


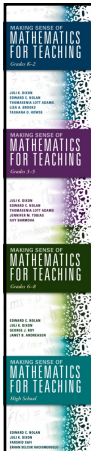
Reinventing Mathematics Intervention

Juli K. Dixon, Ph.D.
JuliDixonMath@gmail.com



Handout:
<http://www.dnamath.com/presentations/>

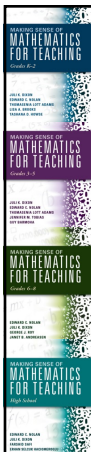
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Session Goals

- Examine current structures for intervention.
- Explore six features for reinventing intervention.
- Share a plan to initiate the reinvention.

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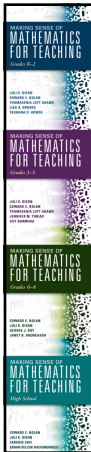


Rethinking Intervention

What is the purpose of intervention?

- ✓ Reteach
- ✓ Address gaps in foundational skills

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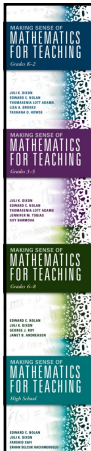
Rethinking Intervention

What is the purpose of intervention?

- ✓ Reteach
- ✓ Address gaps in foundational skills

Is this accomplishing your goals?
Are students succeeding?

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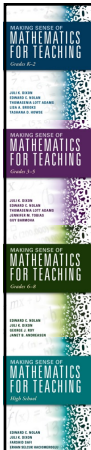


Rethinking Intervention

What is the purpose of intervention?

- ✓ Reteach
- ✓ Address gaps in foundational skills
- ✓ Develop conceptual understanding

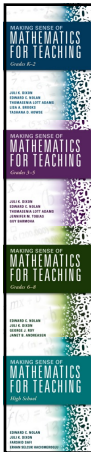
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Why do we intervene?

How do we make intervention purposeful?

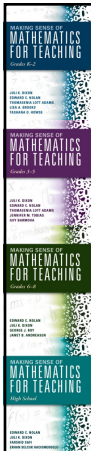
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Six Features for Re-Inventing Intervention

1. Focus on conceptual development.
2. Connect concepts and procedures.
3. Prioritize a strategic selection of content.
4. Support discourse through engaging tasks and targeted questioning.
5. Elicit and linger on common errors.
6. Provide professional development focused on content knowledge for teaching for all interventionists.

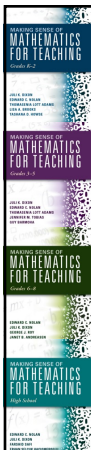
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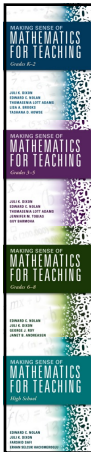
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Consider this task:

The candy shop at Sweet Tooth Elementary School has 376 candies. If the school orders another 258 candies, how much will the store have then?

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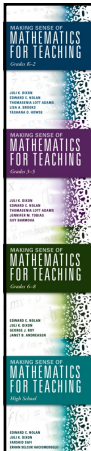
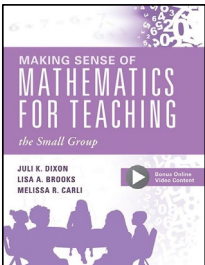



Consider this task:

The candy shop at Sweet Tooth Elementary School has 376 candies. If the school orders another 258 candies, how much will the store have then?

How would you use this task to connect concepts and procedures?

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Making Sense of Mathematics for Teaching
the Small Group

JULI K. DIXON
LISA A. BROOKS
MELISSA R. CARLI

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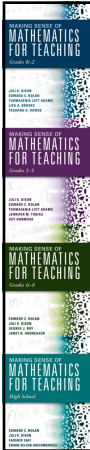
Why do we intervene?

Cultivate Perseverance

- Just-in-case scaffolding
- Just-in-time scaffolding



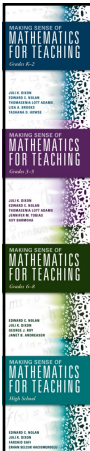

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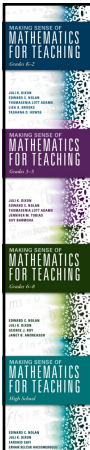


Purposeful Content

What do we focus on with students who are significantly far behind?

This needs to be a deep conversation.

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Priority Topics

Grades 3-5

- Meaning of Operations
- Fact Strategies (for addition and multiplication)
- Multidigit Addition & Subtraction
- Place Value


Grades 6-8

- Multidigit Multiplication & Division
- Fractions/Decimals Concepts & Operations
- Rates & Ratios
- Integer Concepts & Operations
- Equivalent Expressions

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Mathematics for Teaching

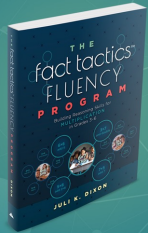

Priority Topics



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Mathematics for Teaching

Support all learners with **math fact fluency**

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Mathematics for Teaching

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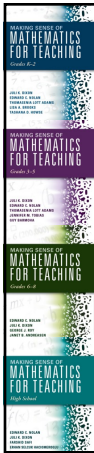
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Discourse Norms

- Provide explanations and justifications with solutions.
- Make sense of others' solutions.
- Communicate when you don't understand or don't agree.

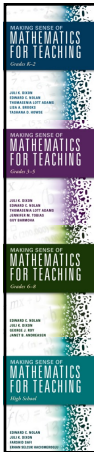
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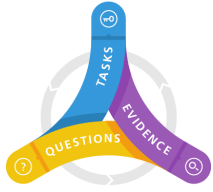
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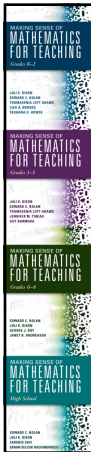


Plan with the TQE Process in Mind



- **Tasks** connect to learning goals and help identify students' errors.
- **Questions** elicit mathematical understandings and common errors.
- **Evidence** drives scaffolding and guides extensions.

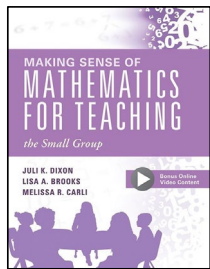
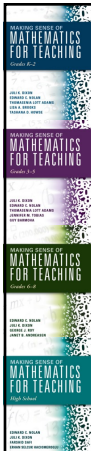
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Choose just the right tasks you know students will get wrong.

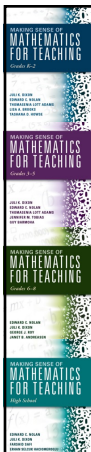
Brandon shared 4 cookies equally between himself and his 4 friends. He started by giving each person (including himself) a half of a cookie. What could he have done next?

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MATHEMATICS FOR TEACHING
Volume 1: Middle School Mathematics

Eliciting Student Errors

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MATHEMATICS FOR TEACHING
Volume 2: Middle School Mathematics

Session Goals

- Examine current structures for intervention.
- Explore six features for reinventing intervention.
- Share a plan to initiate the reinvention.

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MATHEMATICS FOR TEACHING
Volume 3: Middle School Mathematics

Where do we start?

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