Authors and Research

Big Ideas Learning® is pleased to introduce a new, research-based K–8 series, Big Ideas Math®: Modeling Real Life. Written by renowned authors Dr. Ron Larson and Dr. Laurie Boswell, this series uses an exploratory approach to engage students’ inquiring minds through rich explorations and in-class problem solving. With one voice from Grade K through Grade 8, and into high school, students make connections through cohesive progressions and consistent, dependable instruction.

The pedagogical approach used in this program follows the best practices outlined in the most prominent and widely accepted educational research including John Hattie’s Visible Learning, NCTM’s Principles to Actions, Jo Boaler’s Mathematical Mindsets, Wiggins and McTighe’s Understanding by Design, and others.

We created Big Ideas Math because we recognized the need for a truly balanced approach to learning, using discovery learning and scaffolded instruction.

—Ron Larson, Ph.D.

Students go deeper in their learning when they are motivated to dig in. My passion is to provide effective ways for teachers to begin each lesson.

—Laurie Boswell, Ed.D.

Big Ideas Math: Modeling Real Life fits the needs of today’s middle school math classrooms!

- Uses learning targets and success criteria for student self-assessment
- Supports deep conceptual understanding to facilitate meaningful application for success in higher-level math courses
- Helps teachers recognize the impact they have on students
- Allows students to grow as independent learners and experience the delight of mathematics

Ron Larson, Ph.D., is well known as the lead author of a comprehensive program for mathematics that spans school mathematics and college courses. He holds the distinction of Professor Emeritus from Penn State Erie, The Behrend College, where he taught for nearly 40 years. He received his Ph.D. in mathematics from the University of Colorado. Dr. Larson’s numerous professional activities keep him actively involved in the mathematics education community and allow him to fully understand the needs of students, teachers, supervisors, and administrators.

Laurie Boswell, Ed.D., is the former Head of School at Riverside School in Lyndonville, Vermont. In addition to textbook authoring, she provides mathematics consulting and embedded coaching sessions. Dr. Boswell received her Ed.D. from the University of Vermont in 2010. She is a recipient of the Presidential Award for Excellence in Mathematics Teaching and is a Tandy Technology Scholar. Laurie has taught math to students at all levels, elementary through college. In addition, Laurie has served on the NCTM Board of Directors and as a Regional Director for NCSM. Along with Ron, Laurie has co-authored numerous math programs and has become a popular national speaker.

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Common Core Edition also available
Instructional Design

The Big Ideas Math: Modeling Real Life program uses a Universal Design for Learning to create an engaging and innovative program that uses hands-on activities and scaffolded instruction. The instructional design guides students through concepts from surface-level to deep-level learning and allows them to transfer these skills to new concepts in a complete and comprehensive way. This allows for balanced lessons with built-in differentiation, as well as RTI support, that appeals to students and teachers alike. Learning targets and success criteria help to focus student learning and make learning visible to teachers and students.

With a strong emphasis on problem solving in the classroom, students can transfer their mathematical knowledge to new concepts and apply their understanding to real-life situations. Through in-class practice and activities, students become more comfortable with the problem-solving process to become strategic mathematical thinkers.

Lessons offer scaffolding to ensure all levels of learners attain procedural fluency.

Modeling Real Life examples and practice bring problem solving into the classroom, promoting transfer of concepts and skills into real-life situations.

Learning Targets and Success Criteria encourage students to self-assess and evaluate their learning.

Explorations help students reach a deeper level of conceptual understanding.

Learning Targets and Success Criteria encourage students to self-assess and evaluate their learning.

Self-Assessment opportunities allow student ownership and accountability for their learning.
The Big Ideas Math: Modeling Real Life Teaching Edition is a comprehensive resource that guides teachers throughout instruction.

A table in each chapter and the first page of each lesson highlight the Learning Targets and Success Criteria that guide student learning. They encourage self-assessment and give students and teachers benchmarks for each lesson.

The Progressions table highlights the program coherence from grade to grade. Teachers will find this useful because they can see what was covered in the previous grade level and how it builds to the content they are teaching in their grade level. In addition, they can see further connections and applications in the next grade level.

The Learning Standards are called out for every chapter along with guidance on where students should be tracking on their conceptual development.

The table identifies with ‘Preparing’, ‘Learning’, and ‘Complete’ for each lesson.

The information offers an efficient way to plan for the chapter and solidify math background.

Laurie’s Notes appear at the beginning of each chapter and lesson level for embedded professional development, implementation support, questioning strategies, and differentiation tips page-by-page every step of the way.

Laurie’s Notes offer guidance for building proficiency of the mathematical practices and processes.
Differentiation

Embedded Differentiation
The Teaching Edition, along with the program’s print and digital resources, offers support for all levels of learners.

The comprehensive guidance for scaffolding instruction in the Teaching Edition was thoughtfully written with both students and teachers in mind.

Throughout every Lesson, Laurie’s Notes provide point of use differentiation for emerging, proficient, and advanced learners.

ELL Support
The ELL support boxes are located throughout the Teaching Edition. These are quick, point-of-use notes to help teachers differentiate instruction for ELL students.

Some of the ELL notes even have differentiated levels of support to provide the most effective suggestions for these students.

Print and Digital Resources to meet the needs of all Learners
The new middle school series offers options and resources to curate a unique instructional experience. There are a variety of opportunities for reteaching, extra practice, enrichment, and extension in the Teaching Edition, online, and in printed resources.

The Math Tools provide an array of virtual manipulatives for modeling lessons or for students to work out solutions while practicing in their Dynamic Student Edition.

School to Home Connections
The Resources by Chapter book includes Family Letters that support practice and homework exercises.

Extra Examples also include Lesson Tutorial Videos with English and Spanish audio to support students inside and outside the classroom.
Assessment

The Grades 6–8 program offers a variety of opportunities for both formative and summative assessment. Options include:

- Self-Assessments
- Prerequisite Skills Practice
- Pre-Course and Post-Course Test
- Mid- and End-of-Chapter Quizzes
- Chapter Tests
- Alternative Assessments
- STEAM Performance Tasks
- Quarterly Benchmark Tests
- Online Assessments (see Technology page)

Self-Assessment

Student ownership and accountability for learning is a vital component of fluency with both the content and practice standards.

Every Chapter offers a Chapter Self-Assessment for students to evaluate their understanding of the Learning Targets and their performance perception related to the Success Criteria.

High-stakes assessments require a deeper level of conceptual understanding. Explorations provide students with multiple opportunities to develop their conceptual understanding.

The Chapter Tests, as well as Mid- and End-of Chapter Quizzes are opportunities for students to demonstrate understanding. The problems include questions that extend concepts.

The STEAM Performance Task activity provides students the opportunity to demonstrate their understanding of the chapter learning targets. It aligns with what was previewed in the Performance Task Preview.

Connecting Concepts prepare students for high-stakes assessments by asking questions that use previously learned skills in new contexts. Students also practice with the Problem-Solving Plan so they are prepared to use it during assessments.

Laurie’s Notes provide guidance for supporting all learners’ success on the Self-Assessment.

Technology

Big Ideas Math: Modeling Real Life comes with an innovative and dependable technology package that supports and enhances instruction for teachers and students.

Dynamic Student Edition
The Dynamic Student Edition is a complete, interactive version of the Student Edition. Students have access to interactive explorations, digital examples, virtual manipulatives, Lesson Tutorial Videos, and digital exercises from the textbook.

STEAM Videos
STEAM Videos allow students to see mathematics in real life. They also come with corresponding Performance Tasks to make further connections to the mathematical content. Students learn about DNA, the carbon atom, natural disasters, and more!

Dynamic Classroom
The Dynamic Classroom mimics the students' Dynamic Student Edition, with additional resources and support for teachers. Interactive explorations and examples from the textbook create a 21st-century classroom atmosphere that engages students. Point-of-use Laurie’s Notes guide instruction with motivation suggestions, teaching tips, questions to ask the students, closure strategies, and more!

Dynamic Assessment System
With the Dynamic Assessment System, teachers can create customizable homework and assessments with Big Ideas Math question banks or items they create!

Skills Trainer
The Skills Trainer is an online interactive tool for skill practice that comes with detailed reports for teachers to gain insight into each student’s proficiency. Students have access to every skill found within the Modeling Real Life series.

Students complete the assignments online and can receive immediate feedback on their progress.

The Formative Check provides teachers with immediate feedback on student progress, making it easy to differentiate and provide support where it is needed the most.

The Formative Check can be used to engage students in remediation or as the daily warm-up for the lessons!
Components

PRINT RESOURCES
Student Edition
Teaching Edition
Student Journal
Resources by Chapter
• Family Letter
• Warm-Ups
• Extra Practice
• Reteach
• Enrichment and Extension
• Puzzle Time
Assessment Book
• Prerequisite Skills Practice
• Pre-Course Test
• Quizzes
• Chapter Tests
• Alternative Assessments
• STEAM Performance Tasks
• Course Benchmark Tests
• Post-Course Test
Skills Review Handbook
Rich Math Tasks

TECHNOLOGY RESOURCES
Dynamic Student Edition
• Virtual Manipulatives
• Interactive Explorations
• Digital Examples
• Lesson Tutorial Videos
Dynamic Classroom
• Laurie’s Notes
• Virtual Manipulatives
• Interactive Explorations
• Digital Examples
• Extra Examples
• Formative Check
• Mini-Assessments
• Flip-To
Dynamic Teaching Tools
• Answer Presentation Tool
• Skills Trainer
• Digital Flashcards
• STEAM Videos
• Game Library
• Multi-Language Glossary
• Additional Online Resources
• Lesson Plans
• Differentiating the Lesson
• Graphic Organizers
• Pacing Guides
• Cross-Curricular Projects
• Worked-Out Solutions Key
• Math Tool Paper
Dynamic Assessment System
• Customized Practice and Assessments
• Detailed Reports
Video Support for Teachers
• Professional Development Videos
• Concepts and Tools Videos

Big Ideas Math: Modeling Real Life offers a program that:

INSPIRES
Elevate student learning with a balanced approach

ENGAGES
Captivate student learning with innovative technology

EMPOWERS
Make learning visible through student accountability

GROWS
Positively impact student performance in mathematics

Learn more at NGL.Cengage.com/BigIdeas
K–12 Programs

Big Ideas Math programs offer a seamless articulation from elementary through high school. With a consistent author voice from level to level, students make connections through cohesive progressions and rich instruction.

Big Ideas Math uses a balanced approach to engage students’ inquiring minds and empower them to become mathematical thinkers in their daily lives.

Big Ideas Math: Modeling Real Life for Grades K–5

Big Ideas Math: Modeling Real Life for Grades 6–8

Advanced middle school courses available!

Integrated Mathematics courses also available!

Grades 9–12

Precalculus/AP® Calculus

National Geographic Learning® proudly represents Big Ideas Math programs.

Learn more!

NGL.Cengage.com/BigIdeas

Visit NGL.Cengage.com/repfinder to locate your sales consultant for pricing or ordering information. Or, call 888-915-3276.

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