Columbus Regional Math Collaborative September 3, 2021

Notes to Nerds

Workshops Director's Notes News Items Resource Teachers Caught in the Act

High School Workshop

Elementary Workshops

Thursday, September 2, 2021

High School Workshop: Geometry – thinking deeply using a TRY-angle (Virtual Workshop)

Time: 4:15pm - 5:00pm
Presenter(s): Peter Anderson and Nancy Mims

Tuesday, September 14, 2021

K – 5th Elementary School: Creating Mathematical Thinkers (Virtual Workshop)

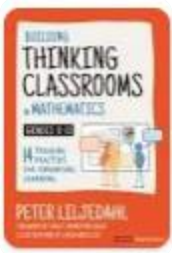
Time: 3:45pm - 4:30pm
Presenter(s): Laura Stokes

Tuesday, September 28, 2021

K – 5th Elementary School: Creating Mathematical Thinkers (Virtual Workshop)

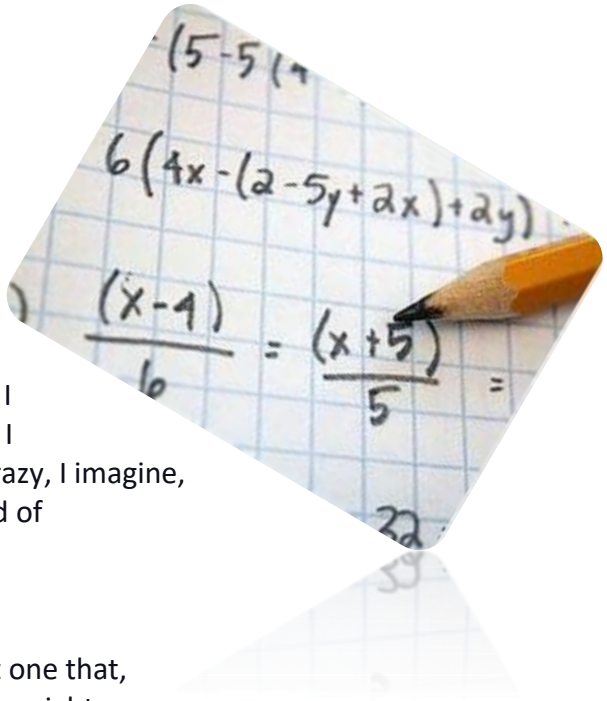
Time: 3:45pm - 4:30pm
Presenter(s): Laura Stokes

Building Thinking Classrooms book study will start next month on



Building Thinking Classrooms book study will start next month on Tuesday, September 7th. **Warning: It will change the way you teach.** Contact Peter Anderson

Director's Notes



Old is New Again

It has been over 35 years since I've been a *new* teacher.
What an odd statement.
I retired from the classroom three years ago, but I don't guess I ever really gave up on the idea of teaching. This past summer, I volunteered to return to a high school classroom. A little bit crazy, I imagine, for most folks to understand. But if you are a teacher, you kind of understand.

I am in a school where nobody knows this old man.

I teach an Algebra 1 course. Not just any Algebra 1 course, but one that, shall we say, is populated with experienced students. This class might be their second or third opportunity to take Algebra 1. So, we all have our work cut out for us--the students and me. I've had to relearn how to establish classroom routines and norms. I've become reacquainted with *discipline issues*. I have been challenged on multiple occasions with strong student apathy towards school, learning, and mathematics. Oftentimes, I am not sure I'm really making progress. An upside? It has been years since I have slept this well thanks to being reacquainted with *teacher tired*.

This past Friday, I started my classroom conferences. I set a desk and two chairs just outside the classroom door. I got the class working well on an engaging assignment that was just inside their wheelhouse. One by one, I called students out into the hall. I started by asking students how they are doing and what grade they think they deserve. We negotiated their grades. Usually, the students were dead on with where they were in the class.

I had one character who sat down and said, "I'm not taking anything less than an 80!" My response was, "Awesome! Show me how you would multiply these polynomials." He looked at me sideways.

The long and the short of it is that we began a dialogue about what he knew and what he needed to know. During our conversation, he realized that he was performing at a 65 level. Since Friday, he has found me several times to show he has learned how to do many of the things we discussed. Tuesday, I caught him on his cell phone. He was watching a video on rational and irrational numbers. I consider that a win. Our classroom conference lasted less than three minutes but leveraged his desire to do better.

These old eyes see anew and appreciate the effort, the determination, and the genuine love that teachers have for their students. Come to think of it, I guess I have been a new teacher every single year I've walked into a classroom. For each of my students, I am certainly new. It is my genuine hope, that if you are a teacher reading this, no matter your circumstance, you fiercely hold onto that joy of being a teacher. Your students need you more than ever.

Happy Maths,
Pete

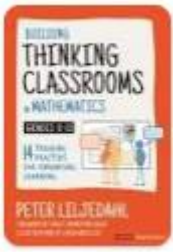
Caught in the Act (of being a teacher leader.)

The mission of the Mathematics Collaborative is to develop and support teacher leaders in our community. To that end, we seek to recognize those teachers who exemplify the qualities of a teacher leader.

We have two teachers this Month!

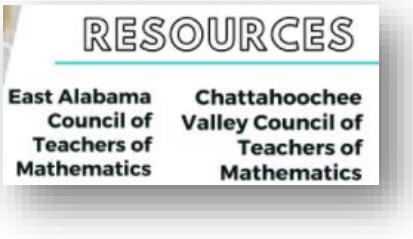
Melissa James and *Jennifer Robinson* are two devoted teachers at GW Carver STEM High School. Melissa and Jennifer worked through the summer to prepare a challenging thinking classroom for their students. They see the challenges faced by students and teachers as an opportunity to transform a classroom into an active learning environment! - This initiative, desire to be better, and leading by example are hallmarks of teacher leaders!

News Items



It will change the way you teach - It will change the way you see your students. - Join us - TUESDAY, September 7th - Building Thinking Classrooms book study. Contact Peter Anderson or Go here to get a link: BTC

Valuable PD … for free (*and you get a certificate!*) - Several events are on tap until the end of September! (Link Here)



Share and Gather East Alabama Council of Teachers of Mathematics and the Chattahoochee Valley Council of Teachers of Mathematics will have concurrent events Thursday, September 30th for Elementary, Middle, and High School teachers! Join us Thursday, September 30 from 6 to 7 pm (ET). Zoom Link or Contact Dr. Basil Conway

Resource Teachers

The Teacher's Corner

Choral Counting – Music to a Math Teacher's Ears

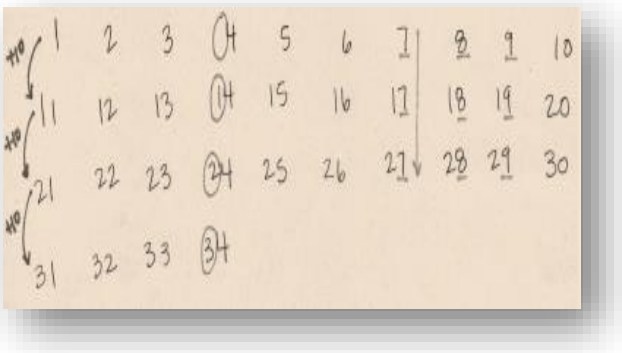
Walk past a kindergarten classroom, and you hear children rote-counting in a sing-song fashion. Elevate that counting routine and bring number sense into it, and it becomes Choral Counting.

Whether 5-year-olds or 16-year-olds are counting, choral counting extends the classic "count-out-loud." The count-out-loud is purposefully recorded. This recording provides students the chance to notice and wonder. The fact that the count is recorded makes the math visual and leads to greater discourse, identification of patterns, opportunities for students to justify their reasoning, and strengthening of number sense.

The strength in the Choral Count routine is in the plan: which number should the children start and end counting, what value should the students count by, and how to strategically record the count.

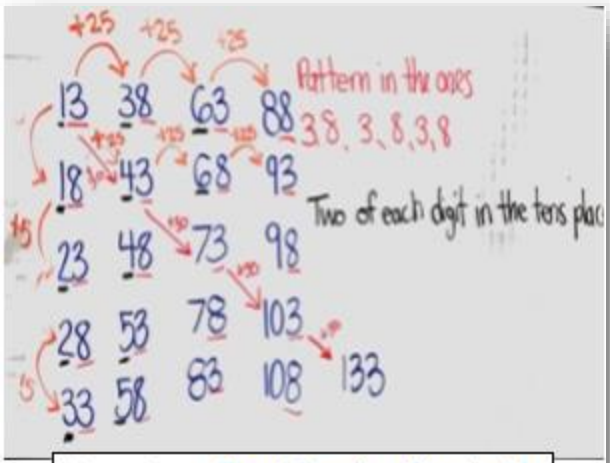
Starting value:

- Consider the age of your students. For younger students use a "benchmark" value: 1, 10, 100, etc. and then progress to numbers off the decade, such as 39, 84, or 996. With older students, start your counts with values that don't immediately fall into "sing-song" rote counting. For example, when counting by 5's, start the count at 7.

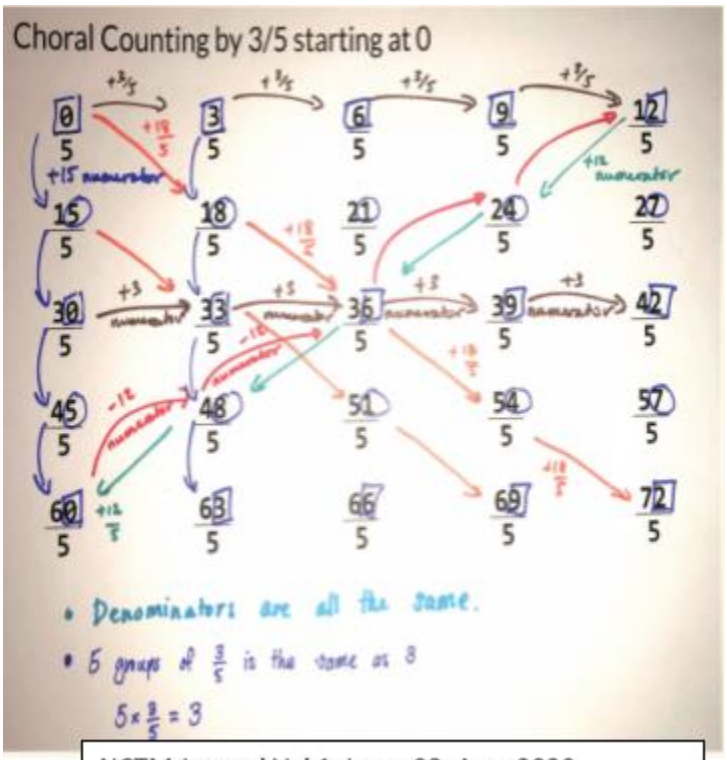


Values by which students count:

- Count forwards and backwards by 2's, 5's, 10's, 25's – any value that lends itself to an interesting recording of the count.
- Count using whole, fractional, or decimal numbers



(image from: Choral Counting: Meaningful Math Moments)



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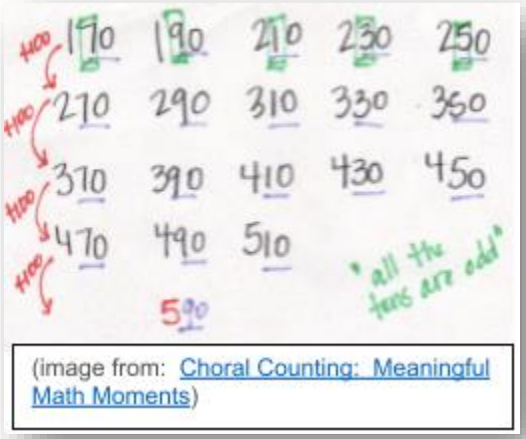
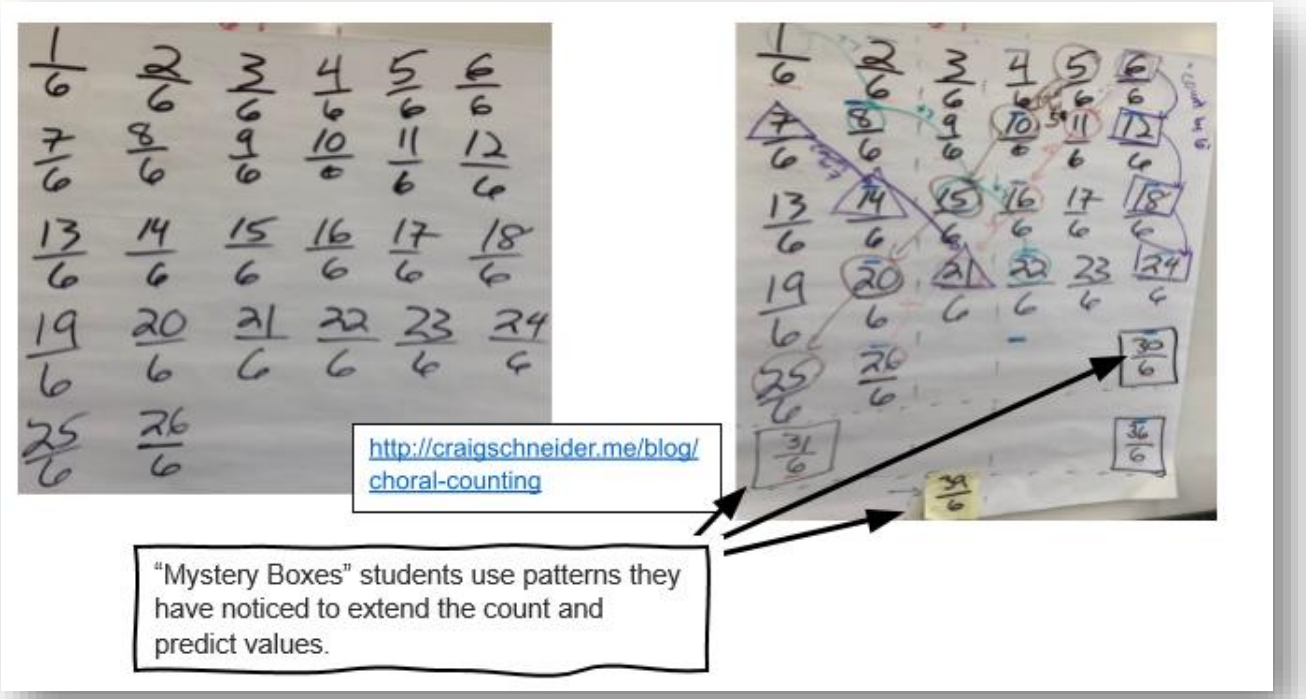
Strategic Recording of Count:

- Determine whether you will record the count with numbers progressing vertically or horizontally.
- Determine the number of rows/columns. This determines how well the patterns are exposed.
- Think about where you want to pause the count and have children start noticing patterns. This then allows students to start predicting the progression of the count.
- Determine the stopping point for the count.
- Notice patterns that you think students may find and the patterns you want to expose.



(image from: Choral Counting: Meaningful Math Moments)

Here is a good example of planning the Choral Count, implementing a planned count, and then, the powerful discourse that ensues. The use of "Mystery Boxes" helps the teacher assess students' understanding of the patterns in the Choral Count.



This visual shows the importance of how the count is arranged. I like that students counted by inches, allowing for a pattern of whole-foot values to emerge. Ideally, the "inches" count should have had 6 rows. That would have allowed the foot measurements to align correctly; the horizontal jumps would be 3-foot jumps. Since there are only five rows, students overgeneralized and incorrectly labeled 42 inches as 3 feet and 72 inches as 5 feet. Instead of the authentic pattern of whole-foot jumps emerging, a false pattern was forced. Ironically, on the bottom (in the red ink) the pattern of +30 is noted. At the top of the count, the same jumps show a 2-foot (24 in) jump.

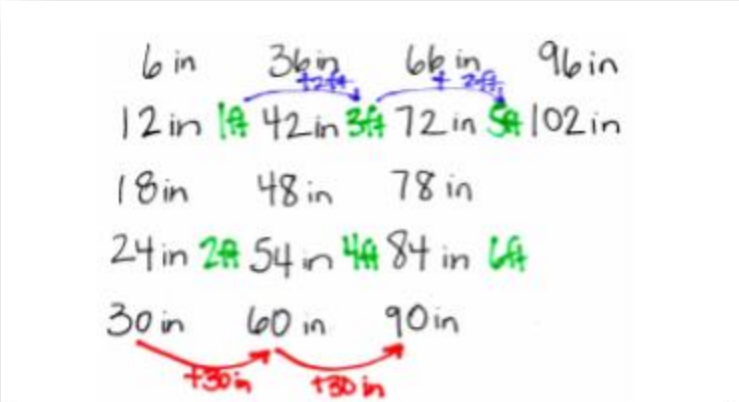


Image from: Choral Counting Task Ideas from tedd.org

Ready to try this? Use the resources below:

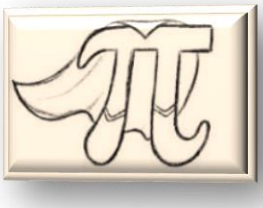
Apps to help plan and organize the counts. They allow you to quickly see how the count would be recorded.

Choral Counting Planner
Choral Counting Tool

Resources:

Choral Count Trusting Patterns
Choral Counting: A Lever to Develop Fraction Understanding
Choral Counting Planner
What is Choral Counting?
Choral Counting Task Ideas

CLICK HERE TO
READ MORE ON OUR WEBSITE



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