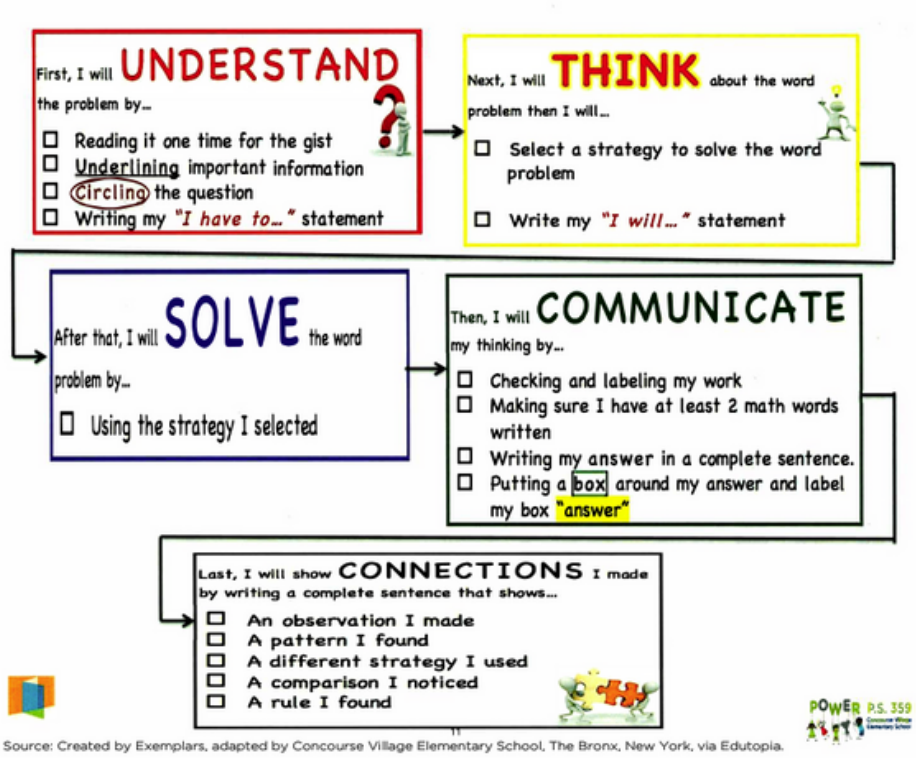
Do Your Students Struggle with Word Problems?

Contributed by CRMC Resource Specialist, Carlie Oelke:

- One of the biggest hurdles in mathematics classes is solving word problems. We have the tools to help students in our approach to literacy skills.

- This Article from Edutopia is a wonderful resource: A Game-Changing Practice Fuses Math and Literacy. This article lays out a narrative that helps to understand the practices needed to help students develop this critical problem-solving skill.

- You will find links to resources like Exemplars, videos, and actual documents like this one: https://www.edutopia.org/article/game-changing-practice-fuses-math- and-literacy/



Source: Created by Exemplars, adapted by Concourse Village Elementary School, The Bronx, New York, via Edutopia.

If your students are struggling to solve word problems (or if they are not), this is a great place to start building the skills necessary to support your students!

Professional Learning and Cool Teacher Stuff

Contributed by CRMC Resource Specialist, Laura Stokes

Thinking ISHFULLY
Using Peter Reynolds' book in math

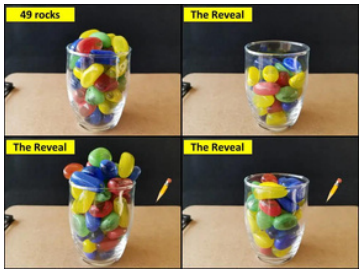
Have you met Ramon in Peter Reynolds' book, Ish? He is a boy who discovers that his art doesn't need to be realistic or exact; it can instead be "-ish." This thinking can also be applied to our students' math understanding.

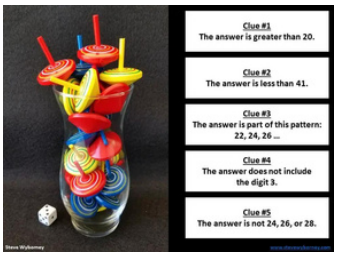
There are many times when the math answer needs to be accurate and exact, but are there also times when we use math to think "-ishfully?"

- What time are we leaving? Oh, 5:00ish.
- How many people are coming to the meeting? I think about 30ish.
- How many pieces of candy are in that jar? I would guess about 25ish.

We need to develop students' ability to think "-ishfully." We need to give them the opportunities to develop a visual/conceptual understanding of magnitude of items in a jar, number of people in a crowd, width of a room, etc. Experiences to develop students' thinking "-ishfully" can be:

- Estimation Jars – can give students hints during the week and allow them to adjust their "-ishful" thinking based on the hints. Initially provide visual benchmark jars to assist in students' thinking.
- Open number lines – can be paper/pencil, built on a clothesline (follow the links to Chris Shore and Kristen Acosta to explore this concept), and create human number lines. Allow students to partition the space and physically move along the distance of the number line to place values.
- Steve Wyborney's Estimation activities: Estimation Clipboard, Esti-Mysteries, and his newest routine 3-Container Estimation Route. To initially develop students' ability to look at objects and use strategies to estimate the quantity start with Estimation Clipboard. As containers are revealed, students use that information to determine each "-ishful" answer.





Explore Esti-Mysteries. Students adjust their estimates based on provided clues that are revealed one at a time. Make sure that students don't erase their estimates as they modify their answer based on clues. There is a lot of learning and discussion in those changes. There are also opportunities to discuss vocabulary such as odd/even, multiple, etc.

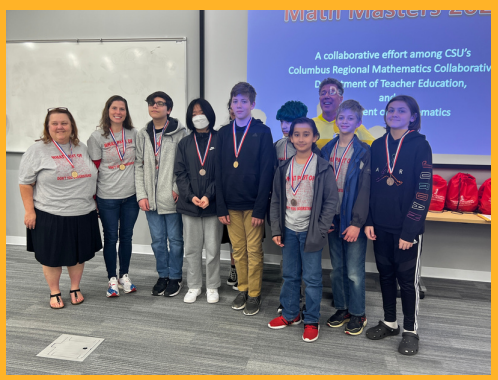
Wyborney's newest routine is 3-Container Estimation Route.

Enjoy all of these activities and help your students become "-ishful" thinkers.
It will also help them determine if thier exact answers are reasonable or not!

Math Masters 2023

Recap: Saturday, March 11th

Congratulations



First Place:
Richards
Middle

Second Place:
Blackmon
Road

Third Place:
Veterans
Memorial

To everyone who gave their time:

CRMC Staff

CSU Campus Security

CSU Facilities

Volunteer Master Teachers

Volunteer Calvary Christian Students

Team Coaches

Friends

Family

and participating schools

Thank you for a wonderful event!

We cannot do this without your support.

Math collaborative

follow us

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@mathcollab

@CollabMath

REGISTRATION OPEN NOW!

WHEN:
TUESDAY,
MARCH 30, 2023

@ CSU, FRANK BROWN HALL

USE THE LINK OR SCAN THE QR CODE BELOW TO REGISTER TODAY:

HTTPS://COLUMBUSSTATE.LIBCAL.COM/EVENT/10242024

Free Registration for:

CSU Students, teachers from Calvary Christian School, Muscogee County Schools, Russell County Schools, St. Anne Pacelli, and members of Delta Kappa Gamma Honor Society

Building a Bridge Between Math & Literacy

- Explore 'not-so-typical' math literature;
- Investigate lessons and activities that deepen understanding;
- Bridge connections with real-world examples;
- Delve into literacy strategies that will assist in Math.

Together, we can explore Math integration within different subject areas to build math investigators!

SAVE-THE-DATE

TWO OPPORTUNITIES!
Learn about the new GA Math Curriculum:

- April 18, 2023
- May 6, 2023

For More Info:
anderson_peter2@columbusstate.edu

Contact Us:
706-565-1475

DID YOU MISS IT THE FIRST TIME? WE'VE GOT YOU COVERED!

Algebra Professional Development:

- Grades 6-8, May 4, 2023
- Grades 6-8, May 11, 2023
- Grades 9-12, May 11, 2023

BUILDING THINKING CLASSROOMS COHORT

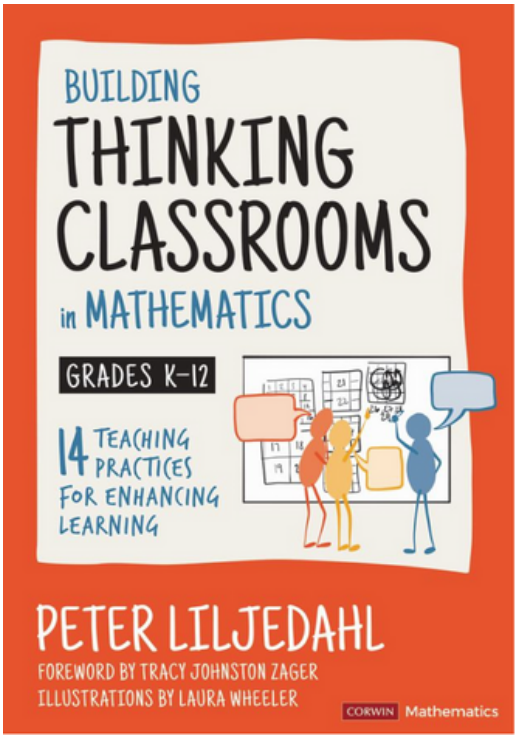
Are the things you are doing in class not connecting with students?

Would you like to engage your students more deeply?

Are you ready for a change that works?
(I know you have heard this before.)

So, kick the tires and see if the promise fits.
It costs nothing but your willingness to participate.
We meet about once a month, after school, at Frank Brown Hall. We develop and share lessons for teaching your subject. We are looking to grow our Building Thinking Classroom Cohort with High School and Middle School teachers.

Resource Link



If you are interested,
contact Peter Anderson:
anderson_peter2@columbusstate.edu

Click here to read more about our website:

Columbus Regional Mathematics Collaborative
Columbus State University

Click the icons below to follow us on social media!

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