The *Big Ideas Math* program was developed around the Common Core State Standards for Mathematics (CCSSM) with the Mathematical Practices as the underlying structure in every section throughout the program. Our curriculum was not written around the methodology that it was tested against for this review. EdReports methodology differs from Big Ideas Math’s fundamental principles, that standards do not dictate curriculum. *Big Ideas Math* has consistently received high scores from accredited reviewers from across the country.

Many aspects of the *Big Ideas Math* program were overlooked. According to the EdReports results, it seems that less than half of the chapters cover the major clusters by grade level, when in fact *Big Ideas Math* meets the requirements set forth by the K-8 Publishers’ Criteria for the Common Core State Standards for Mathematics. The major work identified by the EdReports does not include all of the critical areas determined by the CCSSM.

It is important to note that EdReports only used the content from the Teaching Edition and the Student Edition in their review. *Big Ideas Math* has more to offer than just the textbooks. The program includes ancillaries that support all levels of students, from the Skills Review and Basic Skills Handbook for students who are struggling to grasp specific concepts, to the Enrichment and Extension worksheets for advanced students. The program also has additional online materials, including but not limited to Differentiating the Lesson, Lesson Tutorial Videos, and the Dynamic Assessment System which provides immediate feedback and remediation. Focus and coherence are met in *Big Ideas Math* by using the entire program. We strive to provide the best resources possible to ensure the required, in-depth, strategic learning put forth by the CCSSM.


Although EdReports claims to have revised their review process, the Gateway 1 reviews of *Big Ideas Math* were not reevaluated. EdReports did pass *Big Ideas Math* Grade 8 onto Gateway 2 however, the methodology was also contradictory to our fundamental principles.
The following is in response to some of the scores received by EdReports based on their criteria.

**Coherence**

**Indicator 1b: Instructional material spends the majority of class time on the major clusters of each grade.**

Even though our books cite a standard for a specific section, that is not the only standard covered in that section. For example in our Grade 6 book, we cite 6.EE.2.C. Another standard that is primarily covered in this section is 6.EE.6 which is also part of the major work for the 6th grade level as set forth by the EdReports criteria. Taking into consideration that the standards cited in the PE and TE are not the only standards covered for a particular section, the Big Ideas Math program meets every expectation for this criteria. The Common Core Standards are covered throughout our program and connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important.

**Indicator 1c: Supporting content enhances focus and coherence simultaneously by engaging students in the major work of the grade.**

The Big Ideas Math program exceeds every expectation for the supporting content enhancing focus and coherence simultaneously by engaging students in the major work of the grade. The chapters and the individual lessons support focus and coherence to the major work of the grade level. There are many lessons within the supporting chapters that address standards that are also addressed elsewhere. All of the lessons flow together coherently because the concepts are discussed in relationship to one another. For example in Grade 8, 8.F (using functions to solve) is enhanced by 8.G.C (perimeter and area of common and complex shapes). Also, 8.EE (setting up equations) is enhanced by 8.SP (patterns and fitting lines in scatter plots) and 8.EE and 8.F (using equations and graphs of functions) is enhanced by 8.SP (linear vs. nonlinear modeling of data).

**Indicator 1d: The amount of content designated for one grade level is viable for one school year in order to foster coherence between grades.**

The Big Ideas Math program fully meets the expectations for the amount of content designated for one grade level being viable for one school year in order to foster coherence between grades. The limited number of suggested days of instruction allows teachers to have flexibility in their instruction depending on the needs of their students and still have time to address every standard for their grade level within the year. The pacing guides include time for additional or alternative material as seen fit by the teacher. We offer this as a guide for teachers to use so they can cover all necessary material within the school year. However, it is up to the teachers to modify the pacing suggestions as needed for their particular class.
Indicator 1e: Materials are consistent with the progressions in the Standards

The Big Ideas Math program meets every expectation for the material to be consistent with the progressions in the standards. At every stage of authoring, from designing the table of contents to writing actual content, the common core progressions were considered. For example, in Grade 6, decisions throughout chapter 5 were heavily influenced by the Progressions for the Common Core State Standards on Ratios and Proportional Relationships. We included activities using tape diagrams, double number lines to compare rates, and we even devoted an entire section to ratio tables (Section 5.2) for determining equivalent ratios. This sets the stage for further development in Grade 7 on proportional relationships. These are only a few examples to indicate that the Big Ideas Math progression of thought is consistent with the progressions of the standards.

Indicator 1f: Materials foster coherence through connections at a single grade, where appropriate and required by the Standards

After each standard is introduced in the Big Ideas Math program it is revisited many times in subsequent activities, lessons, and exercises. The Big Ideas Math program connects the supporting clusters in each grade level to the major clusters, where appropriate, in order to help students understand how mathematical concepts are connected to each other. For example in Grade 7, students use their prior knowledge of adding positive fractions, positive decimals, and integers as a basis for learning content covered in standards 7.NS.1a-b, d, and 7.NS.3. They also use their knowledge of using algebra tiles to model solving equations involving addition and subtraction to cover material for standard 7.EE.4a.

The examples given above only cover a few of the areas we would like to respond to. If you would like more information about how the Big Ideas Math program effectively incorporates the Common Core State Standards and Mathematical Practices into its curriculum, please contact Big Ideas Learning.
**Big Ideas Math**

**Authors**

No other authorship team in the industry provides the balance of classroom experience and mathematical expertise that the *Big Ideas Math* program authors bring to the table. Dr. Ron Larson and Dr. Laurie Boswell began writing together in 1992. Since that time, they have authored over three dozen textbooks. In their collaboration, Ron is primarily responsible for the student edition while Laurie is primarily responsible for the teaching edition.

Ron Larson, Ph.D., is well known as the lead author of a comprehensive program for mathematics that spans middle school, high school, 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 Head of School and a mathematics teacher at the Riverside School in Lyndonville, Vermont. Dr. Boswell is a recipient of the Presidential Award for Excellence in Mathematics Teaching and has taught mathematics to students at all levels, from elementary through college. Dr. Boswell is a Tandy Technology Scholar and served on the NCTM Board of Directors from 2002 to 2005. She currently serves on the board of NCSM and is a popular national speaker.

- **A Research Based Program**

  - The *Big Ideas Math* program is a research-based curriculum providing a rigorous, focused, and coherent curriculum for middle school and high school students. Ron Larson and Laurie Boswell utilized their expertise as well as the body of knowledge collected by additional expert mathematicians and researchers to develop each course.

  The pedagogical approach to this program follows the best practices outlined in the most prominent and widely-accepted educational research and standards.

  - Achieve, ACT, and The College Board
  - Adding It Up: Helping Children Learn Mathematics
  - National Research Council ©2001
  - Common Core State Standards
• National Governors Association Center for Best Practices and the Council of Chief State School Officers ©2010
• Curriculum Focal Points
• National Council of Teachers of Mathematics (NCTM) ©2006
• Principles and Standards for School Mathematics
• National Council of Teachers of Mathematics (NCTM) ©2000
• Project Based Learning
• The Buck Institute
• Rigor / Relevance Framework™
• International Center for Leadership in Education
• Universal Design for Learning Guidelines
• CAST ©2011

A Balanced Approach to Instruction

The Big Ideas Math program follows a balanced instructional approach. The program balances conceptual understanding with procedural fluency, as research shows that students benefit from equal exposure to discovery learning and direct instruction.

Each section in the program begins with a discovery Activity that encourages conceptual understanding. These provide students with the opportunity to explore, question, explain, and persevere as they seek to answer Essential Questions that encourage abstract thought.

![Essential Question](image)

How do you know which operation to choose when solving a real-life problem?

**ACTIVITY: Choosing an Operation**

Work with a partner. The double bar graph shows the history of a citywide cleanup day.

- Copy each question below.
- Underline a key word or phrase that helps you know which operation to use to answer the question. State the operation. Why do you think the key word or phrase indicates the operation you chose?
- Write an expression you can use to answer the question.
Each Activity is then followed by a direct instruction Lesson. These lessons give students the opportunity to develop procedural fluency and to use clear, precise mathematical language. These lessons also give teachers opportunities to use class discussion, flexible grouping, and other delivery methods in their classrooms.

Real-life applications are utilized throughout the program. These applications are opportunities for students to connect classroom lessons to realistic scenarios, and assist teachers with turning mathematical learning into an engaging and meaningful way to see and explore the real world.
Chapter openers focused on *What You Learned Before* promote the development of the habits of mind mathematically proficient students demonstrate.

The Mathematical Practices are woven into every chapter, including a full page dedicated to mastering one of the Mathematical Practices. In addition, *On Your Own* problems allow students to practice and sharpen their skills as they work toward mathematical understanding.
Continuous Preparation

- Every chapter of the Big Ideas Math program utilizes question types frequently found on standardized tests, including the PARCC and Smarter Balanced assessments. The balanced approach to instruction helps students develop the habits of mind required to be successful on high-stakes assessments.

- The Exercises available throughout the Big Ideas Math program provide students with opportunities to use multiple approaches to solve problems.
- The Dynamic Assessment System allows teachers to assign assessments directly related to the Big Ideas Math program to just some students or to an entire classroom.
- The Activities that begin every section require students to use higher-level thinking to work through each problem and to explain their reasoning in the solution.
- A Cumulative Assessment is included in every chapter. The questions in each assessment were carefully chosen to represent problem types and reasoning patterns frequently found on standardized tests.
- The Quizzes and Tests allow students to extend concepts learned in each lesson.
- The Online Self-grading Practice allows students to receive immediate feedback on their progress.
- The Performance Tasks allow students to apply their knowledge of multiple content standards and work through realistic scenarios.
- The Alternative Assessments provide teachers with the opportunity to assess students on the same content in a variety of ways.

Personalized Learning with Complete Teacher Support

- The Big Ideas Math program offers teachers and students a number of tools to personalize and enrich their classroom experience. Teachers can use Laurie’s Notes, the Dynamic Classroom, and the Answer Presentation Tool on a daily basis. Students can use the online Lesson Tutorial Videos which are valuable for students who miss a class, need a second explanation, or just need some help with a homework assignment. Big Ideas Math completely supports the 3-Tier Response to Intervention Model, so the program can be customized for every level of learner.
Teaching Edition with Laurie’s Notes

The Big Ideas Math Teaching Edition is unique in its organization. Throughout the book, master educator Laurie Boswell shares insights on Learning Progressions and Mathematical Practices.

Laurie includes connections to previous learning, support for the Mathematical Practices, and closure opportunities for the entire Student Edition. The Teaching Edition also provides Differentiated Instruction, Response to Intervention, and English Language Learner support.

- **Editable Online Resources**
  
  Complete and editable Lesson Plans and Pacing Guides are available online for every lesson in the program to provide teachers with planning support.
Differentiated Instruction
Through print and digital resources, the Big Ideas Math program completely supports the 3-Tier Response to Intervention model. Using research-based instructional strategies, teachers can reach, challenge, and motivate each student with high-quality instruction targeted to individual needs.

Big Ideas Learning works with educators in every step of the development process. Using mathematical and pedagogical research, the Big Ideas Math program focuses on fewer topics at each grade level, providing a narrower and deeper course of study that leads students to mastery of each benchmark as they move from grade to grade. Big Ideas Learning provides students and teachers with all the tools they need to succeed from middle school to high school math.

Ron Larson’s textbooks are known for their readability, accuracy, and real-life applications. They are used by over five-million students each year. He has been deeply committed to providing innovative and coherent print and online materials to the education community for nearly 40 years.