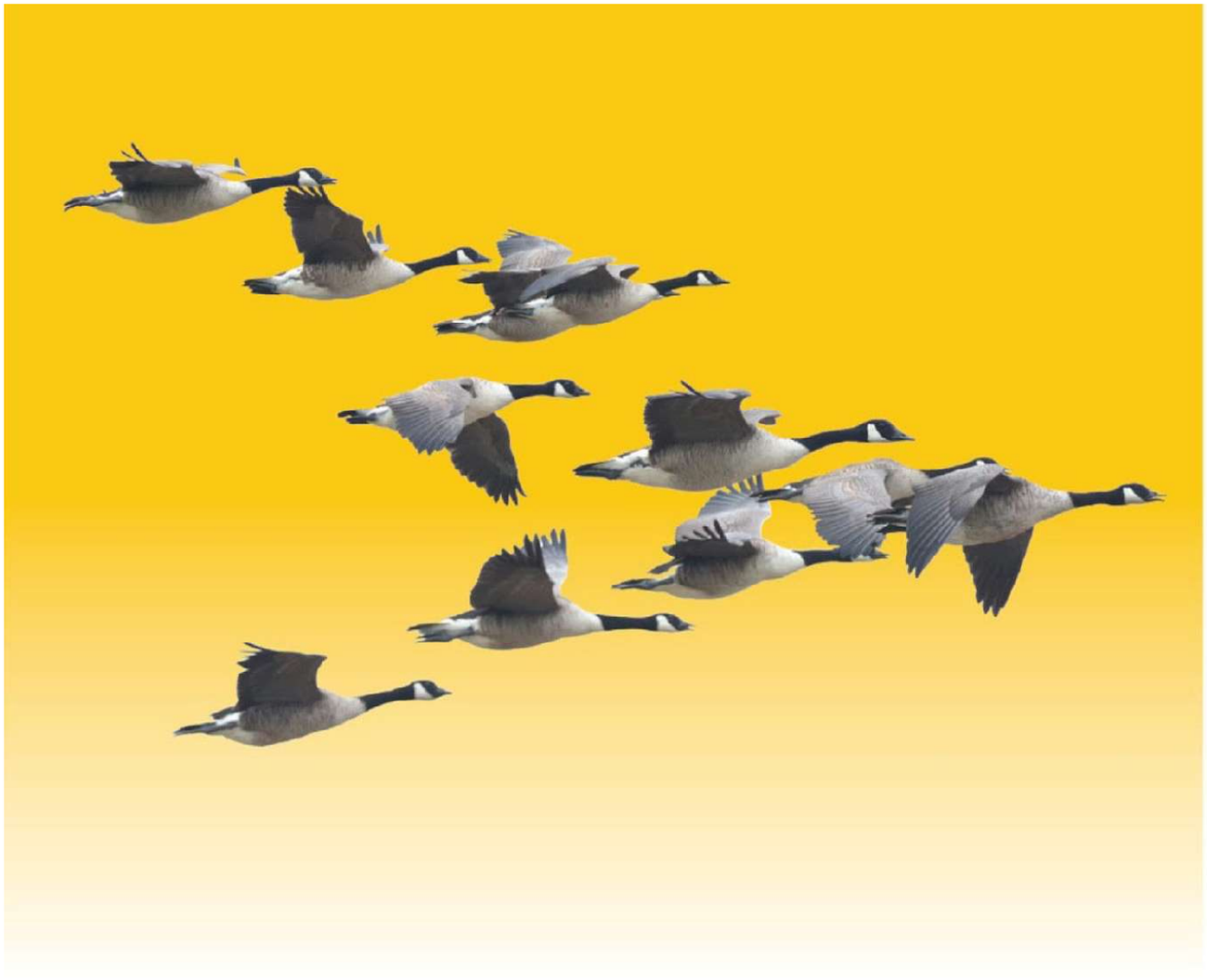

Colorado Charter Schools Annual Conference

February 25-27, 2026
Denver Marriott Tech Center

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If you want to go far, go together."
— African proverb

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(42) Learning Math, Leading Math: Building Content Knowledge for Instructional Impact

Erin Wahler-Cleveland, Founder
Roots and Wings Math

Anneli Dudley, Assistant Principal
Atlas Middle School

Conifer
February 27, 2026 | 1:30 – 2:30 PM
Quality: Academics

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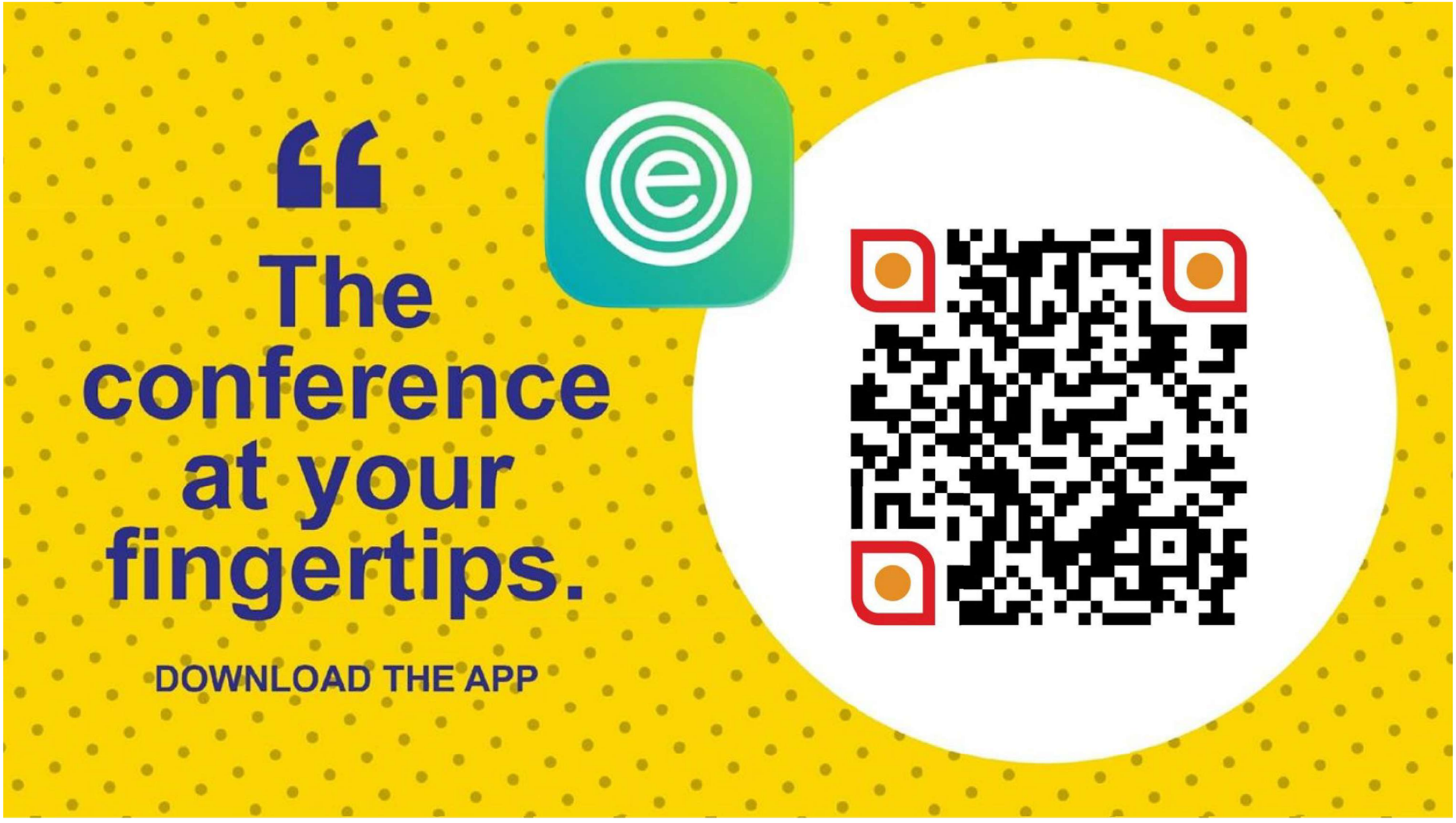
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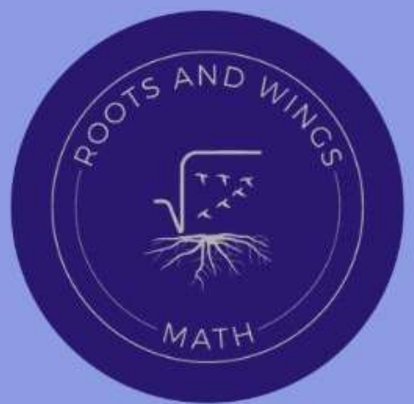
Learning Math, Leading Math

Building Content Knowledge for Instructional Impact



Intros

Erin Wahler-Cleveland

Anneli Dudley

ROOTS AND WINGS MATH

ATLAS SCHOOLS

COLORADO LEAGUE of CHARTER SCHOOLS

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OPENING DISCUSSION

What challenges do you face when it comes to math instruction?

Session Overview

- ☐ ⭐ Math Task
- ☐  A Story of Teachers & Leaders Learning
- ☐ 🛠️ Expanding Our View of the K-8 Trajectory
- ☐ 💬 Key Takeaways

Math Task

Your Task

First, solve 38 ÷ 5 = ?

Write a series of story problems for 38 ÷ 5. Each of your story problems should result in the following different versions of the answer:

a. 7 ⅗
b. 7.6
c. 7 or 8
d. 7
e. 8
f. 7 remainder 3

Debrief

The Math

- Were there answers that were easier or harder to write story problems for? Explain.
- Did you have any disagreements? If you settled them, how did you do it?

The Experience

- What was your experience of that task? What did it ask of you as a learner?
- How does this compare to your past experience, and/or what you typically see in classrooms?

A Story of Teachers & Leaders Learning

My Starting Point

What is a “math person”?

How did you experience math as a student?

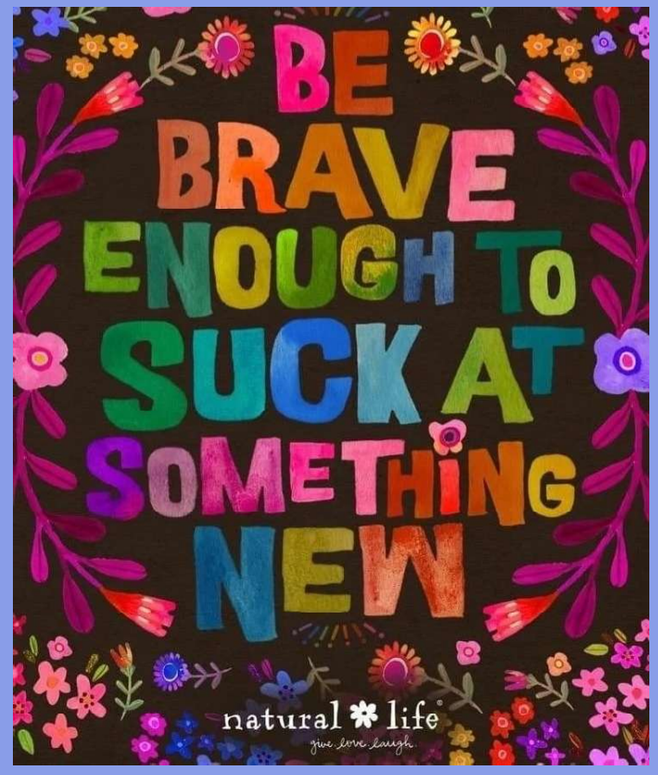
How do you carry your experience of learning math into your current leadership setting?

My Starting Point

- School leadership requires you to learn and adapt
- Dip a toe into something new!
- When you first start out (at anything), confidence feels low. It can feel awkward and uncomfortable.

What Shifted

- Saying “yes”
- Learning independently
- Getting comfortable being uncomfortable and ask for feedback
- Gaining confidence after a few “at bats”



Impact on Leadership

- Instructional coaching vs. Math coaching
  - How about both?
- Teacher trust
  - People expect you to have the answers.
  - Own where you are on your own math journey!
- Confidence in decision making

Math Coaching

- Unit meetings: what math do students need to know?
- How is this broken down into each lesson?
- How will students use modeling and reasoning when mathematizing?
- How will this be assessed?
- Data meetings: how do student samples compare to the exemplar?
- What's the conceptual and procedural gap that can be addressed the next day?

When leaders build their own math identity, their capacity to lead quality instruction grows.

Concrete Action Steps

- **First dip a toe and then dive in.**
  - Get on a granular level with teachers. What is today's lesson asking students to do?
  - Unit Meetings and data meetings rely on strong math internalization
- **Be brave enough to suck at something new. Get up to bat!**
  - Do math like a student. Remind yourself or re-learn it. It's okay!
- **Be authentic about your own math journey**
  - Tell teachers when you aren't sure, problem solve to get to a solution together, or take some time to research and get back to them
- **Embrace math as a lifelong journey.**
  - Keep learning, keep growing, and when you know better, do better.

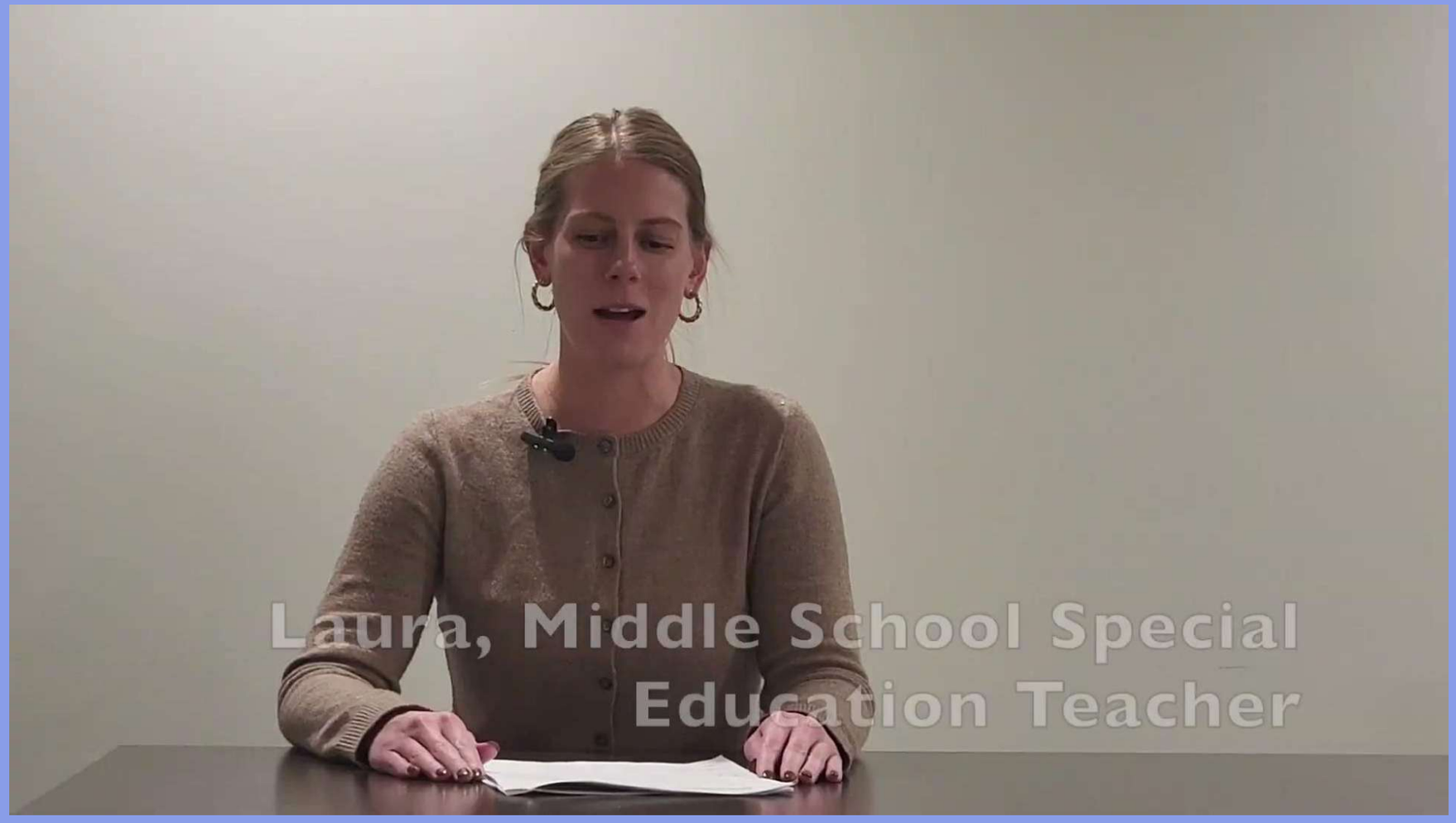
A Deeper Dive → Developing Mathematical Ideas

- 8-session seminars
- Sets up deep, communal engagement with K-8 Mathematics
- My learning in the *Making Meaning For Operations* seminar

PARTNER TALK

What parts of the teacher and leader learning stories are resonating with you right now?

My Experience is Part of a Pattern, Not an Exception



PARTNER TALK

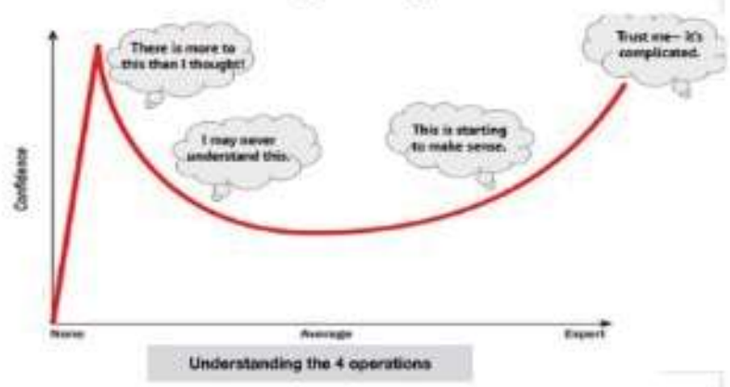
What parts of the teacher and leader learning stories are resonating with you right now?

Expanding Our View of the K-8 Trajectory

Not Ladders. Instead…

Anchor Metaphors for the Teaching and Learning of Mathematics

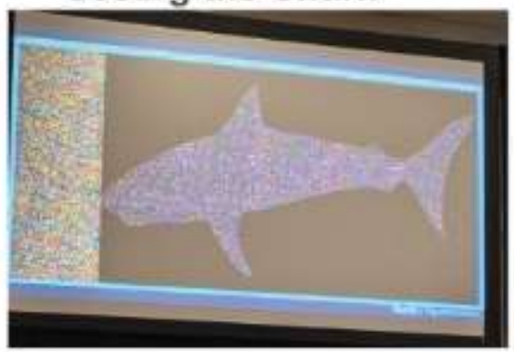
Dunning-Kruger Curve



The Relay Race

Finding Your Way Around the Neighborhood

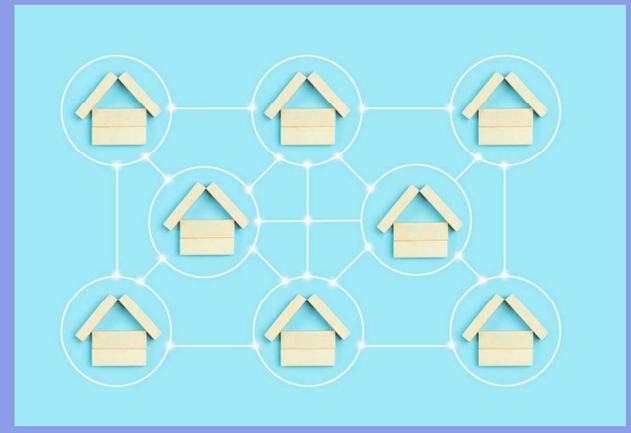
Seeing the Shark



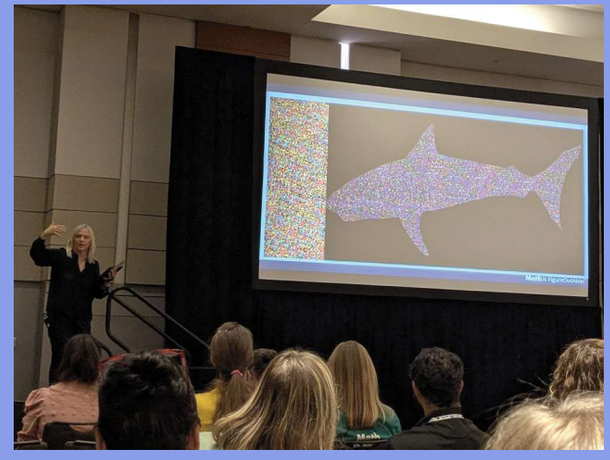
*seeing the shark metaphor comes from math educator Pam Harris

Seminar Participant Reflections

“I love the "Neighborhood" metaphor.. it is SO fun to see all the connections people make through their math thinking and how we can broaden our scope and paths of our neighborhoods each and every day!”



“I resonate with Pam Harris' shark metaphor. Some people see the meaning in the algorithm right away. Others need activities that promote understanding and context. How powerful to have a classroom that does both.”



Seminar Participant Reflections

"The relay race is sticking with me. The journey our students go on as they start and leave their educational career is long and bumpy with so many people trying to support them along the way. This experience has really shown me it's not the last person that had my students responsibility to be exactly where they need to be but everyone along their educational journey. I need to know where to meet my students no matter where they are."

"In order for the relay race baton to be passed on, kids need to make deep meaning of operations through a focus on conceptual understandings over procedural ones."

Key Takeaways

Reflection Questions

- How has this session challenged or affirmed the way I see myself as a leader of math instruction?
- What is one belief I'm leaving with, and one practice I'm questioning?

Key Takeaways

- Your math identity shapes your instructional leadership.
- Deep content learning experiences for teachers and leaders is critical for improving math instruction — and test scores.
- Understanding the K-8 trajectory expands the impact of grade-level instruction.

Thank you, keep in touch!

Scan for session slides delivered to your inbox

Contact info:

Erin: erin@rootsandwingsmath.com

Anneli: anneli.dudley@atlasschools.org

“Your feedback helps us all move forward together

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