

Instructional Materials Evaluation - Student Standards Review

Louisiana educators engaged in a professional review of the state’s academic standards for English language arts (ELA) and mathematics to ensure they continue to maintain strong expectations for teaching and learning aligned with college and workplace demands. The new ELA and math standards will be effective beginning with the 2016-2017 school year. As part of the Louisiana Department of Education’s support for a seamless transition to these new standards, the LDOE identified the major changes of the standards and their potential impact upon criteria used to review instructional materials.

Title: **Discovery Education Math Techbook**

Grade: **6-8**

Publisher: **Discovery Education**

Copyright: **2015**

Overall Rating: **Tier III, Exemplifies quality**

This Mathematics review has been examined for the following major shifts in alignment resulting from the Louisiana Student Standards Review:

- Include standards for money in grades K, 1, and 3 to ensure connections that provide smooth transitions from one grade to the next
- Provide developmentally appropriate content for all grades or courses while maintaining high expectations:
 - Additive area is moved to grade 4 from grade 3
 - The Statistics - Conditional Probability and the Rules of Probability (S-CP) domain is moved from Algebra II to Geometry
 - The standards provide extra clarity around the distinction between Algebra I and II

The following two indicators may be impacted:

- Focus on Major Work (Non-Negotiable)
- Consistent, Coherent Content (Non-Negotiable)

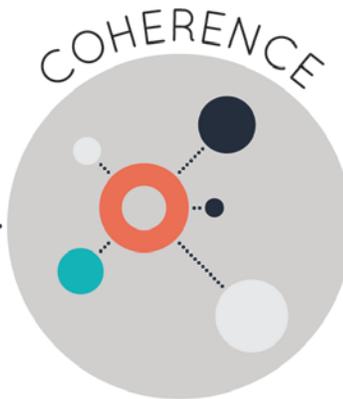
This review remains a Tier 3 rating. As a result of these changes, the following chart identifies the potential impact on specific elements in the current review. The LDOE recommends that district curriculum staff, principals, and teachers take these findings into consideration when using these instructional materials.

Criteria	Currently in the Rubric	Next Steps for Educators
Focus on Major Work (Non-Negotiable)	This program currently is reviewed as “No” for this criterion because while the materials focus the majority of class time on the major work of the grade for grades 6 and 8, the assessments at all grade levels hold students responsible for content that is beyond the grade level standards.	Since these materials received a “No” for this indicator, the current weakness will likely remain and should be addressed by adjusting or supplementing with stronger programs.
Consistent, Coherent Content (Non-Negotiable)	This program currently is reviewed as “No” for this criterion because the materials sometimes connect supporting content to major content in meaningful ways; however, most of the supporting content is taught in isolation.	Since these materials received a “No” for this indicator, the current weakness will likely remain and should be addressed by adjusting or supplementing with stronger programs.

Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: **Discovery Education Math Techbook**

Grade/Course: **6-8**

Publisher: **Discovery Education**

Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
4. Focus Coh. via Practice Std (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
	2. Consistent, Coherent Content (Non-Negotiable)
	3. Rigor and Balance (Non-Negotiable)

Each set of submitted materials was evaluated for alignment with the standards beginning with a review of the indicators for the non-negotiable criteria. If those criteria were met, a review of the other criteria ensued.

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 7.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria.

Tier 3 ratings receive a “No” in Column 1 for at least one of the non-negotiable criteria.

Click below for complete grade-level reviews:

[Grade 6 \(Tier 3\)](#)

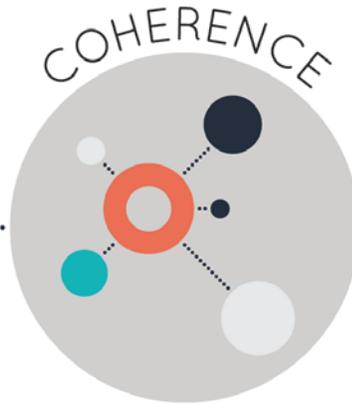
[Grade 7 \(Tier 3\)](#)

[Grade 8 \(Tier 3\)](#)

Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: **Discovery Education Math Techbook**

Grade/Course: **6**

Publisher: **Discovery Education**

Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
4. Focus Coh. via Practice Std (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
	2. Consistent, Coherent Content (Non-Negotiable)
	3. Rigor and Balance (Non-Negotiable)

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a “Yes” for all indicators in Column 2 for Section I, then the materials receive a “Yes” in Column 1. If there is a “No” for any indicator in Column 2 for Section I, then the materials receive a “No” in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a “Yes” for all required indicators in Column 2, then the materials receive a “Yes” in Column 1. If there is a “No” for any required indicators in Column 2, then the materials receive a “No” in Column 1.

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 7.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria.

Tier 3 ratings receive a “No” in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.			
<p>Non-Negotiable 1. FOCUS ON MAJOR WORK¹: Students and teachers using the materials as designed devote the large majority² of time to the major work of the grade/course.</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 1a) Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.</p>	<p>Yes</p>	<p>The materials present 13 units with 28 total concepts (i.e., lessons). Seventy-one percent (i.e., 20 out of 28) of the lessons are devoted to major content (e.g., 6.RP, 6.NS, 6.EE), while the rest focus on supporting or additional content (e.g., 6.G, 6.SP). The term concept is used to define a lesson. For the purposes of this review, the term “lesson” will be used to represent the term “concepts” as presented in the material headings.</p>
	<p>REQUIRED 1b) In any one grade/course, aligned materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.³</p>	<p>No</p>	<p>Most materials and assessments focus on content appropriate for Grade 6. For example, Unit 1 assessment contains 11 questions that all align to 6.RP.1 and 6.RP.3. However, some assessment items hold students responsible for content that is beyond Grade 6 standards. For example, Unit 5 Assessment #1 requires students to understand subtraction of rational numbers as adding the additive inverse (7.NS.1). Unit 13 Assessment #s 2, 3, 5, 6 require students to solve real-world problems involving surface area of rectangular prisms and triangular prisms without a net (7.G.6).</p>
<p>Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course’s instructional materials are coherent and consistent with the content in the Standards.</p>	<p>REQUIRED 2a) Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.⁴</p>	<p>Yes</p>	<p>The materials connect major and supporting content. For example, Lesson 6.2 connects 6.G.3 to 6.NS.8 where students graph coordinate points to create given polygons, using absolute value to determine the distance between points, or the side lengths. The concepts presented in Lessons 12.1 and 12.2 connect standards 6.G.1, 6.G.2, and 6.EE.2. These lessons connect the domains of Geometry and Expressions and Equations. Lesson 7.2 discusses the use of formulas to find area and volume. Students solve surface area and volume problems by</p>

¹ For more on the major work of the grade, see [Focus by Grade Level](#).

² The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

³ Refer also to criterion #2 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

⁴ Refer also to criterion #3 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>REQUIRED 2b) Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.⁵</p>	<p>No</p>	<p>relating to previous work with algebraic expressions. Lesson 6.1 connects standards 6.NS.5, 6.NS.8, and 6.G.3. The application activity "Design a Garden" requires students to use a coordinate plane to connect coordinate graphing to design a garden. Lesson 13.1 relates standards 6.G.4 and 6.EE.2.</p> <p>In some cases, the materials include problems and activities that connect two or more clusters or two or more domains. For example, in Lesson 11.1, students learn about mean as a balancing point (6.SP.5) by manipulating counters to keep a number line balanced, moving one at a time on opposite sides, therefore cancelling each other out (6.NS.5). However, there are some instances where standards are tagged to lessons in the teacher's edition, but the connection is not explicit. For example, the teacher's edition lists Lesson 2.1 standards as 6.NS.2, 6.RP.2, and 6.RP.3b. This lesson's main focus is on the long division algorithm (6.NS.2). While one of the problems presented leads students to find the unit rate (6.RP.3b) for cost of food boxes, the connection is not made explicit in either the teacher's edition or the student edition.</p>
<p>Non-Negotiable 3. RIGOR AND BALANCE: Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application.⁶</p>	<p>REQUIRED 3a) Attention to Conceptual Understanding: Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.</p>	<p>Yes</p>	<p>The materials use a variety of ways to develop student conceptual understanding. For example, Lesson 1.2 build student's conceptual understanding of ratio tables by looking for patterns in the table and describing the method they used to complete the table. Students build conceptual understanding of equivalent ratios using tape diagrams by analyzing a tape diagram to determine how it models the given ratio (6.RP.3). Lesson 3.1 builds student's conceptual understanding of dividing fractions by fractions by exploring how to feed monsters, then explaining, based on their explorations, how fraction division is different than</p>

⁵ Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

⁶ Refer also to criterion #4 in the K–8 [Publishers' Criteria](#) and #2 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<p>whole number division (6.NS.1). Lesson 13.2 builds student’s conceptual understanding of finding the volume of rectangular prisms with fractional edge lengths using centimeter cubes. Students analyze 3 different methods to determine which would work and why (6.G.2). In addition, the discover sections of each lesson provide instructions that develop conceptual understanding. Response questions and tasks require students to frequently model and explain concepts, thinking processes, strategies, and justifications. Each unit provides at least one opportunity for students to discuss or explain concepts with their seat partners. Many of these collaborative opportunities stem from discussion questions.</p>
	<p>REQUIRED 3b) Attention to Procedural Skill and Fluency: The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.</p>	<p>No</p>	<p>There are two standards (6.NS.2 and 6.NS.3) that require fluency for 6th grade. For example, standard 6.NS.2 specifically calls for fluency with multi-digit division of whole numbers using the standard algorithm. This topic is introduced in Lesson 2.1. In this concept, students are required to do the long division algorithm twice within the two investigations, and only two out of the ten practice problems require students to do the long division algorithm. This standard is never revisited in the materials. In addition, standard 6.NS.3 calls for fluency with adding, subtracting, multiplying, and dividing multi-digit decimals using the standard algorithm for each operation. This topic is introduced in Lesson 3.2, where the focus is on conceptual understanding and application to real-world problems. There is actually only one problem with no context for students to solve in the practice section, and the numbers go to the hundredths place, which was taught in Grade 5. This standard is never revisited in the materials.</p>
	<p>REQUIRED 3c) Attention to Applications: Materials are designed so that teachers and students spend sufficient time working</p>	<p>Yes</p>	<p>Students are exposed to many high quality and engaging applications. Real-life applications are provided within every lesson. Students are provided</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	<p>with engaging applications, without losing focus on the major work of each grade/course including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.</p>		<p>opportunities to apply concepts to real life within the discovery and application sections of each lesson. Lesson 3.1 models various situations involving division of fractions (6.NS.1), including dividing sandwiches for a catering event, dividing "monster meals", modeling clay, cutting ribbon, dividing fish bait, preparing for a hike, making bracelets with string, measuring soup ingredients, and travel times. Lesson 5.1 supports standards 6.NS.5-6 by requiring students to graph and compare freezing temperatures, compare and order elevations, evaluate plus and minus ratings of hockey teams, evaluate and determine opposites in real life situations. Lesson 5.3 requires students to justify a student's definition of absolute value (6.NS.7). These activities require students to use problem-solving skills. The discovery and application components of Units 12 and 13 provide many engaging applications of standards 6.G.1-4 where students solve real-life problems involving area, surface area, and volume.</p>
	<p>REQUIRED 3d) Balance: The three aspects of rigor are not always treated together and are not always treated separately.</p>	<p>Yes</p>	<p>The three aspects of rigor are not always treated together and are not always treated separately. For example, in Lesson 13.2, students build conceptual understanding of finding the volume of rectangular prisms with fractional edge lengths using centimeter cubes. Students analyze three different methods to determine which would work and why. Students then apply this concept to real-world problems, such as determining the volume of concrete needed to make a base for a statue. In the practice section of this lesson, students have 10 problems to build procedural skill with finding volume of rectangular prisms with fractional edge lengths.</p>
<p>Non-Negotiable 4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: Materials promote focus and</p>	<p>REQUIRED 4a) Materials address the practice standards in such a way as to enrich the major work of the grade/course; practices strengthen the focus on major work instead of</p>	<p>Yes</p>	<p>The practice standards are addressed throughout the materials and strengthen student understanding of the major work. Materials correlate the math practice standards well within lesson overviews and teacher notes by providing opportunities for</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
<p>coherence by connecting practice standards with content that is emphasized in the Standards.⁷</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>detracting from it, in both teacher and student materials.</p>		<p>students to use a variety of math practice standards. For example, in Lesson 1.2, students model (MP4) equivalent ratios using tape diagrams (6.RP.3) and explain what each part of the diagram represents (MP1). In the introduction of Lesson 2.1, students solve a non-routine problem involving division of multi-digit numbers (6.NS.1) using whatever strategy they want, forcing them to make sense of the problem (MP1). In Lesson 5.3, students discuss integers on a number line and the reasoning behind their choices (MP3). Students also play a game, and then draw conclusions about what absolute value means based on their experiences (MP8). In Lesson 6.1, students use precision (MP6) in identifying the rational number coordinate points (6.NS.8). In Lesson 6.2, students make use of structure by using what they know about finding distance between numbers on a number line to find distances between points on a coordinate plane (MP7). In Lesson 13.2, students use tools strategically (MP5) as they use centimeter cubes to determine the volume of boxes (6.G.2).</p>
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
<p>Additional Criterion</p> <p>5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:</p> <p>Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.</p>	<p>REQUIRED</p> <p>5a) Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.¹⁰</p>	Not Evaluated	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>
	<p>REQUIRED</p> <p>5b) Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.¹⁰</p>	Not Evaluated	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>

⁷ Refer also to criterion #8 in the K–8 [Publishers' Criteria](#) and #6 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013)

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
<input type="checkbox"/> Yes <input type="checkbox"/> No	5c) Materials base content progressions on the progressions in the Standards. ⁸	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	5d) Materials include learning objectives that are visibly shaped by CCSSM cluster headings and/or standards. ⁹	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	5e) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. ¹¹	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. <input type="checkbox"/> Yes <input type="checkbox"/> No	6a) Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard. ¹⁰ Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. ¹¹ There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. Alignments to practice standards are accurate.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	6b) Materials Support the Standards' Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems. ¹²	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	6c) Materials explicitly attend to the specialized language	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.

⁸ Refer also to criterion #5 in the K–8 [Publishers' Criteria](#) and #3 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

⁹ Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

¹⁰ Refer also to criterion #9 in the K–8 [Publishers' Criteria](#) and #7 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

¹¹ Refer also to criterion #7 in the K–8 [Publishers' Criteria](#) and #5 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

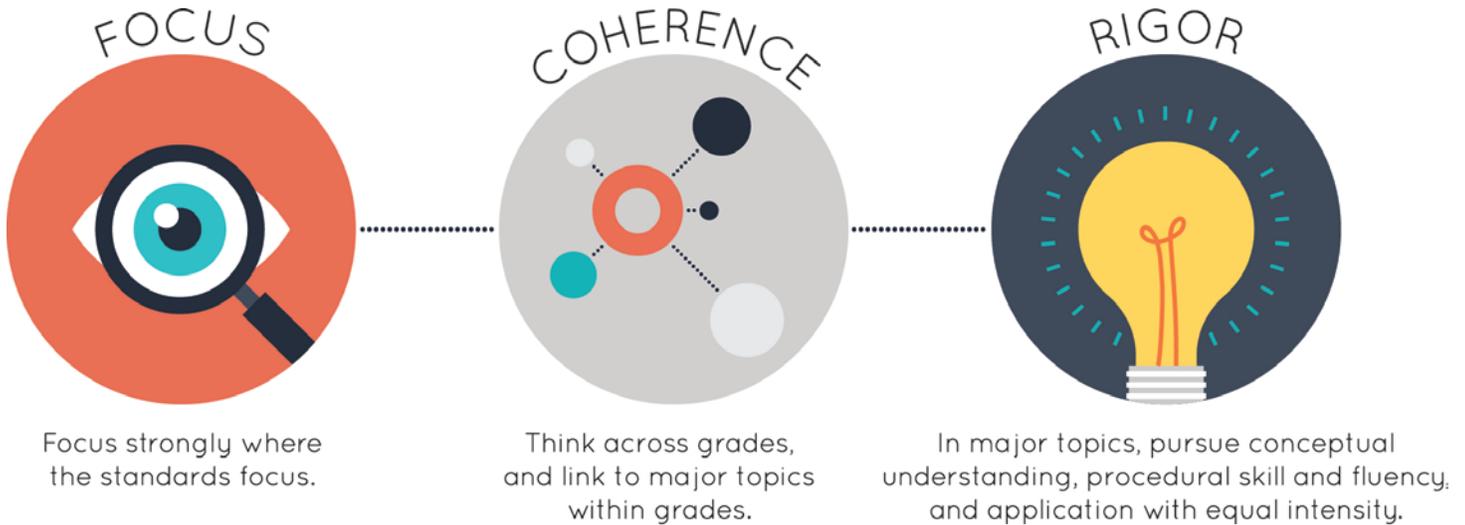
¹² Refer also to criterion #10 in the K–8 [Publishers' Criteria](#) and #8 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
<p>Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ¹³</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	of mathematics. ¹²		
	<p>7a) There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>7b) There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>7d) The underlying design of the materials distinguishes between problems and exercises. In essence the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>7e) Lessons are appropriately structured and scaffolded to support student mastery.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
<p>7f) Materials support the uses of technology as called for in the Standards.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	

¹³ Refer also to pages 18-20 in the K – 8 [Publishers’ Criteria](#) and pages 16-18 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
FINAL EVALUATION <i>Tier 1 ratings</i> receive a “Yes” in Column 1 for Criteria 1 – 7. <i>Tier 2 ratings</i> receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria. <i>Tier 3 ratings</i> receive a “No” in Column 1 for at least one of the non-negotiable criteria.			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	Criteria	Yes/No	Final Justification/Comments
I: Non-Negotiables	1. Focus on Major Work	No	While the materials devote 71% of the lessons on the major work of the grade, there are assessment items that hold students responsible for content that is beyond Grade 6 standards.
	2. Consistent, Coherent Content	No	There are instances where standards are tagged to lessons in the teacher’s edition, but the connection is not explicit within the lesson.
	3. Rigor and Balance	No	There are two standards (6.NS.2 and 6.NS.3) that require fluency for 6th grade however there is lack of practice to guarantee student fluency for the two standards.
	4. Focus and Coherence via Practice Standards	Yes	The practice standards are addressed throughout the materials and strengthen student understanding of the major work.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	6. Alignment Criteria for Standards for Mathematical Practice	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	7. Indicators of Quality	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
FINAL DECISION FOR THIS MATERIAL: <u>Tier III, Not representing quality</u>			

Strong mathematics instruction contains the following elements:



Title: Discovery Education Math Techbook

Grade/Course: 7

Publisher: Discovery Education

Copyright: 2015

Overall Rating: Tier III, Not representing quality

[Tier I](#), [Tier II](#), [Tier III](#) Elements of this review:

STRONG	WEAK
4. Focus Coh. via Practice Std (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
	2. Consistent, Coherent Content (Non-Negotiable)
	3. Rigor and Balance (Non-Negotiable)

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a “Yes” for all indicators in Column 2 for Section I, then the materials receive a “Yes” in Column 1. If there is a “No” for any indicator in Column 2 for Section I, then the materials receive a “No” in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a “Yes” for all required indicators in Column 2, then the materials receive a “Yes” in Column 1. If there is a “No” for any required indicators in Column 2, then the materials receive a “No” in Column 1.

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 7.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria.

Tier 3 ratings receive a “No” in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.			
Non-Negotiable 1. FOCUS ON MAJOR WORK¹⁴: Students and teachers using the materials as designed devote the large majority ¹⁵ of time to the major work of the grade/course. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	REQUIRED 1a) Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	No	The materials present 12 units with 27 total concepts (i.e., lessons). Fifty-five percent (55%) is focused on major content (e.g., 7.RP, 7.NS, and 7.EE), while the rest focus on supporting or additional content (e.g., 7.SP and 7.G). The term concept is used to define a lesson. For the purposes of this review, the term “lesson” will be used to represent the term “concepts” as present in the material headings.
	REQUIRED 1b) In any one grade/course, aligned materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards. ¹⁶	No	Most materials and assessments focus on content appropriate for Grade 7. For example, Unit 1 assessment contains 12 questions that all align to 7.NS.1-3. However, some assessment items hold students accountable for topics beyond 7th grade standards. For example, Unit 2 Assessment #1 requires students to sort numbers as being rational or irrational (8.NS.1). Question #7 on the same assessment asks students to explain why π is rational or irrational (8.NS.1). Unit 10 Assessment #5 requires students to have and apply knowledge of similarity of two-dimensional triangles (8.G.4).
Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course’s instructional materials are coherent and consistent with the content in the Standards.	REQUIRED 2a) Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. ¹⁷	No	The materials sometime connect supporting content to major content in meaningful ways. For example, Lesson 8.3 connects supporting standards 7.SP.6-7, understanding probabilities, to major standards 7.RP.2 and 7.RP.3, deciding whether two quantities are in a proportional relationship. However, Unit 7: Populations and Samples focuses on supporting and additional content 7.SP.1-4 with no connection to the major work of Grade 7, and Unit 9: Probability of Multiple Events focuses on 7.SP.8 in isolation.

¹⁴ For more on the major work of the grade, see [Focus by Grade Level](#).

¹⁵ The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

¹⁶ Refer also to criterion #2 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

¹⁷ Refer also to criterion #3 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	REQUIRED 2b) Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important. ¹⁸	Yes	The materials connect standards in two or more clusters or domains. For example, Lesson 4.2 includes problems and activities that connect 7.G.1 and 7.RP.3 where students use proportional relationships to solve problems involving scale drawings. Lessons 5.3, 6.1, and 6.2 include problems and activities that connect clusters 7.EE.A and 7.EE.B where students use properties of operations to solve real-world and mathematical problems. Lesson 10.1 includes problems and activities that connect 7.G.5 and 7.EE.4 as students write and solve equations to find missing angle measures. Lesson 10.3 connects standards 7.G.6, 7.NS.1, 7.EE.1, and 7.EE.3 to find the area of complex polygons. Lesson 12.1 requires students to find the percentage of space left in a cooler and write an expression to find the leftover volume (7.G.6 and 7.EE.4).
Non-Negotiable 3. RIGOR AND BALANCE: Each grade’s instructional materials reflect the balances in the Standards and help students meet the Standards’ rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ¹⁹ <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	REQUIRED 3a) Attention to Conceptual Understanding: Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	Yes	Throughout the materials, students have opportunities to develop conceptual understanding of key mathematical concepts. For example, in Lesson 6.1, students express conceptual understanding of 7.EE.4, as required by the standard, as they identify what value makes an equation true and explain how they know. In Lesson 12.1, students develop conceptual understanding of 7.G.3 by using an online tool to create cross-sections of prisms and pyramids. Students also describe the results of slicing given solids and explain how they know what the results would be. In addition, the discover sections of lessons provide instruction that develops conceptual understanding. Response questions and tasks require students to frequently model and explain concepts, thinking processes, strategies, and justifications. Each unit provides at least one opportunity for students to discuss or explain concepts with partners. Many of these collaborative opportunities stem from discussion questions. The investigations of Lesson 6.1 model

¹⁸ Refer also to criterion #6 in the K–8 [Publishers’ Criteria](#) and #4 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

¹⁹ Refer also to criterion #4 in the K–8 [Publishers’ Criteria](#) and #2 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
			and solve algebraic equations with algebra tiles and scale balances. Investigation 2 of Lesson 1.2 requires students to explain the math property that was used to create an equivalent expression.
	<p>REQUIRED 3b) Attention to Procedural Skill and Fluency: The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.</p>	No	In each lesson, students have the opportunity build procedural skill in the practice section. However, standard 7.EE.4a requires students to be able to solve equations of the form $px + q = r$ and $p(x + q) = r$ fluently. In the materials, students have the opportunity to develop this skill only Unit 5. But, few opportunities are provided for students to solve equations in the form $px + q = r$ and $p(x + q) = r$ beyond the initial lessons.
	<p>REQUIRED 3c) Attention to Applications: Materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the major work of each grade/course including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.</p>	Yes	Students are exposed to many high quality and engaging applications. Real-life applications are provided within every lesson. Students are provided opportunities to apply concepts to real life within the discovery and application sections of each lesson. The application of Lesson 7.1 "Which Stock Should You Buy?" prompts students to investigate positive and negative stock changes (7.NS.1). The application "What is Salt?" supports standards 7.NS.1 by prompting students to observe the protons and neutrons of sodium and chlorine atoms. Students observe that the opposite quantities balance at zero. Lesson 2.1 relates rational numbers to real life situations including cooking, sales, temperature, and stocks. Within the introduction of Lesson 3.1 students apply standard 7.RP.2 in order to determine Di Vinci's ratios. Investigation 3 of Lesson 3.1 requires students to find units related to driver distances and speeds (7.RP.1). The application "Following Proportions" of concept 3.2 requires students to use proportions to determine the amount of water needed to make a similar large pizza. In Lesson 4.2, students use their knowledge of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
			scale drawing to create a map of the Grand Canyon using a given scale, as required by the standards. Students solve problems involving the scale drawing (7.G.1). In Lesson 5.3, students solve multi-step real-world and mathematical problems with positive and negative rational numbers, as required by the standard (7.EE.3).
	REQUIRED 3d) Balance: The three aspects of rigor are not always treated together and are not always treated separately.	Yes	The three aspects of rigor are not always treated together and are not always treated separately. For example, in Lesson 2.2, students first build conceptual understanding of multiplying and dividing rational numbers by explaining strategies they use, determining statements that are always true for rational numbers, and proving false statements false by providing counterexamples. Students go on to apply the skill to real-world problems, such as deciding what kind of sandwiches to order on a budget and how they should be cut for a party. The Check for Understanding after Investigation 3 in this concept includes 2 opportunities for application to real-world problems and a prompt to explain thinking and 3 problems to practice procedural skill.
Non-Negotiable 4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ²⁰ <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	REQUIRED 4a) Materials address the practice standards in such a way as to enrich the major work of the grade/course; practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.	Yes	The practice standards are addressed throughout the materials and strengthen student understanding of the major work. Materials correlate the math practice standards well within lesson overviews and teacher notes by providing opportunities for students to use a variety of math practice standards. Lessons enrich work by providing opportunities for students to use a variety of mathematical practices. Investigation 3 in Lesson 1.2 requires students to discuss strategies with partners (MP3). Students describe conjectures about the product of signed numbers within the introduction of Lesson 2.1. Students explain the concept of calculating the average cost per pound of elk jerky within the

²⁰ Refer also to criterion #8 in the K–8 [Publishers' Criteria](#) and #6 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013)

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
			<p>introduction of Lesson 3.1. Investigations 3 and 4 of Lesson 1.3 use number lines to model and simplify expressions and exercises prompt students to model the product of integers on a number line (MP4). MP7 is applied when students discuss with a partner what it means to be proportional within Lesson 4.1 (MP3). Students are required to develop conjectures through the units (MP1). Students create conjectures to describe how to determine whether or not proportionality exists within the "check for understanding" assessment of Lesson 4.1 (MP1). In Lesson 5.3, students reason abstractly and quantitatively as they determine the meaning of terms in algebraic equations in context (MP2). In Lesson 6.1, students make sense of numerical relationships in context (MP1) and write algebraic equations to model real-world problems (MP4). In Lesson 10.2, students construct triangles, record the side lengths, and then look patterns in the side lengths to conclude that the sum of the two shorter sides must be greater than the longest side (MP7).</p>
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
<p>Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.</p>	<p>REQUIRED 5a) Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.¹⁰</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>REQUIRED 5b) Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.¹⁰</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
<input type="checkbox"/> Yes <input type="checkbox"/> No	5c) Materials base content progressions on the progressions in the Standards. ²¹	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	5d) Materials include learning objectives that are visibly shaped by CCSSM cluster headings and/or standards. ²²	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	5e) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. ¹¹	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. <input type="checkbox"/> Yes <input type="checkbox"/> No	6a) Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard. ²³ Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. ²⁴ There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. Alignments to practice standards are accurate.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	6b) Materials Support the Standards' Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems. ²⁵	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	6c) Materials explicitly attend to the specialized language	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.

²¹ Refer also to criterion #5 in the K–8 [Publishers' Criteria](#) and #3 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

²² Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

²³ Refer also to criterion #9 in the K–8 [Publishers' Criteria](#) and #7 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

²⁴ Refer also to criterion #7 in the K–8 [Publishers' Criteria](#) and #5 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

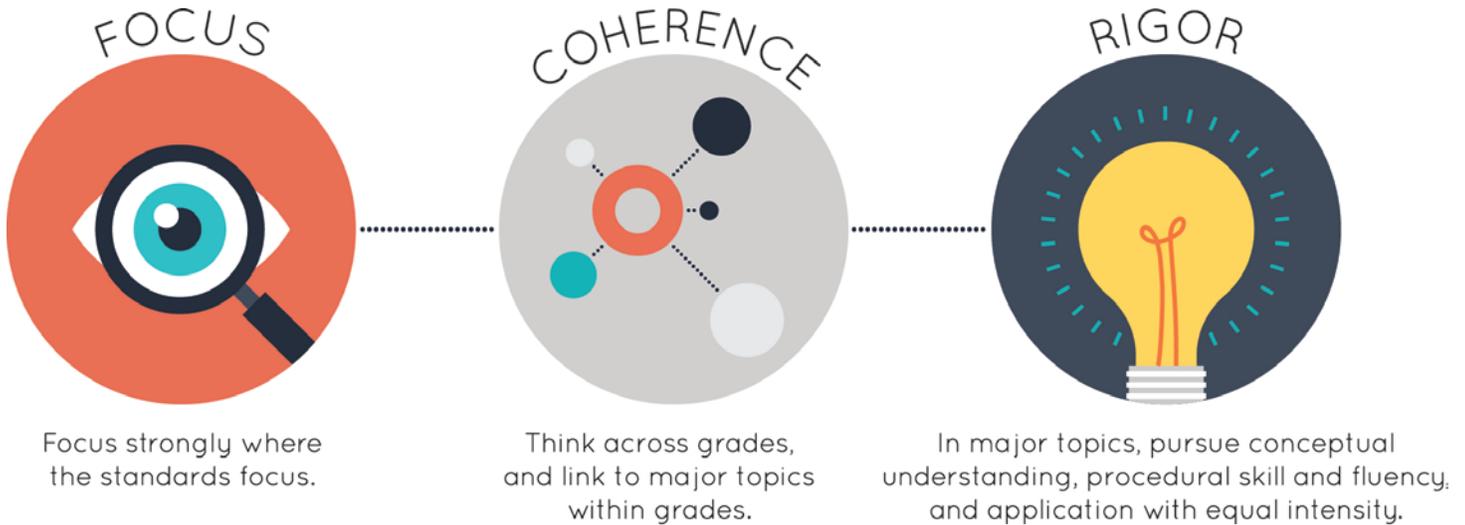
²⁵ Refer also to criterion #10 in the K–8 [Publishers' Criteria](#) and #8 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
<p>Additional Criterion</p> <p>7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards.²⁶</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	of mathematics. ¹²		
	<p>7a) There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>7b) There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>7d) The underlying design of the materials distinguishes between problems and exercises. In essence the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>7e) Lessons are appropriately structured and scaffolded to support student mastery.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
<p>7f) Materials support the uses of technology as called for in the Standards.</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	

²⁶ Refer also to pages 18-20 in the K – 8 [Publishers’ Criteria](#) and pages 16-18 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
FINAL EVALUATION			
<i>Tier 1 ratings</i> receive a “Yes” in Column 1 for Criteria 1 – 7.			
<i>Tier 2 ratings</i> receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria.			
<i>Tier 3 ratings</i> receive a “No” in Column 1 for at least one of the non-negotiable criteria.			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	Criteria	Yes/No	Final Justification/Comments
I: Non-Negotiables	1. Focus on Major Work	No	Only fifty-five percent of the lessons focus on major content (e.g., 7.RP, 7.NS, and 7.EE), while the rest focus on supporting or additional content (7.SP and 7.G). In addition, there are assessment items that hold students responsible for content that is beyond the Grade 7 standards.
	2. Consistent, Coherent Content	No	The materials sometime connect supporting content to major content in meaningful ways; however, most of the supporting content is taught in isolation.
	3. Rigor and Balance	No	There is one standard (i.e., 7.EE.4) that requires fluency for 7th grade; however, there is lack of practice to guarantee student fluency for this standard.
	4. Focus and Coherence via Practice Standards	Yes	The practice standards are addressed throughout the materials and strengthen student understanding of the major work.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	6. Alignment Criteria for Standards for Mathematical Practice	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	7. Indicators of Quality	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
FINAL DECISION FOR THIS MATERIAL: Tier III, Not representing quality			

Strong mathematics instruction contains the following elements:



Title: Discovery Education Math Techbook

Grade/Course: 8

Publisher: Discovery Education

Copyright: 2015

Overall Rating: Tier III, Not representing quality

[Tier I](#), [Tier II](#), [Tier III](#) Elements of this review:

STRONG	WEAK
4. Focus Coh. via Practice Std (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
	2. Consistent, Coherent Content (Non-Negotiable)
	3. Rigor and Balance (Non-Negotiable)

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a “Yes” for all indicators in Column 2 for Section I, then the materials receive a “Yes” in Column 1. If there is a “No” for any indicator in Column 2 for Section I, then the materials receive a “No” in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a “Yes” for all required indicators in Column 2, then the materials receive a “Yes” in Column 1. If there is a “No” for any required indicators in Column 2, then the materials receive a “No” in Column 1.

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 7.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria.

Tier 3 ratings receive a “No” in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.			
<p>Non-Negotiable 1. FOCUS ON MAJOR WORK²⁷: Students and teachers using the materials as designed devote the large majority²⁸ of time to the major work of the grade/course.</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 1a) Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.</p>	<p>Yes</p>	<p>The materials present 11 units with 26 total concepts (lessons). Seventy-seven percent (i.e., 20 of 26) of the lessons focus on major content (e.g., 8.EE, 8.F and 8.G), while the rest focus on support or additional content (8.NS, 8.SP and 8.G). The term concept is used to define a lesson. For the purpose of this review, the term “lesson” will be used to represent the term “concepts” as present in the material headings.</p>
	<p>REQUIRED 1b) In any one grade/course, aligned materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.²⁹</p>	<p>No</p>	<p>Most materials and assessments focus on content appropriate for Grade 8. In most instances, unit progressions and standards note when the content is reaching ahead and is reaching back to standards. This is demonstrated in the Unit 1 assessment which contains 13 questions that all align to 8.EE.1. However, in the Unit 2 Assessment, question 8 is assessing students to explain why $x^{\frac{1}{2}} = \sqrt{x}$, which aligns with HSN.RN.A.1. Eighth grade standards only require students to understand that the $\sqrt{2}$ is irrational.</p>
<p>Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course’s instructional materials are coherent and consistent with the content in the</p>	<p>REQUIRED 2a) Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.³⁰</p>	<p>No</p>	<p>The materials sometime connect supporting content to major content in meaningful ways. For example, Lesson 2.1 connects 8.NS.2 and 8.EE.2, as students compare what happens when they take the square root of a perfect square and a non-perfect square. However, supporting content 8.SP.1-4 are all taught in isolation.</p>

²⁷ For more on the major work of the grade, see [Focus by Grade Level](#).

²⁸ The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

²⁹ Refer also to criterion #2 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

³⁰ Refer also to criterion #3 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
Standards. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	REQUIRED 2b) Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important. ³¹	Yes	The materials connect standards in two or more clusters and domains. For example, Lesson 7.1 includes problems and activities that connect 8.EE.5, 8.F.3, and 8.F.4. Lesson 7.3 includes problems and activities that connect 8.F.1-5, 8.G.3, and 8.EE.6. Lesson 8.1 includes problems and activities that connect 8.EE.7 and 8.EE.4-5.
Non-Negotiable 3. RIGOR AND BALANCE: Each grade’s instructional materials reflect the balances in the Standards and help students meet the Standards’ rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ³² <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	REQUIRED 3a) Attention to Conceptual Understanding: Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	Yes	Materials develop conceptual understanding of key concepts in a variety of ways. For example, in Lesson 1.1, students build conceptual understanding of 8.EE.1 as they compare expanded expressions to simplified expressions, and then draw conclusions about multiplying powers with like bases. They also form a conjecture about how exponents and multiplication are related and then defend the conjecture to a partner. In Lesson 2.1, students explore what it means for a square number or a cubic number to be perfect through visuals and they explain what happens when taking the square of a perfect square number or a non-perfect square number (8.EE.2, 8.NS.2). In Lesson 2.2, students analyze a strategy for converting a repeating decimal to a rational number, then use their findings to solve problems of their own. In the Check for Understanding, students must also explain why the original equation had to be multiplied by 1,000 and 10,000 to convert the decimal to a fraction. (8.NS.1). In Lesson 3.1, students analyze various examples of reflections, then write the meaning of a reflection in their own words. Students must also create a pattern from a single image using transformations, then describe the transformations used (8.G.1). In Lesson 11.1, students use what they know about volume of rectangular prisms to determine the formula for the volume of a cylinder (8.G.9). In addition, the discover sections of lessons provide instruction that develops conceptual understanding. Response questions and tasks require students to

³¹ Refer also to criterion #6 in the K–8 [Publishers’ Criteria](#) and #4 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

³² Refer also to criterion #4 in the K–8 [Publishers’ Criteria](#) and #2 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
			frequently model and explain concepts, thinking processes, strategies, and justifications. Each unit provides at least one opportunity for students to discuss or explain concepts with partners. Many of these collaborative opportunities stem from discussion questions.
	<p>REQUIRED 3b) Attention to Procedural Skill and Fluency: The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.</p>	No	For the most part, each lesson provides students with the opportunity build procedural skill, especially where called for in the standards. For example, in Lesson 2.1, the Check for Understanding has 11 problems for students to practice with square roots and cube roots (8.EE.2). Lesson 2.2 has 5 problems where students practice converting from a decimal expansion to a rational number (8.NS.1). In Lesson 4.3, there are 13 problems for students to build procedural skill with using the Pythagorean theorem to find the distance between points in a coordinate system, as required by the standard (8.G.8). However, Lesson 9 is the only opportunity that provides for students to practice and master analyzing and solving pairs of simultaneous equations (8.EE.8). This standard requires all three aspects of rigor. While conceptual understanding and application are addressed, there is a lack of problems for procedural skill and fluency to be mastered.
	<p>REQUIRED 3c) Attention to Applications: Materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the major work of each grade/course including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations</p>	Yes	Students are exposed to many high quality and engaging applications. Real-life applications are provided within every concept. Students are provided opportunities to apply concepts to real life within the discovery and application sections of each lesson. For example, in Lesson 5.2, students use scientific notation to solve real-world problems as required by standard 8.EE.4. Lesson 6.1 develops understanding of interior and exterior angles by finding and observing changes within reclined positions (8.G.5). Within the investigation "Squaring Up" students use knowledge of perfect squares and square roots to tile a shower (8.NS.1). Students

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	for multi-step and real-world problems are explicit.		apply standard 8.G.7 in investigation 4 of Lesson 4.1 by writing a Pythagorean Theorem equation that will help calculate the missing length within a video game design. Within application 2 of Lesson 4.1 students discover and describe how the Pythagorean Theorem can be used to complete a search and rescue mission (8.G.7). Within Lesson 7.1 students translate a real life situation involving a constant rate to a table and equation. In Lesson 10.1, students use their knowledge of scatterplots to mathematical and real-world problems as they interpret scatterplots for bivariate measurement data (8.SP.1). For example, students analyze a given scatterplot and then choose the statement that best represents the data. In Lesson 11.1, students use their knowledge of formulas of cones, cylinders, and spheres to solve real-world and mathematical problems, such as when they determine how many cones of water it will take to fill the given hemisphere (8.G.9).
	REQUIRED 3d) Balance: The three aspects of rigor are not always treated together and are not always treated separately.	Yes	The three aspects of rigor are not always treated together and are not always treated separately. For example, in Lesson 4.3, Investigation 1, students use the Pythagorean theorem in a real-world situation to find a route for the courier, then display conceptual understanding as they explain why a given method used was correct or not. In the Check for Understanding, students solve 3 problems to build procedural skill, as well as apply their knowledge to a mathematical problem and conceptually explain how to determine the coordinates of a given point using the Pythagorean theorem (8.G.6, 8.G.8). In Lesson 5.2, students use conceptual understanding to explain why given solutions are correct or incorrect, and they also apply the skill of performing operations with numbers in scientific notation to real-world problems (8.EE.4).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
<p>Non-Negotiable 4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.³³</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 4a) Materials address the practice standards in such a way as to enrich the major work of the grade/course; practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.</p>	<p>Yes</p>	<p>The practice standards are addressed throughout the materials and strengthen student understanding of the major work. For example, in Lesson 1.1, students engage in MP7 as they look for patterns in multiplying exponents. After writing several expanded expressions, then simplifying them, students compare the expanded expressions with the simplified versions to draw a conclusion about multiplying powers with like bases. In this same lesson, students also engage in MP3 as they write a conjecture about how exponents and multiplication are related and then defend the conjecture to a partner. In Lesson 5.2 students analyze an incorrect solution and explain why it is incorrect, as well as a correct solution and explain how they know it is correct (MP3). In Lesson 5.2, students also attend to precision as they write numbers in scientific notation (MP6). In Lesson 10.1, in the Extension, students make sense of problems as the experiment with the length of a pendulum and the time it takes to swing back and forth one time (MP1). Students collect data, draw conclusions about their data, and justify their conclusions (MP3). In Lesson 8.1, students create a function to model a real-world situation and sketch a graph of the function (MP4). Students also learn how to use a graphing calculator to find the solution to an equation (MP5). In Lesson 7.3, students model the relationship between variables (toothpick triangles) with an algebraic equation (MP4). MP8 is evident in investigation 2 of Lesson 7.4 when students are prompted to repeatedly fold paper to observe the pattern created by the number of folds and the number of regions formed.</p>

³³ Refer also to criterion #8 in the K–8 [Publishers' Criteria](#) and #6 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013)

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
<p>Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 5a) Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.¹⁰</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>REQUIRED 5b) Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.¹⁰</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>5c) Materials base content progressions on the progressions in the Standards.³⁴</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>5d) Materials include learning objectives that are visibly shaped by CCSSM cluster headings and/or standards.³⁵</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	<p>5e) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.¹¹</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
<p>Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include</p>	<p>6a) Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.³⁶ Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard.³⁷ There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.

³⁴ Refer also to criterion #5 in the K–8 [Publishers' Criteria](#) and #3 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

³⁵ Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

³⁶ Refer also to criterion #9 in the K–8 [Publishers' Criteria](#) and #7 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

³⁷ Refer also to criterion #7 in the K–8 [Publishers' Criteria](#) and #5 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
additional content/skills to teach which are not included in the Standards. <input type="checkbox"/> Yes <input type="checkbox"/> No	development. Alignments to practice standards are accurate.		
	6b) Materials Support the Standards’ Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems. ³⁸	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	6c) Materials explicitly attend to the specialized language of mathematics. ¹²	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ³⁹ <input type="checkbox"/> Yes <input type="checkbox"/> No	7a) There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	7b) There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	7c) Support for English Language Learners and other special populations is thoughtful and helps those	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.

³⁸ Refer also to criterion #10 in the K–8 [Publishers’ Criteria](#) and #8 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

³⁹ Refer also to pages 18-20 in the K – 8 [Publishers’ Criteria](#) and pages 16-18 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	students meet the same standards as all other students. The language in which problems are posed is carefully considered.		
	7d) The underlying design of the materials distinguishes between problems and exercises. In essence the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	7f) Materials support the uses of technology as called for in the Standards.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.

FINAL EVALUATION

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 7.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria.

Tier 3 ratings receive a “No” in Column 1 for at least one of the non-negotiable criteria.

Compile the results for Sections I and II to make a final decision for the material under review.

Section	Criteria	Yes/No	Final Justification/Comments
I: Non-Negotiables	1. Focus on Major Work	No	While the materials devote 77% of the focus on major content appropriate for Grade 8, there are assessment items that hold students responsible for content that is beyond the Grade 8 standards.
	2. Consistent, Coherent Content	No	The materials sometime connect supporting content to major content in meaningful ways, however, most of the supporting content is taught in isolation.
	3. Rigor and Balance	No	For the most part, each lesson provides students with the opportunity build procedural skill, especially where called for in the standards. However, some lessons lack significant practice for students to achieve procedural understanding and are not given additional opportunities for practice at any other points during the course.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	4. Focus and Coherence via Practice Standards	Yes	The practice standards are addressed throughout the materials and strengthen student understanding of the major work.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	6. Alignment Criteria for Standards for Mathematical Practice	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	7. Indicators of Quality	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
FINAL DECISION FOR THIS MATERIAL: <u>Tier III, Not representing quality</u>			

Appendix I.

Publisher Response

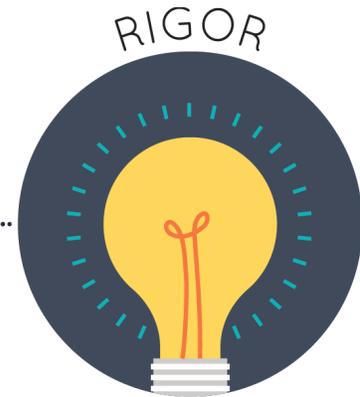
Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: **Discovery Education Math Techbook**

Grade/Course: **6-8**

Publisher: **Discovery Education**

Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
4. Focus Coh. via Practice Std (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
	2. Consistent, Coherent Content (Non-Negotiable)
	3. Rigor and Balance (Non-Negotiable)

Each set of submitted materials was evaluated for alignment with the standards beginning with a review of the indicators for the non-negotiable criteria. If those criteria were met, a review of the other criteria ensued.

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 7.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria.

Tier 3 ratings receive a “No” in Column 1 for at least one of the non-negotiable criteria.

Click below for complete grade-level reviews:

[Grade 6 \(Tier 3\)](#)

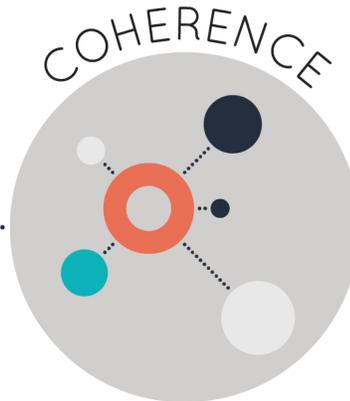
[Grade 7 \(Tier 3\)](#)

[Grade 8 \(Tier 3\)](#)

Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: **Discovery Education Math Techbook**

Grade/Course: **6**

Publisher: **Discovery Education**

Copyright: **2015**

Overall Rating: **Tier III, Not representing quality**

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
4. Focus Coh. via Practice Std (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
	2. Consistent, Coherent Content (Non-Negotiable)
	3. Rigor and Balance (Non-Negotiable)

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a “Yes” for all indicators in Column 2 for Section I, then the materials receive a “Yes” in Column 1. If there is a “No” for any indicator in Column 2 for Section I, then the materials receive a “No” in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a “Yes” for all required indicators in Column 2, then the materials receive a “Yes” in Column 1. If there is a “No” for any required indicators in Column 2, then the materials receive a “No” in Column 1.

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 7.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria.

Tier 3 ratings receive a “No” in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.				
<p>Non-Negotiable 1. FOCUS ON MAJOR WORK¹: Students and teachers using the materials as designed devote the large majority² of time to the major work of the grade/course.</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 1a) Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.</p>	<p>Yes</p>	<p>The materials present 13 units with 28 total concepts (i.e., lessons). Seventy-one percent (i.e., 20 out of 28) of the lessons are devoted to major content (e.g., 6.RP, 6.NS, 6.EE), while the rest focus on supporting or additional content (e.g., 6.G, 6.SP). The term concept is used to define a lesson. For the purposes of this review, the term “lesson” will be used to represent the term “concepts” as presented in the material headings.</p>	
	<p>REQUIRED 1b) In any one grade/course, aligned materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.³</p>	<p>No</p>	<p>Most materials and assessments focus on content appropriate for Grade 6. For example, Unit 1 assessment contains 11 questions that all align to 6.RP.1 and 6.RP.3. However, some assessment items hold students responsible for content that is beyond Grade 6 standards. For example, Unit 5 Assessment #1 requires students to understand subtraction of rational numbers as adding the additive inverse (7.NS.1). Unit 13 Assessment #s 2, 3, 5, 6 require students to solve real-world problems involving surface area of rectangular prisms and triangular prisms without a net (7.G.6).</p>	<p>To reach an appropriate level of rigor, Discovery Education strives to create assessment questions at Depth of Knowledge levels 3 and 4. In order to require a high cognitive effort on the part of the student, assessment questions may be presented abstractly, thereby allowing the student to justify their thinking and transfer knowledge from one domain to another. This can often be misconstrued as developmentally inappropriate; however, all students are capable of complex reasoning, and often that level of thinking allows students to reach beyond a given standard, even though it is not an expectation that they do so.</p> <p>6.G.A.4 requires that students develop nets on their own and use those nets to find surface area of 3-D figures. The four assessment items noted in the review have "nets made up of rectangles and triangles," which is consistent with the standard. Although requiring students to construct the net and then find the surface area makes these problems more challenging (likely DOK 3), we believe they are appropriate for Grade 6 and provide the level of rigor recommended by the Publishers' Criteria.</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				<p>It is noteworthy that, although we are a digital product, we are not opposed to students using paper and pencil. In Unit 13, for example, where students are given real-world problems involving surface area of prisms, it would be completely acceptable for students to draw and use a net in order to solve the problem based on the model of the prism given in the prompt. Students were able to develop fluency in creating nets of prisms throughout the concepts in this unit, and the assessment allows them to exhibit, connect, and apply what they've learned.</p>
<p>Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the Standards.</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 2a) Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.⁴</p>	<p>Yes</p>	<p>The materials connect major and supporting content. For example, Lesson 6.2 connects 6.G.3 to 6.NS.8 where students graph coordinate points to create given polygons, using absolute value to determine the distance between points, or the side lengths. The concepts presented in Lessons 12.1 and 12.2 connect standards 6.G.1, 6.G.2, and 6.EE.2. These lessons connect the domains of Geometry and Expressions and Equations. Lesson 7.2 discusses the use of formulas to find area and volume. Students solve surface area and volume problems by relating to previous work with algebraic expressions. Lesson 6.1 connects standards 6.NS.5, 6.NS.8, and 6.G.3. The application activity "Design a Garden" requires students to use a coordinate plane to connect coordinate graphing to design a garden. Lesson 13.1 relates standards 6.G.4 and 6.EE.2.</p>	
	<p>REQUIRED 2b) Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.⁵</p>	<p>No</p>	<p>In some cases, the materials include problems and activities that connect two or more clusters or two or more domains. For example, in Lesson 11.1, students learn about mean as a balancing point (6.SP.5) by manipulating counters to keep a number line balanced, moving one at a time on opposite sides, therefore cancelling each other out (6.NS.5).</p>	<p>With careful consideration of this review, we are unable to find any other example of where our instructional materials are not consistent and coherent across multiple domains. Connecting standards to course material, and to each other, is a major focus of our design. Although this concept doesn't explicitly cover unit rates, we have provided</p>

⁴ Refer also to criterion #3 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

⁵ Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			<p>However, there are some instances where standards are tagged to lessons in the teacher's edition, but the connection is not explicit. For example, the teacher's edition lists Lesson 2.1 standards as 6.NS.2, 6.RP.2, and 6.RP.3b. This lesson's main focus is on the long division algorithm (6.NS.2). While one of the problems presented leads students to find the unit rate (6.RP.3b) for cost of food boxes, the connection is not made explicit in either the teacher's edition or the student edition.</p>	<p>practice problems (for example, Coach #3, 5, and 7 in Unit 2, Concept 1) that allow students to make the connection between the standard algorithm for division and understanding unit rates. This conceptual understanding can be further applied as students fully discover unit rates in Unit 4, covering standards 6.RP.2 and 6.RP.3b. We believe that the connections to unit rate in Unit 2 set the stage for student understanding in Unit 4, which is why the standards are listed here.</p> <p>As a result of being a digital product, we have the capability to make instantaneous amendments to the Model Lesson and teacher notes in order to make these connections obvious to students. However, by philosophy, we fully expect students to draw their own connections as they reach subsequent instruction involving unit rates within the course.</p>
<p>Non-Negotiable 3. RIGOR AND BALANCE: Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application.⁶</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 3a) Attention to Conceptual Understanding: Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.</p>	<p>Yes</p>	<p>The materials use a variety of ways to develop student conceptual understanding. For example, Lesson 1.2 build student's conceptual understanding of ratio tables by looking for patterns in the table and describing the method they used to complete the table. Students build conceptual understanding of equivalent ratios using tape diagrams by analyzing a tape diagram to determine how it models the given ratio (6.RP.3). Lesson 3.1 builds student's conceptual understanding of dividing fractions by fractions by exploring how to feed monsters, then explaining, based on their explorations, how fraction division is different than whole number division (6.NS.1). Lesson 13.2 builds student's conceptual understanding of finding the volume of rectangular prisms with fractional edge lengths using centimeter cubes. Students analyze 3 different methods to determine which would work and why (6.G.2). In addition, the discover sections of each lesson provide instructions that develop conceptual understanding. Response questions and</p>	

⁶ Refer also to criterion #4 in the K–8 [Publishers' Criteria](#) and #2 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			tasks require students to frequently model and explain concepts, thinking processes, strategies, and justifications. Each unit provides at least one opportunity for students to discuss or explain concepts with their seat partners. Many of these collaborative opportunities stem from discussion questions.	
	<p>REQUIRED 3b) Attention to Procedural Skill and Fluency: The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.</p>	No	<p>There are two standards (6.NS.2 and 6.NS.3) that require fluency for 6th grade. For example, standard 6.NS.2 specifically calls for fluency with multi-digit division of whole numbers using the standard algorithm. This topic is introduced in Lesson 2.1. In this concept, students are required to do the long division algorithm twice within the two investigations, and only two out of the ten practice problems require students to do the long division algorithm. This standard is never revisited in the materials. In addition, standard 6.NS.3 calls for fluency with adding, subtracting, multiplying, and dividing multi-digit decimals using the standard algorithm for each operation. This topic is introduced in Lesson 3.2, where the focus is on conceptual understanding and application to real-world problems. There is actually only one problem with no context for students to solve in the practice section, and the numbers go to the hundredths place, which was taught in Grade 5. This standard is never revisited in the materials.</p>	<p>Discovery Education Math Techbook is divided into units, and each unit is subdivided into concepts. Each concept develops student understanding through the Discover, Practice, and Apply cycle. The development of procedural skill and fluency is included in all three sections of every concept, demonstrating a significant emphasis on procedural skill and fluency where appropriate for the standards.</p> <p>Opportunities to develop procedural skills and build fluency occur through the Investigations in the Discover section. Each Discover section also includes Checks for Understanding that appear at the bottom of each Investigation. The entire Practice section, which includes a Coach section with structured feedback and a Play section with more opportunities for practice, is the centerpiece of each concept. In the Apply section, students have additional opportunities to apply their procedural skills through 2-3 multi-step, real-world problems. Additional opportunities to develop fluency are provided by the Math Assessment Builder feature supplied to all Math Techbook subscribers. Not including the Math Assessment Builder items, there are over 5,000 individual practice items within Discovery Education Math Techbook.</p> <p>We believe that the examples cited as insufficient practice do, in fact, have multiple opportunities for students to practice toward attainment of fluency standards. Most notably, the Checks for Understanding provided at the bottom of each Investigation and the Practice section provide</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				<p>numerous items, and the additional resources provided in the Math Assessment Builder, which is available to all Math Techbook subscribers, offer a database of additional practice items.</p> <p>Regarding Lesson 3.2, we disagree with the contention that the practice problems do not reach beyond Grade 5. Although 5.NBT.B.7 specifically notes that students will work with decimals to the hundredths, there is nothing in 6.NS.B.3 implying that students must take it to a greater number of decimal places. The change for grade 6 is that students use the standard algorithm to solve problems, rather than relying on manipulatives, drawings, or other methods. Consequently, we believe that the practice problems in this concept appropriately address the standards.</p>
	<p>REQUIRED 3c) Attention to Applications: Materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the major work of each grade/course including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.</p>	<p>Yes</p>	<p>Students are exposed to many high quality and engaging applications. Real-life applications are provided within every lesson. Students are provided opportunities to apply concepts to real life within the discovery and application sections of each lesson. Lesson 3.1 models various situations involving division of fractions (6.NS.1), including dividing sandwiches for a catering event, dividing "monster meals", modeling clay, cutting ribbon, dividing fish bait, preparing for a hike, making bracelets with string, measuring soup ingredients, and travel times. Lesson 5.1 supports standards 6.NS.5-6 by requiring students to graph and compare freezing temperatures, compare and order elevations, evaluate plus and minus ratings of hockey teams, evaluate and determine opposites in real life situations. Lesson 5.3 requires students to justify a student's definition of absolute value (6.NS.7). These activities require students to use problem-solving skills. The discovery and application components of Units 12 and 13 provide many engaging applications of standards 6.G.1-4 where students solve real-life problems involving area, surface area, and volume.</p>	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	<p>REQUIRED 3d) Balance: The three aspects of rigor are not always treated together and are not always treated separately.</p>	Yes	<p>The three aspects of rigor are not always treated together and are not always treated separately. For example, in Lesson 13.2, students build conceptual understanding of finding the volume of rectangular prisms with fractional edge lengths using centimeter cubes. Students analyze three different methods to determine which would work and why. Students then apply this concept to real-world problems, such as determining the volume of concrete needed to make a base for a statue. In the practice section of this lesson, students have 10 problems to build procedural skill with finding volume of rectangular prisms with fractional edge lengths.</p>	
<p>Non-Negotiable 4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.⁷</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 4a) Materials address the practice standards in such a way as to enrich the major work of the grade/course; practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.</p>	Yes	<p>The practice standards are addressed throughout the materials and strengthen student understanding of the major work. Materials correlate the math practice standards well within lesson overviews and teacher notes by providing opportunities for students to use a variety of math practice standards. For example, in Lesson 1.2, students model (MP4) equivalent ratios using tape diagrams (6.RP.3) and explain what each part of the diagram represents (MP1). In the introduction of Lesson 2.1, students solve a non-routine problem involving division of multi-digit numbers (6.NS.1) using whatever strategy they want, forcing them to make sense of the problem (MP1). In Lesson 5.3, students discuss integers on a number line and the reasoning behind their choices (MP3). Students also play a game, and then draw conclusions about what absolute value means based on their experiences (MP8). In Lesson 6.1, students use precision (MP6) in identifying the rational number coordinate points (6.NS.8). In Lesson 6.2, students make use of structure by using what they know about finding distance between numbers on a number line to find distances between points on a coordinate plane (MP7). In</p>	

⁷ Refer also to criterion #8 in the K–8 [Publishers' Criteria](#) and #6 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013)

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			Lesson 13.2, students use tools strategically (MP5) as they use centimeter cubes to determine the volume of boxes (6.G.2).	
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY				
<p>Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 5a) Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.¹⁰</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	<p>REQUIRED 5b) Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.¹⁰</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	<p>5c) Materials base content progressions on the progressions in the Standards.⁸</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	<p>5d) Materials include learning objectives that are visibly shaped by CCSSM cluster headings and/or standards.⁹</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	<p>5e) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.¹¹</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
<p>Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful</p>	<p>6a) Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.¹⁰ Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that</p>	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	

⁸ Refer also to criterion #5 in the K–8 [Publishers' Criteria](#) and #3 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

⁹ Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

¹⁰ Refer also to criterion #9 in the K–8 [Publishers' Criteria](#) and #7 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
<p>and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>stimulate students to develop the habits of mind described in the practice standard.¹¹ There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. Alignments to practice standards are accurate.</p>			
	<p>6b) Materials Support the Standards' Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.¹²</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
	<p>6c) Materials explicitly attend to the specialized language of mathematics.¹²</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
<p>Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards.¹³</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>7a) There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
	<p>7b) There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	

¹¹ Refer also to criterion #7 in the K–8 [Publishers' Criteria](#) and #5 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

¹² Refer also to criterion #10 in the K–8 [Publishers' Criteria](#) and #8 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

¹³ Refer also to pages 18-20 in the K – 8 [Publishers' Criteria](#) and pages 16-18 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

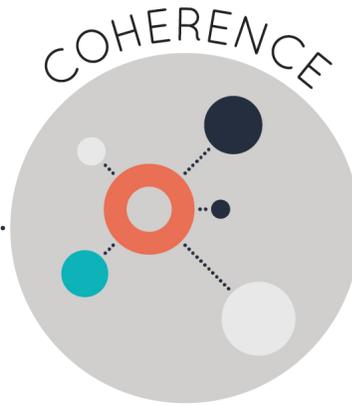
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	of desired mathematical behaviors being elicited among students.			
	7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	7d) The underlying design of the materials distinguishes between problems and exercises. In essence the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	7f) Materials support the uses of technology as called for in the Standards.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
FINAL EVALUATION <i>Tier 1 ratings</i> receive a “Yes” in Column 1 for Criteria 1 – 7. <i>Tier 2 ratings</i> receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria. <i>Tier 3 ratings</i> receive a “No” in Column 1 for at least one of the non-negotiable criteria.				
Compile the results for Sections I and II to make a final decision for the material under review.				
Section	Criteria	Yes/No	Final Justification/Comments	
I: Non-Negotiables	1. Focus on Major Work	No	While the materials devote 71% of the lessons on the major work of the grade, there are assessment items that hold students responsible for content that is beyond Grade 6 standards.	Please see the response to Criterion 1b, above.
	2. Consistent, Coherent Content	No	There are instances where standards are tagged to lessons in the teacher's edition, but the connection is not explicit within the lesson.	Please see the response to Criterion 2b, above.
	3. Rigor and Balance	No	There are two standards (6.NS.2 and 6.NS.3) that require fluency for 6th grade however there is lack	Please see the response to Criterion 3b, above.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			of practice to guarantee student fluency for the two standards.	
	4. Focus and Coherence via Practice Standards	Yes	The practice standards are addressed throughout the materials and strengthen student understanding of the major work.	
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	6. Alignment Criteria for Standards for Mathematical Practice	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	7. Indicators of Quality	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
FINAL DECISION FOR THIS MATERIAL: Tier III, Not representing quality				

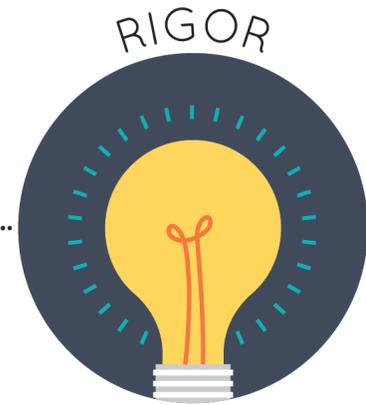
Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: Discovery Education Math Techbook

Grade/Course: 7

Publisher: Discovery Education

Copyright: 2015

Overall Rating: **Tier III, Not representing quality**

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
4. Focus Coh. via Practice Std (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
	2. Consistent, Coherent Content (Non-Negotiable)
	3. Rigor and Balance (Non-Negotiable)

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a “Yes” for all indicators in Column 2 for Section I, then the materials receive a “Yes” in Column 1. If there is a “No” for any indicator in Column 2 for Section I, then the materials receive a “No” in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a “Yes” for all required indicators in Column 2, then the materials receive a “Yes” in Column 1. If there is a “No” for any required indicators in Column 2, then the materials receive a “No” in Column 1.

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 7.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria.

Tier 3 ratings receive a “No” in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.				
<p>Non-Negotiable 1. FOCUS ON MAJOR WORK¹⁴: Students and teachers using the materials as designed devote the large majority¹⁵ of time to the major work of the grade/course.</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 1a) Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.</p>	<p>No</p>	<p>The materials present 12 units with 27 total concepts (i.e., lessons). Fifty-five percent (55%) is focused on major content (e.g., 7.RP, 7.NS, and 7.EE), while the rest focus on supporting or additional content (e.g., 7.SP and 7.G). The term concept is used to define a lesson. For the purposes of this review, the term “lesson” will be used to represent the term “concepts” as present in the material headings.</p>	<p>The Common Core State Standards for Mathematics identify nine clusters in Grade 7, four of which are labeled Major Work. Our philosophy in designing the Grade 7 instructional materials was to begin the course by directly focusing on the Major Work clusters at the beginning of the year, and to follow with supporting content that emphasizes the Major Work clusters later in the year. For instance, the major work related to ratio and proportion in Units 3 and 4 is bolstered when students investigate probability in Units 8 and 9; proportional reasoning is used repeatedly to understand probability concepts and to solve proportion problems.</p> <p>We contend that our strong emphasis on connecting the supporting content to the Major Work clusters allows students to continue to practice major work skills and refine their understanding of ratios and proportions, rational numbers, and algebraic expressions and equations in context. We believe that students who follow our progressions will devote considerable class time to Major Work content in the second half of the year as they explore proportionality in probability and statistics units as well as expressions and equations in geometry units. By our account, students will focus directly on major work standards in 69% of instructional hours.</p> <p>We believe that the method used to count which concepts in Math Techbook align to major work is misguided. Many concepts in the later units may have up to 49% of their material aligned with the major work standards, but the binary approach (either "it is" or "it isn't") doesn't give credit where</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	<p>REQUIRED 1b) In any one grade/course, aligned materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.¹⁶</p>	No	<p>Most materials and assessments focus on content appropriate for Grade 7. For example, Unit 1 assessment contains 12 questions that all align to 7.NS.1-3. However, some assessment items hold students accountable for topics beyond 7th grade standards. For example, Unit 2 Assessment #1 requires students to sort numbers as being rational or irrational (8.NS.1). Question #7 on the same assessment asks students to explain why π is rational or irrational (8.NS.1). Unit 10 Assessment #5 requires students to have and apply knowledge of similarity of two-dimensional triangles (8.G.4).</p>	<p>credit is due. Extreme care was taken in the design of Math Techbook to ensure that students regularly revisit important ideas.</p> <p>We strive for 100% fidelity to the Common Core Standards for Mathematics. We continually work with our design and assessment teams to ensure that all items are appropriate for a given course. As a result of our own internal review--which happened concurrently with the LA state review--the problematic items noted in the review, as well as a few others, have already been replaced or will be replaced in Summer 2016.</p>
<p>Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the Standards.</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 2a) Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.¹⁷</p>	No	<p>The materials sometime connect supporting content to major content in meaningful ways. For example, Lesson 8.3 connects supporting standards 7.SP.6-7, understanding probabilities, to major standards 7.RP.2 and 7.RP.3, deciding whether two quantities are in a proportional relationship. However, Unit 7: Populations and Samples focuses on supporting and additional content 7.SP.1-4 with no connection to the major work of Grade 7, and Unit 9: Probability of Multiple Events focuses on 7.SP.8 in isolation.</p>	<p>We believe that Unit 7: Population and Samples connects to the major work of Grade 7. Standard 7.SP.1 requires students to understand the relationship between populations and samples. Standards 7.SP.2 and 7.SP.4 require students to use sample data to draw inferences about populations. Using a variety of modalities, including direct calculations, interactive tools, and class discussion, students identify the proportional relationship between sample and population statistics throughout the unit. We disagree that 7.SP.8 is addressed in isolation, as this standard requires students to find the numerical probability of compound events, which necessarily requires students to solve multi-step ratio problems, in support of 7.RP.3.</p>

¹⁶ Refer also to criterion #2 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

¹⁷ Refer also to criterion #3 in the K–8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	<p>REQUIRED 2b) Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.¹⁸</p>	Yes	<p>The materials connect standards in two or more clusters or domains. For example, Lesson 4.2 includes problems and activities that connect 7.G.1 and 7.RP.3 where students use proportional relationships to solve problems involving scale drawings. Lessons 5.3, 6.1, and 6.2 include problems and activities that connect clusters 7.EE.A and 7.EE.B where students use properties of operations to solve real-world and mathematical problems. Lesson 10.1 includes problems and activities that connect 7.G.5 and 7.EE.4 as students write and solve equations to find missing angle measures. Lesson 10.3 connects standards 7.G.6, 7.NS.1, 7.EE.1, and 7.EE.3 to find the area of complex polygons. Lesson 12.1 requires students to find the percentage of space left in a cooler and write an expression to find the leftover volume (7.G.6 and 7.EE.4).</p>	
<p>Non-Negotiable 3. RIGOR AND BALANCE: Each grade’s instructional materials reflect the balances in the Standards and help students meet the Standards’ rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application.¹⁹</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 3a) Attention to Conceptual Understanding: Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.</p>	Yes	<p>Throughout the materials, students have opportunities to develop conceptual understanding of key mathematical concepts. For example, in Lesson 6.1, students express conceptual understanding of 7.EE.4, as required by the standard, as they identify what value makes an equation true and explain how they know. In Lesson 12.1, students develop conceptual understanding of 7.G.3 by using an online tool to create cross-sections of prisms and pyramids. Students also describe the results of slicing given solids and explain how they know what the results would be. In addition, the discover sections of lessons provide instruction that develops conceptual understanding. Response questions and tasks require students to frequently model and explain concepts, thinking processes, strategies, and justifications. Each unit provides at least one opportunity for students to discuss or explain concepts with partners. Many of these collaborative opportunities stem from discussion questions. The investigations of Lesson 6.1 model</p>	

¹⁸ Refer also to criterion #6 in the K–8 [Publishers’ Criteria](#) and #4 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

¹⁹ Refer also to criterion #4 in the K–8 [Publishers’ Criteria](#) and #2 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			and solve algebraic equations with algebra tiles and scale balances. Investigation 2 of Lesson 1.2 requires students to explain the math property that was used to create an equivalent expression.	
	<p>REQUIRED</p> <p>3b) Attention to Procedural Skill and Fluency: The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.</p>	No	<p>In each lesson, students have the opportunity build procedural skill in the practice section. However, standard 7.EE.4a requires students to be able to solve equations of the form $px + q = r$ and $p(x + q) = r$ fluently. In the materials, students have the opportunity to develop this skill only Unit 5. But, few opportunities are provided for students to solve equations in the form $px + q = r$ and $p(x + q) = r$ beyond the initial lessons.</p>	<p>Discovery Education Math Techbook is divided into units, and each unit is subdivided into concepts. Each concept develops student understanding through the Discover, Practice, and Apply cycle. The development of procedural skill and fluency is included in all three sections of every concept, demonstrating a significant emphasis on procedural skill and fluency where appropriate for the standards.</p> <p>Opportunities to develop procedural skills and build fluency occur through the Investigations in the Discover section. Each Discover section also includes Checks for Understanding that appear at the bottom of each Investigation. The entire Practice section, which includes a Coach section with structured feedback and a Play section with more opportunities for practice, is the centerpiece of each concept. In the Apply section, students have additional opportunities to apply their procedural skills through 2-3 multi-step, real-world problems. Additional opportunities to develop fluency are provided by the Math Assessment Builder feature supplied to all Math Techbook subscribers. Not including the Math Assessment Builder items, there are over 5,000 individual practice items within Discovery Education Math Techbook.</p> <p>For 7.EE.4a, a variety of practice problems are available through the Checks For Understanding that appear at the bottom of each Investigation as well as through the problems in the Practice section. Moreover, practice solving these types of equations happens both explicitly and implicitly in the rest of the course. For instance, in Unit 10, Concept 1, students are asked to find the angle measures in an "angle of reflection" situation in Investigation 3,</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				which implies the equation $2x + 36 = 180$; more explicitly, Coach #7 in the same unit and concept provides algebraic expressions for angle measures, which necessitate students solving one of the equations $13x - 1 = 90$ or $12x + 6 = 90$. Likewise, Play #2 leads to $3x - 5 = x + 75$.
	<p>REQUIRED 3c) Attention to Applications: Materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the major work of each grade/course including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.</p>	Yes	<p>Students are exposed to many high quality and engaging applications. Real-life applications are provided within every lesson. Students are provided opportunities to apply concepts to real life within the discovery and application sections of each lesson. The application of Lesson 7.1 "Which Stock Should You Buy?" prompts students to investigate positive and negative stock changes (7.NS.1). The application "What is Salt?" supports standards 7.NS.1 by prompting students to observe the protons and neutrons of sodium and chlorine atoms. Students observe that the opposite quantities balance at zero. Lesson 2.1 relates rational numbers to real life situations including cooking, sales, temperature, and stocks. Within the introduction of Lesson 3.1 students apply standard 7.RP.2 in order to determine Di Vinci's ratios. Investigation 3 of Lesson 3.1 requires students to find units related to driver distances and speeds (7.RP.1). The application "Following Proportions" of concept 3.2 requires students to use proportions to determine the amount of water needed to make a similar large pizza. In Lesson 4.2, students use their knowledge of scale drawing to create a map of the Grand Canyon using a given scale, as required by the standards. Students solve problems involving the scale drawing (7.G.1). In Lesson 5.3, students solve multi-step real-world and mathematical problems with positive and negative rational numbers, as required by the standard (7.EE.3).</p>	
	<p>REQUIRED 3d) Balance: The three aspects of rigor are not always treated together and are not always treated separately.</p>	Yes	<p>The three aspects of rigor are not always treated together and are not always treated separately. For example, in Lesson 2.2, students first build conceptual understanding of multiplying and dividing rational numbers by explaining strategies</p>	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			they use, determining statements that are always true for rational numbers, and proving false statements false by providing counterexamples. Students go on to apply the skill to real-world problems, such as deciding what kind of sandwiches to order on a budget and how they should be cut for a party. The Check for Understanding after Investigation 3 in this concept includes 2 opportunities for application to real-world problems and a prompt to explain thinking and 3 problems to practice procedural skill.	
<p>Non-Negotiable 4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.²⁰</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>REQUIRED 4a) Materials address the practice standards in such a way as to enrich the major work of the grade/course; practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.</p>	<p>Yes</p>	<p>The practice standards are addressed throughout the materials and strengthen student understanding of the major work. Materials correlate the math practice standards well within lesson overviews and teacher notes by providing opportunities for students to use a variety of math practice standards. Lessons enrich work by providing opportunities for students to use a variety of mathematical practices. Investigation 3 in Lesson 1.2 requires students to discuss strategies with partners (MP3). Students describe conjectures about the product of signed numbers within the introduction of Lesson 2.1. Students explain the concept of calculating the average cost per pound of elk jerky within the introduction of Lesson 3.1. Investigations 3 and 4 of Lesson 1.3 use number lines to model and simplify expressions and exercises prompt students to model the product of integers on a number line (MP4). MP7 is applied when students discuss with a partner what it means to be proportional within Lesson 4.1 (MP3). Students are required to develop conjectures through the units (MP1). Students create conjectures to describe how to determine whether or not proportionality exists within the "check for understanding" assessment of Lesson 4.1 (MP1). In Lesson 5.3, students reason abstractly and quantitatively as they determine the meaning of terms in algebraic equations in context (MP2).</p>	

²⁰ Refer also to criterion #8 in the K–8 [Publishers' Criteria](#) and #6 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013)

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			In Lesson 6.1, students make sense of numerical relationships in context (MP1) and write algebraic equations to model real-world problems (MP4). In Lesson 10.2, students construct triangles, record the side lengths, and then look patterns in the side lengths to conclude that the sum of the two shorter sides must be greater than the longest side (MP7).	
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY				
Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. <input type="checkbox"/> Yes <input type="checkbox"/> No	REQUIRED 5a) Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year. ¹⁰	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	REQUIRED 5b) Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge. ¹⁰	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	5c) Materials base content progressions on the progressions in the Standards. ²¹	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	5d) Materials include learning objectives that are visibly shaped by CCSSM cluster headings and/or standards. ²²	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	5e) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. ¹¹	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL	6a) Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard. ²³ Over the course of any given year of instruction, each	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	

²¹ Refer also to criterion #5 in the K–8 [Publishers' Criteria](#) and #3 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

²² Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

²³ Refer also to criterion #9 in the K–8 [Publishers' Criteria](#) and #7 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
<p>PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard.²⁴ There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. Alignments to practice standards are accurate.</p> <p>6b) Materials Support the Standards' Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.²⁵</p> <p>6c) Materials explicitly attend to the specialized language of mathematics.¹²</p>			
<p>Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards.²⁶</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>7a) There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.</p> <p>7b) There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of students</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	

²⁴ Refer also to criterion #7 in the K–8 [Publishers' Criteria](#) and #5 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

²⁵ Refer also to criterion #10 in the K–8 [Publishers' Criteria](#) and #8 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

²⁶ Refer also to pages 18-20 in the K – 8 [Publishers' Criteria](#) and pages 16-18 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

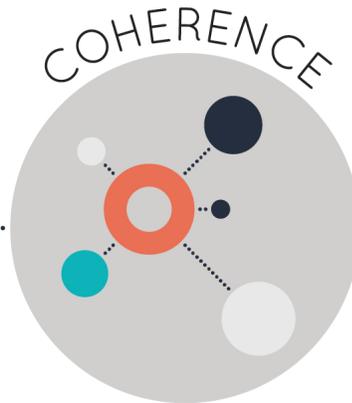
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.			
	7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	7d) The underlying design of the materials distinguishes between problems and exercises. In essence the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	7f) Materials support the uses of technology as called for in the Standards.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
FINAL EVALUATION <i>Tier 1 ratings</i> receive a “Yes” in Column 1 for Criteria 1 – 7. <i>Tier 2 ratings</i> receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria. <i>Tier 3 ratings</i> receive a “No” in Column 1 for at least one of the non-negotiable criteria.				
Compile the results for Sections I and II to make a final decision for the material under review.				
Section	Criteria	Yes/No	Final Justification/Comments	
I: Non-Negotiables	1. Focus on Major Work	No	Only fifty-five percent of the lessons focus on major content (e.g., 7.RP, 7.NS, and 7.EE), while the rest focus on supporting or additional content (7.SP and 7.G). In addition, there are assessment items that hold students responsible for content that is beyond the Grade 7 standards.	Please see the response to Criteria 1a and 1b, above.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	2. Consistent, Coherent Content	No	The materials sometime connect supporting content to major content in meaningful ways; however, most of the supporting content is taught in isolation.	Please see the response to Criteria 2a, above.
	3. Rigor and Balance	No	There is one standard (i.e., 7.EE.4) that requires fluency for 7th grade; however, there is lack of practice to guarantee student fluency for this standard.	Please see the response to Criteria 3b, above.
	4. Focus and Coherence via Practice Standards	Yes	The practice standards are addressed throughout the materials and strengthen student understanding of the major work.	
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	6. Alignment Criteria for Standards for Mathematical Practice	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	7. Indicators of Quality	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
FINAL DECISION FOR THIS MATERIAL: Tier III, Not representing quality				

Strong mathematics instruction contains the following elements:



Focus strongly where the standards focus.



Think across grades, and link to major topics within grades.



In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.

Title: Discovery Education Math Techbook

Grade/Course: 8

Publisher: Discovery Education

Copyright: 2015

Overall Rating: **Tier III, Not representing quality**

Tier I, Tier II, Tier III Elements of this review:

STRONG	WEAK
4. Focus Coh. via Practice Std (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
	2. Consistent, Coherent Content (Non-Negotiable)
	3. Rigor and Balance (Non-Negotiable)

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a “Yes” for all indicators in Column 2 for Section I, then the materials receive a “Yes” in Column 1. If there is a “No” for any indicator in Column 2 for Section I, then the materials receive a “No” in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a “Yes” for all required indicators in Column 2, then the materials receive a “Yes” in Column 1. If there is a “No” for any required indicators in Column 2, then the materials receive a “No” in Column 1.

Tier 1 ratings receive a “Yes” in Column 1 for Criteria 1 – 7.

Tier 2 ratings receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria.

Tier 3 ratings receive a “No” in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.				
<p>Non-Negotiable 1. FOCUS ON MAJOR WORK²⁷: Students and teachers using the materials as designed devote the large majority²⁸ of time to the major work of the grade/course.</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 1a) Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.</p>	<p>Yes</p>	<p>The materials present 11 units with 26 total concepts (lessons). Seventy-seven percent (i.e., 20 of 26) of the lessons focus on major content (e.g., 8.EE, 8.F and 8.G), while the rest focus on support or additional content (8.NS, 8.SP and 8.G). The term concept is used to define a lesson. For the purpose of this review, the term “lesson” will be used to represent the term “concepts” as present in the material headings.</p>	
	<p>REQUIRED 1b) In any one grade/course, aligned materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In aligned materials there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.²⁹</p>	<p>No</p>	<p>Most materials and assessments focus on content appropriate for Grade 8. In most instances, unit progressions and standards note when the content is reaching ahead and is reaching back to standards. This is demonstrated in the Unit 1 assessment which contains 13 questions that all align to 8.EE.1. However, in the Unit 2 Assessment, question 8 is assessing students to explain why $x \wedge \frac{1}{2} = \sqrt{x}$, which aligns with HSN.RN.A.1. Eighth grade standards only require students to understand that the $\sqrt{2}$ is irrational.</p>	<p>In consideration of the Common Core Standards and Publisher's Criteria, care was taken to build conceptual understanding by strengthening the students' grasp on the major work of the course. For example, an understanding of $\sqrt{x}=x^{1/2}$ and $\sqrt[3]{x}=x^{1/3}$ were natural progressions of the concepts of square root and cube root, following the development of concepts related to exponents. Radical exponents are covered fully in our Algebra I course, and a brief mention of the connection was made here to solidify student understanding; it is not the intention that all of HSN.RN.A.1 would be covered in Grade 8.</p> <p>Because the connection between square/cube roots and radical exponents was made in the Discover section, we believed it was appropriate to ask one question about it within the practice or assessment items.</p> <p>Following the Publishers' Criteria, no more than a handful of items beyond the recommended content for Grade 8 were included in the assessments for this course, and those few items were meant to foster coherence and connections. We believe this</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				falls within the recommendation that "minimal time" be spent on content beyond the course.
<p>Non-Negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the Standards.</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 2a) Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.³⁰</p>	<p>No</p>	<p>The materials sometime connect supporting content to major content in meaningful ways. For example, Lesson 2.1 connects 8.NS.2 and 8.EE.2, as students compare what happens when they take the square root of a perfect square and a non-perfect square. However, supporting content 8.SP.1-4 are all taught in isolation.</p>	<p>Grade 8 content related to linear equations falls under the scope of not only guidelines set forth in the Publisher's Criteria but also within CCSSM documentation. According to Common Core, "modeling an association in bivariate data with a linear equation" is included in the description of the first of three critical areas. It is understood that 8.SP Standards 1-4 represent supporting content. However, great care was taken to present curriculum content designed to satisfy Common Core protocol and to also connect that supporting content to major work. For example, Investigation 2 in Grade 8, Unit 10, Concept 2 where content related to 'best fit lines' is introduced, the opening statement is presented as follows: "In investigation 1, you learned that associations help explain relationships between two variables represented in a scatterplot. Use the Best Fit Line Interactive to identify the variables and associations for each of the following data sets." This statement is evidence of attempts made to connect not only the topics within the SP domain but also to those standards classified as major work within other domains.</p> <p>The Model Lesson for Grade 8, Unit 10, attempts to establish the connection between the SP standards and the major work. Concept 1 covers 8.SP.1-4, while 8.F.B.4-5 are listed as "reach-back" standards; and, Concept 2 covers 8.SP.A.2-3, while 8.F.A.2 and 8.F.B.4 are listed as "reach-back" standards. As an example, the interactive used in Investigation 2 of Unit 10, Concept 2 connects the line of best fit for a scatter plot with its equation; further, the questions that follow the interactive ask students to connect</p>

³⁰ Refer also to criterion #3 in the K-8 [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	<p>REQUIRED 2b) Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.³¹</p>	Yes	<p>The materials connect standards in two or more clusters and domains. For example, Lesson 7.1 includes problems and activities that connect 8.EE.5, 8.F.3, and 8.F.4. Lesson 7.3 includes problems and activities that connect 8.F.1-5, 8.G.3, and 8.EE.6. Lesson 8.1 includes problems and activities that connect 8.EE.7 and 8.EE.4-5.</p>	<p>the equation to the context. Although this interactive is primarily focused on content related to 8.SP.A.2, it draws a strong connection to the requirement for students to interpret functions of the form $y = mx + b$ as outlined in 8.F.A.3.</p>
<p>Non-Negotiable 3. RIGOR AND BALANCE: Each grade’s instructional materials reflect the balances in the Standards and help students meet the Standards’ rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application.³²</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>REQUIRED 3a) <i>Attention to Conceptual Understanding:</i> Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.</p>	Yes	<p>Materials develop conceptual understanding of key concepts in a variety of ways. For example, in Lesson 1.1, students build conceptual understanding of 8.EE.1 as they compare expanded expressions to simplified expressions, and then draw conclusions about multiplying powers with like bases. They also form a conjecture about how exponents and multiplication are related and then defend the conjecture to a partner. In Lesson 2.1, students explore what it means for a square number or a cubic number to be perfect through visuals and they explain what happens when taking the square of a perfect square number or a non-perfect square number (8.EE.2, 8.NS.2). In Lesson 2.2, students analyze a strategy for converting a repeating decimal to a rational number, then use their findings to solve problems of their own. In the Check for Understanding, students must also explain why the original equation had to be multiplied by 1,000 and 10,000 to convert the decimal to a fraction. (8.NS.1). In Lesson 3.1, students analyze various examples of reflections, then write the meaning of a reflection in their own words. Students must also create a pattern from a single image using transformations, then describe the transformations used (8.G.1). In Lesson 11.1, students use what they know about</p>	

³¹ Refer also to criterion #6 in the K–8 [Publishers’ Criteria](#) and #4 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

³² Refer also to criterion #4 in the K–8 [Publishers’ Criteria](#) and #2 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			<p>volume of rectangular prisms to determine the formula for the volume of a cylinder (8.G.9). In addition, the discover sections of lessons provide instruction that develops conceptual understanding. Response questions and tasks require students to frequently model and explain concepts, thinking processes, strategies, and justifications. Each unit provides at least one opportunity for students to discuss or explain concepts with partners. Many of these collaborative opportunities stem from discussion questions.</p>	
	<p>REQUIRED 3b) Attention to Procedural Skill and Fluency: The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.</p>	<p>No</p>	<p>For the most part, each lesson provides students with the opportunity to build procedural skill, especially where called for in the standards. For example, in Lesson 2.1, the Check for Understanding has 11 problems for students to practice with square roots and cube roots (8.EE.2). Lesson 2.2 has 5 problems where students practice converting from a decimal expansion to a rational number (8.NS.1). In Lesson 4.3, there are 13 problems for students to build procedural skill with using the Pythagorean theorem to find the distance between points in a coordinate system, as required by the standard (8.G.8). However, Lesson 9 is the only opportunity that provides for students to practice and master analyzing and solving pairs of simultaneous equations (8.EE.8). This standard requires all three aspects of rigor. While conceptual understanding and application are addressed, there is a lack of problems for procedural skill and fluency to be mastered.</p>	<p>Discovery Education Math Techbook is divided into units, and each unit is subdivided into concepts. Each concept develops student understanding through the Discover, Practice, and Apply cycle. The development of procedural skill and fluency is included in all three sections of every concept, demonstrating a significant emphasis on procedural skill and fluency where appropriate for the standards.</p> <p>Opportunities to develop procedural skills and build fluency occur through the Investigations in the Discover section. Each Discover section also includes Checks for Understanding that appear at the bottom of each Investigation. The entire Practice section, which includes a Coach section with structured feedback and a Play section with more opportunities for practice, is the centerpiece of each concept. In the Apply section, students have additional opportunities to apply their procedural skills through 2-3 multi-step, real-world problems. Additional opportunities to develop fluency are provided by the Math Assessment Builder feature supplied to all Math Techbook subscribers. Not including the Math Assessment Builder items, there are over 5,000 individual practice items within Discovery Education Math Techbook.</p> <p>In regards to the specific example about simultaneous equations, the review mentions</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	<p>REQUIRED 3c) Attention to Applications: Materials are designed so that teachers and students spend sufficient time working with engaging applications, without losing focus on the major work of each grade/course including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.</p>	Yes	<p>Students are exposed to many high quality and engaging applications. Real-life applications are provided within every concept. Students are provided opportunities to apply concepts to real life within the discovery and application sections of each lesson. For example, in Lesson 5.2, students use scientific notation to solve real-world problems as required by standard 8.EE.4. Lesson 6.1 develops understanding of interior and exterior angles by finding and observing changes within reclined positions (8.G.5). Within the investigation "Squaring Up" students use knowledge of perfect squares and square roots to tile a shower (8.NS.1). Students apply standard 8.G.7 in investigation 4 of Lesson 4.1 by writing a Pythagorean Theorem equation that will help calculate the missing length within a video game design. Within application 2 of Lesson 4.1 students discover and describe how the Pythagorean Theorem can be used to complete a search and rescue mission (8.G.7). Within Lesson 7.1 students translate a real life situation involving a</p>	<p>"Lesson 9," and we believe that this refers to Unit 9. That unit contains a Concept with 6 Investigations: Inv 1-2 set the stage with graphing and variable identification; Inv 3-5 outline methods for solving systems; and investigation 6 contains an interactive that will generate an infinity of examples. The interactive puts learners in control, and they can decide how much practice they need. In addition, a Check For Understanding PDF is provided at the bottom of each Investigation, which provides practice problems for students to solve; and, all of the items within the Practice section provide opportunities for students to solve systems of equations. With more than 40 items on the CFU and within the Practice section, several more available through Math Assessment Builder that is provided as part of the Discovery Education platform, as well as a limitless supply of problems that can be generated with the interactive described above, we believe that there is ample opportunity for students to develop procedural fluency for standard 8.EE.8.</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			constant rate to a table and equation. In Lesson 10.1, students use their knowledge of scatterplots to mathematical and real-world problems as they interpret scatterplots for bivariate measurement data (8.SP.1). For example, students analyze a given scatterplot and then choose the statement that best represents the data. In Lesson 11.1, students use their knowledge of formulas of cones, cylinders, and spheres to solve real-world and mathematical problems, such as when they determine how many cones of water it will take to fill the given hemisphere (8.G.9).	
	<p>REQUIRED 3d) Balance: The three aspects of rigor are not always treated together and are not always treated separately.</p>	Yes	The three aspects of rigor are not always treated together and are not always treated separately. For example, in Lesson 4.3, Investigation 1, students use the Pythagorean theorem in a real-world situation to find a route for the courier, then display conceptual understanding as they explain why a given method used was correct or not. In the Check for Understanding, students solve 3 problems to build procedural skill, as well as apply their knowledge to a mathematical problem and conceptually explain how to determine the coordinates of a given point using the Pythagorean theorem (8.G.6, 8.G.8). In Lesson 5.2, students use conceptual understanding to explain why given solutions are correct or incorrect, and they also apply the skill of performing operations with numbers in scientific notation to real-world problems (8.EE.4).	
<p>Non-Negotiable 4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: Materials promote focus and coherence by connecting practice</p>	<p>REQUIRED 4a) Materials address the practice standards in such a way as to enrich the major work of the grade/course; practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.</p>	Yes	The practice standards are addressed throughout the materials and strengthen student understanding of the major work. For example, in Lesson 1.1, students engage in MP7 as they look for patterns in multiplying exponents. After writing several expanded expressions, then simplifying them, students compare the expanded expressions with	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
<p>standards with content that is emphasized in the Standards.³³</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>			<p>the simplified versions to draw a conclusion about multiplying powers with like bases. In this same lesson, students also engage in MP3 as they write a conjecture about how exponents and multiplication are related and then defend the conjecture to a partner. In Lesson 5.2 students analyze an incorrect solution and explain why it is incorrect, as well as a correct solution and explain how they know it is correct (MP3). In Lesson 5.2, students also attend to precision as they write numbers in scientific notation (MP6). In Lesson 10.1, in the Extension, students make sense of problems as the experiment with the length of a pendulum and the time it takes to swing back and forth one time (MP1). Students collect data, draw conclusions about their data, and justify their conclusions (MP3). In Lesson 8.1, students create a function to model a real-world situation and sketch a graph of the function (MP4). Students also learn how to use a graphing calculator to find the solution to an equation (MP5). In Lesson 7.3, students model the relationship between variables (toothpick triangles) with an algebraic equation (MP4). MP8 is evident in investigation 2 of Lesson 7.4 when students are prompted to repeatedly fold paper to observe the pattern created by the number of folds and the number of regions formed.</p>	
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY				
<p>Additional Criterion 5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and</p>	<p>REQUIRED 5a) Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	

³³ Refer also to criterion #8 in the K–8 [Publishers' Criteria](#) and #6 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013)

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
<p>coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>specific responsibility is for the current year.¹⁰</p>			
	<p>REQUIRED 5b) Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.¹⁰</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
	<p>5c) Materials base content progressions on the progressions in the Standards.³⁴</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
	<p>5d) Materials include learning objectives that are visibly shaped by CCSSM cluster headings and/or standards.³⁵</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
	<p>5e) Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives.¹¹</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	
<p>Additional Criterion 6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the</p>	<p>6a) Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.³⁶ Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard.³⁷ There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. Alignments to practice standards are accurate.</p>	<p>Not Evaluated</p>	<p>This section was not evaluated because the non-negotiable criteria were not met.</p>	

³⁴ Refer also to criterion #5 in the K–8 [Publishers' Criteria](#) and #3 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

³⁵ Refer also to criterion #6 in the K–8 [Publishers' Criteria](#) and #4 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

³⁶ Refer also to criterion #9 in the K–8 [Publishers' Criteria](#) and #7 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

³⁷ Refer also to criterion #7 in the K–8 [Publishers' Criteria](#) and #5 in the High School [Publishers' Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
Standards. <input type="checkbox"/> Yes <input type="checkbox"/> No	6b) Materials Support the Standards’ Emphasis on Mathematical Reasoning: Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems. ³⁸	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	6c) Materials explicitly attend to the specialized language of mathematics. ¹²	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
Additional Criterion 7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ³⁹ <input type="checkbox"/> Yes <input type="checkbox"/> No	7a) There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	7b) There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of students responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	

³⁸ Refer also to criterion #10 in the K–8 [Publishers’ Criteria](#) and #8 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

³⁹ Refer also to pages 18-20 in the K – 8 [Publishers’ Criteria](#) and pages 16-18 in the High School [Publishers’ Criteria](#) for the Common Core State Standards for Mathematics (Spring 2013).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	7d) The underlying design of the materials distinguishes between problems and exercises. In essence the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
	7f) Materials support the uses of technology as called for in the Standards.	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.	
FINAL EVALUATION <i>Tier 1 ratings</i> receive a “Yes” in Column 1 for Criteria 1 – 7. <i>Tier 2 ratings</i> receive a “Yes” in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one “No” in Column 1 for the remaining criteria. <i>Tier 3 ratings</i> receive a “No” in Column 1 for at least one of the non-negotiable criteria.				
Compile the results for Sections I and II to make a final decision for the material under review.				
Section	Criteria	Yes/No	Final Justification/Comments	
I: Non-Negotiables	1. Focus on Major Work	No	While the materials devote 77% of the focus on major content appropriate for Grade 8, there are assessment items that hold students responsible for content that is beyond the Grade 8 standards.	Please see the response to Criterion 1b, above.
	2. Consistent, Coherent Content	No	The materials sometime connect supporting content to major content in meaningful ways, however, most of the supporting content is taught in isolation.	Please see the response to Criteria 2a, above.
	3. Rigor and Balance	No	For the most part, each lesson provides students with the opportunity build procedural skill, especially where called for in the standards. However, some lessons lack significant practice for students to achieve procedural understanding and are not given additional opportunities for practice at any other points during the course.	Please see the response to Criteria 3b, above.
	4. Focus and Coherence via Practice Standards	Yes	The practice standards are addressed throughout the materials and strengthen student understanding	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			of the major work.	
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	Not Evaluated	This section was not evaluated because the non- negotiable criteria were not met.	
	6. Alignment Criteria for Standards for Mathematical Practice	Not Evaluated	This section was not evaluated because the non- negotiable criteria were not met.	
	7. Indicators of Quality	Not Evaluated	This section was not evaluated because the non- negotiable criteria were not met.	
FINAL DECISION FOR THIS MATERIAL: Tier III, Not representing quality				

Appendix II.

Public Comments

There were no public comments submitted.