

## Review Team Appraisal of Title

(K-8 Mathematics)

This appraisal form is provided for use by educators responsible for the selection of instructional materials for implementation with districts and charter schools across New Mexico to meet the needs of their student populations.

This appraisal form should be used in conjunction with the publisher provided Form D: Research Based Effectiveness Determination that supports this reviewed material which can be found on the Instructional Material Bureau website.

<https://webnew.ped.state.nm.us/bureaus/instructional-materials/the-adoption-cycle/>

IM Title	Big Ideas Math: Modeling Real Life Common Core	Publisher	Big Ideas Learning
SE ISBN	9781642080606	TE ISBN	9781642083690
SW ISBN	9781642083706	Grade Level/Content	Grade 7 Accelerated

**Core Material Designation** *(Core Material is - the comprehensive print or digital educational material, including basal material, which constitutes the necessary instructional components of a full academic course of study in those subjects for which the department has adopted content standards and benchmarks.)*

Recommended  Recommended with Reservations  Not Recommended

**Total Score**

Reviewer #43 ___95.17%___	Reviewer #44 ___93.83%___	Reviewer #45 ___93.33%___	Average Score ___93.78%___
------------------------------	------------------------------	------------------------------	-------------------------------

**Standards Review** - *Materials are reviewed for alignment with the state adopted content standards, benchmarks and performance standards.*

Reviewer #43 ___98.73%___	Reviewer #44 ___98.89%___	Reviewer #45 ___97.30%___	Average Score ___98.31%___
------------------------------	------------------------------	------------------------------	-------------------------------

Materials align with grade level standards.

*Statements of appraisal and supporting evidence:*  
 There was clear alignment with materials and grade level standards, including the major content domains: Ratios and proportional relationships, solving multi-step equations, and the number system. Eighth grade domains that are incorporated into the curriculum are: Geometry and Equations and Expressions. These domains are emphasized in the grade level 7 accelerated curriculum. The materials provide many applicable problems such as in the TE page 72, #33, in which the problem asks students to find the cost of an enclosure using measurements that are rational numbers which relates to a standard in the number system. Additionally, TE p. 469 introduces a type of transformation, called a rotation, which is an 8th grade standard.

Materials align to standards for mathematical practice.

*Statements of appraisal and supporting evidence:*

Mathematical practices were embedded and explicitly denoted and used throughout the text. In addition, the text included suggestions on how the teacher should incorporate the math practices into conversation throughout various activities in order to make the math practices more meaningful and relatable to the context of how and why they are used in the process of mathematical thinking and computations. Reviewers saw evidence of all eight math practices being used. For example, for math practice one (make sense of problems and persevere in solving them) in the regular 7th grade curriculum, students are required to use area models when multiplying rational numbers and they will use area models again to find quotients of rational numbers. In the accelerated portion, the 8th grade content TE p. T-760 math practice two is being addressed. In this problem, students are asked to reason abstractly and quantitatively when they analyze the impact running zero miles in two days will have on a mean of 1.5 miles run per day.

Materials show aspects of rigor.

*Statements of appraisal and supporting evidence:*

In *Big Ideas Math: Modeling Real Life Common Core, Grade 7 Accelerated*, all four quarters were balanced in aspects of rigor. The materials targeted conceptual learning in the different *Exploration* and *Examples* sections. *Modeling Real Life* problems integrated application of all the domains as there was applicable problems in each section of the book. An example, TE pg. 236 #31 models a real life contextual problem using percents. The *Practice* and *Review & Refresh* sections gave opportunity for procedural skills and fluency. For instance, in chapter 15.1 Finding Square Roots, the *Exploration* allows students to conceptualize and understand the square root by using squares of numbers and areas of squares. The *Examples* models how to find the square root of a number. The practice affords students the opportunity to practice the procedures and become fluent in various concepts throughout the material. The application problems relate real life situations to square roots.

**Math Content Review** - *Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the specific reviewed content area.*

Reviewer #43	Reviewer #44	Reviewer #45	Average Score
___85.71%___	___82.14%___	___78.57%___	___82.14%___

Materials are consistent with grade level content, supporting the intent of the delivery and understanding of mathematics.

*Statements of appraisal and supporting evidence:*

The design of the material allows for consistency with grade level content. The text integrates previous standards throughout the text. For example, concepts from 7th grade are built upon with 8th grade standards. For instance, in 7th grade geometry unit, students are expected to use formulas when finding volume, surface area, and area. The 8th grade standards extend the learning in chapter 16 where students conceptualize volumes of cones, cylinders, and spheres. Additionally, students recall information such as order of operations, exponents, and rational numbers, from earlier standards mastery in order to solve applicable geometry problems.

Materials support student learning of mathematics.

*Statements of appraisal and supporting evidence:*

Student learning of grade level mathematics is evident, as standards are embedded throughout the text. In addition, the materials contain self-assessments allowing students to monitor their own learning and progress of mathematics. There are a variety of resources where students can engage with math content

in order to enhance their mathematical knowledge. This is seen when students are able to watch STEAM videos, use manipulatives, use tools (geometry software), engage in collaborative learning and dialogue, and extend their learning through the use of models and performance tasks.

**All Content Review** - Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the material regarding the progression of the standards, lesson structure, pacing, assessment, individual learners and cultural relevance.

Reviewer #43 __ 87.80% __	Reviewer #44 __ 83.54% __	Reviewer #45 __ 83.32% __	Average Score __ 84.55% __
------------------------------	------------------------------	------------------------------	-------------------------------

Materials are consistent with the progression in the standards.

*Statements of appraisal and supporting evidence:*

The materials correlate with the progression in the standards for grade 7 and include some domains from 8th grade to make it a compacted pathway so that students may reach Algebra I by their 8th grade year. They describe how the standards being taught at the current grade level correlate with the 6th, 8th, and high school standards. In addition, in each chapter there is an overview of the progression, which describes how the material will tie in with their previous, current, and future learning. For example, in chapter 5 on p. T-180B the material has a progression's table for ratios and proportional relationships that shows what students learned in 6th grade, what they will be learning in 7th grade, and how that will tie into what they will be learning in 8th grade.

Materials foster coherence through connections at a single grade, where appropriate and required by the standards.

*Statements of appraisal and supporting evidence:*

The materials build on the standards throughout the 7th grade accelerated curriculum and there is a coherent connection where appropriate. In instances where standards naturally connect or build upon each other, there is opportunity for intertwining of two or more standards. For example in the SE, p. 367 *Finding the Circumference*, students may need to use operations of rational numbers to solve the circumference of a circle. In order for the student to determine the circumference of the circle (which is under the Geometry domain), the student is required to use operations with rational numbers (which is a standard in the Number System). In the accelerated version of this curriculum, students are determining missing side lengths of right triangles using the Pythagorean Theorem (Geometry domain). This ties in previous learning such as square roots (Number System domain) and solving multi-step equations with rational and irrational numbers (Expressions and Equations domain).

Materials are well designed and take into account effective lesson structure and pacing.

*Statements of appraisal and supporting evidence:*

There is a suggested pacing guide in the seventh grade accelerated, *Big Ideas Math: Modeling Real Life Common Core*, p. xxvi-xxvii, which addresses the number of days each section and chapter should take. The design takes into account effective lesson structure, yet it fails to specify the amount of time that should be designated for each lesson. Every lesson starts out conceptually then leads into practice and application. An example of this is seen in the regular 7th grade TE, pg. xvi which shows how each section is broken into exploration of the concept, followed by practice lessons, and towards the end of the chapter is Connecting Concepts, Chapter Review, Practice Test, and Cumulative Test.

Materials offer teachers resources and tools to collect ongoing data about student progress on the standards.

*Statements of appraisal and supporting evidence:*

*Big Ideas Math: Modeling Real Life Common Core*, grade 7 accelerated, offers a variety of resources and tools to collect ongoing data about student progress on the standards. In the text, the following are available to assess both formatively and summatively: *Explorations, Try Its and Self-Assessments, Connecting Concepts, and Cumulative Practices*. Through the ancillaries and technology the following are available: *Quizzes and Tests, Alternative Assessments, Performance Tasks, and the Dynamic Assessment System*.

Materials give all students extensive opportunities and support to explore key concepts.

*Statements of appraisal and supporting evidence:*

The material contains extensive opportunities and support to explore key concepts. For example, students are asked to engage in cooperative learning tasks throughout the material that ensure they are strengthening and enriching their learning of key concepts. Students encounter varying Depth of Knowledge levels (TE #1, p. xxxvii), reaching higher cognitive demand as the section progresses. In addition, the examples serve as a reference, which model the expectation of the key concept. Explorations, lessons, and practice problems range from level 1 to level 3, while the assessment portion emphasizes more level 3 questions which prepare students for rigorous high stakes assessment.

Materials support effective use of technology to enhance student learning. Digital materials are accessible and available in multiple platforms.

*Statements of appraisal and supporting evidence:*

The materials support effective use of technology to enhance student learning and are accessible on multiple platforms. Although the publisher offers accessibility on multiple platforms, reviewers were only able to access and confirm the platforms on devices they had at hand i.e. Apple and HP laptops, and Android phone. Technology used to enhance student learning includes: STEAM videos, Skills Trainer, Lesson Tutorial Videos, and the Dynamic Student Edition.

Materials can be easily customized for individual learners.

*Statements of appraisal and supporting evidence:*

The teacher is easily guided to customize materials for students within the seventh grade accelerated math band who are emerging, proficient, advanced, and English Learners. For example, there are different parts in the text which offer ELL support for tasks that include written response or when they are in the Exploration section of the book. Vocabulary support is incorporated into every lesson where students can learn about vocabulary using graphic organizers, through collaborative discussion, and by referencing root words. Also, there are examples throughout the text that allow for the use of Frayer Models so that students gain a better understanding of vocabulary and clear up any misconceptions they may have about the word. Lastly, in TE #1 on p. xxix, the text offers a Response to Intervention section, which provides customization of learning based on the three tier levels. Evidence of this is seen when the materials encourage teachers to use the "Skills Trainer," "Skills Review Handbook," and, "Game Library" for those students who fall under Tier 2 and are in need of strategic intervention.

Materials take into account cultural perspectives.

*Statements of appraisal and supporting evidence:*

*Big Ideas Math*, grade 7 accelerated materials correlate to the Contributions Approach which is a level 1 (James Banks, *Cultural Perspectives*). Although there are examples that tie in with our nation's culture, there is minimum evidence supporting local and state culture. Examples supporting cultural perspectives were difficult to find throughout the curriculum because the material was more content specific (i.e. mathematical visuals such as: tables, graphs, diagrams). Consequently, there are few instances that provide opportunities for students to be exposed to a variety of demographic problems that are relevant and supportive to students of diverse cultural perspectives.

**Reviewer Professional Summation** - These materials are reviewed by Level II and Level III educators from across New Mexico. The reviewers have brought their knowledge, experience and expertise into the review of these materials. They offer here their individual summary of the material as a whole.

Reviewer #43 background and experience:
<i>Professional summary of material:</i>
Reviewer #44 background and experience:
<i>Professional summary of material:</i>
Reviewer #45 background and experience:
<i>Professional summary of material:</i>