Module Home



**Outline­**

**MTSS/RTI**:

Mathematics

* Module Description: This module describes the MTSS, or RTI, framework as applied to mathematics. It includes discussions of how MTSS and RTI are related, as well as a description of instruction, assessment, and data-based decision making at each level of intensity: Tier 1, Tier 2, and Tier 3 (est. completion time: 2.5 hours).

Challenge

* Video: Two years ago, the staff at Lyle Elementary School decided to…

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Initial Thoughts

* What is RTI for mathematics?
* How can teachers effectively implement RTI for mathematics?

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Perspectives & Resources

* Module Objectives
* Have an understanding of the MTSS/RTI framework as it applies to mathematics
* Be familiar with the main features or components of MTSS/RTI
* Be able to identify the differences in instruction at each tier
* Understand the importance of making data-based instructional decisions

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* Page 1: Overview of RTI
* Teachers know that if students are to create a foundation for…
* Research Shows
* Link: multi-tiered system of support (MTSS)
* For Your Information
* RTI serves two primary purposes… [bullet points]
  + Link: IQ-achievement discrepancy model [definition]
  + Link: pre-referral [definition]
* Did You Know?
  + Link: common characteristics [drop-down menu]
    - Link: mathematics learning disability (MLD) [definition]
* Video: In the video, Tessie Rose Bailey, a technical assistance provider…
* Tiers of Support
* Video: The movie illustrates the number of students in the average…
* Link: Every Student Succeeds Act (ESSA) [definition]
* Link: Individuals with Disabilities Education Act (IDEA) [definition]
* In this module, we will… [bullet points]

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* Page 2: The Features of RTI
* Although schools might implement RTI in different ways, there are…
* RTI Features [table]
  + Link: evidence-based practices [definition]
  + Link: formative assessment [definition]
* Video: Watch the video to gain a clearer understanding of the…
* Elementary versus Middle and High School
  + Audio: David Allsopp discusses how RTI differs at the elementary…
  + Audio: Brad Witzel discusses how RTI differs at the elementary…
  + Myth/Fact [table]
* Importance of Collaboration
  + He also elaborates on the four steps below that… [bullet points]
  + Audio: Brad Witzel discusses the importance of collaboration…

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* Page 3: Universal Screening
* The administration of an assessment to every student in a classroom…
* Frequency of the Screening
  + Time Administered/Purpose [table]
  + For Your Information
* Selecting a Measure
  + Link: curriculum-based measurement (CBM) [definition]
  + Link: general outcome measurement (GOM) [definition]
  + Computation Probe/Concepts and Applications Probe [table]
  + Regardless of the universal screening measure a… [bullet points]
  + For Your Information
    - Link: Click to use this tool chart [web page]
    - Audio: Brad Witzel highlights the need for better universal…
  + Administering a Measure
    - Link: alternate forms [definition]
    - Audio: David Allsopp discusses how time, staffing, and…
  + Criteria for Identifying Struggling Students
    - Link: benchmarks [definition]
    - Audio: Listen as Lynn Fuchs explains the importance of…

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* Page 4: Instruction
* Effective instruction is a cornerstone of the RTI framework…
* High-Quality Instruction
  + Standards-based curriculum
    - Link: Common Core State Standards for… [definition]
    - Additionally, the CCSSM… [bullet points]
  + Evidence-based practices (EBPs)
    - Link: scientifically based research [definition]
    - Among the benefits of using EBPs… [bullet points]
    - For Your Information
* Increasingly Intensive Levels of Support
  + Tier 1: Core Instruction
    - Evidence-Based Practice/Definition [table]
    - Link: High-Quality Mathematics Instruction: What Teachers Should Know [IRIS Module]
  + Tier 2: Supplemental Intervention
    - Link: standard protocol [definition]
    - Link: problem-solving [definition]
    - Group Size/Length of Intervention [table]
    - Audio: Brad Witzel discusses the importance of not ending…
    - For Your Information
      * Audio: David Allsopp suggests considering the…
    - Link: Click for a list of web-based… [drop-down menu]
      * Link: Best Evidence Encyclopedia [website]
      * Link: Center on Instruction [website]
      * Link: Doing What Works [web page]
      * Link: Evidence-Based Intervention… [web page]
      * Link: National Center on Intensive… [website]
      * Link: Promising Practices Network [web page]
      * Link: What Works Clearinghouse [website]
  + Tier 3: Intensive, Individualized Intervention
    - Change/Definition [table]
    - For Your Information
      * Link: Click to learn more… [drop-down menu]
        + Assessment/Purpose [table]
        + For Your Information
        + Link: The Pre-Referral Process: Procedures for Supporting Students with Academic and Behavioral Concerns [IRIS Module]
    - Link: Intensive Intervention (Part 1): Using Data-Based Individualization to Intensify Instruction [IRIS Module]
  + Comparison of Instruction at Each Tier
    - Tier 1/Tier 2/Tier 3 [table]

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* Page 5: Progress Monitoring
* Progress monitoring is a form of assessment in which student learning…
* It is used in the following ways at the different levels… [bullet points]
* These assessments are useful because… [bullet points]
* Audio: Brad Witzel discusses why it is important to use a curriculum…
* Link: mastery measurement [definition]
* For Your Information
* Computation Probe/Concepts and Applications Probe [table]
* For Your Information
  + Link: Click to use this tool chart [web page]
  + Audio: David Allsopp discusses an option for assessing…
* Keep in Mind
  + Audio: Lynn Fuchs talks more about the benefits of using…
* Administering, Scoring, and Graphing Progress Monitoring Probes
  + Administering [drop-down menu]
    - For Your Information
  + Scoring [drop-down menu]
    - Link: Elementary computation probe… [drop-down sample]
    - Link: Secondary algebra probe… [drop-down sample]
    - Audio: Lynn Fuchs points out several issues that school…
    - Audio: Brad Witzel discusses the reasoning behind…
  + Graphing [drop-down menu]
    - For Your Information
  + Link: Progress Monitoring: Mathematics [IRIS Module]
  + Link: RTI: Progress Monitoring [IRIS Module]
  + Activity
    - Link: Student A: Elementary Student [drop-down sample]
    - Link: Student B: Secondary Student [drop-down sample]

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* Page 6: Evaluating Student Performance
* As we have explained, one of the purposes of RTI is to…
* Rate of Growth
  + Link: IRIS Slope Calculator [pop-up tool]
  + The teacher should compare each student’s rate of… [bullet points]
  + For Your Information
  + Activity
    - Link: Student A: Elementary Student [drop-down menu]
    - Link: Student B: Secondary Student [drop-down menu]
* Performance Level
  + By doing so, the teacher can determine whether… [bullet points]
  + Example
    - Link: Description of Ian’s Graph [drop-down menu]
  + Activity
    - Link: Student A: Elementary Student [drop-down menu]
    - Link: Student B: Secondary Student [drop-down menu]
  + For Your Information
    - Link: IRIS Short-Term Goal Calculator [pop-up tool]
    - Link: Calculating a short-term goal [drop-down menu]
* Dual Discrepancy
  + When teachers use this approach, they can… [bullet points]
  + Performance Level/Rate of Growth/Outcome [table]
  + Audio: Lynn Fuchs outlines how to determine whether a student…
* When to Use Each Indicator
  + Level of Support/Indicator(s)/When to Evaluate [table]
  + Activity
    - Link: Click to begin [drop-down menu]

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* Page 7: Data-Based Decisions
* *Data-based decision-making* is the process of using data…
* Indicating Instructional Supports
* Discontinuing Instructional Supports
  + Link: round of intervention [definition]
  + For Your Information
    - Link: individualized education program (IEP) [definition]
    - Link: Intensive Intervention (Part 2): Collecting and Analyzing Data for Data-Based Individualization [IRIS Module]
  + Performance Level: 20/Slope: 0.4 [table]
  + Audio: Listen as Diane Bryant describes how teams make…
  + Activity
    - Link: Student 3 [drop-down menu]
    - Link: Student 4 [drop-down menu]

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* Page 8: Fidelity of Implementation
* Throughout the RTI process, it’s important that schools and districts…
* Link: fidelity of implementation [definition]
* Link: Lyle Elementary RTI Manual [PDF]
* Link: East High School RTI Manual [PDF]
* Fidelity Variables
  + As is outlined in the table below, fidelity checks… [bullet points]
  + Fidelity Variables [table]
    - Link: standard checklist [definition]
  + Link: Evidence-Based Practices (Part 2): Implementing a Practice or Program with Fidelity [IRIS Module]
  + Audio: David Chard talks about two components of RTI…
  + Ms. Wilkes example
  + Ms. Sutton example
  + Mr. Chandler example

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| NOTES |  |

* Page 9: Implementation at Lyle Elementary
* In the Challenge, you learned that for the past two years…
* Did You Know?
* Link: Lyle Elementary RTI Manual [PDF]
* Universal Screening
* High-Quality Instruction
  + Link: Click to view one of Ms. Shockley’s… [drop-down menu]
* Progress Monitoring
  + Link: TaShonda [drop-down menu]
  + Link: Luis [drop-down menu]
  + Link: Olivia [drop-down menu]
  + Link: Jacob [drop-down menu]
* Data-Based Decisions (Tier 1)
  + Student/Does Performance Level Meet Criteria?/Does… [table]
* Fidelity of Implementation
  + Link: Fidelity of Implementation: Selecting and Implementing Evidence-Based Practices and Programs [IRIS Module]
* Data-Based Decisions (Tier 2)
  + Link: Luis [drop-down menu]
  + Link: Olivia [drop-down menu]
  + Link: Jacob [drop-down menu]
  + Audio: Diane Bryant discusses a number of the issues that…

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| NOTES |  |

* Page 10: Implementation at East High School
* In the Challenge, you learned that for the past two years…
* Did You Know?
* Link: East High School RTI Manual [PDF]
* Universal Screening
* High-Quality Instruction
  + Audio: Brad Witzel discusses the benefits of creating a flextime…
  + Audio: David Allsopp discusses the advantages of scheduling by…
* Progress Monitoring
* Data-Based Decisions
  + Student/Does Performance Level Meet Criteria?/Does… [table]
* Fidelity of Implementation
  + Link: Fidelity of Implementation: Selecting and Implementing Evidence-Based Practices and Programs [IRIS Module]

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| NOTES |  |

* Page 11: References & Additional Resources
* Suggested module citation
* References
* Additional Resources
* Page 12: Credits
* Content Contributors
* Expert Reviewers
* Module Developers
* Module Production Team
* Media

Wrap Up

* Summary of the module
* Video: Click on the movie for a summary of the main features of RTI…
* Revisit your Initial Thoughts responses

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Assessment

* Take some time now to answer the following questions.

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You Have Completed This Module

* Give Us Your Feedback
  + Link: Module Feedback Form
* Professional Development Hours
  + Link: IRIS PD Options
* Related Resources [link]