



Special Edition - COI Resources to Support Students with Disabilities and Learning Difficulties in Mathematics

Many states, districts, and schools are merging new educational initiatives and priorities, such as **college-and career-readiness** and **School Improvement Grants (SIG)**, with their existing RTI framework as a way to support students with learning difficulties and disabilities. The Center on Instruction has developed a table identifying COI resources in the content area of mathematics that support these initiatives. The support that these COI resources can provide to SEAs, LEAs, and schools in the delivery of effective instruction that promotes mastery of **college-and career-ready standards** includes:

- Design of professional development
- Selection of research-based core instructional programs
- Design, delivery, and use of evidence-based intensive interventions
- Ongoing data-based decision-making
- Differentiation of instruction

Similarly, the **School Improvement Grants (SIG)** turnaround and transformation models include several requirements that link directly to effective instruction, including:

- Design of professional development
- Providing staff with ongoing, high-quality, job-embedded professional development
- Using data to identify and implement research-based instructional programs that align with state standards
- Promoting the continuous use of student data to inform and differentiate instruction
- Establishing schedules and implementing strategies that provide increased learning time

The table below identifies COI resources in the content area of mathematics that support college-and career-readiness and School Improvement Grants (SIG), initiatives for students with disabilities or those with learning difficulties in mathematics.

Resource	Supporting Materials	Possible Uses
A Summary of Nine Key Studies: Multi-Tier Intervention and Response to Interventions for Students Struggling in Mathematics (2009)		<ul style="list-style-type: none"> • Provide information to states about research-based Tier 2 strategies • Ensure that research and evidence-based practices are considered for mathematics instruction/intervention • Inform development of policy, plans, licensure, and grants for mathematics • Guide professional development planning

<p>Mathematics Instruction for Students with Learning Disabilities or Difficulty Learning Mathematics: A Synthesis of the Intervention Research (2008)</p>	<p>Mathematics Instruction for Students with Learning Disabilities or Difficulty Learning Mathematics: A Guide for Teachers (2008)</p>	<ul style="list-style-type: none"> • Provide states with the latest research on mathematics interventions for students in grades 1-12 with learning disabilities (LD) • Discuss how key findings translate to instruction in the classroom and inform professional development
<p>Mathematics Instruction for Students with Learning Disabilities or Difficulty Learning Mathematics: A Guide for Teachers (2008)</p>	<p>Mathematics Instruction for Students with Learning Disabilities or Difficulty Learning Mathematics: A Synthesis of the Intervention Research (2008)</p>	<ul style="list-style-type: none"> • Meet with SEA staff to discuss identified instructional practices and how district and school implementation of these practices can lead to improved student outcomes • Guide professional development planning
<p>Webinar: Algebra Readiness: Mathematics Interventions for Struggling Students in Grades 6-8 (2008)</p>		<ul style="list-style-type: none"> • Use archived WebEx event as the basis for a discussion with SEAs on algebra readiness and mathematics interventions for struggling students and the implications for professional development with teachers
<p>A Synopsis of "A Synthesis of Empirical Research on Teaching Mathematics to Low-Achieving Students" (2007)</p>	<p>A Synthesis of Empirical Research on Teaching Mathematics to Low-Achieving Students (2002)</p> <p>Webinar: A Synthesis of Empirical Research on Teaching Mathematics to Low-Achieving Students (2007)</p>	<ul style="list-style-type: none"> • Inform existing state professional development initiatives to ensure that interventions for improving mathematics are included as important, research-based instructional strategies • Use archived WebEx event) as the basis for a professional development with SEAs • Assist SEAs with plans to disseminate the synopsis and accompanying webinar to LEAs
<p>Intensive Interventions for Students Struggling in Reading and Mathematics: Practice Guide (2012)</p>	<p>Intensive Interventions for Students Struggling Reading and Mathematics: Teacher Toolkit (Coming Summer 2012)</p>	<ul style="list-style-type: none"> • Inform existing state policy on evidence-based practices and "essential features" of intensive interventions in reading and mathematics • Build the knowledge of technical assistance providers, so they can inform SEAs and others on the use of intensive interventions with struggling students and students with disabilities • Incorporate information and resources from the practice guide (e.g., research summaries, frequently asked questions, lesson examples) into professional development delivered at the state or local levels
<p>Webinar: RTI in Math: An Introduction (2008)</p>		<ul style="list-style-type: none"> • Learn about Response to Intervention (RTI) as it applies to mathematics • Use with districts and schools to develop interventions that address mathematics
<p>Screening for Mathematics Difficulties in K-3 Students - Second Edition (2011)</p>	<p>Webinar: An Overview of Recently Released Math Resources: Screening for Mathematics Difficulties in K-3 Students, and Curriculum-Based Measurement (CBM) in Elementary Mathematics (2007)</p>	<ul style="list-style-type: none"> • Learn about current research on screening measures in mathematics for students in early elementary school • Guide RCCs as they dialogue with SEAs about mathematics difficulties for students in the early elementary grades • Guide planning for professional development
<p>An Introduction to</p>		<ul style="list-style-type: none"> • Learn about current research and resources on

Progress Monitoring in Mathematics (2009)		<ul style="list-style-type: none"> progress monitoring Identify materials appropriate for professional development on progress monitoring in mathematics Inform new and existing state initiatives on progress monitoring
Curriculum-based Measurement in Mathematics: An Evidence-based Formative Assessment Procedure (2007)	Webinar: An Overview of Recently Released Math Resources: Screening for Mathematics Difficulties in K-3 Students, and Curriculum-Based Measurement (CBM) in Elementary Mathematics (2007)	<ul style="list-style-type: none"> Inform decision-making regarding practices to support mathematics assessments Learn about Mathematics Curriculum-Based Measurement (M-CBM) Guide RCCs as they assist states in implementing M-CBM
Webinar: Responsiveness-To-Intervention in Mathematics: Distinctions among Primary, Secondary, and Tertiary Prevention (2012)	Q&A - Webinar: RTI-Math: Distinctions among Primary, Secondary, and Tertiary Prevention (2012)	<ul style="list-style-type: none"> Learn about a framework for conceptualizing RTI and outlined meaningful distinctions among primary, secondary, and tertiary prevention in mathematics Guide RCCs as they assist states in implementing RTI in mathematics
Webinar: RTI in Mathematics at the Secondary Level (2012)		<ul style="list-style-type: none"> Provide states with the latest research on double-dose algebra initiatives Learn about a research on engaging middle school students who struggle in mathematics. Guide RCCs as they assist states in implementing RTI in mathematics at the secondary level

These resources, and others, are available for free download at www.centeroninstruction.org. All COI resources may be reproduced and disseminated, with two stipulations: (1) the "preferred citation" for each product, typically noted on the page following the title page, must be included in all reproductions and (2) no profit may be made in the reproduction and/or distribution of the material. Nominal charges to cover printing, photocopying, or mailing are allowed.

Other COI Special Edition issues have provide similar tables with resources for [Response to Intervention \(RTI\)](#) and [English Language Arts \(ELA\)](#) in [Early Literacy \(K-3\)](#) and [Adolescent Literacy](#).

The Center on Instruction is one of five content centers to support the regional comprehensive centers in providing technical assistance to SEAs and districts/schools in need of improvement. The goal of COI is to supply much of the research-based information, products, guidance, analyses, and knowledge on key topics related to the Elementary and Secondary Education Act (ESEA) to the 16 Regional Comprehensive Centers for their work with states and districts.

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