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: **Math Trailblazers** Grade: **K-5**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

Overall Rating: **Tier III, Not representing 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.

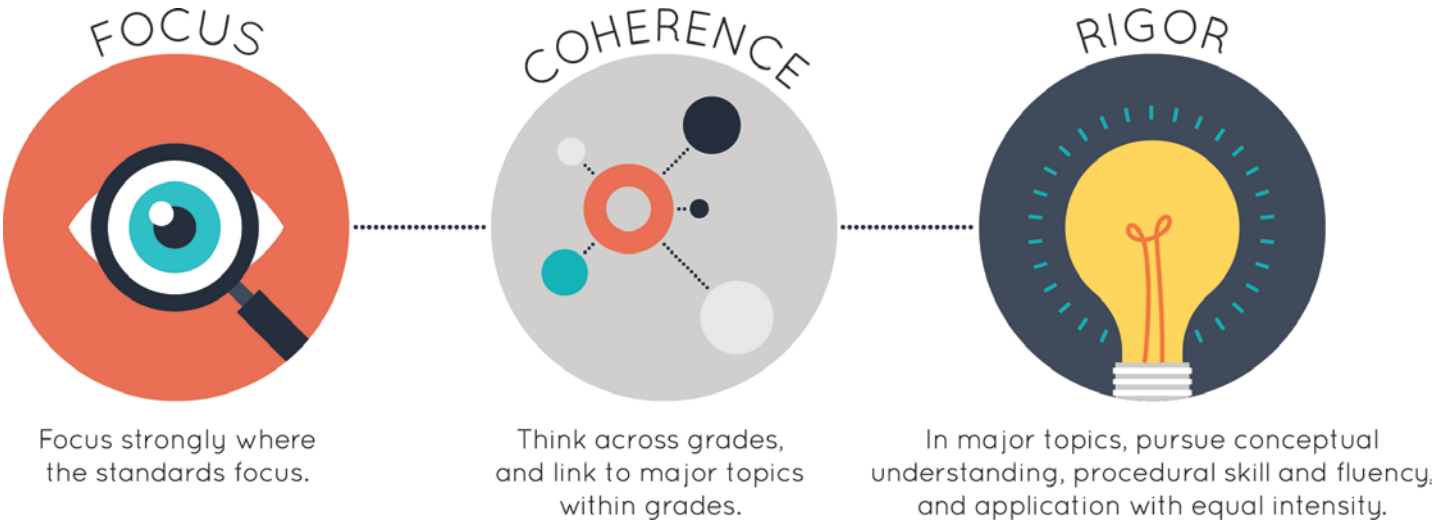
Criteria	Currently in the Rubric	Next Steps for Educators
Focus on Major Work (Non-Negotiable)	This program currently is reviewed as "No" for these criteria because the material goes beyond the scope of the grades on numerous student assessments. This holds students and teachers responsible for content that is outside of the grade level.	Make sure to review all assessment materials to ensure alignment to new clarifications/limitations and the revised, as well as, the placement of standards by grade/course.
Consistent, Coherent Content (Non-Negotiable)	This program currently is reviewed as "Yes" for these criteria because the materials were consistently found to connect the major content to the support content in meaningful ways at all grade levels throughout the year. Materials aim to connect multiple standards within domains and clusters.	Make sure to review instructional materials focused on new supporting content (e.g., money in Grades K and 1) to ensure it supports the major work of the grade/course.

DEPARTMENT of EDUCATION
Louisiana Believes

Instructional Materials Evaluation Review for Alignment in Mathematics Grades K – 12 (IMET)

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:



Title: **Math Trailblazers** Grade/Course: **K-5**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

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

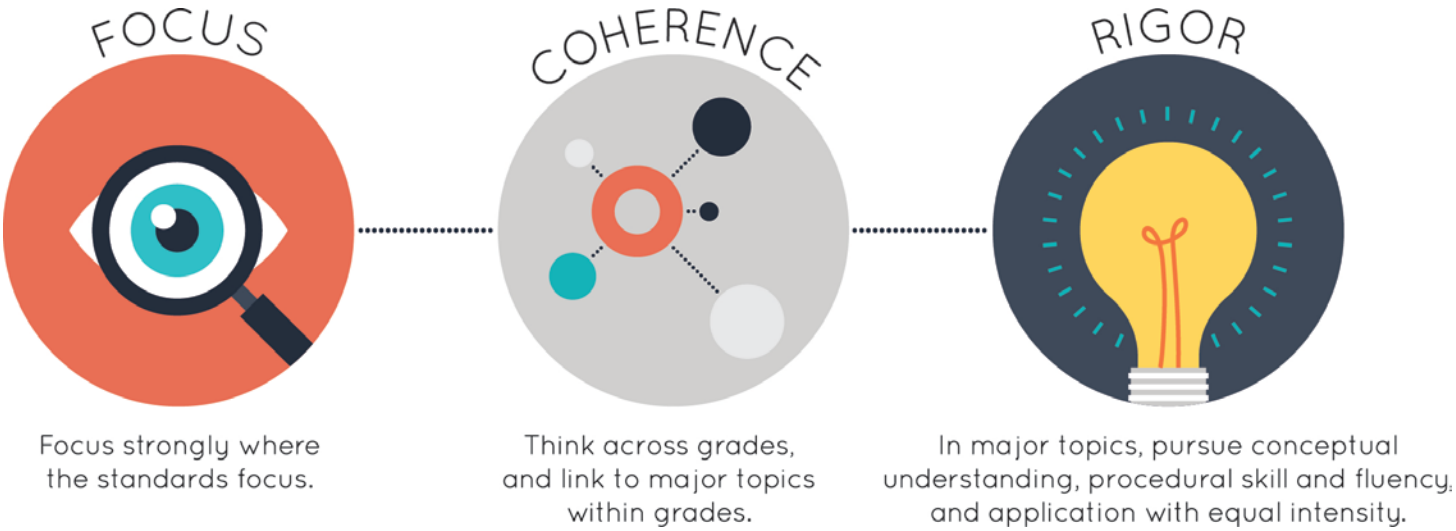
Each set of submitted materials was evaluated for alignment with the standards beginning with a review of the indicators for the non-negotiable criteria. If those criteria were met, a review of the other criteria ensued.

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 K (Tier 3) Grade 1 (Tier 3) Grade 2 (Tier 3)
Grade 3 (Tier 3) Grade 4 (Tier 3) Grade 5 (Tier 3)

Strong mathematics instruction contains the following elements:



Title: **Math Trailblazers** Grade/Course: **K**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

STRONG	WEAK
2. Consistent, Coherent Content (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (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 WORK[1]:** Students and teachers using the materials as designed devote the large majority[2] of time to the major work of the grade/course. ☐ Yes ☒ 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.	**Yes**	The instructional materials reviewed for Kindergarten do meet the expectations for spending the large majority of class time on the major clusters of the grade. Approximately 84 percent (i.e., 31 out of 37) of the lessons focus on the major work of the grade. Five percent (i.e., 2 out of 37) focus on supporting clusters. Eleven percent (i.e., 4 out of 37) focuses on additional clusters of the grade. These percentages were calculated using the table of contents and planning guides for each lesson as well as a brief overview of each lesson.
	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]	**No**	The instructional materials reviewed do not meet the expectations for only assessing the work of the grade level. In Month 2, Lessons 2 and 4 there are assessment items that align to 4.OA.C. , "Generate and analyze patterns." The Key Assessment Opportunities Chart shows the expectation that students be able to recognize, describe, and extend a growing pattern; make predictions and solve problems from growing and repeating patterns; identify the pattern unit in a repeating pattern represented with colors, shapes, numerals, and quantities; and recognize, describe, copy, and extend a repeating pattern represented with colors, shapes, numerals, and quantities. These lessons account for two of the four lessons in month two. In Month 5, Lesson 1 there are assessment items that align to 4.OA.C, "Generate and analyze patterns." In Month 7, area, mass, and capacity is addressed, which is not covered in the standards until grade 3. Examples also include skip counting by 2s and 5s, reading number words to 20, and reading and creating bar and picture graphs.

[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).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[4]	**Yes**	The materials connect supporting content to major content in meaningful ways. This is especially evident in Months 1, 2, 3, 5, 6, and 9. For example, Month 1, Lessons 2 and 4 combine the supporting standard of K.MD.3 (classifying objects and counting the number of objects in each category) with the major standards K.OA.2 (solving addition and subtraction word problems, and add and subtract within 10 by using objects or drawings to represent the problem), K.CC.2 (counting forward beginning from a given number within the known sequence), K.CC.3 (writing numbers from 0 to 20), K.CC.5 (count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration), and K.CC.6 (identifying whether the number of objects in one group is greater than , less than, or equal to the number of objects in another group). While Month 2 Lesson 3 combines the supporting standard K.MD.3 (classifying objects and counting the number of objects in a category) with the major standards of K.OA.3 (decomposing numbers less than or equal to 10 into pairs in more than one way), K.CC.3 (writing numbers from 0 to 20), K.CC.4 (understanding the relationship between numbers and quantities), and with K.CC.6 and K.CC.7 (comparing numbers). Additionally, Month 3, Lesson 2 combines the supporting standard of K.MD.3 (classifying objects and counting the number of objects in categories), with the major standards K.OA.3 (decomposing numbers less than or equal to 10 into pairs in more than one way), K.CC.3 (writing numbers from 0 to 20), K.CC.4 (understanding the relationship between numbers and quantities), and with K.CC.6 and K.CC.7 (comparing numbers). Month 5, Lessons 2 and 4 combine the supporting strand of K.MD.3 (classifying objects and counting the number of objects in categories), with the major standards of K.CC.4 (understanding the relationship between numbers and quantities), K.CC.5 (counting to answer

[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
			"how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration) and with K.OA.1, K.OA.2, K.OA.3, K.OA.4, and K.OA.5 (understanding addition as putting together and adding to, and understanding subtraction as taking apart and taken from). Month 9, Lesson 1 combines and connects the same supporting and major standards.
	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]	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade. Month 1 mixes the K.CC domain, Counting and Cardinality with the K.MD domain, Measurement and Data. Month 4 has a mixture of the K.CC domain, Counting and Cardinality with the K.OA domain, Operations and Algebraic Thinking, and the K.G domain, Geometry. Month 8 has a focus on the combination of K.OA, Operations and Algebraic Thinking, with the domain of K.CC, Counting and Cardinality, and K.MD, Measurement and Data.
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] ☒ Yes ☐ 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**	The materials provide a deliberate progression in conceptual development, purposeful use of representation, and explicit instruction about making connections among representations exists to help teachers analyze developing mathematicians. The carefully engineered structure and questioning in the lessons are designed to show teacher where students are and where they need to go. The teacher's text includes sample dialog to develop conceptual understanding in the students. For example, Month 2, Lesson 1- How many dots are on the card? How did you know how many dots are there? Did anyone know the answer without counting the dots? Did anyone see a different answer? What number did they see? And also in Month 8, Lesson 3, Balancing Number Sentences- How many more do you need to make the number sentence balance? How did you figure that out? Is

[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
			there another way to check the answer? What is the complete number sentence? Do both sides of the equal sign show the same quantity? Lessons often start with a problem to assess students' prior knowledge and all lessons include a Summarizing the Lesson session to get a feel where students are in the learning process before the next lesson begins. Lessons are structured so that students are asked to grapple with, represent, and justify their own thinking and reasoning. This solid conceptual foundation gives students a deeper understanding of the mathematics. For example, The standard K.CC.B.4 is a standard that stresses conceptual understanding. The students must understand the concept of counting to tell the number of objects in Month 1 Lessons 1-4, Month 3 Lessons 1-4, and Month 5 Lessons 1,2,3, and 5. Most of the K standards are conceptual understanding like the standards of K.CC.6 and K.CC.7 on comparing numbers. These two major standards are together and stressed in at least nine lessons throughout the Kindergarten year. The Kindergarten major standards K.OA.1, K.OA.3 and K.OA.4 all are conceptual understanding. These standards can be found in the materials at least 13 times in lessons throughout the year. Although the materials develop conceptual understanding of key mathematical concepts for most of the K standards, they are lacking in developing the conceptual understanding of working with numbers 11-19 to gain a foundation for place value. This conceptual understanding and major standard, K.NBT.A.1 is only seen one time in one lesson, Month 6, Lesson 4.
	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	**Yes**	The material's solid conceptual foundation gives students a deeper understanding of the mathematics, and the power to develop fluency with the procedures and think flexibly and strategically about mathematics. Students build on their own knowledge. Then they use informal, invented strategies to solve problems. Finally, students are able to revise their strategies and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	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.		develop fluency with formal procedures. Students are given regular opportunities to explore, develop, discuss and refine their strategies and mathematical ideas. This conceptual foundation gives students the power to develop fluency with mathematical procedures and the ability to think flexibly and strategically about mathematics. Students are routinely provided with opportunities to apply concepts and skills, and regularly presented with modeling, reasoning and problem-solving experiences to develop their fluency with procedures. For example, the fluency standards K.OA.A.2 and K.OA.5 are addressed explicitly throughout the text. The text does provide practice for the required fluencies for grade K, addition/subtraction within 5. Month 3 Lessons 3-4 and Month 7 Lessons 2, 5, and 6 cover those standards.
	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.	**Yes**	Materials are designed so that the teachers and students spend sufficient time working with engaging applications. For example standards K.OA.A.2, K.G.A.1, and K.G.B.5 are explicitly included in the lessons throughout the text. For example, Month 1 Lesson 3, Month 6 Lesson 2, and Month 4 Lesson 3 feature word problems with the above standards.
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The materials that align to the content standards have attended to the three components of rigor. Throughout each unit of study, students are provided the opportunity to develop necessary, foundational understanding of grade-level math concepts. This understanding naturally and coherently leads to the development of particular procedural skills and, through repeated exposure,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
			fluencies. The materials then provide students opportunities to apply their knowledge and skills in the real world context. The ebb and flow between the components of rigor within a single unit of study (and throughout the course of the year) is logical and well designed, targeting the appropriate component(s) of rigor for each individual standard, as well as, making meaningful connection between components of rigor preserving the balance that is called for by the standards for this grade. For example, Month 2, Lesson 3 addresses K.CC.C.6 as students compare dots on dominoes to determine which set of dots is larger. This is completed as a game of domino "war." Students also practice this skill later in Month 2, Lesson 4 for procedural practice on worksheets using objects in a chart.
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] ☒ Yes ☐ 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**	Materials do address the practice standards that enrich the major work of the grade. A standards correlation document includes each standard, a descriptor, lesson citations, and correlation to the Mathematical Practices. This document does strengthen the focus on major work for the standards of this grade level. Each lesson in the materials has the students using many if not all 8 of the mathematical practices. Each lesson in the teacher's guide has a box to click on to see all the standards addressed as well as which math practices are used in that lesson. For example, In Lesson 1 of Month 5 there are several activities that focus on the 1-8 Mathematical Practices. The students have a master sheet of the first six math practices. It is the form of a print out. They use this to fill in and look at throughout the activities. They must 1.Know the problem. 2.Find a strategy. 3.Check for reasonableness. 4.Check my calculations. 5.Show my work. 6.Use labels. They also talk to each other and the teacher about these six math practices and how they used them throughout the activities. The student site is the first grade student site and it has

[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
			a reference tab that includes videos that explain each one of the first six math practices in a cartoon like, and child friendly way. Also, In Lesson 1 of Month 9 there are several activities that address all of the 8 math practices. The first 6 are specifically visited over and over throughout the different activities. Lesson 1 of Month 9, Journal Prompt: How Many More with Feedback box, Activity 4, page 1574 accesses Math practices numbers 1- Know the problem, 2- Find a strategy, and 5- Show my work.
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. ☐ Yes ☐ 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.[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.

[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).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
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. ☐ Yes ☐ 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 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.[13]	**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:	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

[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).
[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
☐ Yes ☐ No	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.		
	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

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.

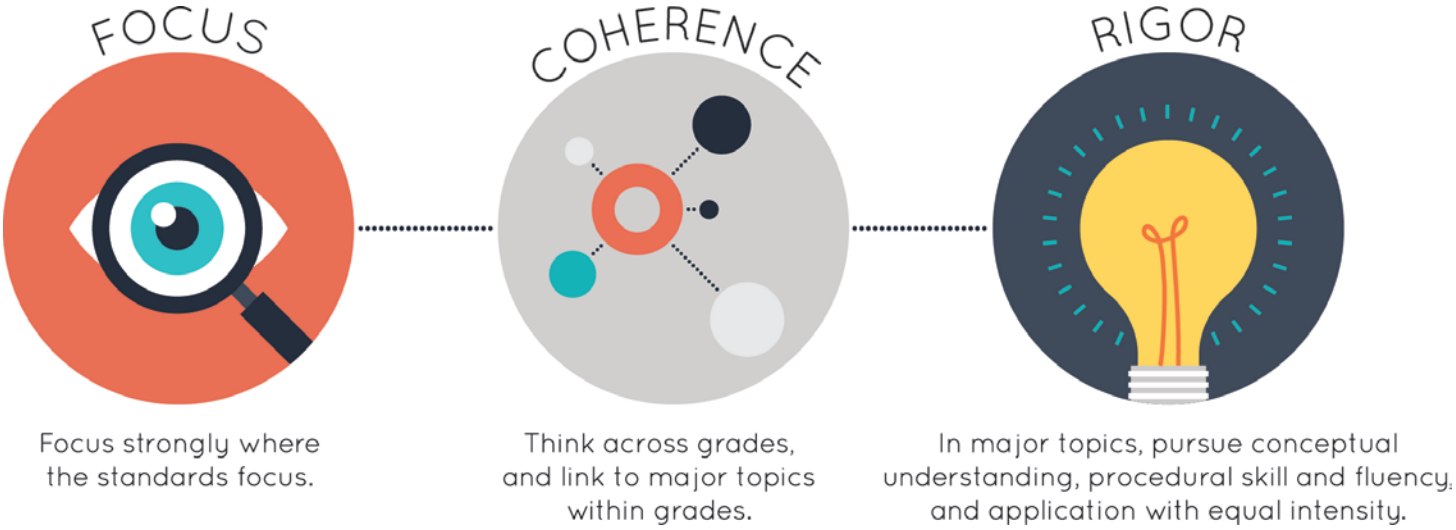
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

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 84% of the lessons are focused on the major work of Grade K, the material goes beyond the scope of the grade on numerous student assessments holding students and teachers responsible for content that is outside the grade level.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	2. Consistent, Coherent Content	**Yes**	Supporting work of the grade supports the major work of the grade where it is both appropriate and natural. Materials aim to connect multiple standards within domains and clusters.
	3. Rigor and Balance	**Yes**	Materials are balanced with the appropriate aspects of rigor and address the content standards with the rigor required by each standard of the grade level.
	4. Focus and Coherence via Practice Standards	**Yes**	Practice standards and explanations provided within the text strengthen the major work of the grade.
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: **Math Trailblazers** Grade/Course: **1**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

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

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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 WORK[14]:** Students and teachers using the materials as designed devote the large majority[15] of time to the major work of the grade/course. ☐ Yes ☒ 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**	In Grade 1, up to 85 percent of class time should be devoted to the major work of the grade. In the materials reviewed however, approximately 51 percent (i.e., 56 out of 109) of the lessons focus on the major work of the grade, 5 percent (i.e., 5 out of 109) focus on the supporting clusters, and 13 percent (i.e., 14 out of 109) focus on additional clusters. These percentages were calculated using the table of contents and planning guides for each lesson.
	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**	Approximately 31 percent (i.e., 34 of 109) of the lessons focused on work outside of the grade level. For example, Unit 8, Lessons 1 - 4 have assessment items that align to standards from 3.MD.C. "Geometric measurement: understand concepts of area and relate area to multiplication and addition;" Unit 13, Lessons 1 - 4 have assessment items that align to standards from 5.MD.C, "Geometric measurement: understand concepts of volume;" and Unit 14, Lesson 2 has assessment items that align to 3.MD.B.3., "Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs." In Unit 3, money is addressed, which is not covered until Grade 2 (2.MD.C.8). The text often goes beyond the scope of Grade 1 standards, into Grade 2 work. For example, see skip counting in Unit 5, Lessons 1 and 2 and in Unit 7, Lesson 1; see money in Unit 11, Lessons 3 and 4; and counting beyond 120 in Unit 17, Lessons 2,3, and 4.

[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).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[17]	**Yes**	The materials connect supporting content to major content in Units 3, 5, 7, 9, 10, and 14. Unit 3, Lesson 1 combines the supporting strand of 1.MD.C.4 with the major standards of 1.NBT.A.1 and 1.NBT.B.2. This lesson has the supporting topic of representing and interpreting data mixed with major topics of extending the counting sequence, and understanding place value. Unit 5, Lesson 5 has both the supporting standard of 1.MD.C.4 and the major standards of 1.NBT.A.1, 1.NBT.B.2, and 1.OA.A.2. This lesson combines the supporting topic of representing and interpreting data with the major topics of extending the counting sequence, understanding place value, and solving word problems that call for addition of three whole numbers whose sum is less than or equal to 20. Unit 7, Lessons 3 and 4 connect the supporting standard of 1.MD.C.4 with the major standards of 1.NBT.A.1, 1.NBT.B.2, 1.NBT.B.3, 1.OA.C.5, and 1.OA.C. These lessons combine the supporting topic of representing and interpreting data with the major topics of extending the counting sequence, understanding place value, adding and subtracting within 20, and measuring lengths indirectly and by iterating length units. Unit 9, Lesson 1 combines the supporting standard of 1.MD.C.4 with the major standard of 1.NBT.A.1. The supporting topic of representing and interpreting data is mixed in with the major topic of extending the counting sequence. Unit 10, Lessons 3 and 8 mix the supporting standard of 1.MD.C.4 with the major standards of 1.NBT.A.1, 1.NBT.B.2, 1.NBT.B.3, 1.NBT.C.4, and 1.NBT.C.5. These lessons combine the supporting topic of representing and interpreting data and the major topics of extending the counting sequence, understanding place value, and using place value understanding and properties of operations to add and subtract. Unit 11, Lesson 6 combines the supporting standard of 1.MD.C.4, representing and interpreting data with the major standard 1.MD.A.2,

[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
			expressing the length of an object as a whole number of length units. Unit 14, Lessons 2, 4, and 5 combine the supporting standard of 1.MD.C.4 with the major standards of 1.OA.C.4 and 1.NBT.C.4. These three lessons in Unit 14 mix the supporting topic of representing and interpreting data with the major topics of using addition and subtraction within 20 to solve word problems and adding within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings.
	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 include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade. Unit 3 Lessons 2, 4, 5, and the Units 4 and 5 lessons connect 1.NBT.1, extending the counting sequence, and 1.NBT.2, understanding place value with 1.OA.C.5, relating counting to addition and subtraction and 1.OA.C.6, adding and subtracting within 20. Unit 6 lessons combine the different parts of the major standard of Operations and Algebraic Thinking. The standards of 1.OA.A, representing and solving problems involving addition and subtraction, 1.OA.B, understanding and applying properties of operations and the relationship between addition and subtraction, 1.OA.C, adding and subtracting within 20, and 1.OA.D, working with addition and subtraction equations. Lessons in Units 7, 8, 9, 10, and 11 combine the three domains of 1.NBT, Numbers and Operations in Base Ten, 1.OA, Operations and Algebraic Thinking, and 1.MD, Measurement and Data.
Non-Negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous	**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	**Yes**	Materials develop conceptual understanding of key mathematical concepts. The standards 1.NBT.A.1 and 1.NBT.A.2 are addressed. For example, the students must understand the concept of place value for 1.NBT.C.4 in multiple lessons such as Unit 3 Lessons 1-6, Unit 5 Lessons 1-5, and Unit 7 Lessons 1-3. Lessons in the text include "Daily Practice and

[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).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application.[19] ☒ Yes ☐ No	questions.		Problems." Throughout these practices students are asked to explain their thinking. For example, Unit 10, Lesson 7 for 1.MD.A.2, Practice Q: Nick measured his window. He said that the window was 19 links wide. Which object is wider? Show or tell how you decided. Lessons also include many questions for teachers to use to extend the conceptual understanding of the students. Another good example in Unit 6, Lesson 5 (Addition Strategies 1.OA.C.6) included the questions: Which strategy did you use for [2 + 1]? Are there other addition facts you would solve using this strategy? What facts might help you solve 5 + 6? How can you use that fact? Which addition facts were helpful? Which addition facts do you need to work on first then?
	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.	**Yes**	The material's solid conceptual foundation gives students a deeper understanding of the mathematics and the power to develop fluency with the procedures, and to think flexibly and strategically about mathematics. Students build on their own knowledge. Then they use informal, invented strategies to solve problems. Students are able to revise their strategies and develop fluency with formal procedures. Students are also given regular opportunities to explore, develop, reasoning and problem-solving experiences to develop their fluency with procedures. For example, the fluency standards 1.OA.C.6 and 1.OA.D.8 are addressed explicitly throughout the text. The text also provides practice for the required fluencies for Grade 1, addition/subtraction within 10 (e.g., see Unit 6 Lessons 1-9 and Unit 12 Lessons 1-10 which cover those standards).
	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	**Yes**	Materials are designed so that the teachers and students spend sufficient time working with engaging applications. For example standards 1.OA.A.1 and 1.OA.A.2 are explicitly included in the lessons throughout the text. Unit 4, Lessons 2-5, Unit 12, Lessons 1-10, and Unit 13, Lessons 1,3, and 4 feature word problems with 1.OA.A.1 and

[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
	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.		1.OA.A.2. In Unit 4, Lesson 2 (1.OA.A.1) students are asked, What is the total number of pets? (See pg. 71 of the Student Activity Book). Nice examples are also found in Unit 12, Lesson 1. (1.OA.A.1): 1) Grace and Jerome went to the library. Grace took out 9 books and Jerome took out 7 books. How many books did they take out altogether? and 2) Grace's mom had some grapes. She gave 6 to Grace. She has 7 left. How many grapes did she start with? (See pg. 361 of the Student Activity Book).
	REQUIRED **3d)** ***Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The materials are aligned to the content standards and attend to the three components of rigor as required in 3a - 3c. Throughout each unit of study, students are provided the opportunity to develop necessary foundational understanding of grade-level math concepts. This understanding naturally and coherently leads to the development of particular procedural skills, and through repeated exposure, fluencies. The materials then provide students opportunities to apply their knowledge and skills in the real world context. The ebb and flow between the components of rigor within a single unit of study (and throughout the course of the year) is logical and well designed, targeting the appropriate component(s) of rigor for each individual standard, as well as making meaningful connection between components of rigor preserving the balance that is called for by the standards for this grade. For example, Unit 6, Lesson 1 works through a variety of strategies to partition 10 such as working with 10 frames, counters, and number lines for 1.OA.C.6. Students also practice fluency for 1.OA.A.C.6 in Unit 6, Lesson 2 as students practice using flash cards and a number game. Later, in Lesson 6 of the unit, addition and subtraction problems that are related to the circus as real-world word problems for 1.OA.A.1 are presented.
Non-Negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and	**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	**Yes**	Materials address the practice standards that enrich the major work of the grade. A standards correlation document includes each standard, a descriptor, lesson citations and correlation to the Mathematical Practices. This document does show how to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
coherence by connecting practice standards with content that is emphasized in the Standards.[20] ☒ Yes ☐ No	detracting from it, in both teacher and student materials.		strengthen the focus on major work for the standards of this grade level. Each lesson has the students using many if not all 8 of the mathematical practices. Each lesson in the teacher's guide has a box to click on to see all the standards addressed as well as which math practices are used in that lesson. The Grade 1 student site has a reference tab with a math practice page with videos that explain each one of the first six math practices in a cartoon-like and child friendly way. In Unit 7, Lesson 3 the first six math practices are practiced and discussed through the activities, but there is one called "Rolling Along With Links," that accesses the math practice 2-Find a strategy, 5-Show my work, and 6-Use labels. Unit 12, Lesson 9 uses the math practices of 1-6 throughout the activities, but the activity, called "Use Strategies," accesses math practice 1-Know the problem, 2-Find a strategy, and 5-Show how my work are accessed.
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.	**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.

[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
☐ Yes ☐ 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. ☐ Yes ☐ 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
	of mathematics.[12]		
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] ☐ Yes ☐ 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.
	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.

[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

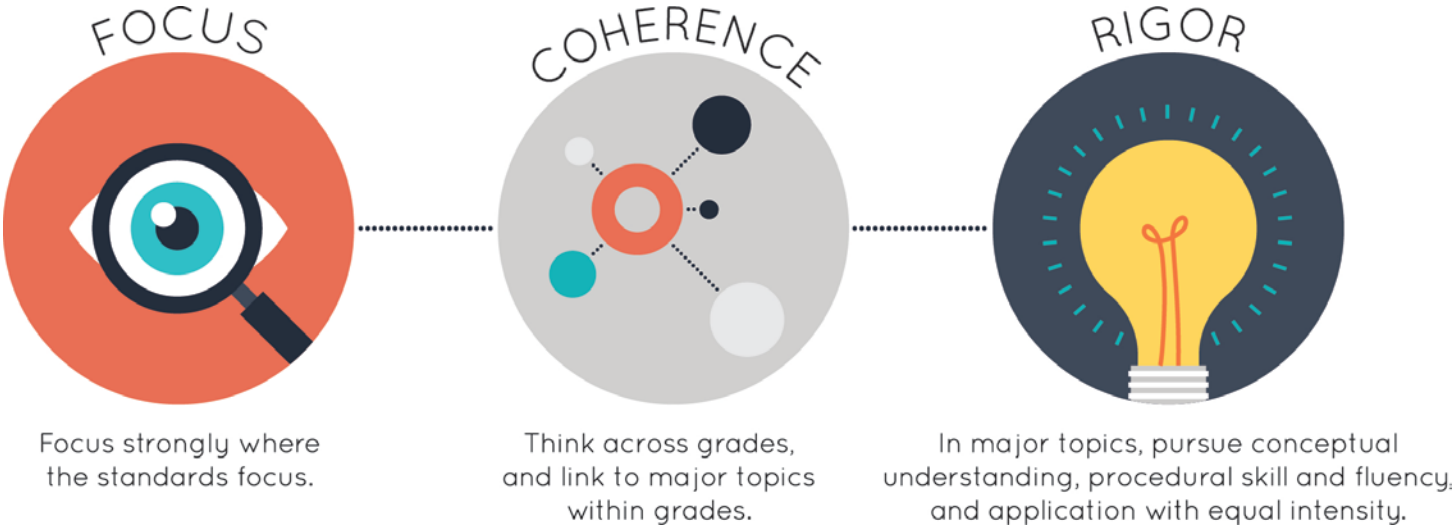
FINAL EVALUATION
Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the 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**	Only 51% of the lessons are focused on the major work of the grade. In addition, the material goes beyond the scope of the grade on several assessments holding students and teachers responsible for content that is outside the grade level.
	2. Consistent, Coherent Content	**Yes**	Supporting work of the grade supports the major work of the grade where it is both appropriate and natural. Materials aim to connect multiple standards within domains and clusters.
	3. Rigor and Balance	**Yes**	Materials are balanced with the appropriate aspects of rigor and address the content standards with the rigor required by each standard of the grade level.
	4. Focus and Coherence via Practice Standards	**Yes**	Practice standards and explanations provided within the text strengthen the major work of the grade.
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: **Math Trailblazers** Grade/Course: **2**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

STRONG	WEAK
2. Consistent, Coherent Content (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (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 WORK[27]:** Students and teachers using the materials as designed devote the large majority[28] of time to the major work of the grade/course. ☐ Yes ☒ 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**	In 2nd grade, up to 85 percent of class time should be devoted to the major work of the grade. However, when reviewing the materials, approximately 51 percent (i.e., 53 out of 104) of the lessons focus on the major work of the grade, 7 percent (i.e., 7 out of 104) focus on the supporting clusters, and 8 percent (i.e., 8 out of 104) focus on the additional clusters. These percentages were calculated using the table of contents and planning guides for each lesson.
	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]	**No**	Approximately 33 percent of the materials focus on work outside of the grade level. For example, Unit 5, Lesson 2 has assessment items that partially align to 3.MD.A.2. "Measure and estimate liquid volumes and masses of objects." Unit 8 focuses on Mass, and Units 10 and 11 Focus on Volume. These topics are not addressed in the 2nd grade standards. Other material found in the 2nd grade text that are outside the scope of the standards are multiplication, estimation, coordinate maps, sums over 1,000, place value over 1,000 and reading a thermometer. The End of the Year test in grade 2 contains problems dealing with multiplication not arranged in a rectangular array. 2.OA.C.4 is a supporting standard that specifically states to use addition to find the total number of objects arranged in rectangular arrays. The 2nd grade End of the Year test also contains problems that partition shapes other than that of a circle or rectangles into equal shares. 2.G.3 additional standard is partitioning of circles and rectangles into two, three, or four equal shares. There is also a problem focused on area, which is not the content of grade 2.

[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).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[30]	**Yes**	The material connects supporting content to major content in Units 1, 2, 3, 4, 5, 6, 8, 10, 11, 12, and 15. Unit 1, Lessons 1-8 combine the supporting standards of 2.MD.C.8 and 2.MD.D.10 with the major standards of 2.OA.A.1, 2.OA.B.2, and 2.MD.B.6. The lessons in Unit 1 take the supporting topics of solving word problems involving dollar bills, quarters, dimes, nickels, and pennies, and drawing picture and bar graphs with the major topics of representing and solving problems involving addition and subtraction, adding and subtracting within 20, and representing whole numbers as lengths on a number line diagram. Unit 2, Lessons 2 and 3 combine the supporting standard of 2.MD.D.10 with the major standards of 2.NBT.A.1, 2.NBT.A.3, 2.NBT.A.4, and 2.OA.A.1. Lessons 2 and 3 mix the supporting topic of drawing a picture or bar graph to represent data set with the major topics of understanding place value, and using addition and subtraction within 100 to solve one- and two-step word problems. Unit 3, Lesson 4 combines the supporting standard 2.MD.D.10 with the major standards of 2.MD.B.6, 2.OA.A.1, 2.OA.B.2, 2.NBT.A.1, 2.NBT.B.5, 2.NBT.B.7, and 2.NBT.B.8. Lesson 4 mixes the supporting topic of drawing a picture graph and bar graph to represent a set of data with the major topics of representing number lengths on a number line diagram, representing and solving problems involving addition and subtraction, adding and subtracting within 20 using mental strategies, understanding place value, and using place value understanding and properties of operations to add and subtract. Unit 4, Lesson 6 combines the supporting standards of 2.MD.D.9 and 2.MD.D.10 with the major standards of 2.NBT.A.4 and 2.MD.A.2. Lesson 6 mixes the supporting topics of generating measurement data by measuring lengths of several objects, and drawing picture and bar graphs to represent a set of data with the major topics of comparing two three-digit numbers, and

[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
			measuring the lengths of objects twice using two different units. Similar instances are also found in Units 4, 6, 8, 10, 11, 12, and 15.
	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 do include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in the grade. Units 1, 3, 7, 8, 9, and 15 all contain lessons where the domain of 2.OA, Operations and Algebraic Thinking and 2.MD, Measurement and Data are clearly combined. Unit 10 and 12 lessons combine the three domains of 2.G, Geometry, 2.OA, Operations and Algebraic Thinking, and 2.NBT, Numbers and Operations in Base 10. Unit 7 and 14 lessons mix the 2.NBT.A.1-4 and 2.NBT.B.5-9 standards.
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] ☒ Yes ☐ 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**	The teacher's book does a great job throughout the entire book of providing numerous questions for class discussion that help the students gain conceptual understanding. The student practice pages require students not only to solve problems but to explain their thinking. The standard 2.OA.C3 is addressed. For example, the students must work with equal groups of objects to gain a foundation for multiplication. This occurs in Unit 11 Lessons 1,2,3, and 5. Lessons in the text include "Daily Practice and Problems." Throughout these practices students are asked to explain their thinking. For example, in Unit 3, Lesson 3 (2.NBT.B.7), Practice G-- Problem 3D is 4 + 14. Problem 4 asks "Show or tell how to solve 4 + 14." Lessons also include many questions for teachers to use to extend the conceptual understanding of the students. Unit 7, Lesson 7 (2.NBT.B.7) (Addition Strategies) included these questions: "Did someone in your group use a mental math strategy? Did someone use a paper-and-pencil method? Which strategy did you like the best for this problem? Did one method seem more efficient

[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
			than another? Was one method easier to understand than another? Is this the strategy that you choose most often? Which strategy do you choose most often? Why? What do you think about the paper-and-pencil methods? Are they efficient? Easy to use?"
	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.	**Yes**	The material's solid conceptual foundation gives students a deeper understanding of the mathematics, and the power to develop fluency with the procedures and think flexibly and strategically about mathematics. Students build on their own knowledge. Then they use informal, invented strategies to solve problems. Finally, students are able to revise their strategies and develop fluency with formal procedures. Students are given regular opportunities to explore, develop, discuss and refine their strategies and mathematical ideas. Students are routinely provided with opportunities to apply concepts and skills, and regularly presented with modeling, reasoning and problem-solving experiences to develop their fluency with procedures. For example, the fluency standards 2.NBT.B.5 and 2.OA.B.2 are addressed explicitly throughout the text. The text does provide practice for the required fluencies for grade 2, addition/subtraction within 100 and single digit sums and differences. For example in Unit 1 Lessons 1-9 and Unit 10 Lessons 1-6. The text offers practice exercises for the single digit addition and subtraction, but very little practice with sums and differences within 100.
	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	**Yes**	Materials are designed so that the teachers and students spend sufficient time working with engaging applications. For example standards 2.OA.A.1 and 2.MD.B.5 are explicitly included in the lessons throughout the text. For example, Unit 3, Lessons 1-9 and Unit 4, Lessons 3-6 feature word problems with the above standards. Unit 3. Lesson 3 (2.OA.A.1) -Luis tries to win a bear for his sister at

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	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.		the ring toss. He is given 12 rings and tosses 5 rings. How many rings does he have left? (See pg. 117, Student Activity Book). Unit 4, Lessons 3-3- Andy Alligator is 3 meters long. His brother is one meter shorter. How long is Andy Alligator's brother? (See pg. 194, Student Activity Book).
	REQUIRED **3d)** ***Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The materials are aligned to the content standards and attend to the three components of rigor as required in 3a - 3c. Throughout each unit of study, students are provided the opportunity to develop necessary, foundational understanding of grade-level math concepts. This understanding naturally and coherently leads to the development of particular procedural skills and, through repeated exposure, fluencies. The materials then provide students opportunities to apply their knowledge and skills in the real world context. The ebb and flow between the components of rigor within a single unit of study (and throughout the course of the year) is logical and well designed, targeting the appropriate component(s) of rigor for each individual Standard, as well as, making meaningful connection between components of rigor preserving the balance that is called for by the Standards for this grade. For example, in Unit 7, Lesson 4 students use concepts of place value (using base 10 blocks) to solve addition and subtraction problems for 2.NBT.B.7. In Lesson 5 students continue their learning to explore the standard algorithm and working with expanded form to develop their conceptual understanding of 2.NBT.B.7; students also work many problems geared towards developing fluency of the standard. Later, in Lesson 8 of the same unit, students work with addition and subtraction within a context of a snack shop to work real-world problems for 2.OA.A.1.
Non-Negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:**	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the major work of the grade/course;	**Yes**	Materials address the practice standards that enrich the major work of the grade. A standards correlation document includes each standard, a descriptor,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.[33] ☒ Yes ☐ No	practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.		lesson citations, and correlation to the Mathematical Practices. This document does strengthen the focus on major work for the standards of this grade level. Each lesson in the materials has the students using many if not all 8 of the mathematical practices. Each lesson in the teacher's guide has a box to click on to see all the standards addressed as well as which math practices are used in that lesson. The Grade 2 student site has a reference tab with a math practice page that has videos that explain each one of the first six math practices in a cartoon like, and child friendly way. It should be noted that in Unit 7, Lesson 3 the first six math practices are practiced and discussed through the activities. However, in the activity called "Rolling Along With Links," math practice 2-Find a strategy, 5-Show my work, and 6-Use labels are addressed. In Lesson 9, Unit 12 the math practices of 1-6 are used throughout the activities. However, in the activity called, "Use Strategies," math practice 1-Know the problem, 2-Find a strategy, and 5-Show how my work are addressed.
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.	**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	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

[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
☐ Yes ☐ No	knowledge.[10]		
	5c) Materials base content progressions on the progressions in the Standards. [34]	**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.[35]	**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. ☐ Yes ☐ No	**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.	**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	**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
	thoroughly to places in the Standards that explicitly set expectations for multi-step problems. [38]		
	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] ☐ Yes ☐ 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.
	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.

[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
	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.

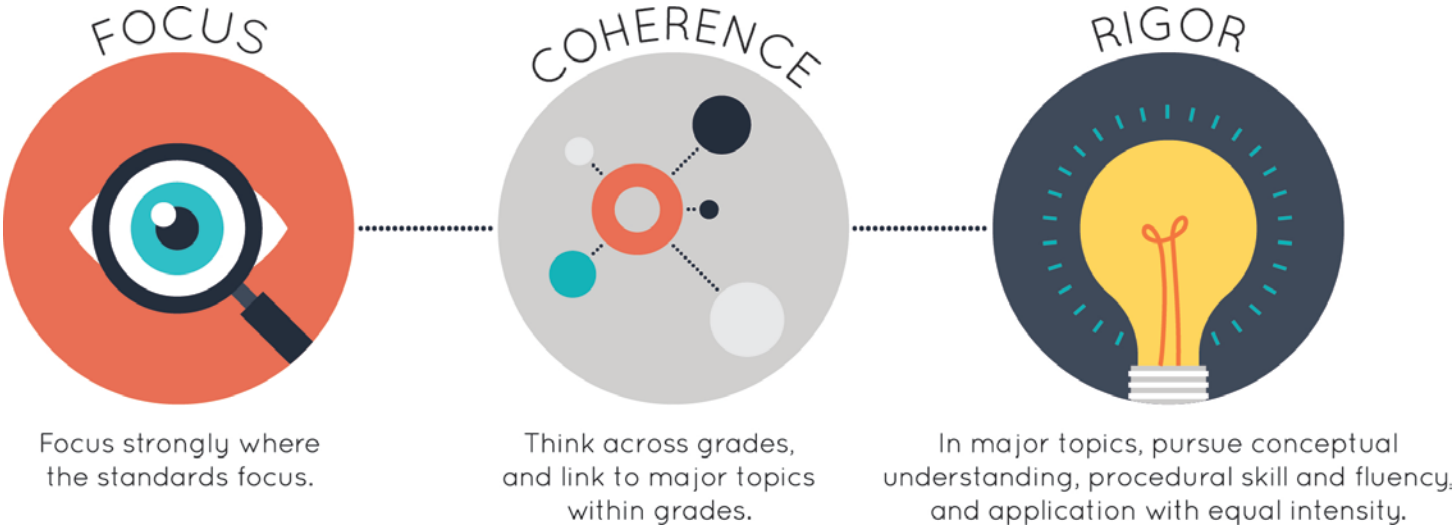
FINAL EVALUATION
Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the 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**	Only 51% of the lessons are focused on the major work of the grade. In addition, the material goes beyond the scope of the grade on several assessments holding students and teachers responsible for content that is outside the grade level.
	2. Consistent, Coherent Content	**Yes**	Supporting work of the grade supports the major work of the grade where it is both appropriate and natural. Materials aim to connect multiple standards within domains and clusters.
	3. Rigor and Balance	**Yes**	Materials are balanced with the appropriate aspects of rigor and address the content standards with the rigor required by each standard of the grade level.
	4. Focus and Coherence via Practice Standards	**Yes**	Practice standards and explanations provided within the text strengthen the major work of the grade.
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.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	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: **Math Trailblazers** Grade/Course: **3**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

STRONG	WEAK
2. Consistent, Coherent Content (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (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 WORK[40]:** Students and teachers using the materials as designed devote the large majority[41] of time to the major work of the grade/course. ☐ Yes ☒ 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 instructional materials reviewed for grade 3 do not spend the large majority of class time on the major clusters of the grade. Approximately 59 percent (i.e., 56 out of 95) of the lessons focus on the major work of the grade, 12 percent (i.e., 11 out of 95) focus on supporting clusters of the grade, and 25 percent (i.e., 24 out of 95) focus on additional clusters of the grade. These percentages were calculated using information from the table of contents and planning guides for each lesson. Overall, the instructional materials allocate too much instructional time to clusters of standards that do not represent the major work of Grade 3 and to standards that are above Grade 3. In addition, a large amount of time is devoted to addition and subtraction (work prior to Grade 3) with little time spent solving problems that involve the four operations.
	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.[42]	**No**	The instructional materials reviewed for Grade 3 do not meet expectations for assessment. In Unit 1, Lessons 1, 3, and 5 there are assessment items that align to standards from 6.SP.A "Develop understanding of statistical variability," and 7.SP.A, "Use random sampling to draw inferences about a population." In Unit 5, Lessons 3, 4, and 5 there are assessment items that align to standards from 6.SP.B, "Summarize and describe distributions." In Unit 11, Lessons 4, 7, and 8 there are assessment items that align to 4.G.A.3, "Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry," and to standards from 8.G.A, "Understand congruence

[40] For more on the major work of the grade, see Focus by Grade Level.
[41] 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%.
[42] Refer also to criterion #2 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
			and similarity using physical models, transparencies, or geometry software." The materials also contain an End of the Year test for Grade 3, which includes having to give the volume of a solid (which is part of the 5th grade content). Students must also measure lengths of a non-rectangular shape to the nearest half-inch and then determine its area, instead of working with the area of rectangular shapes using whole number side lengths as required by the standards.
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[43]	**Yes**	The materials show connections between supporting content and major content in Units 5, 8, 9, 11 and 12. Unit 5, Lesson 4 combines the major standard of 3.MD.C.6 with the supporting standard of 3.MD.B.3. This lesson mixes the major topic of measuring areas by counting unit squares with the supporting topic of drawing graphs to represent a set of data. Unit 8, Lesson 7 combines the supporting standard 3.MD.B.4 with the major standards of 3.OA.A.1, 3.OA.A.2, 3.OA.A.3, 3.OA.B.5, and 3.OA.C.7. Lesson 7 mixes the supporting topic of generating measurement data by measuring lengths using rulers marked with halves and fourths of an inch with the major topics of interpreting products and quotients, using multiplication and division, applying properties of operations to multiply and divide, and to multiply and divide within 100. Unit 9, Lessons 2, 3, 4, 5, 6, and 7 combine the supporting standard of 3.G.A.2 with the major standards of 3.NF.A.1, 3.NF.A.2, 3.NF.A.3. These lessons mix the supporting topic of partitioning shapes into parts with equal areas and the major topics of developing understanding of fractions as numbers. Unit 11, Lessons 2 and 3 combine the supporting standards of 3.G.A.1, 3.G.A.2 with the major standards of 3.MD.C.5, 3.MD.C.6, and 3.MD.C.7. These lessons mix the supporting topic of reasoning with shapes and their attributes and the major topic of geometric measurement: understanding concepts of

[43] 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
			area and relate it to multiplication and addition. Unit 12, Lesson 2, 3, 5, and 6 combine the supporting strand of 3.MD.B.4 with the major standards of 3.OA.A.3, 3.MD.A.2, and 3.OA.D.9. These lessons mix the supporting topic of generating measurement data by measuring lengths using rulers marked with halves and fourths of an inch with the major topics of using multiplication and division within 100 to solve word problems, identifying patterns and explaining them using properties of operations, and measuring and estimating liquid volumes and masses of objects.
	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. [44]	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade. Unit 8 and 10 lessons contain a mixture of standards from the domain of 3.OA, Operations and Algebraic Thinking. These two units have lessons that combine 3.OA.A.1-4, representing and solving problems involving multiplication and division, 3.OA.B.5-6, understanding properties of multiplication and the relationship between multiplication and division, 3.OA.C.7, multiplying and dividing within 100, and 3.OA.D.8-9, solving problems involving the four operations, and identifying and explaining the patterns in arithmetic. Unit 11 lessons combine the standards in the domain of geometry, 3.G, and measurement and data, 3.MD.
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	**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**	The teacher's manual provides an abundant amount of questions for class discussion that help the students gain conceptual understanding. The student practice pages require students not only to solve problems, but also to explain their thinking. Materials develop conceptual understanding of key mathematical concepts. The standard 3.NBT.A.1, which has an explicit expectation for the use of place value to understand how to round whole

[44] 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
develop conceptual understanding, procedural skill and fluency, and application.[45] ☒ Yes ☐ No			numbers to the nearest 10 or 100, is addressed. For example, the students must understand the concept of using place value to understand rounding in Unit 6, Lessons 2-5. Lessons in the text include "Daily Practice and Problems." Throughout these practices students are also asked to explain their thinking. In addition, lessons include many questions for teachers to use to extend the conceptual understanding of the students. For example, in Unit 8, Lesson 5 standard 3.OA.A.1 which has the explicit expectation for students to interpret the products of whole numbers is addressed through questions such as: What is 0 × 5? (0) Tell a multiplication story that would help us understand why 0 × 5 = 0. How does the rectangle match the problem of 6 × 3? Show me on the rectangle. How is the rectangle in Question 3 divided? Why can it be divided that way? How are the rectangles (see questions 2 and 3) alike and different (see question 4)? Which ways to break apart the products make it easier to find the product or remember the fact?
	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.	**Yes**	The material's solid conceptual foundation gives students a deeper understanding of the mathematics, the power to develop fluency with the procedures, and to think flexibility and strategically about mathematics. Students build on their own knowledge, and then use informal, invented strategies to solve problems. Finally, students are able to revise their strategies and develop fluency with formal procedures. Students are given regular opportunities to explore, develop, discuss, and refine their strategies and mathematical ideas. Students are routinely provided with opportunities to apply concepts and skills, and regularly presented with modeling, reasoning, and problem-solving experiences to develop their fluency with procedures. In addition, the Daily

[45] 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
			Practices provide enough practice in the required fluency of single-digit products and quotients. For example, lessons in Unit 1, 2, 4, 6, and 7 address the standard 3.NBT.A.2, which has the explicit expectation for students to fluently add and subtract within 1000. While the lessons in Unit 3, 8, and 13 address the procedural skill and fluency requirements of 3.OA.C.7 that requires students to multiply and divide within 100. However, it should be noted that there are fewer opportunities for practice to meet standard 3.NBT.A.2, which has the explicit expectation for students to fluently add/subtract within 1000, than those to meet standard 3.OA.C.7 (multiply and divided within 100).
	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.	**Yes**	Materials are designed so that the teachers and students spend sufficient time working with engaging applications. Unit 8, Lessons 1-10, Unit 13, Lessons 4-8, and Unit 11, Lesson 1 all feature word problems to meet standards 3.OA.A.3 (to use multiplication and division within 100), 3.OA.D.8 (to solve two-step programs using the four operations), and 3.MD.A.1 (to tell and write time to the nearest minute and solve word problems involving addition and subtraction of time intervals in minutes). The following example from Unit 13, Lessons 4 addresses standard 3.OA.A.3, which has the explicit expectation for students to use multiplication and division within 100, in problem #8, which states, "250 children from Bessie Coleman Elementary School were going on a field trip. Each bus could hold 60 children. How many buses did they need? #10 The teachers at Bessie Coleman Elementary School ordered 21 pizzas for the four third-grade classes to share equally. How many pizzas did each class get?"
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The materials that are aligned to the content standards attend to the three components of rigor as required in 3a - 3c. Throughout each unit of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
			study, students are provided the opportunity to develop necessary foundational understanding of grade-level math concepts. This understanding naturally and coherently leads to the development of particular procedural skills, and through repeated exposure, fluencies. The materials then provide students opportunities to apply their knowledge and skills in the real world context. The ebb and flow between the components of rigor within a single unit of study (and throughout the course of the year) is logical and well designed, targeting the appropriate component(s) of rigor for each individual standard, as well as, making meaningful connection between components of rigor preserving the balance that is called for by the standards for this grade. For example, in Unit 3, Lesson 2 students work with strategies such as skip counting to explore multiplication for 3.OA.B.5. Students also practice "naked number" problems aimed at developing fluency in multiplication for 3.OA.C.7. Later in the same unit in Lessons 3 and 6, students solve and create multiplication stories to develop application of 3.OA.A.3.
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.[46] ☒ Yes ☐ 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**	Materials address the practice standards that enrich the major work of the grade. A standards correlation document includes each standard, a descriptor, lesson citations and correlation to the Mathematical Practices. This document does strengthen the focus on major work for the standards of this grade level. Each lesson in the materials has the students using many if not all 8 of the mathematical practices. Each lesson in the teacher's guide has a box to click on to see all the standards addressed as well as which math practices are used in that lesson. The grade 3 student site has a reference tab with a math practice page that has videos that explain each one of the first six math practices in a cartoon-like and child friendly way.

[46] 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
			It should be noted that in Unit 10, Lesson 7 the students discuss and practice all 8 of the math practices. However, in the activity "Delivering Newspapers" math practices 2-Find a strategy, 3-Check for reasonableness, 5-Show my work, and 6-Use labels are addressed. In Unit 13, Lesson 4 the students use and focus on the first seven math practices throughout the activities. However, in the activity called, "Solving Problems with Multiplication and Division," math practices 1-Know the problem, 2-Find a strategy, 5-Show my work, and 6-Use labels are addressed.
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. ☐ Yes ☐ 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. [47]	**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.[48]	**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.

[47] 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).
[48] 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
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. ☐ Yes ☐ No	**6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[49] 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.[50] 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.[51]	**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.[52]	**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:	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

[49] 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).
[50] 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).
[51] 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).
[52] 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
☐ Yes ☐ No	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.		
	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.

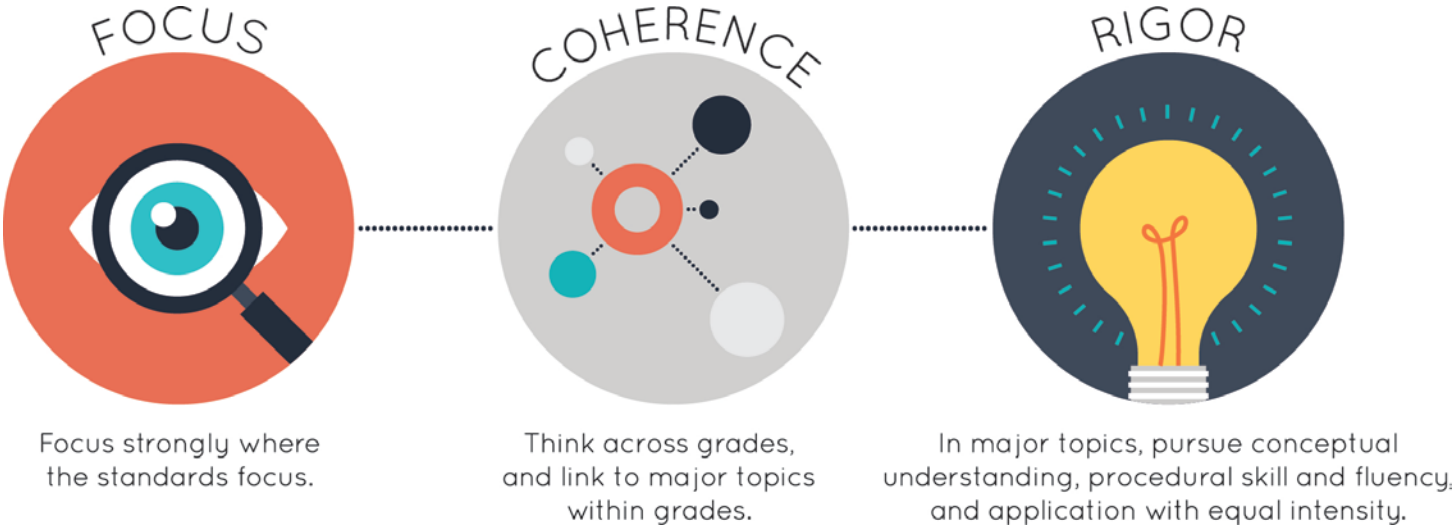
FINAL EVALUATION
Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the 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**	Only 59% of the lessons are focused on the major work of the grade. In addition, the material goes beyond the scope of the grade on several assessments holding students and teachers

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
			responsible for content that is outside the grade level.
	2. Consistent, Coherent Content	**Yes**	Supporting work of the grade supports the major work of the grade where it is both appropriate and natural. Materials aim to connect multiple standards within domains and clusters.
	3. Rigor and Balance	**Yes**	Materials are balanced with the appropriate aspects of rigor and address the content standards with the rigor required by each standard of the grade level.
	4. Focus and Coherence via Practice Standards	**Yes**	Practice standards and explanations provided within the text strengthen the major work of the grade.
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: **Math Trailblazers** Grade/Course: **4**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

STRONG	WEAK
2. Consistent, Coherent Content (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (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 WORK[53]:** Students and teachers using the materials as designed devote the large majority[54] of time to the major work of the grade/course. ☐ Yes ☒ 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 instructional materials reviewed for Grade 4 do not spend the large majority of class time on the major clusters of the grade. Approximately 60 percent (i.e., 60 out of 100) of the lessons focus on the major work of the grade, 14 percent (i.e., 14 out of 100) focus on supporting work of the grade, and 11 percent (i.e., 11 out of 100) focus on additional work of the grade. These percentages were calculated using information from the table of contents and planning guides for each lesson. Overall, the instructional materials allocate too much instructional time to clusters of standards that are not the major work of Grade 4, or are not the standards for Grade 4.
	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.[55]	**No**	The instructional materials reviewed for Grade 4 do not meet expectations for assessment. ” In Unit 1, Lessons 3, 4, and 5 there are assessment items that align to standards from 6.SP.A, “Develop understanding of statistical variability”, and 6.SP.B, “Summarize and describe distributions”. In Unit 5, Lessons 2, 3, 4, and 5 there are assessment items that align to standards from 6.SP.A, “Develop understanding of statistical variability,” and 6.SP.B, “Summarize and describe distributions.” In Unit 6, the midterm assessment in Lesson 8 has assessment items that align to standards from 6.SP.A and 6.SP.B. For example, in Unit 8, Lesson 12 students add fractions with unlike denominators. Also, in Unit 10, Lesson 7 students perform operations using decimals. In addition, the midterm test of Grade 4 has a focus question on finding the area of a non-rectangular shape. The standard 4.MD.A.3 is to apply the area and perimeter formulas to find the area or perimeter of rectangles.

[53] For more on the major work of the grade, see Focus by Grade Level.
[54] 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%.
[55] Refer also to criterion #2 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
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[56]	**Yes**	The materials in Grade 4 connect the supporting content to the major content in Units 3, 5, 7, 10, and 11. Unit 3, Lessons 1, 3, 4, 5, 7, 8, and 9 connect the supporting standard of 4.OA.B.4 with the major standard of 4.NBT.B.5 and 4.NBT.B.6. In Lessons 1, 3, 4, and 5 the working with factors and multiples supporting topics are combined with multiplying multi-digit numbers and finding quotients major topics. In Lessons 7, 8, and 9 the supporting topic of gaining familiarity with factors and multiples is combined with the major topic of multiplying whole numbers. Unit 5 Lessons 2, 3, and 4 combine the supporting standards of 4.MD.B.4 and 4.MD.A.2 with the major standards of 4.OA.A.1, 4.OA.A.2, 4.OA.A.3, and 4.NBT.A.3. Lessons 2, 3, and 4 combine the supporting topic of representing and interpreting data with the major topics of interpreting a multiplication equation as a comparison, multiplying or dividing to solve word problems involving multiplicative comparison, solving multi-step word problems, and some rounding of numbers. Unit 7, Lessons 4, 5, 6, and 8 combine the major standards of 4.NBT.A.3, 4.NBT.B.5, 4.NBT.B.7, and 4.OA.A.3 with the supporting standard of 4.OA.B.4. These lessons mix the major standard of generalizing place value understanding for multi-digit whole numbers, and solving multi-step word problems with the supporting standard of gaining familiarity with factors and multiples. Unit 10, Lessons 2 and 5 combine the supporting standard of 4.MD.A.1 with the major standard of 4.NF.C. These lessons mix the supporting standard of knowing relative sizes of measurement units within one system of units with the major topic of understanding decimal notation for fractions and comparing decimal fractions. Unit 11, Lesson 2 mixes the supporting standard of 4.MD.A.3 with the major standards of 4.NBT.A, 4.NBT.B.5, and 4.OA.A.3. Lesson 2 combines the supporting topic of applying the area and perimeter

[56] 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
			formulas for rectangles in real world and mathematical problems with the major topics of generalizing place value understanding for multi-digit whole numbers, and solving multi-step word problems.
	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. [57]	**Yes**	The materials do include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade. Units 3, 4, 5, 7, and 11 lessons combine standards of 4.NBT, Number and Operations in Base Ten, and 4.OA, Operations and Algebraic Thinking. Unit 10 lessons mix standards from 4.MD, Measurement and Data, and 4.G.A.1-3, drawing and identifying lines and angles, and classifying shapes by properties of their lines and angles. Unit 10 lessons combine the 4.MD.A.1, knowing relative sizes of measurement units standard with 4.NF.C.5-7, understanding decimal notation for fractions, and comparing decimal fractions standards. Unit 8 lessons contain different standards from the 4.NF, Number and Operations-Fractions domain.
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.[58]	**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**	The teacher's manual provides an abundant amount of questions for class discussion that help the students gain conceptual understanding. The student practice pages require students not only to solve problems but to explain their thinking. Materials develop conceptual understanding of key mathematical concepts. The standards 4.G.A.1, 4.G.A.2, and 4.G.A.3 are addressed. For example, the students must understand the concept of drawing points, lines, line segments, and arrays in Unit 9, Lessons 2, 6, 9, and 10. Lessons in the text include "Daily Practice and Problems." Throughout these practices students are asked to explain their thinking. For example, in Unit 8, Lesson 7 (4.OA.B.4) Exercise U gives 4 numbers (4010, 11,826, 765, and

[57] 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).
[58] 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
☒ Yes ☐ No			1224) and asks these questions: Which of the numbers above are divisible by 9? Explain how you know. If any of the above numbers are not divisible by 9, what number or numbers (2, 3, 5, 6, 10) are they divisible by? Lessons also include many questions for teachers to use to extend the conceptual understanding of the students. Unit 11, Lesson 1 (4.NBT.B.5) (Multiplication with Larger Numbers) included these questions: What multiplication problem does this rectangle represent? (18 × 14) How do you know? (There are 18 rows and 14 columns.) Who solved the problem by breaking the large rectangle into parts? What parts did you divide your large rectangle into? Why did you choose those partitions? What were you thinking about? How is your strategy different from [student name]'s strategy? How is your strategy the same? What did you multiply to get the numbers inside the rectangles? How do the numbers inside the rectangles match the numbers in the addition problem? Which partitions are easier to work with to solve the problem? Why?
	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.	**Yes**	The materials contain a majority of lessons that are focused on procedural skills and fluency standards such as, 4.NBT.B.4-6, using place value understanding and properties of operations to perform multi-digit arithmetic. In addition, supporting standard 4.OA.B.4, gaining familiarity with factors and multiples and major standards 4.NF.A.1-2, extending understanding of fraction equivalence and ordering are covered throughout the 4th grade materials and focus on procedural skills and fluencies. In Unit 4, Lessons 1, 4,5, 6, and 7 the fluency standard 4.NBT.B.4, add/subtract within 1,000,000, is addressed explicitly throughout the text; however, the text does not provide ongoing practice for students to attain this required standard for Grade 4.
	REQUIRED	**Yes**	The materials are designed so that teachers and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	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.		students spend sufficient time working with engaging applications. Unit 2 contains lessons that focus on the supporting application standard of 4.MD.A.3, applying the area and perimeter formulas for rectangles in real world and mathematical problems. Unit 4, 7, and 12 have lessons that focus on the major application standard of 4.OA.A.3, solving multi-step word problems posed with whole numbers and having whole-number answers using the four operations. Unit 5 lessons include the major application standard of 4.OA.A.2, multiply or divide to solve word problems involving multiplicative comparisons. Unit 13 contains lessons that have the supporting application standard of 4.MD.A.2, using the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money. Unit 8 lessons focus on the major application standards of 4.NF.B.3.d, solving word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, and 4.NF.B.4.c, solving word problems involving multiplication of a fraction by a whole number. Unit 5 Lesson 5 (4.MD.A.2) #14. If Mr. Sabol lives about 350 miles away, will he get there in six hours? Show how you know using your graph (See pg. 167, Student Activity Book. Unit 13 Lesson 3 (4.MD.A.2) Irma and Jessie have 150 cc of water in their graduated cylinder. They add large marbles until the water level is 168 cc. How many large marbles did they add? Show or tell how you know (See pg. 565, Student Guide).
	REQUIRED **3d)** ***Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The materials are aligned to the content standards and attend to the three components of rigor as required in 3a - 3c. Throughout each unit of study, students are provided the opportunity to develop necessary, foundational understanding of grade-level math concepts. This understanding naturally and coherently leads to the development of particular procedural skills and, through repeated exposure, fluencies. The materials then provide students opportunities to apply their knowledge and skills in the real world context. The ebb and flow

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
			between the components of rigor within a single unit of study (and throughout the course of the year) is logical and well designed, targeting the appropriate component(s) of rigor for each individual Standard, as well as, making meaningful connection between components of rigor preserving the balance that is called for by the Standards for this grade. For example, in Unit 11, Lessons 1-4 students work with strategies such as using the standard algorithm and partials to explore multiplication for 4.NBT.B.5. Students also practice "naked number" problems aimed at developing fluency in multiplication for the same standard. Later in Lesson 5 of the same unit, students choose from a variety of strategies to solve word problems related to Phil and Howard's Excellent Egyptian Adventure for 4.OA.A.2.
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.[59] ☒ Yes ☐ 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**	Materials address the practice standards that enrich the major work of the grade. A standards correlation document includes each standard, a descriptor, lesson citations, and a correlation to the Mathematical Practices. This document does strengthen the focus on major work for the standards of Grade 4. Each lesson in the materials has the students using many if not all 8 of the Mathematical Practices. Each lesson in the teacher's guide has a box to click on to see all the standards addressed as well as which math practices are used in that lesson. The Grade 4 student site has a reference tab with a math practice page with videos that explain each one of the first six math practices in a cartoon like, and child friendly way. Lesson 4, Unit 5 addresses the math practices of 1-8 throughout the activities. For example, in "Bouncing Ball" and "Bouncing Ball Lab" math practices 5-Show my work and 6- Use labels are addressed. In Unit 11, Lesson 5 in an activity called "Dancing in TIMSville," math practices 2-Find a strategy, 3-Check for reasonableness, and 5-Show my work are all addressed.

[59] 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			
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. ☐ Yes ☐ 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. [60]	**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.[61]	**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	**6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[62] 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.[63] There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

[60] 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).
[61] 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).
[62] 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).
[63] 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. ☐ Yes ☐ 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. [64]	**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. [65] ☐ Yes ☐ 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.

[64] 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).
[65] 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.

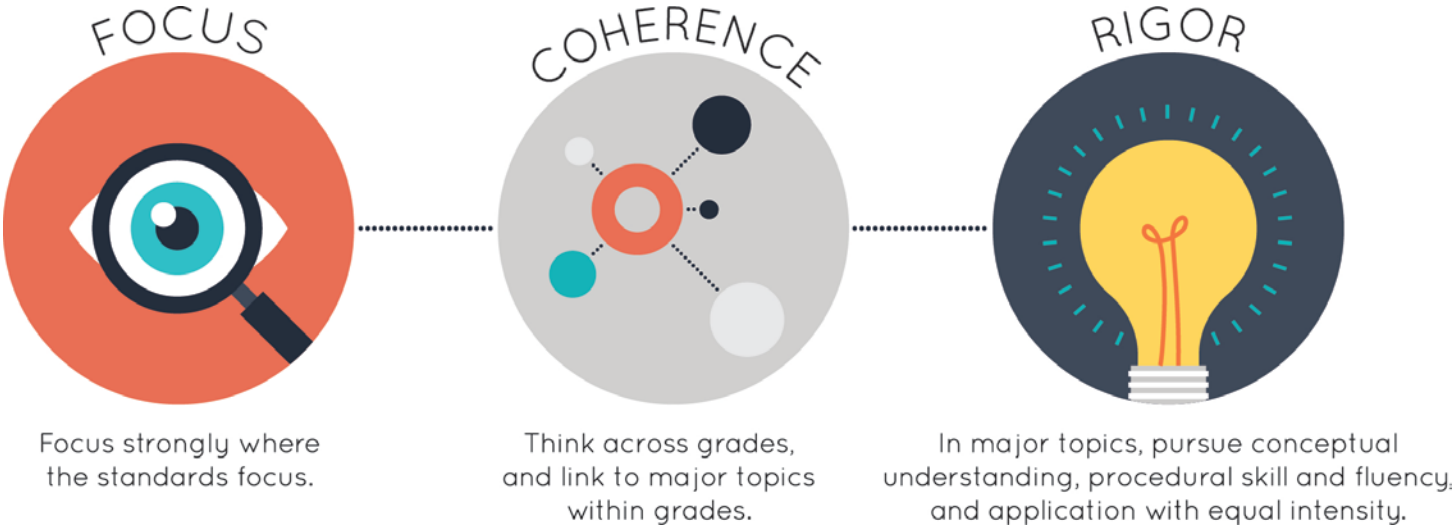
FINAL EVALUATION
Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the 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**	Only 60% of the lessons are focused on the major work of the grade. In addition, the material goes beyond the scope of the grade on several student assessments holding students and teachers responsible for content that is outside the grade level.
	2. Consistent, Coherent Content	**Yes**	Supporting work of the grade supports the major work of the grade where it is both appropriate and natural. Materials aim to connect multiple standards within domains and clusters.
	3. Rigor and Balance	**Yes**	Materials are balanced with the appropriate aspects of rigor and address the content standards with the rigor required by each standard of the grade level.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
	4. Focus and Coherence via Practice Standards	**Yes**	Practice standards and explanations provided within the text strengthen the major work of the grade.
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: **Math Trailblazers** Grade/Course: **5**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

STRONG	WEAK
2. Consistent, Coherent Content (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (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 WORK[66]:** Students and teachers using the materials as designed devote the large majority[67] of time to the major work of the grade/course. ☐ Yes ☒ 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 instructional materials reviewed for Grade 5 do not meet the expectations for spending the large majority of class time on the major clusters of the grade. Approximately 54 percent (i.e., 49 out of 91) of the lessons focus on the major work of the grade, 7 percent (6 out of 91) focus on the supporting work, and 10 percent (9 out of 91) focus on the additional work of the grade. These percentages were calculated using the table of contents and planning guides for each lesson. Overall, the instructional materials allocate too much instructional time to clusters of standards that are not the major work of Grade 5, or are not the standards for Grade 5.
	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.[68]	**No**	The instructional materials reviewed for Grade 5 do not meet expectations for assessment. In Unit 1, Lessons 1, 2, 3, and 4 there are assessment items that align to standards from 6.SP.A "Develop understanding of statistical variability," and 6.SP.B, "Summarize and describe distributions." In Unit 5, Lessons 2-6 there are assessment items that align to standards from 6.RP.A, "Understand ratio concepts and use ratio reasoning to solve problems." In Unit 8, Lessons 5 and 6 there are assessment items that align to standards from 6.SP.B, "Summarize and describe distributions." In Unit 8, decimals to the nearest thousandths are addressed, which is not covered until Grade 6. Also, Units 5, 7, and 11 focus on ratios and/or variables, which are introduced in 6th grade. Unit 6 introduced negative numbers and graphing in all 4 quadrants, this also goes beyond the scope of 5th grade standards. Unit 8 requires students to multiply and divide by decimals to the 100,000th place. The midterm test for Grade 5 in

[66] For more on the major work of the grade, see Focus by Grade Level.
[67] 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%.
[68] Refer also to criterion #2 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
			the materials has a focus on finding the median of two groups of numbers and mode. This too is not content belonging to the 5th grade. The midterm test also has a focus on the coordinate grid with more than the first quadrant, which is also not a part of the 5th grade content. Standard 5.NF.B.7 has the explicit expectation for students to apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. However, the End of the Year test asks about ratio, which is content for 6th grade.
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[69]	**Yes**	The materials do connect supporting content to major content in meaningful ways. Unit 5 Lessons 3, 4, and 5 connect the supporting standards of 5.MD.A.1 and 5.MD.A.2 with the major standards of 5.NF.A.1, 5.NF.B.3 and 5.NF.B.5. Lesson 3 in Unit 5 connects adding and subtracting fractions with unlike denominators, and interpreting a fraction as division of the numerator by the denominator with converting measurements in multi-step word problems. Lesson 4 in Unit 5 connects the supporting topic of converting measurements and making a line plot to display a set of data of measurement in fractions of a unit with the major topics of adding and subtracting fractions with unlike denominators and interpreting multiplication as scaling by comparing the size of a product to the size of one factor or explaining the multiplying a number by a fraction greater than 1 and its product. Lesson 5 in Unit 5 connects the major standard of adding and subtracting fractions with unlike denominators by replacing equivalent fractions to produce sums or differences of fractions with like denominators and the supporting standard of converting like measurement units within a given measurement system.

[69] 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
	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. [70]	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade. Unit 5 contains lessons that combine major standards of 5.NF.A.1, adding and subtracting fractions with unlike denominators, 5.NF.B.5, interpreting multiplication as scaling, with supporting standards of 5.MD.A.1, converting like measurement units within a given measurement system, 5.MD.B.2, representing and interpreting data, and additional standard 5.OA.B.3, analyzing patterns and relationships. Unit 10 has lessons from the major standards of 5.NF.A.1-2, using equivalent fractions as a strategy to add and subtract fractions, and 5.NF.B.3-7, applying and extending previous understandings of multiplication and division to multiply and divide fractions.
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.[71] ☒ Yes ☐ 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**	The teacher's manual provides an abundant amount of questions for class discussion that help the students gain conceptual understanding. The student practice pages require students not only to solve problems but to explain their thinking. Materials develop conceptual understanding of key mathematical concepts. The standard 5.NF.2 is addressed. For example, the students must understand the concept of addition and subtraction of fractions in Unit 10 Lessons 1-11. Lessons in the text include "Daily Practice and Problems". Throughout these practices students are asked to explain their thinking. For example, in Unit 8, Lesson 4 (5.NBT.B.6), Practice I-- Problem F is n ÷ 70 = 70. Problem G asks, "Explain the strategy you used to solve Question F." Lessons also include many questions for teachers to use to extend the conceptual understanding of the students. Unit 10, Lesson 4 (5.NBT.B.7) (Add Mixed Numbers) included these questions: Will the sum of 1 1/2 and 2 3/4 be more or less than 4? How can you decide without calculating an exact answer? Does this sum make

[70] 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).
[71] 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
			sense? Why or why not? Is the answer in simplest form? How do you know? Can you use circle pieces to prove that the answer is correct? Can you use this method to solve 1 3/4 and 2 9/12? Is there another way or a more efficient way to solve this problem?
	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.	**Yes**	The materials are designed so that students attain the fluencies and procedural skills required by the standards. The major standards of 5.NBT.B.5-7, performing operations with multi-digit whole numbers and with decimals to hundredths focus on the procedural skills and fluencies and can be found in lessons in Units 4, 7, and 8. The major standard 5.NF.A.1, adding and subtracting fractions with unlike denominators focuses on procedural skills and fluencies and can be found in lessons in Units 2, 5, 9, 10, and 11.
	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.	**Yes**	The materials are designed so that the teachers and students spend sufficient time working with engaging applications. The supporting standard of 5.MD.A.1, converting like measurement units within a given measurement system and use these conversions in solving multi-step, real world problems can be found in the lessons in Units 1 and 5 and focus on application. The major application standards of 5.NF.B.3, solving word problems involving division of whole numbers leading to answers in the form of fractions and mixed numbers, and 5.NF.B.6, solving real world problems involving multiplication of fractions and mixed numbers by using visual fraction models or equations to represent the problem can be found in lessons in Units 2, 5, and 10.
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The materials are aligned to the content standards and, as such, have attended to the three components of rigor as required in 3a - 3c. Throughout each unit of study, students are

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
			provided the opportunity to develop necessary, foundational understanding of grade-level math concepts. This understanding naturally and coherently leads to the development of particular procedural skills and, through repeated exposure, fluencies. The materials then provide students opportunities to apply their knowledge and skills in the real world context. The ebb and flow between the components of rigor within a single unit of study (and throughout the course of the year) is logical and well designed, targeting the appropriate component(s) of rigor for each individual Standard, as well as, making meaningful connection between components of rigor preserving the balance that is called for by the Standards for this grade. For example, in Unit 10, Lesson 1-10 students work with strategies such as using estimation and fraction diagrams to introduce and expand upon the four operations using fractions for 5.NF.A.1 and 5.NF.B.4. Later in Lesson 11 of the same unit, students choose from a variety of strategies to solve word problems the four operations with fractions for 5.NF.B.6 and 5.NF.A.2.
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.[72] ☒ Yes ☐ 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**	Materials do address the practice standards that enrich the major work of the grade. A correlation document includes each standard, a descriptor, lesson citations, and a correlation to the Mathematical Practices. This document does strengthen the focus on major work for the standards of this grade level. Each lesson in the materials has the students using many if not all 8 of the mathematical practices. Each lesson in the teacher's guide has a box to click on to see all the standards addressed as well as which math practices are used in that lesson. In Lesson 8 of Unit 7 the students recognize the use of all of the 8 math practices throughout different activities in the lesson. The students discuss the practices, especially the first six. There is a reference tab on the Grade 5

[72] 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
			student site that brings up a page explaining and naming the first six math practices in a kid friendly cartoon like way. In Unit 7, Lesson 8 has an activity called "How Many Drops," where the math practice 1-Know the problem, 2-Find a strategy, 5-Show my work, and 6-Use labels are all accessed.
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. ☐ Yes ☐ 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. [73]	**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.[74]	**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:**	**6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[75] Over the course of any given year of instruction, each mathematical practice standard is meaningfully present	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

[73] 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).
[74] 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).
[75] 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
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. ☐ Yes ☐ No	in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard.[76] 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.		
	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. [77]	**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. [78] ☐ Yes ☐ 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	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

[76] 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).
[77] 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).
[78] 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
	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
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.

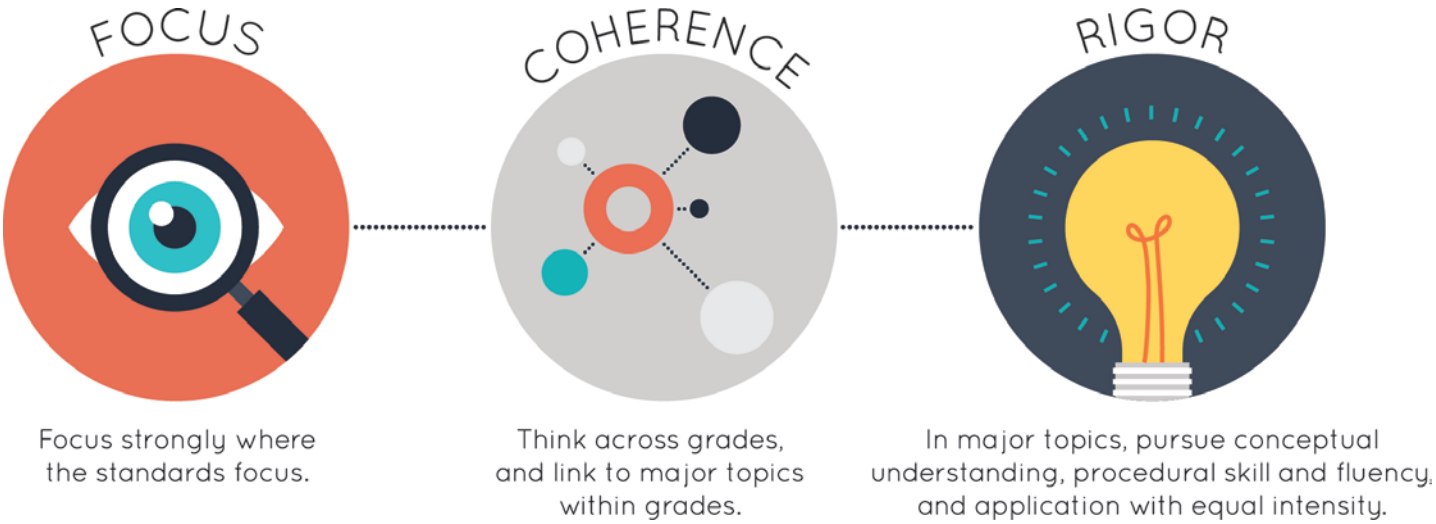
Section	Criteria	Yes/No	Final Justification/Comments
I: Non-Negotiables	1. Focus on Major Work	**No**	Only 54% of the lessons are focused on the major work of the grade. In addition, the material goes beyond the scope of the grade on several student assessments holding students and teachers responsible for content that is outside the grade level.
	2. Consistent, Coherent Content	**Yes**	Supporting work of the grade supports the major work of the grade where it is both appropriate and natural. Materials aim to connect multiple standards

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES
			within domains and clusters.
	3. Rigor and Balance	**Yes**	Materials are balanced with the appropriate aspects of rigor and address the content standards with the rigor required by each standard of the grade level.
	4. Focus and Coherence via Practice Standards	**Yes**	Practice standards and explanations provided within the text strengthen the major work of the grade.
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 I.

Publisher Response

Strong mathematics instruction contains the following elements:



Title: **Math Trailblazers** Grade/Course: **K-5**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

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

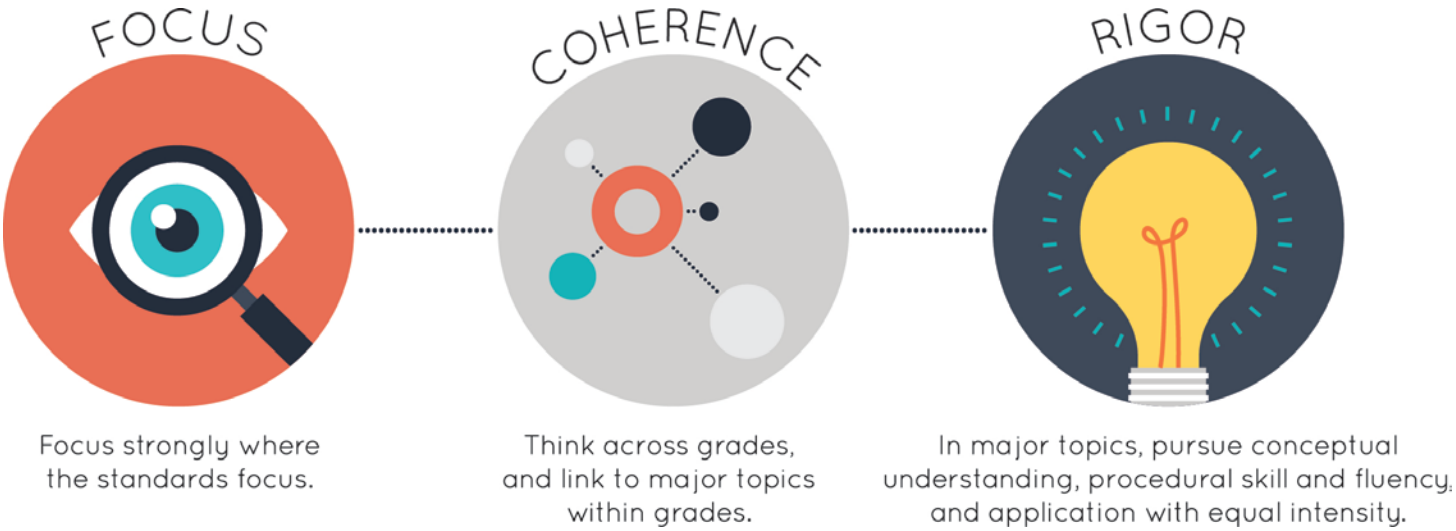
Each set of submitted materials was evaluated for alignment with the standards beginning with a review of the indicators for the non-negotiable criteria. If those criteria were met, a review of the other criteria ensued.

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 K (Tier 3) Grade 1 (Tier 3) Grade 2 (Tier 3)
Grade 3 (Tier 3) Grade 4 (Tier 3) Grade 5 (Tier 3)

Strong mathematics instruction contains the following elements:



Title: **Math Trailblazers** Grade/Course: **K**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

STRONG	WEAK
2. Consistent, Coherent Content (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (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.				
Non-Negotiable **1. FOCUS ON MAJOR WORK[1]:** Students and teachers using the materials as designed devote the large majority[2] of time to the major work of the grade/course. ☐ Yes ☒ 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.	**Yes**	The instructional materials reviewed for Kindergarten do meet the expectations for spending the large majority of class time on the major clusters of the grade. Approximately 84 percent (i.e., 31 out of 37) of the lessons focus on the major work of the grade. Five percent (i.e., 2 out of 37) focus on supporting clusters. Eleven percent (i.e., 4 out of 37) focuses on additional clusters of the grade. These percentages were calculated using the table of contents and planning guides for each lesson as well as a brief overview of each lesson.	
	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]	**No**	The instructional materials reviewed do not meet the expectations for only assessing the work of the grade level. In Month 2, Lessons 2 and 4 there are assessment items that align to 4.OA.C. , "Generate and analyze patterns." The Key Assessment Opportunities Chart shows the expectation that students be able to recognize, describe, and extend a growing pattern; make predictions and solve problems from growing and repeating patterns; identify the pattern unit in a repeating pattern represented with colors, shapes, numerals, and quantities; and recognize, describe, copy, and extend a repeating pattern represented with colors, shapes, numerals, and quantities. These lessons account for two of the four lessons in month two. In Month 5, Lesson 1 there are assessment items that align to 4.OA.C, "Generate and analyze patterns." In Month 7, area, mass, and capacity is addressed, which is not covered in the standards until grade 3. Examples also include skip counting by 2s and 5s, reading number words to 20, and reading and creating bar and picture graphs.	Math Trailblazers provides numerous assessment opportunities, both formal and informal, embedded throughout the lessons, so timely feedback can effectively guide instruction and improve learning. This research-based, balanced approach gives teachers better information about where students are going, what students know, and how to make instructional decisions in a timely manner. Assessment opportunities in Math Trailblazers at Grade K that are labeled Benchmark Expectations are used to evaluate student mastery of standards. Other assessment items are midpoint checks for student understanding on their way to mastery. **Key Assessment Opportunities Charts** These charts appear at every unit for every grade and they identifiy target assessment items for endpoint and mid point assessments. To best address specific assessments items as being at or above grade level it is recommended using the

[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).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				Key Assessment Opportunities Charts Upon review none of the identified assessment items were Benchmark Expectation Assessments for Kindergarten. The authors of Math Trailblazers developed multiday lessons to allow for the wide range of abilities among 5 year olds in a K classroom. Some students enter K already skip counting by 2's and 5's so it is not new material introduced but built upon for student growth. The standards are assessed as needed by the Benchmark Expectations. The reference to a 4th grade standard as a backdrop for student exploration in grade K is not an assessed item for student mastery. Month 7, is an example of how Math Trailblazers includes many topics as contexts for students to explore number and operations. With this cross-grade level design, students gradually access material such as volume, area, and mass through developmentally appropriate contexts without distracting from the main topics of the grade level, allowing their conceptual understanding of the ideas to grow naturally.
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.[4]	**Yes**	The materials connect supporting content to major content in meaningful ways. This is especially evident in Months 1, 2, 3, 5, 6, and 9. For example, Month 1, Lessons 2 and 4 combine the supporting standard of K.MD.3 (classifying objects and counting the number of objects in each category) with the major standards K.OA.2 (solving addition and subtraction word problems, and add and subtract within 10 by using objects or drawings to represent the problem), K.CC.2 (counting forward beginning from a given number within the known sequence),	

[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	PUBLISHER RESPONSE
☒ Yes ☐ No			K.CC.3 (writing numbers from 0 to 20), K.CC.5 (count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration), and K.CC.6 (identifying whether the number of objects in one group is greater than , less than, or equal to the number of objects in another group). While Month 2 Lesson 3 combines the supporting standard K.MD.3 (classifying objects and counting the number of objects in a category) with the major standards of K.OA.3 (decomposing numbers less than or equal to 10 into pairs in more than one way), K.CC.3 (writing numbers from 0 to 20), K.CC.4 (understanding the relationship between numbers and quantities), and with K.CC.6 and K.CC.7 (comparing numbers). Additionally, Month 3, Lesson 2 combines the supporting standard of K.MD.3 (classifying objects and counting the number of objects in categories), with the major standards K.OA.3 (decomposing numbers less than or equal to 10 into pairs in more than one way), K.CC.3 (writing numbers from 0 to 20), K.CC.4 (understanding the relationship between numbers and quantities), and with K.CC.6 and K.CC.7 (comparing numbers). Month 5, Lessons 2 and 4 combine the supporting strand of K.MD.3 (classifying objects and counting the number of objects in categories), with the major standards of K.CC.4 (understanding the relationship between numbers and quantities), K.CC.5 (counting to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration) and with K.OA.1, K.OA.2, K.OA.3, K.OA.4, and K.OA.5 (understanding addition as putting together and adding to, and understanding subtraction as taking apart and taken from). Month 9, Lesson 1 combines and connects the same supporting and major standards.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	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]	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade. Month 1 mixes the K.CC domain, Counting and Cardinality with the K.MD domain, Measurement and Data. Month 4 has a mixture of the K.CC domain, Counting and Cardinality with the K.OA domain, Operations and Algebraic Thinking, and the K.G domain, Geometry. Month 8 has a focus on the combination of K.OA, Operations and Algebraic Thinking, with the domain of K.CC, Counting and Cardinality, and K.MD, Measurement and Data.	
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] ☒ Yes ☐ 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**	The materials provide a deliberate progression in conceptual development, purposeful use of representation, and explicit instruction about making connections among representations exists to help teachers analyze developing mathematicians. The carefully engineered structure and questioning in the lessons are designed to show teacher where students are and where they need to go. The teacher's text includes sample dialog to develop conceptual understanding in the students. For example, Month 2, Lesson 1- How many dots are on the card? How did you know how many dots are there? Did anyone know the answer without counting the dots? Did anyone see a different answer? What number did they see? And also in Month 8, Lesson 3, Balancing Number Sentences- How many more do you need to make the number sentence balance? How did you figure that out? Is there another way to check the answer? What is the complete number sentence? Do both sides of the equal sign show the same quantity? Lessons often start with a problem to assess students' prior knowledge and all lessons include a Summarizing the Lesson session to get a feel where students are in the learning process before the next lesson begins. Lessons are structured so that students are	

[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	PUBLISHER RESPONSE
			asked to grapple with, represent, and justify their own thinking and reasoning. This solid conceptual foundation gives students a deeper understanding of the mathematics. For example, The standard K.CC.B.4 is a standard that stresses conceptual understanding. The students must understand the concept of counting to tell the number of objects in Month 1 Lessons 1-4, Month 3 Lessons 1-4, and Month 5 Lessons 1,2,3, and 5. Most of the K standards are conceptual understanding like the standards of K.CC.6 and K.CC.7 on comparing numbers. These two major standards are together and stressed in at least nine lessons throughout the Kindergarten year. The Kindergarten major standards K.OA.1, K.OA.3 and K.OA.4 all are conceptual understanding. These standards can be found in the materials at least 13 times in lessons throughout the year. Although the materials develop conceptual understanding of key mathematical concepts for most of the K standards, they are lacking in developing the conceptual understanding of working with numbers 11-19 to gain a foundation for place value. This conceptual understanding and major standard, K.NBT.A.1 is only seen one time in one lesson, Month 6, Lesson 4.	
	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.	**Yes**	The material's solid conceptual foundation gives students a deeper understanding of the mathematics, and the power to develop fluency with the procedures and think flexibly and strategically about mathematics. Students build on their own knowledge. Then they use informal, invented strategies to solve problems. Finally, students are able to revise their strategies and develop fluency with formal procedures. Students are given regular opportunities to explore, develop, discuss and refine their strategies and mathematical ideas. This conceptual foundation gives students the power to develop fluency with mathematical procedures and the ability to think flexibly and strategically about mathematics. Students are routinely provided with opportunities to apply	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			concepts and skills, and regularly presented with modeling, reasoning and problem-solving experiences to develop their fluency with procedures. For example, the fluency standards K.OA.A.2 and K.OA.5 are addressed explicitly throughout the text. The text does provide practice for the required fluencies for grade K, addition/subtraction within 5. Month 3 Lessons 3-4 and Month 7 Lessons 2, 5, and 6 cover those standards.	
	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.	**Yes**	Materials are designed so that the teachers and students spend sufficient time working with engaging applications. For example standards K.OA.A.2, K.G.A.1, and K.G.B.5 are explicitly included in the lessons throughout the text. For example, Month 1 Lesson 3, Month 6 Lesson 2, and Month 4 Lesson 3 feature word problems with the above standards.	
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The materials that align to the content standards have attended to the three components of rigor. Throughout each unit of study, students are provided the opportunity to develop necessary, foundational understanding of grade-level math concepts. This understanding naturally and coherently leads to the development of particular procedural skills and, through repeated exposure, fluencies. The materials then provide students opportunities to apply their knowledge and skills in the real world context. The ebb and flow between the components of rigor within a single unit of study (and throughout the course of the year) is logical and well designed, targeting the appropriate component(s) of rigor for each individual standard, as well as, making meaningful connection between	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			components of rigor preserving the balance that is called for by the standards for this grade. For example, Month 2, Lesson 3 addresses K.CC.C.6 as students compare dots on dominoes to determine which set of dots is larger. This is completed as a game of domino "war." Students also practice this skill later in Month 2, Lesson 4 for procedural practice on worksheets using objects in a chart.	
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] ☒ Yes ☐ 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**	Materials do address the practice standards that enrich the major work of the grade. A standards correlation document includes each standard, a descriptor, lesson citations, and correlation to the Mathematical Practices. This document does strengthen the focus on major work for the standards of this grade level. Each lesson in the materials has the students using many if not all 8 of the mathematical practices. Each lesson in the teacher's guide has a box to click on to see all the standards addressed as well as which math practices are used in that lesson. For example, In Lesson 1 of Month 5 there are several activities that focus on the 1-8 Mathematical Practices. The students have a master sheet of the first six math practices. It is the form of a print out. They use this to fill in and look at throughout the activities. They must 1.Know the problem. 2.Find a strategy. 3.Check for reasonableness. 4.Check my calculations. 5.Show my work. 6.Use labels. They also talk to each other and the teacher about these six math practices and how they used them throughout the activities. The student site is the first grade student site and it has a reference tab that includes videos that explain each one of the first six math practices in a cartoon like, and child friendly way. Also, In Lesson 1 of Month 9 there are several activities that address all of the 8 math practices. The first 6 are specifically visited over and over throughout the different activities. Lesson 1 of Month 9, Journal Prompt: How Many More with Feedback box, Activity 4, page	

[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
			1574 accesses Math practices numbers 1- Know the problem, 2- Find a strategy, and 5- Show my work.	
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. ☐ Yes ☐ 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. [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	**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	**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).

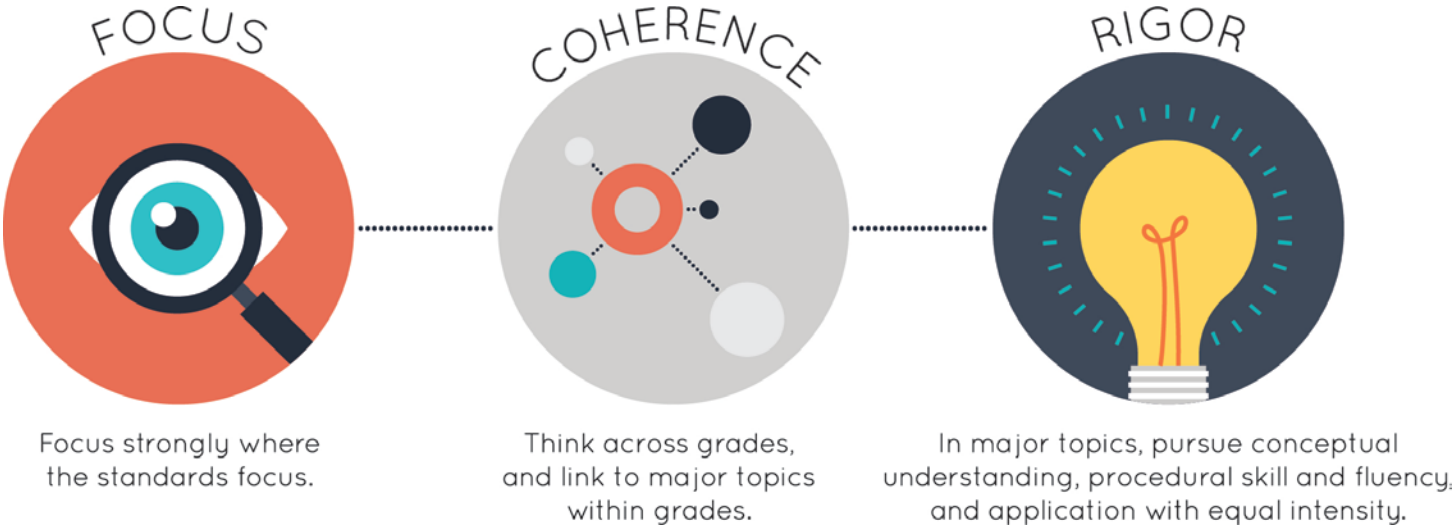
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. ☐ Yes ☐ No	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.			
	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 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. [13] ☐ Yes ☐ 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	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[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 ***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 84% of the lessons are focused on the major work of Grade K, the material goes beyond the scope of the grade on numerous student assessments holding students and teachers responsible for content that is outside the grade level.	Please see comments on the most efficient way to navigate the assessment tools in the program.
	2. Consistent, Coherent Content	**Yes**	Supporting work of the grade supports the major work of the grade where it is both appropriate and natural. Materials aim to connect multiple standards within domains and clusters.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	3. Rigor and Balance	**Yes**	Materials are balanced with the appropriate aspects of rigor and address the content standards with the rigor required by each standard of the grade level.	
	4. Focus and Coherence via Practice Standards	**Yes**	Practice standards and explanations provided within the text strengthen the major work of the grade.	
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: **Math Trailblazers** Grade/Course: **1**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

STRONG	WEAK
2. Consistent, Coherent Content (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (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.				
Non-Negotiable **1. FOCUS ON MAJOR WORK[14]:** Students and teachers using the materials as designed devote the large majority[15] of time to the major work of the grade/course. ☐ Yes ☒ 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**	In Grade 1, up to 85 percent of class time should be devoted to the major work of the grade. In the materials reviewed however, approximately 51 percent (i.e., 56 out of 109) of the lessons focus on the major work of the grade, 5 percent (i.e., 5 out of 109) focus on the supporting clusters, and 13 percent (i.e., 14 out of 109) focus on additional clusters. These percentages were calculated using the table of contents and planning guides for each lesson.	Our Math Trailblazers author team did an analysis of the Focus on Major Work at grade 1 and their finding are listed here. This information is used in the implemenation and professional development plan developed for program rollout and planning at each user site. Our program authors recognize that students need frequent and varied experiences with concepts prior to end point assessments at a grade level. Student mathematicians need time to explore, develop, build upon, revise, solidify, and make their own meaning of a topic well before the grade where it is assessed. **Focus on Major Work in Grade 1** Major Work 1.OA.A Represent and solve problems involving addition and subtraction. Unit 3 Lesson 4, 5, 7 Unit 4 Lesson 2, 3, 4, 5 Unit 5 Lesson 5 Unit 6 Lesson 1, 2, 3, 4, 5, 6, 7, 8 Unit 11 Lesson 2, 3, 4, 5, 7, 8 Unit 12 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Unit 13 Lesson 1, 3, 4 Unit 14 Lesson 2, 4, 5, 6 1.OA.B Understand and apply properties of operations and the relationship between addition and subtraction. Unit 6 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9 Unit 12 Lesson 1, 3, 4, 5, 6, 7, 8, 9, 10 Unit 17 Lesson 4, 5

[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%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				1.OA.C Add and subtract with 20. Unit 3 Lesson 2, 4, 5, 7 Unit 4 Lesson 2, 3, 4, 5 Unit 5 Lesson 2, 3, 4 Unit 6 Lesson 1, 2, 3, 4, 5, 6, 7, 9 Unit 7 Lesson 1, 2, 3 Unit 8 Lesson 4 Unit 9 Lesson 2 Unit 11 Lesson 3, 4 Unit 12 Lesson 1, 3, 4, 5, 6, 7, 8, 9, 10 Unit 17 Lesson 4, 5 1.OA.D Work with addition and subtraction equations. Unit 4 Lesson 2, 3, 4, 5 Unit 6 Lesson 3, 4, 6, 7, 9 Unit 9 Lesson 2 Unit 12 Lesson 1, 6, 7, 8, 9, 10 1.NTB.A Extend the counting sequence. Unit 1 Lesson 1, 2, 4, 5, 6 Unit 3 Lesson 1, 2, 4, 5, 6 Unit 4 Lesson 1, 2, 3, 4, 5 Unit 5 Lesson 1, 2, 3, 4, 5 Unit 7 Lesson 1, 2, 3 Unit 8 Lesson 1, 2, 3, 4 Unit 9 Lesson 1 Unit 10 Lesson 1, 2, 3, 4, 5, 6, 7, 8 Unit 11 Lesson 2, 3, 5 Unit 17 Lesson 1, 2, 3, 4, 5 1.NTB.B Understand place value. Unit 3 Lesson 1, 2, 4, 5, 6 Unit 5 Lesson 1, 2, 3, 4, 5 Unit 7 Lesson 1, 2, 3, 4, 5 Unit 8 Lesson 1, 2, 3, 5 Unit 9 Lesson 3, 4, 5, 6, 7 Unit 10 Lesson 1, 2, 3, 4, 5, 6, 7, 8 Unit 11 Lesson 2, 3, 4 Unit 17 Lesson 1, 2, 3, 4 1.NTB.C Use place value understanding and properties of operations to add and subtract. Unit 10 Lesson 1, 2, 3, 4, 5, 6, 7, 8 Unit 11 Lesson 5 Unit 14 Lesson 2, 3, 4, 5, 6

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				Unit 17 Lesson 1, 2, 3, 4, 5 1.MD.A Measure lengths indirectly and by iterating length units. Unit 1 Lesson 5 Unit 7 Lesson 2, 3, 4, 5, 6 Unit 8 Lesson 1, 2, 3, 5 Unit 11 Lesson 6 Supporting Work 1.MD.C Represent and interpret data. Unit 3 Lesson 1, 3 Unit 5 Lesson 5 Unit 7 Lesson 3, 4 Unit 9 Lesson 1 Unit 10 Lesson 3, 8 Unit 11 Lesson 6 Unit 14 Lesson 2, 4, 5 Additional Work 1.MD.B Tell and write time. Unit 9 Lesson 9 Unit 11 Lesson 1 Unit 13 Lesson 5 1.G.A Reason with shapes and their attributes. Unit 2 Lesson 1, 2, 3, 4, 5 Unit 9 Lesson 8 Unit 15 Lesson 1, 2, 3, 4, 5, 6 Unit 16 Lesson 2, 3
	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	**No**	Approximately 31 percent (i.e., 34 of 109) of the lessons focused on work outside of the grade level. For example, Unit 8, Lessons 1 - 4 have assessment items that align to standards from 3.MD.C. "Geometric measurement: understand concepts of area and relate area to multiplication and addition;" Unit 13, Lessons 1 - 4 have assessment items that align to standards from 5.MD.C, "Geometric measurement: understand concepts of volume;"	Math Trailblazers provides numerous assessment opportunities, both formal and informal, embedded throughout the lessons, so timely feedback can effectively guide instruction and improve learning. This research-based, balanced approach gives teachers better information about where students are going, what students know, and how to make instructional decisions in a timely manner. Assessment opportunities in Math Trailblazers at

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	grade/course in which they are introduced in the Standards.[16]		and Unit 14, Lesson 2 has assessment items that align to 3.MD.B.3., "Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs." In Unit 3, money is addressed, which is not covered until Grade 2 (2.MD.C.8). The text often goes beyond the scope of Grade 1 standards, into Grade 2 work. For example, see skip counting in Unit 5, Lessons 1 and 2 and in Unit 7, Lesson 1; see money in Unit 11, Lessons 3 and 4; and counting beyond 120 in Unit 17, Lessons 2,3, and 4.	Grade 1 that are labeled Benchmark Expectations are used to evaluate student mastery of standards. Other assessment items are midpoint checks for student understanding on their way to mastery. **Key Assessment Opportunities Charts** These charts appear at every unit for every grade and they identifiy target assessment items for endpoint and mid point assessments. To best address specific assessment items as being at or above grade level it is recommended using the Key Assessment Opportunities Charts. A few notes regarding materials being addressed as out of grade level are listed here. Unit 8 - Lessons 1-4, assessment includes 3.MD.C as a secondary story to earlier work with Measurement and provides interesting, real world context for comparing. Unit 13 - Lesson 1-4, 5.MD.C not present in unit assessment Unit 14 - Lesson2, 3.MD.B.3, not present in unit assessment. In reference to scope: Money is used to set context for composing and decomposing numbers in Unit 3 not used as expected in grade 2. Skip counting is a portion of 1.OA.C5 for grade 1 standards for developing counting on strategies by 2. It is a natural adjunct strategy when grouping and counting. Unit 17 is the last unit of 1st grade and experience with numbers beyond 120 are precursor activities for grade 2. As the last unit for the year, it can be optional for completion.

[16] Refer also to criterion #2 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
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[17]	**Yes**	The materials connect supporting content to major content in Units 3, 5, 7, 9, 10, and 14. Unit 3, Lesson 1 combines the supporting strand of 1.MD.C.4 with the major standards of 1.NBT.A.1 and 1.NBT.B.2. This lesson has the supporting topic of representing and interpreting data mixed with major topics of extending the counting sequence, and understanding place value. Unit 5, Lesson 5 has both the supporting standard of 1.MD.C.4 and the major standards of 1.NBT.A.1, 1.NBT.B.2, and 1.OA.A.2. This lesson combines the supporting topic of representing and interpreting data with the major topics of extending the counting sequence, understanding place value, and solving word problems that call for addition of three whole numbers whose sum is less than or equal to 20. Unit 7, Lessons 3 and 4 connect the supporting standard of 1.MD.C.4 with the major standards of 1.NBT.A.1, 1.NBT.B.2, 1.NBT.B.3, 1.OA.C.5, and 1.OA.C. These lessons combine the supporting topic of representing and interpreting data with the major topics of extending the counting sequence, understanding place value, adding and subtracting within 20, and measuring lengths indirectly and by iterating length units. Unit 9, Lesson 1 combines the supporting standard of 1.MD.C.4 with the major standard of 1.NBT.A.1. The supporting topic of representing and interpreting data is mixed in with the major topic of extending the counting sequence. Unit 10, Lessons 3 and 8 mix the supporting standard of 1.MD.C.4 with the major standards of 1.NBT.A.1, 1.NBT.B.2, 1.NBT.B.3, 1.NBT.C.4, and 1.NBT.C.5. These lessons combine the supporting topic of representing and interpreting data and the major topics of extending the counting sequence, understanding place value, and using place value understanding and properties of operations to add and subtract. Unit 11, Lesson 6 combines the supporting standard of 1.MD.C.4, representing and interpreting data with the major standard 1.MD.A.2,	

[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
			expressing the length of an object as a whole number of length units. Unit 14, Lessons 2, 4, and 5 combine the supporting standard of 1.MD.C.4 with the major standards of 1.OA.C.4 and 1.NBT.C.4. These three lessons in Unit 14 mix the supporting topic of representing and interpreting data with the major topics of using addition and subtraction within 20 to solve word problems and adding within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings.	
	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 include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade. Unit 3 Lessons 2, 4, 5, and the Units 4 and 5 lessons connect 1.NBT.1, extending the counting sequence, and 1.NBT.2, understanding place value with 1.OA.C.5, relating counting to addition and subtraction and 1.OA.C.6, adding and subtracting within 20. Unit 6 lessons combine the different parts of the major standard of Operations and Algebraic Thinking. The standards of 1.OA.A, representing and solving problems involving addition and subtraction, 1.OA.B, understanding and applying properties of operations and the relationship between addition and subtraction, 1.OA.C, adding and subtracting within 20, and 1.OA.D, working with addition and subtraction equations. Lessons in Units 7, 8, 9, 10, and 11 combine the three domains of 1.NBT, Numbers and Operations in Base Ten, 1.OA, Operations and Algebraic Thinking, and 1.MD, Measurement and Data.	
Non-Negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet	**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	**Yes**	Materials develop conceptual understanding of key mathematical concepts. The standards 1.NBT.A.1 and 1.NBT.A.2 are addressed. For example, the students must understand the concept of place value for 1.NBT.C.4 in multiple lessons such as Unit 3 Lessons 1-6, Unit 5 Lessons 1-5, and Unit 7 Lessons	

[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).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application.[19] ☒ Yes ☐ No	high-quality conceptual problems and discussion questions.		1-3. Lessons in the text include "Daily Practice and Problems." Throughout these practices students are asked to explain their thinking. For example, Unit 10, Lesson 7 for 1.MD.A.2, Practice Q: Nick measured his window. He said that the window was 19 links wide. Which object is wider? Show or tell how you decided. Lessons also include many questions for teachers to use to extend the conceptual understanding of the students. Another good example in Unit 6, Lesson 5 (Addition Strategies 1.OA.C.6) included the questions: Which strategy did you use for [2 + 1]? Are there other addition facts you would solve using this strategy? What facts might help you solve 5 + 6? How can you use that fact? Which addition facts were helpful? Which addition facts do you need to work on first then?	
	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.	**Yes**	The material's solid conceptual foundation gives students a deeper understanding of the mathematics and the power to develop fluency with the procedures, and to think flexibly and strategically about mathematics. Students build on their own knowledge. Then they use informal, invented strategies to solve problems. Students are able to revise their strategies and develop fluency with formal procedures. Students are also given regular opportunities to explore, develop, reasoning and problem-solving experiences to develop their fluency with procedures. For example, the fluency standards 1.OA.C.6 and 1.OA.D.8 are addressed explicitly throughout the text. The text also provides practice for the required fluencies for Grade 1, addition/subtraction within 10 (e.g., see Unit 6 Lessons 1-9 and Unit 12 Lessons 1-10 which cover those standards).	
	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	**Yes**	Materials are designed so that the teachers and students spend sufficient time working with engaging applications. For example standards 1.OA.A.1 and 1.OA.A.2 are explicitly included in the lessons throughout the text. Unit 4, Lessons 2-5,	

[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
	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.		Unit 12, Lessons 1-10, and Unit 13, Lessons 1,3, and 4 feature word problems with 1.OA.A.1 and 1.OA.A.2. In Unit 4, Lesson 2 (1.OA.A.1) students are asked, What is the total number of pets? (See pg. 71 of the Student Activity Book). Nice examples are also found in Unit 12, Lesson 1. (1.OA.A.1): 1) Grace and Jerome went to the library. Grace took out 9 books and Jerome took out 7 books. How many books did they take out altogether? and 2) Grace's mom had some grapes. She gave 6 to Grace. She has 7 left. How many grapes did she start with? (See pg. 361 of the Student Activity Book).	
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The materials are aligned to the content standards and attend to the three components of rigor as required in 3a - 3c. Throughout each unit of study, students are provided the opportunity to develop necessary foundational understanding of grade-level math concepts. This understanding naturally and coherently leads to the development of particular procedural skills, and through repeated exposure, fluencies. The materials then provide students opportunities to apply their knowledge and skills in the real world context. The ebb and flow between the components of rigor within a single unit of study (and throughout the course of the year) is logical and well designed, targeting the appropriate component(s) of rigor for each individual standard, as well as making meaningful connection between components of rigor preserving the balance that is called for by the standards for this grade. For example, Unit 6, Lesson 1 works through a variety of strategies to partition 10 such as working with 10 frames, counters, and number lines for 1.OA.C.6. Students also practice fluency for 1.OA.A.C.6 in Unit 6, Lesson 2 as students practice using flash cards and a number game. Later, in Lesson 6 of the unit, addition and subtraction problems that are related to the circus as real-world word problems for 1.OA.A.1 are presented.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
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] ☒ Yes ☐ 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**	Materials address the practice standards that enrich the major work of the grade. A standards correlation document includes each standard, a descriptor, lesson citations and correlation to the Mathematical Practices. This document does show how to strengthen the focus on major work for the standards of this grade level. Each lesson has the students using many if not all 8 of the mathematical practices. Each lesson in the teacher's guide has a box to click on to see all the standards addressed as well as which math practices are used in that lesson. The Grade 1 student site has a reference tab with a math practice page with videos that explain each one of the first six math practices in a cartoon-like and child friendly way. In Unit 7, Lesson 3 the first six math practices are practiced and discussed through the activities, but there is one called "Rolling Along With Links," that accesses the math practice 2-Find a strategy, 5-Show my work, and 6-Use labels. Unit 12, Lesson 9 uses the math practices of 1-6 throughout the activities, but the activity, called "Use Strategies," accesses math practice 1-Know the problem, 2-Find a strategy, and 5-Show how my work are accessed.	
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.	**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	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[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
☐ Yes ☐ No	reorganized and extended to accommodate the new knowledge.[10]			
	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. ☐ Yes ☐ 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	**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).

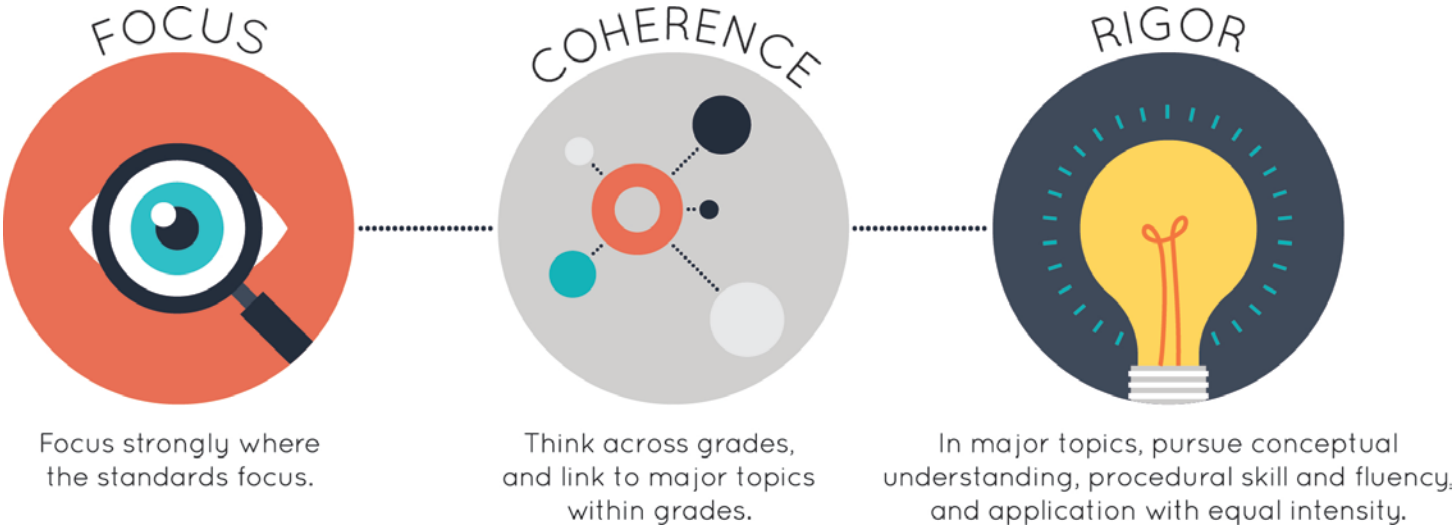
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	thoroughly to places in the Standards that explicitly set expectations for multi-step problems. [25]			
	6c) Materials explicitly attend to the specialized language of mathematics.[12]	**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. [26] ☐ Yes ☐ 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.	
	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.	

[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
	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**	Only 51% of the lessons are focused on the major work of the grade. In addition, the material goes beyond the scope of the grade on several assessments holding students and teachers responsible for content that is outside the grade level.	Please see comments in detail above.
	2. Consistent, Coherent Content	**Yes**	Supporting work of the grade supports the major work of the grade where it is both appropriate and natural. Materials aim to connect multiple standards within domains and clusters.	
	3. Rigor and Balance	**Yes**	Materials are balanced with the appropriate aspects of rigor and address the content standards with the rigor required by each standard of the grade level.	
	4. Focus and Coherence via Practice Standards	**Yes**	Practice standards and explanations provided within the text strengthen the major work of the grade.	
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.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	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: **Math Trailblazers** Grade/Course: **2**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

STRONG	WEAK
2. Consistent, Coherent Content (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (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.				
Non-Negotiable **1. FOCUS ON MAJOR WORK[27]:** Students and teachers using the materials as designed devote the large majority[28] of time to the major work of the grade/course. ☐ Yes ☒ 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**	In 2nd grade, up to 85 percent of class time should be devoted to the major work of the grade. However, when reviewing the materials, approximately 51 percent (i.e., 53 out of 104) of the lessons focus on the major work of the grade, 7 percent (i.e., 7 out of 104) focus on the supporting clusters, and 8 percent (i.e., 8 out of 104) focus on the additional clusters. These percentages were calculated using the table of contents and planning guides for each lesson.	Our Math Trailblazers author team did an analysis of the Focus on Major Work at grade 2 and their finding are listed here. This information is used in the implemenation and professional development plan developed for program rollout and planning at each user site. Our program authors recognize that students need frequent and varied experiences with concepts prior to end point assessments at a grade level. Student mathematicians need time to explore, develop, build upon, revise, solidify, and make their own meaning of a topic well before the grade where it is assessed. **Focus on Major Work in Grade 2** Major Work 2.OA.A Represent and solve problems involving addition and subtraction. Unit 1 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9 Unit 2 Lesson 3, 5 Unit 3 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9 Unit 7 Lesson 2, 3, 4, 5, 6, 7, 8 Unit 8 Lesson 2, 4, 5 Unit 9 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9 Unit 10 Lesson 2, 3, 4, 5, 6 Unit 11 Lesson 2, 3, 4, 5 Unit 12 Lesson 1, 2, 3, 4, 5, 6 Unit 14 Lesson 3, 4, 5, 6 Unit 15 Lesson 2, 3 2.OA.B Add and subtract with 20. Unit 1 Lesson 1, 3, 4, 5, 6, 7, 8, 9 Unit 3 Lesson 2, 3, 4, 6

[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%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				Unit 9 Lesson 1 Unit 12 Lesson 1, 2, 3, 4, 5, 6 Unit 14 Lesson 3, 5 2.NBT.A Understand place value. Unit 2 Lesson 2, 4, 5 Unit 3 Lesson 5, 6, 7, 8, 9 Unit 4 Lesson 1, 2, 3, 4, 6 Unit 5 Lesson 2, 3, 4, 5, 6 Unit 6 Lesson 2, 3, 4, 5, 6, 7 Unit 7 Lesson 1, 2, 3, 4, 5, 6, 7, 8 Unit 8 Lesson 1, 2, 3, 4, 5 Unit 9 Lesson 2, 4, 5, 6, 7, 8, 9 Unit 10 Lesson 1, 3, 4, 5, 6 Unit 11 Lesson 1, 2, 3, 4, 5 Unit 14 Lesson 1, 2, 3, 5, 6 2.NBT.B Use place value understanding and properties of operations to add and subtract. Unit 3 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9 Unit 7 Lesson 1, 2, 3, 4, 5, 6, 7, 8 Unit 8 Lesson 2, 3, 4, 5 Unit 9 Lesson 2, 3, 4, 5, 6, 7, 8, 9 Unit 10 Lesson 1, 2, 3, 4, 5, 6 Unit 11 Lesson 4, 5 Unit 14 Lesson 1, 2, 3, 4, 5, 6 2.MD.A Measure and estimate lengths in standard units. Unit 4 Lesson 1, 2, 3, 4, 6 Unit 5 Lesson 2, 3 Unit 6 Lesson 5, 7 Unit 15 Lesson 4, 5, 6 2.MD.B Relate addition and subtraction to length. Unit 1 Lesson 2, 3, 4, 5, 6, 7, 8, 9 Unit 3 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9 Unit 4 Lesson 3, 4, 5, 6 Unit 6 Lesson 2, 3, 4, 6, 7 Unit 7 Lesson 2, 3, 4, 5, 6, 7, 8 Unit 9 Lesson 2, 3, 4, 5, 6, 7, 8, 9 Unit 11 Lesson 2, 3, 4, 5 Unit 14 Lesson 1, 2, 3, 4, 5, 6 Supporting Work 2.OA.C Work with equal groups of objects to gain foundations for multiplication.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				Unit 8 Lesson 2, 4, 5 Unit 10 Lesson 1, 2, 3, 4, 5, 6 Unit 11 Lesson 1, 2, 3, 5 Unit 12 Lesson 1 Unit 15 Lesson 2, 3 2.MD.C Work with time and money. Unit 1 Lesson 1, 2, 3, 4, 5, 6, 7, 8 Unit 5 Lesson 1, 3, 4, 5, 6 Unit 6 Lesson 1 Unit 8 Lesson 6 2.MD.D Represent and interpret data. Unit 1 Lesson 2 Unit 2 Lesson 2, 3 Unit 3 Lesson 4 Unit 4 Lesson 5, 6 Unit 5 Lesson 2 Unit 8 Lesson 4 Unit 11 Lesson 2, 4, 5 Unit 15 Lesson 1, 2, 3, 4, 6 Additional Work 2.G.A Reason with shapes and their attributes. Unit 2 Lesson 1, 3 Unit 10 Lesson 1, 2, 3, 4, 5 Unit 12 Lesson 1, 2, 3, 4, 5, 6 Unit 13 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
	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]	**No**	Approximately 33 percent of the materials focus on work outside of the grade level. For example, Unit 5, Lesson 2 has assessment items that partially align to 3.MD.A.2. "Measure and estimate liquid volumes and masses of objects." Unit 8 focuses on Mass, and Units 10 and 11 Focus on Volume. These topics are not addressed in the 2nd grade standards. Other material found in the 2nd grade text that are outside the scope of the standards are multiplication, estimation, coordinate maps, sums over 1,000, place value over 1,000 and reading a thermometer. The End of the Year test in grade 2 contains problems dealing with multiplication not arranged in a	Math Trailblazers provides numerous assessment opportunities, both formal and informal, embedded throughout the lessons, so timely feedback can effectively guide instruction and improve learning. This research-based, balanced approach gives teachers better information about where students are going, what students know, and how to make instructional decisions in a timely manner. Assessment opportunities in Math Trailblazers at Grade 2 that are labeled Benchmark Expectations are used to evaluate student mastery of standards. Other assessment items are midpoint checks for

[29] Refer also to criterion #2 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
			rectangular array. 2.OA.C.4 is a supporting standard that specifically states to use addition to find the total number of objects arranged in rectangular arrays. The 2nd grade End of the Year test also contains problems that partition shapes other than that of a circle or rectangles into equal shares. 2.G.3 additional standard is partitioning of circles and rectangles into two, three, or four equal shares. There is also a problem focused on area, which is not the content of grade 2.	student understanding on their way to mastery. **Key Assessment Opportunities Charts** These charts appear at every unit for every grade and they identifiy target assessment items for endpoint and mid point assessments. To best address specific assessment items as being at or above grade level it is recommended using the Key Assessment Opportunities Charts. A few notes regarding materials being addressed as out of grade level are listed here. Unit 5 - Lesson 2 3.MD.A.2 is identified as a Standard but is not being considered as an end point assessment. It is not labeled a Benchmark Expectation Assessment. The question around the use of Mass and Volume in Units 8, 10 & 11, is an example of how Math Trailblazers includes many topics as contexts for students to explore number and operations. This secondary story gives 2nd graders interesting, real reasons to count, compare, and understand addition. With this cross-grade level design, students gradually access material such as volume, area, and mass through developmentally appropriate contexts without distracting from the main topics of the grade level, allowing their conceptual understanding of the ideas to grow naturally. End of Year Tests are a strong summative tool for wrapping up the year with required mastery and also to help with prediction of student understanding for the next school year. All items are not required assessment items.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[30]	**Yes**	The material connects supporting content to major content in Units 1, 2, 3, 4, 5, 6, 8, 10, 11, 12, and 15. Unit 1, Lessons 1-8 combine the supporting standards of 2.MD.C.8 and 2.MD.D.10 with the major standards of 2.OA.A.1, 2.OA.B.2, and 2.MD.B.6. The lessons in Unit 1 take the supporting topics of solving word problems involving dollar bills, quarters, dimes, nickels, and pennies, and drawing picture and bar graphs with the major topics of representing and solving problems involving addition and subtraction, adding and subtracting within 20, and representing whole numbers as lengths on a number line diagram. Unit 2, Lessons 2 and 3 combine the supporting standard of 2.MD.D.10 with the major standards of 2.NBT.A.1, 2.NBT.A.3, 2.NBT.A.4, and 2.OA.A.1. Lessons 2 and 3 mix the supporting topic of drawing a picture or bar graph to represent data set with the major topics of understanding place value, and using addition and subtraction within 100 to solve one- and two-step word problems. Unit 3, Lesson 4 combines the supporting standard 2.MD.D.10 with the major standards of 2.MD.B.6, 2.OA.A.1, 2.OA.B.2, 2.NBT.A.1, 2.NBT.B.5, 2.NBT.B.7, and 2.NBT.B.8. Lesson 4 mixes the supporting topic of drawing a picture graph and bar graph to represent a set of data with the major topics of representing number lengths on a number line diagram, representing and solving problems involving addition and subtraction, adding and subtracting within 20 using mental strategies, understanding place value, and using place value understanding and properties of operations to add and subtract. Unit 4, Lesson 6 combines the supporting standards of 2.MD.D.9 and 2.MD.D.10 with the major standards of 2.NBT.A.4 and 2.MD.A.2. Lesson 6 mixes the supporting topics of generating measurement data by measuring lengths of several objects, and drawing picture and bar graphs to represent a set of data with the major topics of comparing two three-digit numbers, and	

[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
			measuring the lengths of objects twice using two different units. Similar instances are also found in Units 4, 6, 8, 10, 11, 12, and 15.	
	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 do include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in the grade. Units 1, 3, 7, 8, 9, and 15 all contain lessons where the domain of 2.OA, Operations and Algebraic Thinking and 2.MD, Measurement and Data are clearly combined. Unit 10 and 12 lessons combine the three domains of 2.G, Geometry, 2.OA, Operations and Algebraic Thinking, and 2.NBT, Numbers and Operations in Base 10. Unit 7 and 14 lessons mix the 2.NBT.A.1-4 and 2.NBT.B.5-9 standards.	
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] ☒ Yes ☐ 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**	The teacher's book does a great job throughout the entire book of providing numerous questions for class discussion that help the students gain conceptual understanding. The student practice pages require students not only to solve problems but to explain their thinking. The standard 2.OA.C3 is addressed. For example, the students must work with equal groups of objects to gain a foundation for multiplication. This occurs in Unit 11 Lessons 1,2,3, and 5. Lessons in the text include "Daily Practice and Problems." Throughout these practices students are asked to explain their thinking. For example, in Unit 3, Lesson 3 (2.NBT.B.7), Practice G-- Problem 3D is 4 + 14. Problem 4 asks "Show or tell how to solve 4 + 14." Lessons also include many questions for teachers to use to extend the conceptual understanding of the students. Unit 7, Lesson 7 (2.NBT.B.7) (Addition Strategies) included these questions: "Did someone in your group use a mental math strategy? Did someone use a paper-and-pencil method? Which strategy did you like the best for this problem? Did one method seem more efficient	

[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
			than another? Was one method easier to understand than another? Is this the strategy that you choose most often? Which strategy do you choose most often? Why? What do you think about the paper-and-pencil methods? Are they efficient? Easy to use?"	
	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.	**Yes**	The material's solid conceptual foundation gives students a deeper understanding of the mathematics, and the power to develop fluency with the procedures and think flexibly and strategically about mathematics. Students build on their own knowledge. Then they use informal, invented strategies to solve problems. Finally, students are able to revise their strategies and develop fluency with formal procedures. Students are given regular opportunities to explore, develop, discuss and refine their strategies and mathematical ideas. Students are routinely provided with opportunities to apply concepts and skills, and regularly presented with modeling, reasoning and problem-solving experiences to develop their fluency with procedures. For example, the fluency standards 2.NBT.B.5 and 2.OA.B.2 are addressed explicitly throughout the text. The text does provide practice for the required fluencies for grade 2, addition/subtraction within 100 and single digit sums and differences. For example in Unit 1 Lessons 1-9 and Unit 10 Lessons 1-6. The text offers practice exercises for the single digit addition and subtraction, but very little practice with sums and differences within 100.	
	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	**Yes**	Materials are designed so that the teachers and students spend sufficient time working with engaging applications. For example standards 2.OA.A.1 and 2.MD.B.5 are explicitly included in the lessons throughout the text. For example, Unit 3, Lessons 1-9 and Unit 4, Lessons 3-6 feature word problems with the above standards. Unit 3. Lesson 3 (2.OA.A.1) -Luis tries to win a bear for his sister at	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	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.		the ring toss. He is given 12 rings and tosses 5 rings. How many rings does he have left? (See pg. 117, Student Activity Book). Unit 4, Lessons 3-3- Andy Alligator is 3 meters long. His brother is one meter shorter. How long is Andy Alligator's brother? (See pg. 194, Student Activity Book).	
	REQUIRED **3d)** ***Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The materials are aligned to the content standards and attend to the three components of rigor as required in 3a - 3c. Throughout each unit of study, students are provided the opportunity to develop necessary, foundational understanding of grade-level math concepts. This understanding naturally and coherently leads to the development of particular procedural skills and, through repeated exposure, fluencies. The materials then provide students opportunities to apply their knowledge and skills in the real world context. The ebb and flow between the components of rigor within a single unit of study (and throughout the course of the year) is logical and well designed, targeting the appropriate component(s) of rigor for each individual Standard, as well as, making meaningful connection between components of rigor preserving the balance that is called for by the Standards for this grade. For example, in Unit 7, Lesson 4 students use concepts of place value (using base 10 blocks) to solve addition and subtraction problems for 2.NBT.B.7. In Lesson 5 students continue their learning to explore the standard algorithm and working with expanded form to develop their conceptual understanding of 2.NBT.B.7; students also work many problems geared towards developing fluency of the standard. Later, in Lesson 8 of the same unit, students work with addition and subtraction within a context of a snack shop to work real-world problems for 2.OA.A.1.	
Non-Negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:**	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the major work of the grade/course;	**Yes**	Materials address the practice standards that enrich the major work of the grade. A standards correlation document includes each standard, a descriptor,	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.[33] ☒ Yes ☐ No	practices strengthen the focus on major work instead of detracting from it, in both teacher and student materials.		lesson citations, and correlation to the Mathematical Practices. This document does strengthen the focus on major work for the standards of this grade level. Each lesson in the materials has the students using many if not all 8 of the mathematical practices. Each lesson in the teacher's guide has a box to click on to see all the standards addressed as well as which math practices are used in that lesson. The Grade 2 student site has a reference tab with a math practice page that has videos that explain each one of the first six math practices in a cartoon like, and child friendly way. It should be noted that in Unit 7, Lesson 3 the first six math practices are practiced and discussed through the activities. However, in the activity called "Rolling Along With Links," math practice 2-Find a strategy, 5-Show my work, and 6-Use labels are addressed. In Lesson 9, Unit 12 the math practices of 1-6 are used throughout the activities. However, in the activity called, "Use Strategies," math practice 1-Know the problem, 2-Find a strategy, and 5-Show how my work are addressed.	
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.	**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	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[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
☐ Yes ☐ No	knowledge.[10]			
	5c) Materials base content progressions on the progressions in the Standards. [34]	**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.[35]	**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. ☐ Yes ☐ No	**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.	**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	**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).

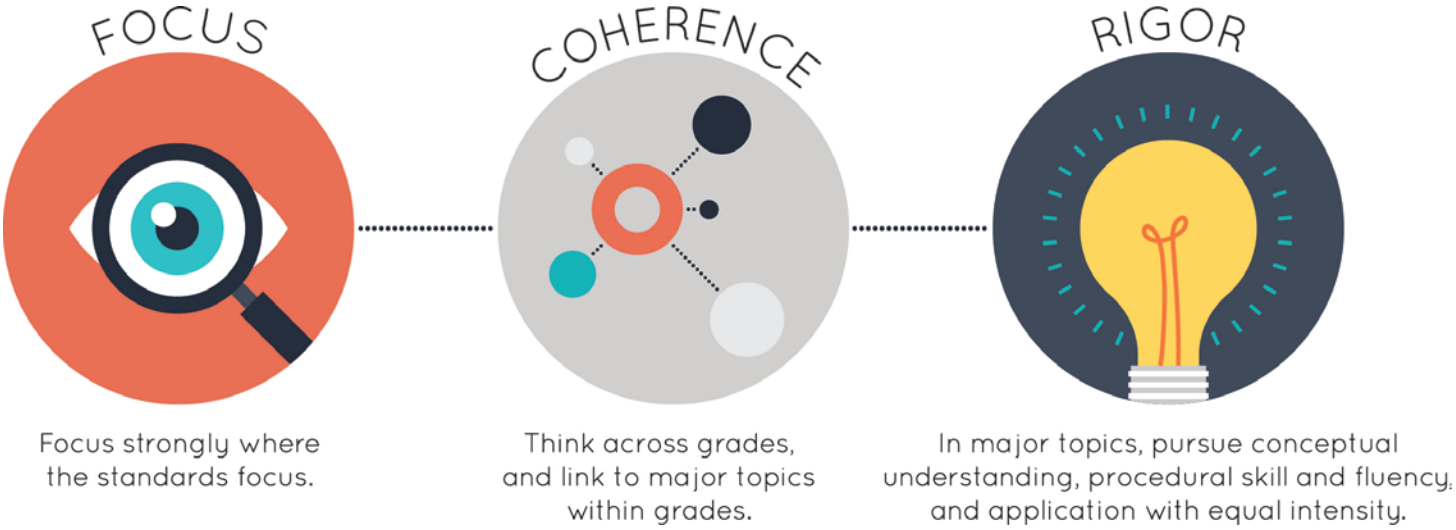
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	thoroughly to places in the Standards that explicitly set expectations for multi-step problems. [38]			
	6c) Materials explicitly attend to the specialized language of mathematics.[12]	**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] ☐ Yes ☐ 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.	
	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.	

[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
	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**	Only 51% of the lessons are focused on the major work of the grade. In addition, the material goes beyond the scope of the grade on several assessments holding students and teachers responsible for content that is outside the grade level.	Please see detailed comments above.
	2. Consistent, Coherent Content	**Yes**	Supporting work of the grade supports the major work of the grade where it is both appropriate and natural. Materials aim to connect multiple standards within domains and clusters.	
	3. Rigor and Balance	**Yes**	Materials are balanced with the appropriate aspects of rigor and address the content standards with the rigor required by each standard of the grade level.	
	4. Focus and Coherence via Practice Standards	**Yes**	Practice standards and explanations provided within the text strengthen the major work of the grade.	
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.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	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: **Math Trailblazers** Grade/Course: **3**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

STRONG	WEAK
2. Consistent, Coherent Content (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (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.				
Non-Negotiable **1. FOCUS ON MAJOR WORK[40]:** Students and teachers using the materials as designed devote the large majority[41] of time to the major work of the grade/course. ☐ Yes ☒ 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 instructional materials reviewed for grade 3 do not spend the large majority of class time on the major clusters of the grade. Approximately 59 percent (i.e., 56 out of 95) of the lessons focus on the major work of the grade, 12 percent (i.e., 11 out of 95) focus on supporting clusters of the grade, and 25 percent (i.e., 24 out of 95) focus on additional clusters of the grade. These percentages were calculated using information from the table of contents and planning guides for each lesson. Overall, the instructional materials allocate too much instructional time to clusters of standards that do not represent the major work of Grade 3 and to standards that are above Grade 3. In addition, a large amount of time is devoted to addition and subtraction (work prior to Grade 3) with little time spent solving problems that involve the four operations.	Our Math Trailblazers author team did an analysis of the Focus on Major Work at grade 3 and their finding are listed here. This information is used in the implementation and professional development plan developed for program rollout and planning at each user site. Our program authors recognize that students need frequent and varied experiences with concepts prior to end point assessments at a grade level. Student mathematicians need time to explore, develop, build upon, revise, solidify, and make their own meaning of a topic well before the grade where it is assessed. **Focus on Major Work in Grade 3** Major Work 3.OA.A Represent and solve problems involving multiplication and division. Unit 3 Lesson 1, 2, 3, 4, 5, 6 Unit 5 Lesson 4 Unit 8 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Unit 10 Lesson 1, 2, 3, 4, 5, 6, 7 Unit 12 Lesson 2, 3, 4, 5, 6 Unit 13 Lesson 1, 2, 3, 4, 5, 6, 8 3.OA.B Understand properties of multiplication and the relationship between multiplication and division. Unit 5 Lesson 4, 6 Unit 8 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Unit 10 Lesson 1, 2, 3, 4, 5, 6, 7 Unit 12 Lesson 4, 6 Unit 13 Lesson 1, 2, 3, 4, 5, 6, 7, 8 3.OA.C Multiply and divide within 100.

[40] For more on the major work of the grade, see Focus by Grade Level.
[41] 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%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				Unit 3 Lesson 2, 6 Unit 8 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Unit 10 Lesson 4, 5, 6, 7 Unit 13 Lesson 1, 2, 3, 4, 5, 6, 8, 9 3.OA.D Solve problems involving the four operations, and identify and explain patterns in arithmetic. Unit 1 Lesson 1, 2, 3, 4, 5 Unit 2 Lesson 1, 2, 3, 4, 5, 6, 7, 8 Unit 3 Lesson 1, 5, 6 Unit 4 Lesson 7 Unit 5 Lesson 2, 3, 4, 5, 6, 7 Unit 6 Lesson 1, 2, 3, 4, 5, 6 Unit 7 Lesson 2, 3, 4, 5, 6 Unit 8 Lesson 3, 5, 8, 9, 10 Unit 10 Lesson 1, 2, 3, 4, 5, 6, 7 Unit 12 Lesson 3, 4, 5, 6 Unit 13 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9 3.NF.A Develop understanding of fractions as numbers. Unit 5 Lesson 2, 3, 4, 5, 6 Unit 9 Lesson 1, 2, 3, 4, 5, 6, 7 Unit 10 Lesson 1, 5 3.MD.A Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. Unit 4 Lesson 1, 2, 3, 4 Unit 7 Lesson 1 Unit 8 Lesson 4, 5, 7, 8, 9, 10 Unit 11 Lesson 1 Unit 12 Lesson 1, 2, 3, 4, 5, 6 Unit 13 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9 3.MD.C Geometric measurement: understand concepts of area and relate area to multiplication and to addition. Unit 5 Lesson 2, 3, 4, 5, 6 Unit 8 Lesson 7 Unit 11 Lesson 2, 3 Supporting Work 3.MD.B Represent and interpret data. Unit 1 Lesson 1, 3, 4, 5 Unit 5 Lesson 4, 5

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				Unit 8 Lesson 7 Unit 12 Lesson 2, 3, 5, 6 3.G.A Reason with shapes and their attributes. Unit 9 Lesson 2, 3, 4, 5, 6, 7 Unit 11 Lesson 2, 3, 4, 5, 6, 7, 8, 9 Additional Work 3.NBT.A Use place value understanding and properties of operations to perform multi-digit arithmetic. Unit 1 Lesson 2, 3 Unit 2 Lesson 1, 2, 3, 4, 5, 7, 8 Unit 4 Lesson 1, 2, 3, 4, 5, 6, 7 Unit 6 Lesson 1, 2, 3, 4, 5, 6 Unit 7 Lesson 2, 3, 4, 5, 6, 7, 8 Unit 8 Lesson 9 Unit 13 Lesson 2, 3, 6 3.MD.D Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. Unit 11 Lesson 2, 3
	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.[42]	**No**	The instructional materials reviewed for Grade 3 do not meet expectations for assessment. In Unit 1, Lessons 1, 3, and 5 there are assessment items that align to standards from 6.SP.A "Develop understanding of statistical variability," and 7.SP.A, "Use random sampling to draw inferences about a population." In Unit 5, Lessons 3, 4, and 5 there are assessment items that align to standards from 6.SP.B, "Summarize and describe distributions." In Unit 11, Lessons 4, 7, and 8 there are assessment items that align to 4.G.A.3, "Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry," and to standards from 8.G.A, "Understand congruence and similarity using physical models, transparencies, or geometry software." The materials also contain	Math Trailblazers provides numerous assessment opportunities, both formal and informal, embedded throughout the lessons, so timely feedback can effectively guide instruction and improve learning. This research-based, balanced approach gives teachers better information about where students are going, what students know, and how to make instructional decisions in a timely manner. Assessment opportunities in Math Trailblazers at Grade 3 that are labeled Benchmark Expectations are used to evaluate student mastery of standards. Other assessment items are midpoint checks for student understanding on their way to mastery. **Key Assessment Opportunities Charts** These charts appear at every unit for every grade

[42] Refer also to criterion #2 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
			an End of the Year test for Grade 3, which includes having to give the volume of a solid (which is part of the 5th grade content). Students must also measure lengths of a non-rectangular shape to the nearest half-inch and then determine its area, instead of working with the area of rectangular shapes using whole number side lengths as required by the standards.	and they identifiy target assessment items for endpoint and mid point assessments. To best address specific assessment items as being at or above grade levelit is recoommended using the Key Assessment Opportunities Chart. A few notes regarding the material being addressed out of grade level are listed here. Unit 1 - Lesson 3 includes 6.SP.A and this assessment is not a Benchmark Assessment so considered a mid-point check-in. We did not see 7.SP.A identified in any assessments for this unit. Unit 5 - ONLY Lessons 3 & 4 include 6.SP.B, and assessment is not a Benchmark Assessment so considered a mid-point assessment. Unit 11 - ONLY Lessons 4,7, & 8 include 8.G.A and assessment is not a Benchmark Assessment so considered a mid-point assessment. We did not find 4.GA.3 present in this unit. End of Year Tests are a strong summative tool for wrapping up the year with required mastery and also to help with prediction of student understanding for the next school year. All items are not required assessment items.
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[43]	**Yes**	The materials show connections between supporting content and major content in Units 5, 8, 9, 11 and 12. Unit 5, Lesson 4 combines the major standard of 3.MD.C.6 with the supporting standard of 3.MD.B.3. This lesson mixes the major topic of measuring areas by counting unit squares with the supporting topic of drawing graphs to represent a set of data. Unit 8, Lesson 7 combines the supporting standard 3.MD.B.4 with the major standards of 3.OA.A.1, 3.OA.A.2, 3.OA.A.3, 3.OA.B.5, and 3.OA.C.7. Lesson 7 mixes the supporting topic of generating measurement data by measuring lengths	

[43] 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
			using rulers marked with halves and fourths of an inch with the major topics of interpreting products and quotients, using multiplication and division, applying properties of operations to multiply and divide, and to multiply and divide within 100. Unit 9, Lessons 2, 3, 4, 5, 6, and 7 combine the supporting standard of 3.G.A.2 with the major standards of 3.NF.A.1, 3.NF.A.2, 3.NF.A.3. These lessons mix the supporting topic of partitioning shapes into parts with equal areas and the major topics of developing understanding of fractions as numbers. Unit 11, Lessons 2 and 3 combine the supporting standards of 3.G.A.1, 3.G.A.2 with the major standards of 3.MD.C.5, 3.MD.C.6, and 3.MD.C.7. These lessons mix the supporting topic of reasoning with shapes and their attributes and the major topic of geometric measurement: understanding concepts of area and relate it to multiplication and addition. Unit 12, Lesson 2, 3, 5, and 6 combine the supporting strand of 3.MD.B.4 with the major standards of 3.OA.A.3, 3.MD.A.2, and 3.OA.D.9. These lessons mix the supporting topic of generating measurement data by measuring lengths using rulers marked with halves and fourths of an inch with the major topics of using multiplication and division within 100 to solve word problems, identifying patterns and explaining them using properties of operations, and measuring and estimating liquid volumes and masses of objects.	
	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. [44]	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade. Unit 8 and 10 lessons contain a mixture of standards from the domain of 3.OA, Operations and Algebraic Thinking. These two units have lessons that combine 3.OA.A.1-4, representing and solving problems involving multiplication and division, 3.OA.B.5-6, understanding properties of multiplication and the relationship between multiplication and division,	

[44] 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
			3.OA.C.7, multiplying and dividing within 100, and 3.OA.D.8-9, solving problems involving the four operations, and identifying and explaining the patterns in arithmetic. Unit 11 lessons combine the standards in the domain of geometry, 3.G, and measurement and data, 3.MD.	
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.[45] ☒ Yes ☐ 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**	The teacher's manual provides an abundant amount of questions for class discussion that help the students gain conceptual understanding. The student practice pages require students not only to solve problems, but also to explain their thinking. Materials develop conceptual understanding of key mathematical concepts. The standard 3.NBT.A.1, which has an explicit expectation for the use of place value to understand how to round whole numbers to the nearest 10 or 100, is addressed. For example, the students must understand the concept of using place value to understand rounding in Unit 6, Lessons 2-5. Lessons in the text include "Daily Practice and Problems." Throughout these practices students are also asked to explain their thinking. In addition, lessons include many questions for teachers to use to extend the conceptual understanding of the students. For example, in Unit 8, Lesson 5 standard 3.OA.A.1 which has the explicit expectation for students to interpret the products of whole numbers is addressed through questions such as: What is 0 × 5? (0) Tell a multiplication story that would help us understand why 0 × 5 = 0. How does the rectangle match the problem of 6 × 3? Show me on the rectangle. How is the rectangle in Question 3 divided? Why can it be divided that way? How are the rectangles (see questions 2 and 3) alike and different (see question 4)? Which ways to break apart the products make it easier to find the product or remember the fact?	

[45] 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
	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.	**Yes**	The material's solid conceptual foundation gives students a deeper understanding of the mathematics, the power to develop fluency with the procedures, and to think flexibility and strategically about mathematics. Students build on their own knowledge, and then use informal, invented strategies to solve problems. Finally, students are able to revise their strategies and develop fluency with formal procedures. Students are given regular opportunities to explore, develop, discuss, and refine their strategies and mathematical ideas. Students are routinely provided with opportunities to apply concepts and skills, and regularly presented with modeling, reasoning, and problem-solving experiences to develop their fluency with procedures. In addition, the Daily Practices provide enough practice in the required fluency of single-digit products and quotients. For example, lessons in Unit 1, 2, 4, 6, and 7 address the standard 3.NBT.A.2, which has the explicit expectation for students to fluently add and subtract within 1000. While the lessons in Unit 3, 8, and 13 address the procedural skill and fluency requirements of 3.OA.C.7 that requires students to multiply and divide within 100. However, it should be noted that there are fewer opportunities for practice to meet standard 3.NBT.A.2, which has the explicit expectation for students to fluently add/subtract within 1000, than those to meet standard 3.OA.C.7 (multiply and divided within 100).	
	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	**Yes**	Materials are designed so that the teachers and students spend sufficient time working with engaging applications. Unit 8, Lessons 1-10, Unit 13, Lessons 4-8, and Unit 11, Lesson 1 all feature word problems to meet standards 3.OA.A.3 (to use multiplication and division within 100), 3.OA.D.8 (to solve two-step programs using the four operations), and 3.MD.A.1 (to tell and write time to the nearest minute and solve word problems involving addition and subtraction of time intervals in minutes).	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	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.		The following example from Unit 13, Lessons 4 addresses standard 3.OA.A.3, which has the explicit expectation for students to use multiplication and division within 100, in problem #8, which states, "250 children from Bessie Coleman Elementary School were going on a field trip. Each bus could hold 60 children. How many buses did they need? #10 The teachers at Bessie Coleman Elementary School ordered 21 pizzas for the four third-grade classes to share equally. How many pizzas did each class get?"	
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The materials that are aligned to the content standards attend to the three components of rigor as required in 3a - 3c. Throughout each unit of study, students are provided the opportunity to develop necessary foundational understanding of grade-level math concepts. This understanding naturally and coherently leads to the development of particular procedural skills, and through repeated exposure, fluencies. The materials then provide students opportunities to apply their knowledge and skills in the real world context. The ebb and flow between the components of rigor within a single unit of study (and throughout the course of the year) is logical and well designed, targeting the appropriate component(s) of rigor for each individual standard, as well as, making meaningful connection between components of rigor preserving the balance that is called for by the standards for this grade. For example, in Unit 3, Lesson 2 students work with strategies such as skip counting to explore multiplication for 3.OA.B.5. Students also practice "naked number" problems aimed at developing fluency in multiplication for 3.OA.C.7. Later in the same unit in Lessons 3 and 6, students solve and create multiplication stories to develop application of 3.OA.A.3.	
Non-Negotiable	**REQUIRED**	**Yes**	Materials address the practice standards that enrich	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.[46] ☒ Yes ☐ No	**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.		the major work of the grade. A standards correlation document includes each standard, a descriptor, lesson citations and correlation to the Mathematical Practices. This document does strengthen the focus on major work for the standards of this grade level. Each lesson in the materials has the students using many if not all 8 of the mathematical practices. Each lesson in the teacher's guide has a box to click on to see all the standards addressed as well as which math practices are used in that lesson. The grade 3 student site has a reference tab with a math practice page that has videos that explain each one of the first six math practices in a cartoon-like and child friendly way. It should be noted that in Unit 10, Lesson 7 the students discuss and practice all 8 of the math practices. However, in the activity "Delivering Newspapers" math practices 2-Find a strategy, 3-Check for reasonableness, 5-Show my work, and 6-Use labels are addressed. In Unit 13, Lesson 4 the students use and focus on the first seven math practices throughout the activities. However, in the activity called, "Solving Problems with Multiplication and Division," math practices 1-Know the problem, 2-Find a strategy, 5-Show my work, and 6-Use labels are addressed.	
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	**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.	

[46] 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
domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☐ Yes ☐ No	**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. [47]	**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.[48]	**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. ☐ Yes ☐ No	**6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[49] 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.[50] 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	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[47] 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).
[48] 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).
[49] 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).
[50] 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).

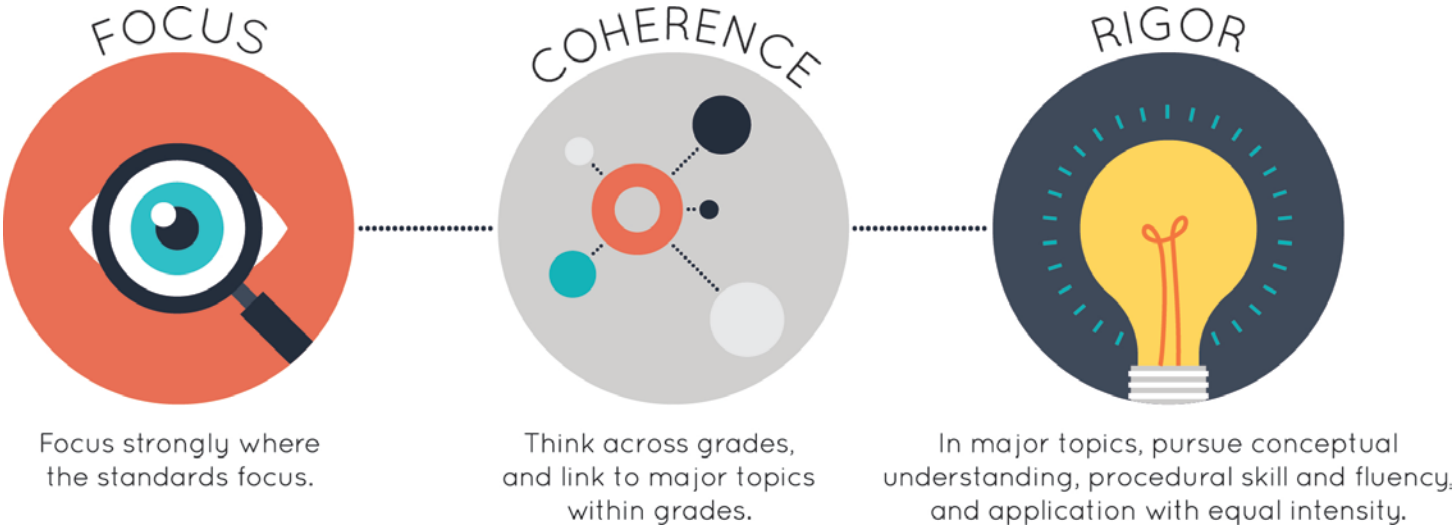
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems. [51]			
	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. [52] ☐ Yes ☐ 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.	
	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.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[51] 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).
[52] 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
	Each problem or exercise has a purpose.			
	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**	Only 59% of the lessons are focused on the major work of the grade. In addition, the material goes beyond the scope of the grade on several assessments holding students and teachers responsible for content that is outside the grade level.	Please see comments in above details.
	2. Consistent, Coherent Content	**Yes**	Supporting work of the grade supports the major work of the grade where it is both appropriate and natural. Materials aim to connect multiple standards within domains and clusters.	
	3. Rigor and Balance	**Yes**	Materials are balanced with the appropriate aspects of rigor and address the content standards with the rigor required by each standard of the grade level.	
	4. Focus and Coherence via Practice Standards	**Yes**	Practice standards and explanations provided within the text strengthen the major work of the grade.	
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.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	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: **Math Trailblazers** Grade/Course: **4**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

STRONG	WEAK
2. Consistent, Coherent Content (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (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.				
Non-Negotiable **1. FOCUS ON MAJOR WORK[53]:** Students and teachers using the materials as designed devote the large majority[54] of time to the major work of the grade/course. ☐ Yes ☒ 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 instructional materials reviewed for Grade 4 do not spend the large majority of class time on the major clusters of the grade. Approximately 60 percent (i.e., 60 out of 100) of the lessons focus on the major work of the grade, 14 percent (i.e., 14 out of 100) focus on supporting work of the grade, and 11 percent (i.e., 11 out of 100) focus on additional work of the grade. These percentages were calculated using information from the table of contents and planning guides for each lesson. Overall, the instructional materials allocate too much instructional time to clusters of standards that are not the major work of Grade 4, or are not the standards for Grade 4.	Our Math Trailblazers author team did an analysis of the Focus on Major Work at grade 4 and their finding are listed here. This information is used in the implementation and professional development plan developed for program rollout and planning at each user site. Our program authors recognize that students need frequent and varied experiences with concepts prior to end point assessments at a grade level. Student mathematicians need time to explore, develop, build upon, revise, solidify, and make their own meaning of a topic well before the grade where it is assessed. **Focus on Major Work in Grade 4** Major Work 4.OA.A Use the four operations with whole numbers to solve problems. Unit 1 Lesson 1, 2, 3, 4, 5, 6 Unit 2 Lesson 1, 2, 3, 4 Unit 3 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Unit 4 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Unit 5 Lesson 2, 3, 4, 5, 6, 7 Unit 6 Lesson 1, 3, 6 Unit 7 Lesson 1, 2, 3, 4, 5, 6, 7, 8 Unit 11 Lesson 1, 2, 4, 5 Unit 12 Lesson 1, 3, 6 4.NBT.A Generalize place value understanding for multi-digit whole numbers. Unit 4 Lesson 1, 2, 3, 4, 5, 7, 8, 9, 10 Unit 5 Lesson 1, 4, 5, 7 Unit 6 Lesson 2, 3, 4, 5, 6, 7

[53] For more on the major work of the grade, see Focus by Grade Level.
[54] 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%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				Unit 7 Lesson 2, 3, 4, 5, 7, 8 Unit 11 Lesson 1, 2, 3, 4, 5 Unit 12 Lesson 2, 4, 5 4.NBT.B Use place value understanding and properties of operations to perform multi-digit arithmetic. Unit 3 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Unit 4 Lesson 1, 8, 9, 10 Unit 6 Lesson 2, 4, 5, 7 Unit 7 Lesson 3, 4, 5, 6, 7, 8 Unit 11 Lesson 1, 2, 3, 4, 5 Unit 12 Lesson 1, 2, 3, 4, 5, 6 4.NF.A Extend understanding of fraction equivalence and ordering. Unit 1 Lesson 5 Unit 5 Lesson 1, 4, 7 Unit 8 Lesson 1, 2, 4, 5, 6, 7, 8, 9, 11 Unit 10 Lessons 2, 3, 4, 6, 7 4.NF.B Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. Unit 8 Lesson 1, 2, 3, 4, 6, 7, 8, 10, 11, 12 4.NF.C Understand decimal notation for fractions, and compare decimal fractions. Unit 10 Lesson 1, 2, 3, 4, 5, 6, 7 Unit 13 Lesson 5, 6 Supporting Work 4.OA.B Gain familiarity with factors and multiples. Unit 3 Lesson 1, 3, 4, 5, 6, 7, 8, 9 Unit 7 Lesson 2, 4, 5, 6, 8 Unit 11 Lesson 2, 5 Unit 13 Lesson 5, 6, 7 4.MD.A Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. Unit 5 Lesson 3, 4 Unit 10 Lesson 1, 2, 5 Unit 11 Lesson 2, 5 Unit 13 Lesson 1, 2, 3, 4, 5, 6, 7 4.MD.B Represent and interpret data. Unit 1 Lesson 1, 2, 3, 4, 5, 6 Unit 2 Lesson 2, 4

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				Unit 5 Lesson 2, 3, 4 Unit 10 Lesson 5 Unit 13 Lesson 3, 5, 6, 7 Additional Work 4.OA.C Generate and analyze patterns. Unit 6 Lesson 3 Unit 10 Lesson 5 Unit 13 Lesson 3, 5, 6, 7 4.MD.C Geometric measurement: understand concepts of angle and measure angles. Unit 9 Lesson 1, 2, 3, 4, 5, 6, 9, 10 4.G.A Draw and identify lines and angles, and classify shapes by properties of their lines and angles. Unit 9 Lesson 2, 3, 5, 6, 7, 8, 9, 10, 11
	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.[55]	**No**	The instructional materials reviewed for Grade 4 do not meet expectations for assessment. " In Unit 1, Lessons 3, 4, and 5 there are assessment items that align to standards from 6.SP.A, "Develop understanding of statistical variability", and 6.SP.B, "Summarize and describe distributions". In Unit 5, Lessons 2, 3, 4, and 5 there are assessment items that align to standards from 6.SP.A, "Develop understanding of statistical variability," and 6.SP.B, "Summarize and describe distributions." In Unit 6, the midterm assessment in Lesson 8 has assessment items that align to standards from 6.SP.A and 6.SP.B. For example, in Unit 8, Lesson 12 students add fractions with unlike denominators. Also, in Unit 10, Lesson 7 students perform operations using decimals. In addition, the midterm test of Grade 4 has a focus question on finding the area of a non-rectangular shape. The standard 4.MD.A.3 is to apply the area and perimeter formulas to find the area or perimeter of rectangles.	Math Trailblazers provides numerous assessment opportunities, both formal and informal, embedded throughout the lessons, so timely feedback can effectively guide instruction and improve learning. This research-based, balanced approach gives teachers better information about where students are going, what students know, and how to make instructional decisions in a timely manner. Assessment opportunities in Math Trailblazers at Grade 4 that are labeled Benchmark Expectations are used to evaluate student mastery of standards. Other assessment items are midpoint checks for student understanding on their way to mastery. **Key Assessment Opportunities Charts** These charts appear at every unit for every grade and they identifiy target assessment items for endpoint and mid point assessments. To best address specific assessment items as being at or above grade level it is recommended using the

[55] Refer also to criterion #2 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
				Key Assessment Opportunities Chart. A few notes regarding material being addressed as out of grade level are listed here. Unit 1 - Lesson 3, 4,and 5 do include 6.SP.A as part of expectations in relation to 4.MD.3. Students are listing variables and creating bar graph and are not statisctical in nature. 6.SP.A in these lessons is not a Benchmark Expectation so considered a mid-point check. Standard 6.SP.B is present as a Benchmark Expectation in relation to collection of data in the context of Math as a Science Experiment. We will take under advisement to reconsider as mid-point assessment. Unit 5 has similar context for 6.SP.A and 6.SP.B presence. Students are being assessed on 4.MD.4 and 4.OA.3 and context relates to 6.SP.A and 6.SP.B. Unit 8 Lesson 12 students are shown addition of fractions with unlike denominators and then asked to use fraction circle pieces to show the number sentence solution. This supports assessent of 4.NF.3. Unit 10 - Lesson 7 is at the end of the unit on decimals. Students use models to add & subtract decimals. This is not a Benchmark Expectation so considered a midpoint check. Unit 6 Midterm - the question asks student to find area and then perimeter using knowledge of rectangular shapes. The diagram shows two rectangles together and highlighted with marking to identify as such. Students are asked to only to find area and perimeter. The Key Assessment Opportunity Chart identifies this problem as assessing 3.MD.7 and 3.MD.8.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[56]	**Yes**	The materials in Grade 4 connect the supporting content to the major content in Units 3, 5, 7, 10, and 11. Unit 3, Lessons 1, 3, 4, 5, 7, 8, and 9 connect the supporting standard of 4.OA.B.4 with the major standard of 4.NBT.B.5 and 4.NBT.B.6. In Lessons 1, 3, 4, and 5 the working with factors and multiples supporting topics are combined with multiplying multi-digit numbers and finding quotients major topics. In Lessons 7, 8, and 9 the supporting topic of gaining familiarity with factors and multiples is combined with the major topic of multiplying whole numbers. Unit 5 Lessons 2, 3, and 4 combine the supporting standards of 4.MD.B.4 and 4.MD.A.2 with the major standards of 4.OA.A.1, 4.OA.A.2, 4.OA.A.3, and 4.NBT.A.3. Lessons 2, 3, and 4 combine the supporting topic of representing and interpreting data with the major topics of interpreting a multiplication equation as a comparison, multiplying or dividing to solve word problems involving multiplicative comparison, solving multi-step word problems, and some rounding of numbers. Unit 7, Lessons 4, 5, 6, and 8 combine the major standards of 4.NBT.A.3, 4.NBT.B.5, 4.NBT.B.7, and 4.OA.A.3 with the supporting standard of 4.OA.B.4. These lessons mix the major standard of generalizing place value understanding for multi-digit whole numbers, and solving multi-step word problems with the supporting standard of gaining familiarity with factors and multiples. Unit 10, Lessons 2 and 5 combine the supporting standard of 4.MD.A.1 with the major standard of 4.NF.C. These lessons mix the supporting standard of knowing relative sizes of measurement units within one system of units with the major topic of understanding decimal notation for fractions and comparing decimal fractions. Unit 11, Lesson 2 mixes the supporting standard of 4.MD.A.3 with the major standards of 4.NBT.A, 4.NBT.B.5, and 4.OA.A.3. Lesson 2 combines the supporting topic of applying the area and perimeter	

[56] 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
			formulas for rectangles in real world and mathematical problems with the major topics of generalizing place value understanding for multi-digit whole numbers, and solving multi-step word problems.	
	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. [57]	**Yes**	The materials do include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade. Units 3, 4, 5, 7, and 11 lessons combine standards of 4.NBT, Number and Operations in Base Ten, and 4.OA, Operations and Algebraic Thinking. Unit 10 lessons mix standards from 4.MD, Measurement and Data, and 4.G.A.1-3, drawing and identifying lines and angles, and classifying shapes by properties of their lines and angles. Unit 10 lessons combine the 4.MD.A.1, knowing relative sizes of measurement units standard with 4.NF.C.5-7, understanding decimal notation for fractions, and comparing decimal fractions standards. Unit 8 lessons contain different standards from the 4.NF, Number and Operations-Fractions domain.	
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.[58]	**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**	The teacher's manual provides an abundant amount of questions for class discussion that help the students gain conceptual understanding. The student practice pages require students not only to solve problems but to explain their thinking. Materials develop conceptual understanding of key mathematical concepts. The standards 4.G.A.1, 4.G.A.2, and 4.G.A.3 are addressed. For example, the students must understand the concept of drawing points, lines, line segments, and arrays in Unit 9, Lessons 2, 6, 9, and 10. Lessons in the text include "Daily Practice and Problems." Throughout these practices students are asked to explain their thinking. For example, in Unit 8, Lesson 7 (4.OA.B.4) Exercise U gives 4 numbers (4010, 11,826, 765, and	

[57] 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).
[58] 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
☒ Yes ☐ No			1224) and asks these questions: Which of the numbers above are divisible by 9? Explain how you know. If any of the above numbers are not divisible by 9, what number or numbers (2, 3, 5, 6, 10) are they divisible by? Lessons also include many questions for teachers to use to extend the conceptual understanding of the students. Unit 11, Lesson 1 (4.NBT.B.5) (Multiplication with Larger Numbers) included these questions: What multiplication problem does this rectangle represent? (18 × 14) How do you know? (There are 18 rows and 14 columns.) Who solved the problem by breaking the large rectangle into parts? What parts did you divide your large rectangle into? Why did you choose those partitions? What were you thinking about? How is your strategy different from [student name]'s strategy? How is your strategy the same? What did you multiply to get the numbers inside the rectangles? How do the numbers inside the rectangles match the numbers in the addition problem? Which partitions are easier to work with to solve the problem? Why?	
	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.	**Yes**	The materials contain a majority of lessons that are focused on procedural skills and fluency standards such as, 4.NBT.B.4-6, using place value understanding and properties of operations to perform multi-digit arithmetic. In addition, supporting standard 4.OA.B.4, gaining familiarity with factors and multiples and major standards 4.NF.A.1-2, extending understanding of fraction equivalence and ordering are covered throughout the 4th grade materials and focus on procedural skills and fluencies. In Unit 4, Lessons 1, 4,5, 6, and 7 the fluency standard 4.NBT.B.4, add/subtract within 1,000,000, is addressed explicitly throughout the text; however, the text does not provide ongoing practice for students to attain this required standard for Grade 4.	
	REQUIRED	**Yes**	The materials are designed so that teachers and	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	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.		students spend sufficient time working with engaging applications. Unit 2 contains lessons that focus on the supporting application standard of 4.MD.A.3, applying the area and perimeter formulas for rectangles in real world and mathematical problems. Unit 4, 7, and 12 have lessons that focus on the major application standard of 4.OA.A.3, solving multi-step word problems posed with whole numbers and having whole-number answers using the four operations. Unit 5 lessons include the major application standard of 4.OA.A.2, multiply or divide to solve word problems involving multiplicative comparisons. Unit 13 contains lessons that have the supporting application standard of 4.MD.A.2, using the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money. Unit 8 lessons focus on the major application standards of 4.NF.B.3.d, solving word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, and 4.NF.B.4.c, solving word problems involving multiplication of a fraction by a whole number. Unit 5 Lesson 5 (4.MD.A.2) #14. If Mr. Sabol lives about 350 miles away, will he get there in six hours? Show how you know using your graph (See pg. 167, Student Activity Book. Unit 13 Lesson 3 (4.MD.A.2) Irma and Jessie have 150 cc of water in their graduated cylinder. They add large marbles until the water level is 168 cc. How many large marbles did they add? Show or tell how you know (See pg. 565, Student Guide).	
	REQUIRED **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The materials are aligned to the content standards and attend to the three components of rigor as required in 3a - 3c. Throughout each unit of study, students are provided the opportunity to develop necessary, foundational understanding of grade-level math concepts. This understanding naturally and coherently leads to the development of particular procedural skills and, through repeated exposure, fluencies. The materials then provide students opportunities to apply their knowledge and	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			skills in the real world context. The ebb and flow between the components of rigor within a single unit of study (and throughout the course of the year) is logical and well designed, targeting the appropriate component(s) of rigor for each individual Standard, as well as, making meaningful connection between components of rigor preserving the balance that is called for by the Standards for this grade. For example, in Unit 11, Lessons 1-4 students work with strategies such as using the standard algorithm and partials to explore multiplication for 4.NBT.B.5. Students also practice "naked number" problems aimed at developing fluency in multiplication for the same standard. Later in Lesson 5 of the same unit, students choose from a variety of strategies to solve word problems related to Phil and Howard's Excellent Egyptian Adventure for 4.OA.A.2.	
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.[59] ☒ Yes ☐ 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**	Materials address the practice standards that enrich the major work of the grade. A standards correlation document includes each standard, a descriptor, lesson citations, and a correlation to the Mathematical Practices. This document does strengthen the focus on major work for the standards of Grade 4. Each lesson in the materials has the students using many if not all 8 of the Mathematical Practices. Each lesson in the teacher's guide has a box to click on to see all the standards addressed as well as which math practices are used in that lesson. The Grade 4 student site has a reference tab with a math practice page with videos that explain each one of the first six math practices in a cartoon like, and child friendly way. Lesson 4, Unit 5 addresses the math practices of 1-8 throughout the activities. For example, in "Bouncing Ball" and "Bouncing Ball Lab" math practices 5-Show my work and 6- Use labels are addressed. In Unit 11, Lesson 5 in an activity called "Dancing in TIMSville," math practices 2-Find a strategy, 3-Check for	

[59] 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
			reasonableness, and 5-Show my work are all addressed.	
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. ☐ Yes ☐ 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. [60]	**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.[61]	**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	**6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[62] 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	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[60] 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).
[61] 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).
[62] 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).

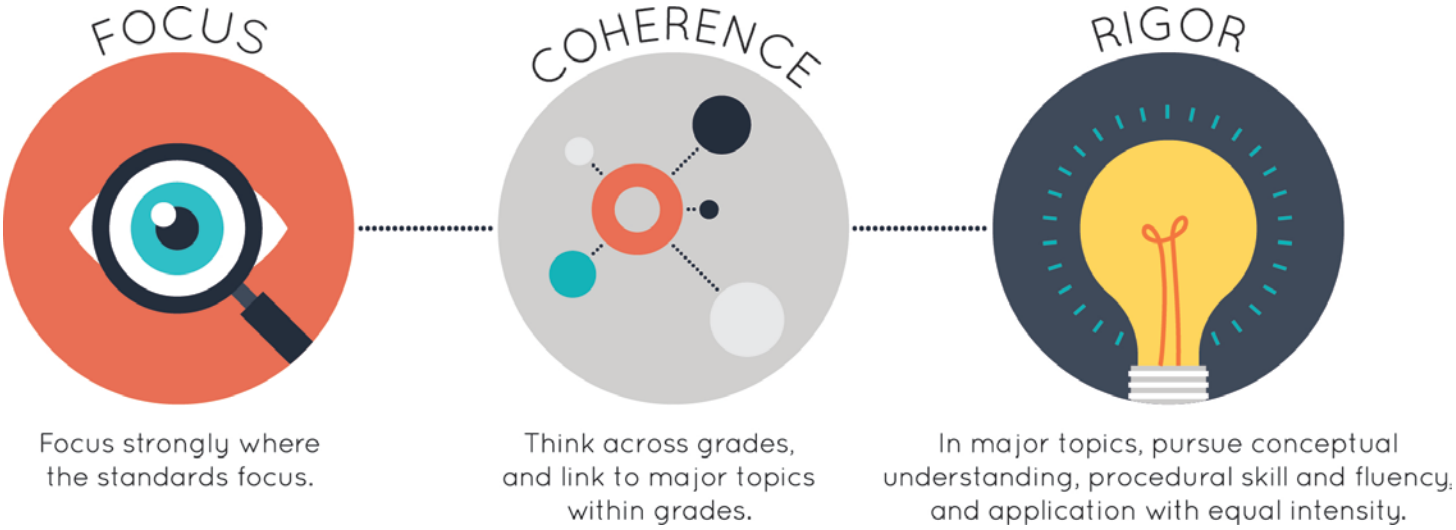
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. ☐ Yes ☐ No	stimulate students to develop the habits of mind described in the practice standard.[63] 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.			
	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.[64]	**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.[65] ☐ Yes ☐ 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	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[63] 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).
[64] 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).
[65] 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 ***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**	Only 60% of the lessons are focused on the major work of the grade. In addition, the material goes beyond the scope of the grade on several student assessments holding students and teachers responsible for content that is outside the grade level.	Please see comments in above details.
	2. Consistent, Coherent Content	**Yes**	Supporting work of the grade supports the major work of the grade where it is both appropriate and natural. Materials aim to connect multiple standards within domains and clusters.	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	3. Rigor and Balance	**Yes**	Materials are balanced with the appropriate aspects of rigor and address the content standards with the rigor required by each standard of the grade level.	
	4. Focus and Coherence via Practice Standards	**Yes**	Practice standards and explanations provided within the text strengthen the major work of the grade.	
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: **Math Trailblazers** Grade/Course: **5**

Publisher: **Kendall Hunt Publishing Company** Copyright: **2015**

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

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

STRONG	WEAK
2. Consistent, Coherent Content (Non-Negotiable)	1. Focus on Major Work (Non-Negotiable)
3. Rigor and Balance (Non-Negotiable)	
4. Focus Coh. via Practice Std (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.				
Non-Negotiable **1. FOCUS ON MAJOR WORK[66]:** Students and teachers using the materials as designed devote the large majority[67] of time to the major work of the grade/course. ☐ Yes ☒ 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 instructional materials reviewed for Grade 5 do not meet the expectations for spending the large majority of class time on the major clusters of the grade. Approximately 54 percent (i.e., 49 out of 91) of the lessons focus on the major work of the grade, 7 percent (6 out of 91) focus on the supporting work, and 10 percent (9 out of 91) focus on the additional work of the grade. These percentages were calculated using the table of contents and planning guides for each lesson. Overall, the instructional materials allocate too much instructional time to clusters of standards that are not the major work of Grade 5, or are not the standards for Grade 5.	Our Math Trailblazers author team did an analysis of the Focus on Major Work at grade 5 and their finding are listed here. This information is used in the implementation and professional development plan developed for program rollout and planning at each user site. Our program authors recognize that students need frequent and varied experiences with concepts prior to end point assessments at a grade level. Student mathematicians need time to explore, develop, build upon, revise, solidify, and make their own meaning of a topic well before the grade where it is assessed. **Focus on Major Work in Grade 5** Major Work 5.NBT.A Understand the place value system. Unit 3 Lesson 1, 4, 5, 6 Unit 7 Lesson 1, 3, 4 Unit 8 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 Unit 11 Lesson 4, 5 5.NBT.B Perform operations with multi-digit whole numbers and with decimals to hundredths. Unit 1 Lesson 2, 3, 6 Unit 4 Lesson 1, 2, 3, 4, 5, 6, 7, 8 Unit 7 Lesson 1, 2, 3, 4 Unit 8 Lesson 5, 7, 8, 9, 10, 11 5.NF.A Use equivalent fractions as a strategy to add and subtract fractions. Unit 2 Lesson 2, 3, 6, 7, 8, 10, 11, 12 Unit 5 Lesson 1, 2, 3, 4, 5, 6 Unit 9 Lesson 2, 3, 8, 9

[66] For more on the major work of the grade, see Focus by Grade Level.
[67] 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%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				Unit 10 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 Unit 11 Lesson 4, 5, 6 5.NF.B Apply and extend previous understandings of multiplication and division to multiply and divide fractions. Unit 2 Lesson 2, 3, 4, 5, 6, 7, 10 Unit 5 Lesson 1, 2, 3, 4, 5, 6 Unit 6 Lesson 3, 4 Unit 7 Lesson 8, 9 Unit 10 Lesson 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 5.MD.C Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition. Unit 4 Lesson 5, 6, 7, 8 Unit 11 Lesson 4 Supporting Work 5.MD.A Convert like measurement units within a given measurement system. Unit 1 Lesson 1, 2, 3, 4, 5, 6 Unit 5 Lesson 3, 4, 5 5.MD.B Represent and interpret data. Unit 5 Lesson 4 Additional Work 5.OA.A Write and interpret numerical expressions. Unit 7 Lesson 7 Unit 9 Lesson 6, 7 5.OA.B Analyze patterns and relationships. Unit 1 Lesson 1, 4, 6 Unit 5 Lesson 2, 3, 4 Unit 7 Lesson 5, 8 Unit 8 Lesson 5, 6 Unit 9 Lesson 2, 3, 4, 6, 7 Unit 11 Lesson 1, 2, 3, 4, 5, 6 5.G.A Graph points on the coordinate plane to solve real-world and mathematical problems. Unit 5 Lesson 2, 3, 4 Unit 6 Lesson 1, 2, 3, 4, 5, 6, 7 Unit 7 Lesson 8 Unit 8 Lesson 5, 6 5.G.B Classify two-dimensional figures into categories based on their properties.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				Unit 6 Lesson 5, 6, 7
	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.[68]	**No**	The instructional materials reviewed for Grade 5 do not meet expectations for assessment. In Unit 1, Lessons 1, 2, 3, and 4 there are assessment items that align to standards from 6.SP.A "Develop understanding of statistical variability," and 6.SP.B, "Summarize and describe distributions." In Unit 5, Lessons 2-6 there are assessment items that align to standards from 6.RP.A, "Understand ratio concepts and use ratio reasoning to solve problems." In Unit 8, Lessons 5 and 6 there are assessment items that align to standards from 6.SP.B, "Summarize and describe distributions." In Unit 8, decimals to the nearest thousandths are addressed, which is not covered until Grade 6. Also, Units 5, 7, and 11 focus on ratios and/or variables, which are introduced in 6th grade. Unit 6 introduced negative numbers and graphing in all 4 quadrants, this also goes beyond the scope of 5th grade standards. Unit 8 requires students to multiply and divide by decimals to the 100,000th place. The midterm test for Grade 5 in the materials has a focus on finding the median of two groups of numbers and mode. This too is not content belonging to the 5th grade. The midterm test also has a focus on the coordinate grid with more than the first quadrant, which is also not a part of the 5th grade content. Standard 5.NF.B.7 has the explicit expectation for students to apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. However, the End of the Year test asks about ratio, which is content for 6th grade.	Math Trailblazers provides numerous assessment opportunities, both formal and informal, embedded throughout the lessons, so timely feedback can effectively guide instruction and improve learning. This research-based, balanced approach gives teachers better information about where students are going, what students know, and how to make instructional decisions in a timely manner. Assessment opportunities in Math Trailblazers at Grade 5 that are labeled Benchmark Expectations are used to evaluate student mastery of standards. Other assessment items are midpoint checks for student understanding on their way to mastery. **Key Assessment Opportunities Charts** These charts appear at every unit for every grade and they identifiy target assessment items for endpoint and mid point assessments. To best address specific assessment items as being at or above grade level it is recommended using the Key Asssessment Opportunties Chart. A few notes regarding the material being addressed out of grade level are listed here. Unit 1 - Lesson 2 - 4 show assessments to include 6.SP.A and 6.SP.B in the Key Assessment Opportunities Chart but does not identify them as Benchmark Expectations so should be considered mid-point checks. Unit 5 - Lessons 2 - 6 do not appear to show assessments nor lesson work identified to 6.RP.A. Unit 8 - Lesson 5 and Lesson 6 show assessments to include 6.SP.B in the Key Assessment Opportunities

[68] Refer also to criterion #2 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
				Chart but do not identify them as Benchmark Expectations so should be considered mid-point checks. Unit 8 and Unit 6 do have content that is considered enrichment for differentiation and should not be identified as Benchmark Assessments. These will be reconsidered to be modified as mid-point checks. Unit 5 - assessments align to 5.NF.1 and 5.NF.3 include ratio as secondary to fraction knowledge. Ratio as synonymous to fraction. Unit 7 presents a Science experiment in the context of math where students collect data as variables. Assessments for these lessons are not Benchmark Expectations so considered mid-point checks. Unit 11 is the last unit of 5th grade and experience with ratios and variables can be considered precursor activities for grade 6. As the last unit for the year, it can be optional for completetion.
Non-Negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**REQUIRED** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.[69]	**Yes**	The materials do connect supporting content to major content in meaningful ways. Unit 5 Lessons 3, 4, and 5 connect the supporting standards of 5.MD.A.1 and 5.MD.A.2 with the major standards of 5.NF.A.1, 5.NF.B.3 and 5.NF.B.5. Lesson 3 in Unit 5 connects adding and subtracting fractions with unlike denominators, and interpreting a fraction as division of the numerator by the denominator with converting measurements in multi-step word problems. Lesson 4 in Unit 5 connects the supporting topic of converting measurements and making a line plot to display a set of data of measurement in fractions of a unit with the major topics of adding and subtracting fractions with unlike denominators and interpreting multiplication as scaling by comparing the size of a product to the size of one factor or explaining the multiplying a number by a fraction greater than 1 and its product. Lesson 5 in Unit 5 connects the major standard of adding and subtracting fractions with unlike denominators by replacing equivalent fractions to	

[69] 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
			produce sums or differences of fractions with like denominators and the supporting standard of converting like measurement units within a given measurement system.	
	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. [70]	**Yes**	The materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade. Unit 5 contains lessons that combine major standards of 5.NF.A.1, adding and subtracting fractions with unlike denominators, 5.NF.B.5, interpreting multiplication as scaling, with supporting standards of 5.MD.A.1, converting like measurement units within a given measurement system, 5.MD.B.2, representing and interpreting data, and additional standard 5.OA.B.3, analyzing patterns and relationships. Unit 10 has lessons from the major standards of 5.NF.A.1-2, using equivalent fractions as a strategy to add and subtract fractions, and 5.NF.B.3-7, applying and extending previous understandings of multiplication and division to multiply and divide fractions.	
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.[71]	**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**	The teacher's manual provides an abundant amount of questions for class discussion that help the students gain conceptual understanding. The student practice pages require students not only to solve problems but to explain their thinking. Materials develop conceptual understanding of key mathematical concepts. The standard 5.NF.2 is addressed. For example, the students must understand the concept of addition and subtraction of fractions in Unit 10 Lessons 1-11. Lessons in the text include "Daily Practice and Problems". Throughout these practices students are asked to explain their thinking. For example, in Unit 8, Lesson 4 (5.NBT.B.6), Practice I-- Problem F is n ÷ 70 = 70. Problem G asks, "Explain the strategy you used to solve Question F." Lessons also include many	

[70] 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).
[71] 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
☒ Yes ☐ No			questions for teachers to use to extend the conceptual understanding of the students. Unit 10, Lesson 4 (5.NBT.B.7) (Add Mixed Numbers) included these questions: Will the sum of 1 1/2 and 2 3/4 be more or less than 4? How can you decide without calculating an exact answer? Does this sum make sense? Why or why not? Is the answer in simplest form? How do you know? Can you use circle pieces to prove that the answer is correct? Can you use this method to solve 1 3/4 and 2 9/12? Is there another way or a more efficient way to solve this problem?	
	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.	**Yes**	The materials are designed so that students attain the fluencies and procedural skills required by the standards. The major standards of 5.NBT.B.5-7, performing operations with multi-digit whole numbers and with decimals to hundredths focus on the procedural skills and fluencies and can be found in lessons in Units 4, 7, and 8. The major standard 5.NF.A.1, adding and subtracting fractions with unlike denominators focuses on procedural skills and fluencies and can be found in lessons in Units 2, 5, 9, 10, and 11.	
	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.	**Yes**	The materials are designed so that the teachers and students spend sufficient time working with engaging applications. The supporting standard of 5.MD.A.1, converting like measurement units within a given measurement system and use these conversions in solving multi-step, real world problems can be found in the lessons in Units 1 and 5 and focus on application. The major application standards of 5.NF.B.3, solving word problems involving division of whole numbers leading to answers in the form of fractions and mixed numbers, and 5.NF.B.6, solving real world problems involving multiplication of fractions and mixed numbers by using visual fraction models or equations to represent the problem can be found in	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (Yes/No)	JUSTIFICATION/ COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			lessons in Units 2, 5, and 10.	
	REQUIRED **3d)** ***Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	**Yes**	The materials are aligned to the content standards and, as such, have attended to the three components of rigor as required in 3a - 3c. Throughout each unit of study, students are provided the opportunity to develop necessary, foundational understanding of grade-level math concepts. This understanding naturally and coherently leads to the development of particular procedural skills and, through repeated exposure, fluencies. The materials then provide students opportunities to apply their knowledge and skills in the real world context. The ebb and flow between the components of rigor within a single unit of study (and throughout the course of the year) is logical and well designed, targeting the appropriate component(s) of rigor for each individual Standard, as well as, making meaningful connection between components of rigor preserving the balance that is called for by the Standards for this grade. For example, in Unit 10, Lesson 1-10 students work with strategies such as using estimation and fraction diagrams to introduce and expand upon the four operations using fractions for 5.NF.A.1 and 5.NF.B.4. Later in Lesson 11 of the same unit, students choose from a variety of strategies to solve word problems the four operations with fractions for 5.NF.B.6 and 5.NF.A.2.	
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.[72]	**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**	Materials do address the practice standards that enrich the major work of the grade. A correlation document includes each standard, a descriptor, lesson citations, and a correlation to the Mathematical Practices. This document does strengthen the focus on major work for the standards of this grade level. Each lesson in the materials has the students using many if not all 8 of the mathematical practices. Each lesson in the	

[72] 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)

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☒ Yes ☐ No			teacher's guide has a box to click on to see all the standards addressed as well as which math practices are used in that lesson. In Lesson 8 of Unit 7 the students recognize the use of all of the 8 math practices throughout different activities in the lesson. The students discuss the practices, especially the first six. There is a reference tab on the Grade 5 student site that brings up a page explaining and naming the first six math practices in a kid friendly cartoon like way. In Unit 7, Lesson 8 has an activity called "How Many Drops," where the math practice 1-Know the problem, 2-Find a strategy, 5-Show my work, and 6-Use labels are all accessed.	
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. ☐ Yes ☐ 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. [73]	**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.[74]	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.	

[73] 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).
[74] 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).

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	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. ☐ Yes ☐ No	**6a)** Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.[75] 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.[76] 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. [77]	**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	**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.	

[75] 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).
[76] 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).
[77] 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	PUBLISHER RESPONSE
tools they need to meet the expectations of the Standards. [78] ☐ Yes ☐ No	**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.	
	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.				

[78] 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).

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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 54% of the lessons are focused on the major work of the grade. In addition, the material goes beyond the scope of the grade on several student assessments holding students and teachers responsible for content that is outside the grade level.	Please see comments in above details.
	2. Consistent, Coherent Content	**Yes**	Supporting work of the grade supports the major work of the grade where it is both appropriate and natural. Materials aim to connect multiple standards within domains and clusters.	
	3. Rigor and Balance	**Yes**	Materials are balanced with the appropriate aspects of rigor and address the content standards with the rigor required by each standard of the grade level.	
	4. Focus and Coherence via Practice Standards	**Yes**	Practice standards and explanations provided within the text strengthen the major work of the grade.	
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.