



Response to New York State Education Department (NYSED) Numeracy Briefs

This document compiles information relevant to understanding mathematics education, drawing insights from Curriculum Associates' *i-Ready Classroom Mathematics* program and a series of NYSED Numeracy Briefs. *i-Ready Classroom Mathematics* is identified as a comprehensive core mathematics program for Grades K–Algebra 1.

The NYSED Numeracy Briefs are a collection of eight reports produced for the NYSED by Deborah Loewenberg Ball and TeachingWorks at the University of Michigan, focusing on supporting evidence-based Grades P–12 mathematics teaching practices. While these distinct resources are presented together in the provided sources, the materials do not explicitly detail a direct collaborative partnership between Curriculum Associates and the NYSED.

i-Ready Classroom Mathematics for Grades K–8 aligns to and supports the eight Numeracy Briefs from the NYSED as described on the following pages.

Interested in *i-Ready Classroom Mathematics*?

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Brief 1: The Research Base for Mathematics Teaching and Learning

The *i-Ready Classroom Mathematics* program is designed to create impact with Grades K–Algebra 1 mathematics, personalized instruction, and more. It aims to support students in becoming strong, independent mathematical thinkers and make mathematics accessible to all. This aligns with the brief’s emphasis on developing all five interwoven mathematical proficiencies: **Conceptual Understanding, Procedural Fluency, Strategic Competence, Adaptive Reasoning, and Productive Disposition**.

The program’s multiple-day lesson structure, which includes Explore, Develop, and Refine sessions, provides students with the necessary time to develop conceptual understanding, build procedural fluency, and apply mathematics to novel situations. Furthermore, the program features the Try–Discuss–Connect instructional framework, which guides students to build upon existing knowledge, discuss their work with peers, and make connections across multiple strategies and representations, thereby deepening understanding, building flexibility in thinking, and fostering retention.

i-Ready Classroom Mathematics also supports engaging and active environments. It promotes a student-centered classroom and integrates Connect to Culture activities that leverage students’ diverse backgrounds and experiences, such as discussions about Tsikuri, phở, and Spanish tortillas. The program is specifically designed with English Learners in mind, incorporating research-based best practices and offering additional language and discourse support resources such as Discourse Cards and Multilingual Glossaries. This holistic approach contributes to fostering positive mathematical identities by encouraging student agency and confidence.

Brief 2: Debunking Myths about Mathematics Teaching and Learning

i-Ready Classroom Mathematics counters common myths by promoting a broad view of mathematical competence beyond just speed and accuracy, emphasizing **conceptual understanding, strategic competence, adaptive reasoning, and a productive disposition**. The program’s multiple-day lessons provide built-in time for accelerating learning and connecting key prerequisites as well as dedicated time for differentiation and practice. This supports flexible grouping, allowing teachers to meet students where they are and get them where they need to be without relying on static ability grouping that can widen achievement gaps.

The program encourages students to engage with challenging problems and inquiry, rather than reducing cognitive demand. The Explore session sparks curiosity by introducing lesson concepts with problems students can solve using prior knowledge. In Develop sessions, the Try–Discuss–Connect framework guides students to make sense of problems and persevere in solving them, fostering critical thinking and discussion before explicit instruction. While providing a Fluency and Skills Practice Book and the Fluency Flight digital program, *i-Ready Classroom Mathematics* ensures procedural fluency is built in tandem with problem-solving skills, aligning with the brief’s guidance that competence involves more than isolated drills.

Brief 3: High-Leverage Mathematical Content

i-Ready Classroom Mathematics provides a **comprehensive math curriculum for Grades K–Algebra 1**, directly aligning with the brief’s focus on high-leverage content that is fundamental across grades and crucial for accessing advanced knowledge and skills. The program is designed to build a solid foundation for success, including Build Number Sense activities with warm-ups, repeated practice, and hands-on learning, and develop an understanding of the **base-10 number system**.

The program emphasizes developing **mathematical practices** authentically through problem solving and discussion, which are core components of the New York State Next Generation Mathematics Learning Standards. To support teachers in effectively teaching this content, the Teacher’s Guide provides best-practice teaching support for every lesson and a variety of professional learning resources. Examples of this support include content such as **fractions**, with examples of fluency practice and detailed lesson content on adding and subtracting fractions. Additionally, the program offers Algebra 1 support, which includes content related to **solving equations** that builds on elementary concepts of missing-value problems.

Brief 4: High-Leverage Instructional Practices

i-Ready Classroom Mathematics integrates various high-leverage instructional practices essential for effective teaching and student development. It supports **eliciting and interpreting individual students’ thinking** through the Discuss It component, where students share their strategies and learn from one another. Protocols for engagement like Shout Out and Quick Write/Quick Draw are built into lessons to encourage student expression. The Teacher’s Guide provides activities and Tools for Instruction that guide teachers in prompting and attending to student thinking.

- The program facilitates **explaining and modeling content**, ensuring students can make connections across multiple representations. It offers Digital Math Tools and encourages hands-on learning with manipulatives, which are central resources for modeling mathematical ideas.
- **Leading group discussions** is explicitly supported by the Discuss It framework and through the provision of Discourse Cards and a list of Questions That Promote Mathematical Discourse.
- For **setting up and managing small group work**, the program includes student-led centers to reinforce concepts and build fluency and offers small group resources and Math Center Activities based on Diagnostic reports to address prerequisite or on-grade level skills.
- The program aims to **establish and maintain community expectations** by fostering a student-centered, supportive, and inclusive classroom environment that empowers students to take academic risks and grow as confident learners.

Brief 5: Mathematics Assessment of and for Student Learning

i-Ready Classroom Mathematics offers a comprehensive system of assessment, aligning with the brief’s call for systematic and useful assessment tools. The program includes a **Diagnostic assessment** that is adaptive, criterion and norm referenced, and state/nationally recognized. This Diagnostic automatically generates a Grade-Level Planning (Prerequisites) report, providing teachers with actionable insights into students’ strengths and needs to accelerate learning and personalize instruction.

For **formative assessment (i.e., assessment for learning)**, the program provides Comprehension Checks that are auto-graded and offer in-depth analysis of student understanding, including rationales for common incorrect responses to help identify misconceptions. Teachers can also assign Interactive Practice and track progress through Learning Games reports. The program also includes **summative assessments (i.e., assessment of learning)** through assignable digital assessments for Grades K–8, comparable to Lesson Quizzes and Unit Assessments. While not explicitly detailing tools for assessing mathematical identity, the program’s overall goal to help students take ownership of their learning and build confidence indirectly supports this aspect of student development.

Brief 6: The Role and Challenges of Using Representations

i-Ready Classroom Mathematics recognizes **representations** as central resources in mathematical reasoning and problem solving. The program encourages students to develop understanding using **manipulatives** before moving to more abstract mathematical challenges, supporting hands-on learning opportunities. It provides both physical (through optional Manipulative Kits) and digital (e.g., Digital Math Tools powered by Desmos Studio PBC for Grades 6–8) representations.

The curriculum’s Try–Discuss–Connect instructional framework guides students to **make connections across multiple strategies and representations**. Teachers are supported in using these representations effectively through the Teacher’s Guide, which offers best-practice teaching support for every lesson. The program encourages sensemaking by providing time for students to explore and experiment with representations as they solve problems, with support provided when needed. This approach ensures students not only use various forms of representation but also develop the skill and disposition to create, interpret, and connect them, deepening their mathematical understanding and problem-solving abilities.

Brief 7: Understanding, Using, and Modifying Curriculum Materials

i-Ready Classroom Mathematics is a **comprehensive core mathematics program** that aims to empower students and align with high-quality curriculum material expectations. EdReports has reviewed *i-Ready Classroom Mathematics* ©2024 for Grades K–8 and found that the materials **meet expectations for alignment to the CCSSM** in terms of Focus & Coherence (Gateway 1) and Rigor & Mathematical Practices (Gateway 2), indicating a strong foundation in standards- and evidence-based practices.

The program's instructional design is **research based** and promotes high-impact teaching strategies, aligning with the brief's guidance on integrating evidence-based practices. It fosters a student-centered classroom, with protocols for engagement and **cultural connections** that contribute to a welcoming and affirming environment. For supporting the **needs of all learners**, *i-Ready Classroom Mathematics* offers on-the-spot differentiation and is specifically designed with **English Learners** in mind, incorporating research-based strategies and resources. The program provides extensive teacher support through the Teacher's Guide and the Grade-Level Planning (Prerequisites) report to help educators understand students' needs and adapt lessons effectively, ensuring adaptations maintain core mathematical ideas and cognitive demand.

Brief 8: The Role of Leadership

i-Ready Classroom Mathematics supports leaders in their crucial role of fostering equitable and impactful mathematics teaching. Curriculum Associates provides a **professional learning suite** that offers collaborative live sessions and curated, on-demand digital resources that are designed to help educators drive meaningful student outcomes with their programs. These opportunities are specifically tailored to Curriculum Associates' programs, ensuring **curriculum-specific learning opportunities** for teachers and leaders.

The program's robust **assessment system**, including the Diagnostic and Comprehension Check reports, provides teachers with real-time, actionable data to identify student needs and inform instructional adjustments. This empowers leaders to encourage **data-driven decisions** and collaborative data analysis among staff. The comprehensive nature of *i-Ready Classroom Mathematics*, with its integrated instruction, assessment, and professional learning resources, such as the Teacher's Guide and Teacher Toolbox, provides a strong framework that leaders can leverage to support teacher growth, improve instructional practices, and build effective systems that allocate time and space for ongoing professional learning and reflection.

Learn more about the [NYSED Numeracy Briefs](#).