Math Coaches as Catalysts:
Advancing Number Sense and Numeracy in K-5

Build Math Minds Virtual Summit
Mar. 1, 2026

Sue O'Connell
www.qualityteacherdevelopment.com

"Understanding number and operations, developing number sense, and gaining fluency in arithmetic computations form the core of mathematics education in the elementary grades."

Principles and Standards for School Mathematics
NCTM, 2000

Reflection Questions

1. Do your teachers know which standards are priorities for their students?
2. Do they have a strong understanding of the progression of those standards (what comes before and after)?
3. Do they utilize instructional strategies that support deep understanding and skill development?
4. Do they provide students with meaningful and ongoing opportunities to practice number skills?

Determining an Action Plan

1. Prioritize essential standards.

Work with teachers to identify and share priorities.

- Look at state standards designations.
- Discuss and highlight those that are priorities.

Prompt conversations about priority standards.

- What areas of math are considered priorities?
- How much instructional time is spent on these standards?
- Are there opportunities for students to revisit priority standards throughout the school year?

2. Deepen teacher understanding of learning progressions.

- Collaborative planning discussions: What comes before this? Identify foundation skills.
- Share ideas for how to begin with foundational skills and build from there.
- Harness the power of number routines and number talks as ways to revisit foundational skills.
- Facilitate vertical alignment discussions to connect one year to the next.

3. Promote effective instructional strategies.

Provide professional learning that merges content and instructional practice.

- Use priority standards as content to show instructional strategies.
- If possible, offer co-planning and co-teaching with priority standards.

Offer a variety of opportunities to gather new ideas and reflect on practice (PLCs, workshops, emails…)

4. Integrate meaningful practice tasks.

Examine current practice tasks.

- Do they align with instructional practice?

Introduce alternate practice tasks.

- Consider practice tasks on a progression.
- Consider centers that are interactive.
- Share examples and resources with teachers.

Highlighted Stories related to Numeracy Topics

Title	Author	Possible Numeracy Topic
Ten Gulab Jamuns: Counting with an Indian Sweet Treat	Sandhya Acharya	Intro to subtraction
Ten Pigs	Derek Anderson	+1 or One More
Jingle Dancer	Cynthia Leitich Smith	Adding 4 two-digit numbers
Max's Words	Kate Banks	3-digit place value
A Gift for Amma	Meera Sriram	Money and problem solving
Born and Bred in the Great Depression	Jonah Winter	Dividing a unit fraction by a whole number

Resources:

For more math/literature investigations by grade level from K-5 (Heinemann):
www.MathbytheBook.com – download a free list of 120 literature and related math topics from K-5 at this site

For more instructional ideas, math content refreshers, and progression charts by grade level from K-5, explore Math in Practice (Heinemann):
www.MathinPractice.com

For center tasks aligned to progressions, see Navigating Numeracy Learning Progression Center Kits (hand2Mind):
https://www.hand2mind.com/supplemental-curriculum/math/navigating-numeracy-learning-progression-centers

Join Sue's Facebook group at https://www.facebook.com/groups/MathinPractice

Follow Sue on Blue Sky @sueoconnellmath.bsky.social

Explore Sue's resources, along with blogs and links to additional math tools/resources on her website: https://www.qualityteacherdevelopment.com/