

# DOINGWHATWORKS



## Presentation

FULL DETAILS AND TRANSCRIPT

### Response to Intervention: Framework in Math

March 2010

Topic: Response to Intervention in Elementary-Middle Math  
Practice: RtI Implementation

#### Highlights

- An overview of RtI and its components is provided.
- Three recommended practices for implementing an RtI framework are discussed: screening and progress monitoring, focus on the foundations of arithmetic, and intentional teaching.
- All students should be screened at the beginning and in the middle of the year, followed by close progress monitoring.
- Schools should select screening instruments that are efficient, reliable, and valid measures of appropriate mathematics skills at each grade level.
- Progress monitoring should be conducted at least once a month and used for regrouping and moving students across tiers.
- RtI mathematics interventions should teach the foundations of arithmetic as recommended in the 2008 National Mathematics Advisory Panel Report.
- Tier 2 and Tier 3 interventions should focus intensely on in-depth treatment of whole numbers in K-5 and on rational numbers in grades 4-8.
- Teachers should use concrete manipulatives first, followed by representations, with the goal of moving toward facility with the abstract.
- It is important to encourage active student engagement, emphasize effort and persistence, and acknowledge accomplishments and effort.

## Full Transcript

### Slide 1: Welcome

Welcome to the overview on Response to Intervention: Framework in Math.

### Slide 2: Defining Rtl

Response to Intervention, or Rtl, is a multi-tiered early detection, prevention, and support system that identifies struggling students and assists them before they fall behind. Rtl strategies are used in both reading and mathematics.

### Slide 3: Components of Rtl

Rtl systems combine screening, progress monitoring, systematic instruction, and the use of data to differentiate instruction at each tier level, with intensive interventions targeted at struggling students.

### Slide 4: Practice guide

The Practice Guide for Rtl math offers important recommendations to help educators assess students' mathematics abilities and implement interventions within an Rtl framework.

### Slide 5: Three practices

Three Rtl math practices have been identified that support the development of foundational arithmetic skills in elementary and middle school students. Let's take a closer look at these practices.

### Slide 6: Universal screening

Rtl begins with universal screening for all students to identify those at risk for potential mathematics difficulties at the beginning and middle of the year. Screening is followed by close monitoring of students' progress.

### Slide 7: Screening measures

A district- or school-level Rtl team should select screening measures that are efficient and reliable and demonstrate predictive validity. Using the same screening tool across a district enables analysis of results

across schools. In grades 4 through 8, screening data can be used in combination with state testing results to assess mathematics skills.

#### Slide 8: Progress monitoring

Regular progress monitoring is used in Tier 2, Tier 3, and in Tier 1 for borderline students. Monitoring should be conducted at least once a month using grade-appropriate general outcome measures. In addition, curriculum-embedded assessments can provide helpful information about student learning.

#### Slide 9: Regrouping

Progress monitoring provides teachers with valuable information for regrouping students. Regrouping helps to respond to students' changing instructional needs and prevents them from "stagnating" in an intervention that is not working.

#### Slide 10: Mathematics interventions

RtI mathematics interventions teach the foundations of arithmetic as recommended in the 2008 National Mathematics Advisory Panel Report.

#### Slide 11: Focus of interventions

Tier 2 and Tier 3 interventions should focus intensely on in-depth treatment of whole numbers in kindergarten through grade 5 and on rational numbers in grades 4 through 8. Also important is explicit instruction in solving word problems and building fluent retrieval of basic arithmetic facts.

#### Slide 12: Nature of interventions

Instruction during Tier 2 and Tier 3 interventions is intentional. In RtI, teachers use explicit, systematic instruction that includes modeling, scaffolded practice, corrective feedback, and cumulative review.

#### Slide 13: Manipulatives and representations

Students need opportunities to work with concrete materials and visual representations of mathematical ideas, such as number lines, arrays, and strip diagrams. Teachers use concrete manipulatives first, followed by representations, with the goal of moving toward facility with the abstract.

Slide 14: Student engagement

Because students struggling with mathematics have likely experienced failure and frustration by the time they are placed in an intervention, teachers should continually encourage active student engagement, remind students about the need for effort and persistence in learning mathematics, and acknowledge accomplishments and effort.

Slide 15: Learn more

To learn more about Response to Intervention: Framework in Math, please explore the additional resources on the Doing What Works website.