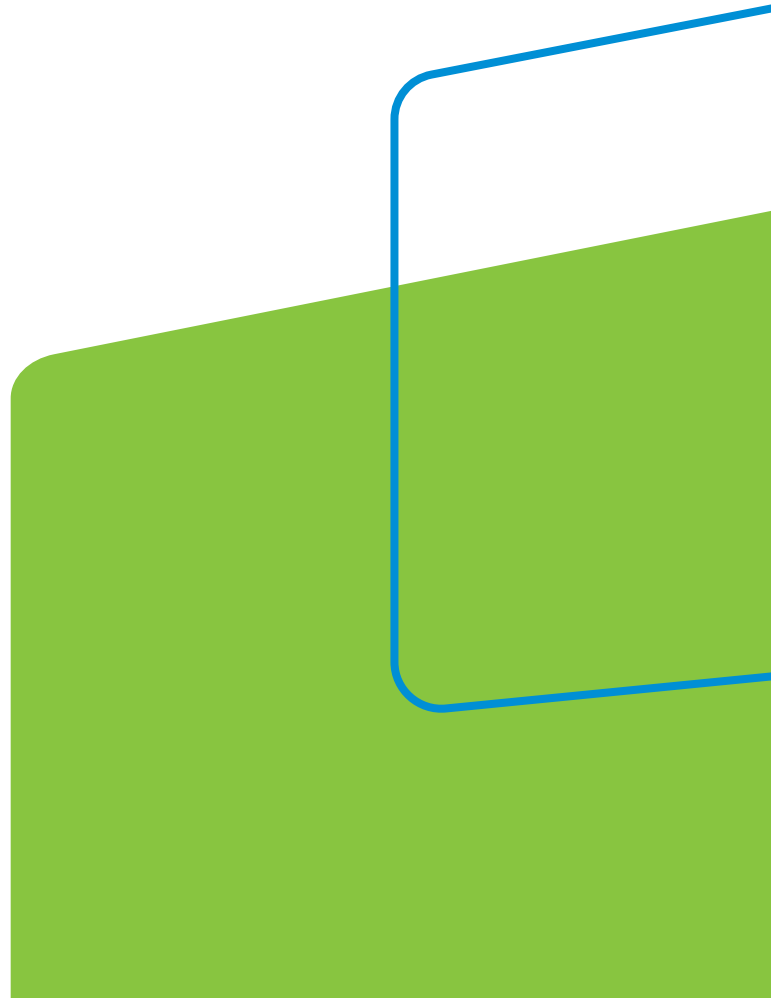




i-Ready Classroom Mathematics
Research Base Executive Summary
Grades K–8



The mission of Curriculum Associates
is to make classrooms better places
for teachers and students.

Introduction

i-Ready Classroom Mathematics is a comprehensive core mathematics program that flexibly embeds opportunities for students to take ownership of their learning. It empowers students with the conceptual understanding and fluency necessary to promote their growth in mathematics. The program equally emphasizes three aspects of rigor with a balanced approach that builds students' conceptual understanding of mathematics, develops their procedural fluency around them, and provides opportunities for students to demonstrate their learning through application to new situations.

Moreover, *i-Ready Classroom Mathematics* is intentionally designed and written to support teachers in identifying where students are in their mathematical understanding in order to accelerate their progress toward grade level and beyond. The ongoing progress monitoring allows teachers to see what their students know and still need to learn. Equipped with this information, teachers flexibly use the *i-Ready Classroom Mathematics* program to provide data-driven and research-informed instruction that is differentiated to meet students where they are to propel them forward.

The following fundamental principles guide the work of *i-Ready Classroom Mathematics*:

- **Put Students at the Heart of Learning:** Deepen students' understanding of mathematics and encourage them to participate actively in math class by responding to their unique learning styles.
- **Focus on High-Impact Teaching Strategies:** Maximize student growth by using a student-centered approach that incorporates engaging routines, activities, and discourse to help build conceptual understanding, develop procedural fluency, and support mathematical application.
- **Turn Data into Action:** Teachers use data from both formal and informal assessments to inform instructional decisions.
- **Support Teachers Every Step of the Way:** The program is designed to provide teachers with ample support and resources so they can meet their students' learning needs.

The following pages provide an overview of the *i-Ready Classroom Mathematics* program and the mathematics principles upon which it is built. For full details on the research behind the *i-Ready Classroom Mathematics* program, please see the full Research Base.

Authors and Advisors

i-Ready Classroom Mathematics provides evidence-based instruction informed by program authors, advisors, and a panel of expert educators representing teachers across the country. Guidance from our authors and advisors ensured the design of a rigorous program that provides students with opportunities to practice and apply new learning purposefully and meaningfully while being manageable for teachers to implement.



Dr. Mark Ellis, Ph.D.

Awards and Key Positions

- Board of Directors, Executive Committee, National Council of Teachers of Mathematics (NCTM)
- Department Chair and Professor, Education, California State University (CSU) Fullerton
- Distinguished Faculty, College of Education, CSU Fullerton
- Certification Council, National Board for Professional Teaching Standards (NBPTS)
- National Board Certified Teacher
- Research to Practice Award, Mathematics Teaching in the Middle School

Publications and Advisory Focus

- Coauthor of *Reimagining the Mathematics Classroom: Creating and Sustaining Productive Learning Environments, K–6*
- Equitable and inclusive practices in mathematics education
- Culturally responsive mathematics teaching and learning
- Preparation of teachers of mathematics
- History of school mathematics in the United States



Gladis Kersaint, Ph.D.

Awards and Key Positions

- Professor of Mathematics Education and Vice Provost for Strategic Initiatives, University of Connecticut
- Dean, Neag School of Education, University of Connecticut, 2016–2021
- Professor of Mathematics Education, University of South Florida, 1998–2016
- Board of Directors, NCTM, 2012–2015
- Board of Directors, Association of Mathematics Teachers Educators (AMTE), 2008–2011
- Mathematics teacher, Miami-Dade County Public Schools

Publications and Advisory Focus

- Coauthor of *Teaching Mathematics to English Language Learners* and *Mathematical Literacy: Helping Students Make Meaning in the Middle Grades*
- Equity and discourse in mathematics education
- Mathematics teaching and learning
- Preparation of teachers of mathematics



Grace Kelemanik, M.S.T.

Awards and Key Positions

- Cofounder, Fostering Math Practices
- National consultant supporting teachers, coaches, and school leaders
- Education Development Center, project director
- Boston Teacher Residency Program, teacher educator
- Urban Grades 6–12 mathematics teacher and leader

Publications and Advisory Focus

- Coauthor of *Routines for Reasoning: Fostering the Mathematical Practices in All Students* and *Teaching for Thinking: Fostering Mathematical Practices Through Reasoning Routines*
- Teaching with instructional routines and implementing high-leverage pedagogical strategies
- Urban education
- Mathematics instruction for special populations
- Teacher development



Amy Lucenta, M.Ed.

Awards and Key Positions

- Cofounder, Fostering Math Practices
- National consultant supporting teachers, coaches, and school leaders
- Mathematics teacher and leader (Grades K–12)

Publications and Advisory Focus

- Coauthor of *Routines for Reasoning: Fostering the Mathematical Practices in All Students* and *Teaching for Thinking: Fostering Mathematical Practices Through Reasoning Routines*
- Teaching with instructional routines and implementing equitable teaching practices
- Integrating mathematical practices into instruction
- Engaging and supporting all learners

Advisors

Michael Flynn

Advisory Focus: Grades K–2 Enrichment

Mike Flynn, director of the mathematics leadership programs at Mount Holyoke College, Massachusetts, is an active leader in mathematics education. He is the author of numerous publications on mathematics teaching, including *Beyond Answers: Exploring Mathematical Practices with Young Children*.

Bob Dolan, Ph.D.

Advisory Focus: Universal Design for Learning

Bob Dolan, Ph.D., Diverse Learners Consulting, brings 30+ years of experience in neuroscience, learning science, instructional design, assessment, and software development. He is an expert on applying the Universal Design for Learning (UDL) to instruction and assessment in both publishing and research environments.

Dr. Sharroky Hollie

Advisory Focus: Cultural Responsiveness

Professor Sharroky Hollie provides professional development to thousands of educators in the area of cultural responsiveness. Since 2000, Dr. Hollie has trained more than 150,000 educators and worked in nearly 2,000 classrooms. He has been a classroom teacher, a central office professional development coordinator in the Los Angeles Unified School District, a school founder and administrator, and a university professor in teacher education at Cal State University. He wrote *Culturally and Linguistically Responsive Teaching and Learning: Classroom Practices for Student Success*, published in 2011, and *Strategies for Culturally and Linguistically Responsive Teaching and Learning* in 2015.

English Learners Success Forum (ELSF)

Advisory Focus: Academic Language and Discourse

The English Learners Success Forum is a collaboration of researchers, teachers, state and district leaders, content creators, and education funders who are dedicated to improving the quality and accessibility of instructional materials for English Learners (ELs). ELSF's experts provide guidance to curriculum developers in addressing the linguistic and cultural assets and needs of ELs with the goal of providing them full access to grade-level content and quality learning.

Sarah Bent

Advisory Focus: Grades 3–5 Enrichment

Sarah Bent, assistant director of the mathematics leadership programs at Mount Holyoke College, Massachusetts, supports professional learning programs for Grades K–8 mathematics teachers around the country. Sarah is a former Grades 3 and 4 teacher.

Cathery Yeh

Advisory Focus: Equity and Inclusion

Cathery Yeh is an assistant professor at Chapman University. She has been in education for more than 20 years, beginning her tenure in dual-language classrooms in Los Angeles and Orange County, CA and abroad. At Chapman University, Cathery teaches mathematics methods with a focus on teaching practices that challenge deficit-based thinking and draw on student strengths. She also developed the community math learning program and has authored many journals and books, including coauthoring *Reimagining the Mathematics Classroom*. Cathery is the 2022 Early Career Award recipient from the AMTE and a member of the NCTM Board of Directors.

Harold Asturias

Advisory Focus: Equity and ELs

Harold Asturias is the director of the Center for Mathematics Excellence and Equity at the University of California, Berkeley. He provides professional development in the areas of standards and assessment in mathematics for large urban districts and smaller rural districts. His current focus is supporting Grades K–12 teachers with students from underrepresented and underserved groups, connecting mathematics and English language development.

The Council of the Great City Schools

Advisory Focus: ELs

The Council of the Great City Schools brings together 76 of the nation’s largest public school systems in a coalition dedicated to the improvement of education for children in the inner cities. Mathematics and ELs experts from member districts provided feedback to Curriculum Associates and other publishers to meet the criteria for instructional materials set forth in *A Framework for Re-envisioning Mathematics Instruction for English Language Learners* (The Council of the Great City Schools, 2019).

Program Components

Assessment

Diagnose, Screen, and Monitor

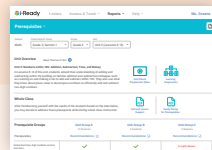
Diagnostic

This adaptive assessment provides teachers with actionable insight into student needs and charts a personalized learning path for each student.



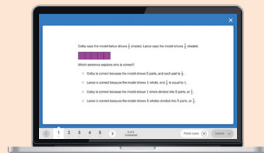
Prerequisites Report

Address unfinished learning during small group or whole class instruction, depending on the needs of the class.



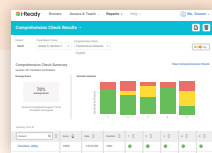
Comprehension Checks

Save time with auto-graded assessments comparable to the Lesson Quizzes and Mid-Unit and Unit Assessments.



Comprehension Check Reports

In-depth analysis of student understanding, including the rationale for typical incorrect responses, helps identify student misconceptions.



Whole Class Instruction and Practice

Student Components

Students take ownership of their learning with these engaging print and digital resources.



Student Worktexts, Fluency and Skills Practice Book, Assessment Practice Book, Student Digital Experience (including digital practice and virtual manipulatives), and Manipulative Kits*

*Available for purchase at [Hand2Mind.com/Curriculum-Associates](https://www.Hand2Mind.com/Curriculum-Associates)

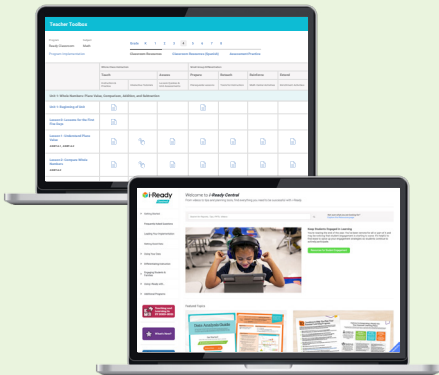
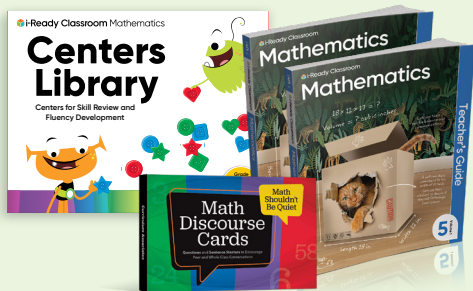
 Available in English and Spanish

i-Ready Classroom Matemáticas
also available!

Whole Class Instruction and Practice

Teacher Components E/S

Make math accessible and build students' confidence with these high-quality instructional materials.



Teacher's Guides, Discourse Cards, Centers Library (Grades K–1), *i-Ready Success Central*, and Teacher Digital Experience (including reports, Teacher Toolbox, assignable practice, and program implementation resources and support)

Small Group Differentiation

Prerequisite Lessons E/S

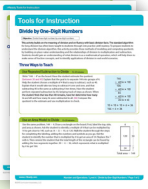
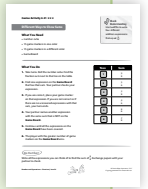
In-depth instruction that reviews prerequisite concepts

Math Center Activities and Enrichment Activities E/S

Targeted resources to help students grow and succeed

Tools for Instruction PDFs E/S

Teacher-led activities for small group instruction addressing prerequisite or on-grade level skills

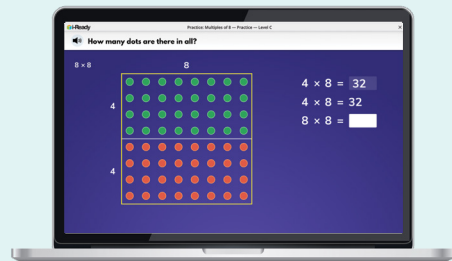


Add On

Personalized Learning and Intervention

i-Ready Personalized Instruction E/S

Driven by results from the *i-Ready Diagnostic*, these interactive lessons provide instruction tailored to each student's needs.



Evidence Base

Effective Mathematics Teaching Practices Explored

i-Ready Classroom Mathematics is a student-centered, core mathematics program designed to prepare all students to succeed with grade-level content. Utilizing flexible, equitable, accessible instruction, *i-Ready Classroom Mathematics* embeds and integrates best practices for teaching mathematics into daily instruction to develop the habits of mind of mathematically proficient students. A student's experience in learning mathematics has a substantial influence on their cognitive processing, which has the potential to shape their impression of mathematics and their view of themselves as mathematicians (Aguirre et al., 2013). To provide every student with the opportunity to reach their full mathematical potential, the program intentionally helps students make connections and deepen their understanding of mathematical concepts, apply their knowledge in novel situations, demonstrate mastery, and experience the wonder, joy, and beauty of mathematics (NCTM, 2020a).

i-Ready Classroom Mathematics is grounded in the following Effective Mathematics Teaching Practices as defined by the NCTM (NCTM, 2014):

1. Establish mathematics goals to focus learning.
2. Implement tasks that promote reasoning and problem solving.
3. Use and connect mathematical representations.
4. Facilitate meaningful mathematical discourse.
5. Pose purposeful questions.
6. Build procedural fluency from conceptual understanding.
7. Support productive struggle in learning mathematics.
8. Elicit and use evidence of student thinking.

For full details on how *i-Ready Classroom Mathematics* embeds these Effective Mathematics Teaching Practices into the program, see the full Research Base.

Instruction Grounded in the NCTM's Effective Mathematics Teaching Practices

The screenshot shows a lesson page for 'LESSON 18 | SESSION 3' titled 'Develop Using a Benchmark to Compare Fractions'. The page is annotated with eight numbered callouts (1-8) corresponding to the Effective Mathematics Teaching Practices listed on the left. Callout 1 points to the 'Purpose' section. Callout 2 points to the 'Read and try to solve the problem below.' section. Callout 3 points to the 'Math Toolkit' section. Callout 4 points to the 'DISCUSS IT' section. Callout 5 points to the 'Support Partner Discussion' section. Callout 6 points to the 'Common Misconception' section. Callout 7 points to the 'TRY IT' section. Callout 8 points to the 'Make Sense of the Problem' section.

Purposeful Instruction: Lessons in i-Ready Classroom Mathematics incorporate NCTM's Effective Mathematics Teaching Practices into instruction.

References

Aguirre, J., Mayfield-Ingram, K., & Martin, D. (2013). *The impact of identity in K–8 mathematics: Rethinking equity-based practices*. National Council of Teachers of Mathematics.

NCTM. (2014). *Principles to actions: Ensuring mathematical success for all*. Author.

NCTM. (2020a). *Catalyzing change in early childhood and elementary mathematics*. Author.

i-Ready Classroom Mathematics

Built to address the rigor of the new standards, *i-Ready* helps students make real gains. *i-Ready* collects a broad spectrum of rich data on student abilities that identifies areas where a student needs support, measures growth across a student’s career, supports teacher-led differentiated instruction, and provides a personalized instructional path within a single online solution.

To learn more about evidence on the impact of *i-Ready*, please visit CurriculumAssociates.com/Research.



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