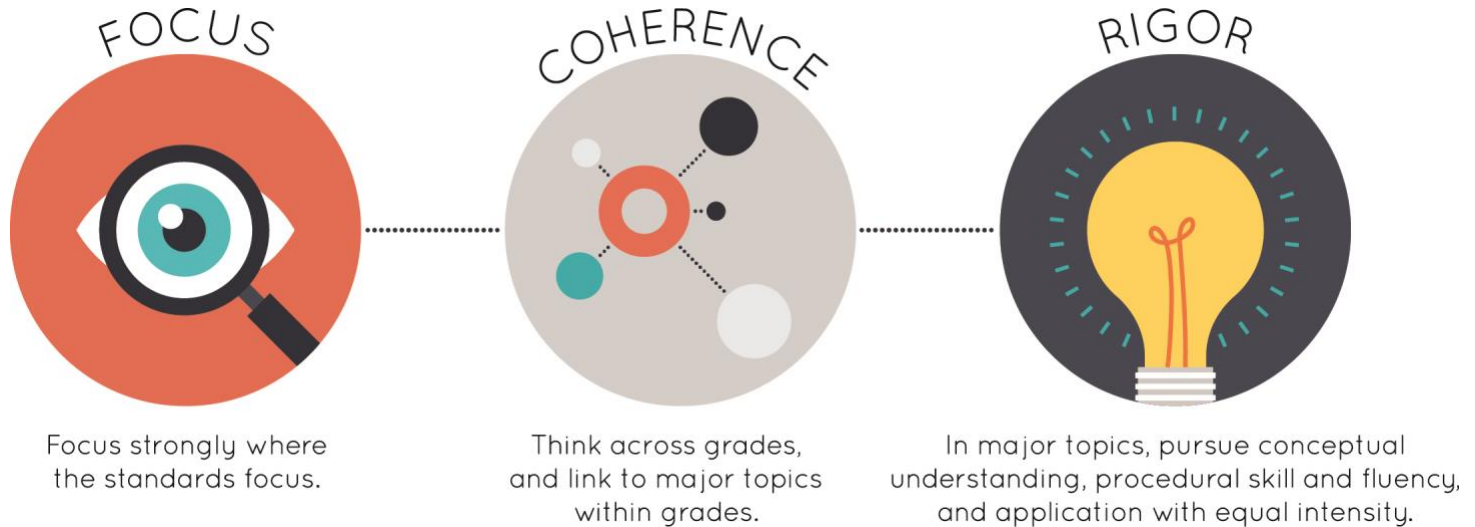




Strong mathematics instruction contains the following elements:



Title: **Zearn Math**

Grade/Course: **K**

Publisher: **Zearn**

Copyright: **2018**

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

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

STRONG	WEAK
1. Focus on Major Work (Non-negotiable)	
2. Consistent, Coherent Content (Non-negotiable)	
3. Rigor and Balance (Non-negotiable)	
4. Focus and Coherence via Practice Standards (Non-negotiable)	
5. Alignment Criteria for Standards for Mathematical Content	
6. Alignment Criteria for Standards for Mathematical Practice	
7. Indicators of Quality	



To evaluate instructional materials for alignment with the standards and determine tiered rating, begin with

Section I: Non-negotiable Criteria.

- Review the **required**¹ Indicators of Superior Quality for each **Non-negotiable** criterion.
- If there is a “Yes” for all **required** Indicators of Superior Quality, materials receive a “Yes” for that **Non-negotiable** Criterion.
- If there is a “No” for any of the **required** Indicators of Superior Quality, materials receive a “No” for that **Non-negotiable** Criterion.
- Materials must meet **Non-negotiable** Criterion 1 and 2 for the review to continue to **Non-negotiable** Criteria 3 and 4. Materials must meet all of the **Non-negotiable** Criteria 1-4 in order for the review to continue to Section II.
- If materials receive a “No” for any **Non-negotiable** Criterion, a rating of Tier 3 is assigned and the review does not continue.

If all Non-negotiable Criteria are met, then continue to **Section II: Additional Criteria of Superior Quality.**

- Review the **required** Indicators of Superior Quality for each criterion.
- If there is a “Yes” for all **required** Indicators of Superior Quality, then the materials receive a “Yes” for the additional criteria.
- If there is a “No” for any **required** Indicator of Superior Quality, then the materials receive a “No” for the additional criteria.

Tier 1 ratings receive a “Yes” for all Non-negotiable Criteria and a “Yes” for each of the Additional Criteria of Superior Quality.

Tier 2 ratings receive a “Yes” for all Non-negotiable Criteria, but at least one “No” for the Additional Criteria of Superior Quality.

Tier 3 ratings receive a “No” for at least one of the Non-negotiable Criteria.

¹ **Required Indicators of Superior Quality** are labeled “**Required**” and shaded yellow. Remaining indicators that are shaded white are included to provide additional information to aid in material selection and do not affect tiered rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Section I: Non-negotiable Criteria of Superior Quality Materials must meet all of the Non-negotiable Criteria 1-4 in order for the review to continue to Section II.			
<p>Non-negotiable 1. FOCUS ON MAJOR WORK²: Students and teachers using the materials as designed devote the large majority³ of time to the major work of the grade/course.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Required 1a) Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.</p>	<p>Yes</p>	<p>The materials devote 113 out of 152 lessons (74%) to the major work of the grade. The major work in Kindergarten should be devoted to Counting and Cardinality, Operations and Algebraic Thinking, and Number and Operations in Base Ten of the Louisiana Student Standards for Mathematics (LSSM). An overview explains that the major work is developed within Missions 1 (34 lessons), 3 (13 lessons), 4 (40 lessons), 5 (23 lessons), and 6 (3 lessons). In Mission 1, Topic C, Lesson 9, students count 5 cubes arranged in a rectangular array to answer “how many questions” (LSSM K.CC.B.5). In Mission 3, 5 out of 7 standards focus on major work of the grade (LSSM K.CC.B.4, K.CC.B.5, K.CC.C.6, K.CC.C.7). In Mission 3, Topic F, Lessons 21 and 22, students’ understanding of greater than and less than is developed (LSSM K.CC.C.6). In Mission 4, Topic C, Lesson 13, students represent addition with drawings and equations demonstrating how objects can be joined (LSSM K.OA.A.1). Mission 5 exclusively addresses major work of the grade and is aligned to LSSM K.CC.A.1, K.CC.A.2, K.CC.A.3, K.CC.B.4, K.CC.B.5, K.CC.C.6, K.NBT.A.1. For example, in Mission 5, Topic A, Lesson 1 students gain an understanding of place value by creating and counting groups of ten.</p>
	<p>Required 1b) In any one grade/course, instructional 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 assessment materials, there are no chapter tests, unit</p>	<p>Yes</p>	<p>The materials spend minimal time on content outside of the appropriate grade level. The assessment components do not make students or teachers responsible for any topics before the grade level in which they are introduced. Lessons are aligned to the Kindergarten standards and the assessments are grade-level appropriate. Occasionally there are materials that address</p>

² For more on the major work of the grade, see [Focus by Grade Level](#).

³ 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
	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.		standards beyond the grade level; however, these are called out in the Mission Overview and are not assessed. For example, LSSM 1.NBT.1 and 1.NBT.3 are identified in the Mission Overview of Mission 5. The overview states, "Topic D involves the Grade 1 standard 1.NBT.1 because students also write their numbers from 21 to 100," and "The missing addend aligns Lesson 21 to the Grade 1 standard 1.OA.D.8."
<p>Non-negotiable 2. CONSISTENT, COHERENT CONTENT Each course's instructional materials are coherent and consistent with the content in the Standards.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Required 2a) Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.</p>	<p>Yes</p>	<p>The materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. When supporting standards are taught, they have an opportunity to connect to the major work of the grade level. For example, in Mission 1, Topic B, Lesson 5, students classify objects into three predefined categories (Supporting LSSM K.MD.3) by sorting pictures according to where they belong, with the sun, raindrops, or a snowflake. The students then count the objects in each category (Major LSSM K.CC.B.5), and understand that the last number said when counting the objects in each category indicates the total (Major LSSM K.CC.B.4b). This lesson connects Supporting LSSM K.MD.3 to Major LSSM K.CC.B.5 and K.CC.4b. The idea is built upon in Lesson 6 as students select objects out of a bag, count the number of objects in the group (Major LSSM K.CC.B.4a), then sort a group of objects by count (Supporting LSSM K.MD.3). Topic C continues to build on this concept as students sort by count (Supporting K.MD.3) in rows and columns and answer "how many" questions (Major LSSM K.CC.B.5).</p> <p>In Mission 2, Topic A, Lesson 2, students classify shapes (Additional LSSM K.G.A.2) by counting how many sides or corners each shape has (Major LSSM K.CC.B.5). Students continue to categorize the shapes by count (Supporting LSSM K.MD.B.3) throughout the Topic. Topic B builds upon this understanding with three-dimensional shapes. Students continue to count "how many" sides shapes have and classify them into categories,</p>

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			<p>connecting Supporting LSSM K.MD.B.3 to Major LSSM K.CC.B.5. In Mission 6, Topic B, Lesson 5, students use pattern blocks for composition with shapes. Students follow instructions to compose flat shapes using pattern blocks. Students are told which blocks to use and have to explain how they know that the block they chose is correct. Students count sides to confirm. Students count sides and corners of new shapes formed. This connects Supporting LSSM K.G.B.6 to the Major LSSM of the K.CC domain. Supporting LSSM K.MD.C.4 is not addressed in the materials.</p>
	<p>Required 2b) Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.</p>	<p>Yes</p>	<p>The materials include problems and activities that connect two or more clusters in a domain or two or more domains in the grade level where these connections are natural and important. For example, the Counting and Cardinality (CC) domain and Measurement and Data (MD) domain are connected in Mission 1, Topic B, Lesson 5. Students classify items by attribute (LSSM K.MD.A.1) and count to understand that the last number name said tells the number of objects counted (LSSM K.CC.B.4). Mission 3 connects the Counting and Cardinality domain to the Measurement and Data domain, as well. In Mission 3, Topic B, Lesson 7, students are shown a linking cube stick that represents a 5-stick. Students take two smaller linking cube sticks (e.g., a 3-stick and a 2-stick) and combine them to make the same size stick as the 5-stick. In Mission 5, materials connect the Counting and Cardinality domain and Numbers and Operations in Base 10 domain. In Mission 5, Topic A, Lesson 4, students count objects (LSSM K.CC.B.4). Students then circle ten. The students are taught the Say 10 way (LSSM K.NBT.A.1). In Mission 6, Topic A, Lesson 3, clusters K.G.A and K.G.B are connected as students compose solid shapes (LSSM K.G.B.4) through the description of objects in the environment using names of shapes and describing the relative position of the object (LSSM K.G.A.1). In Mission, 5 Topic B, Lessons 6-9, students represent whole numbers numerically while separating the count of 10 ones from the</p>

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			count of the remaining ones with drawings and manipulatives. Students then model and write teen numbers represented as tens and ones (LSSM K.NBT.A.1, K.CC.B.5, and K.CC.A.3).
<p>Non-negotiable 3. RIGOR AND BALANCE: Each grade’s instructional materials reflect the balances in the Standards and help students meet the Standards’ rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Required 3a) Attention to Conceptual Understanding: Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.</p>	<p>Yes</p>	<p>The materials develop conceptual understanding of key mathematical concepts for Kindergarten. In Mission 1, Topic E, Lesson 19, students count cubes in standard order, saying the number that names each cube as they relate to each cube in the group, demonstrating one-to-one correspondence (LSSM K.CC.B.4). This activity develops the understanding of counting using one-to-one correspondence in order to relate counting to cardinality. In Mission 2, students begin with two dimensional flat shapes (Topic A) to build three dimensional shapes (Topic B and C and LSSM K.G.A.3). On the Mission 2, End of Mission Assessment, students analyze and compare two and three dimensional shapes (LSSM K.G.B.5). In Mission 4, Topic B, Lesson 10, Optional Set, students decompose numbers up to 10 with multiple representations and record each with a drawing and equation (LSSM K.OA.A.3). In Mission 4, Topic A, Lesson 3, students are given an image of a number of objects or a number. The student draws a number bond to decompose the number (LSSM K.OA.A.3) in order to develop an understanding of part-whole relationships and that a smaller set of objects exists within that larger set. In Mission 6, Topic A, Lesson 1, students apply their understanding of geometric attributes by modeling shapes using straws, and then, in the Optional Problem Set, students draw to complete the shape (LSSM K.G.B.5).</p> <p>Standard K.MD.C.4, which develops a student’s ability to recognize pennies, nickels, dimes, and quarters by name and value, is not contained in any Mission.</p>
	<p>Required 3b) Attention to Procedural Skill and Fluency: The materials are designed so that students attain the</p>	<p>Yes</p>	<p>The materials are designed so that students attain the fluencies and procedural skills required by the standards. The expected fluency in Kindergarten is to add and subtract fluently within 5 by the end of</p>

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	<p>fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.</p>		<p>the school year. The fluency standard K.OA.A.5 is practiced in Mission 4, Topic A, Lesson 6. Students are shown a number less than 5. They are then required to circle the number needed to make 5. Beginning in Mission 4, Topic F, and for the remainder of this mission, each day's fluency activity includes an opportunity for review and mastery of the sums and differences with totals through 5 by means of the Core Fluency Practice Sets or Sprints. Teachers are provided with five fluency activities for LSSM K.OA.A.5 in Mission 4. Students use digital materials to build procedural skills and fluency, as well. For example, in one digital activity called "Sum Snacks," students are presented with an addition word problem. The student uses pictures to model the addition in the problem. The digital activity is repeated multiple times to build fluency and number sense. Students also have the opportunity to build procedural skills expectations throughout the curriculum. For example, in Mission 2, Topic C, Lesson 9, the teacher is told to give every student a bag filled with 2D and 3D shapes. The students will determine "how many" cubes are in the stick by keeping track of objects as they count (LSSM K.CC.B.5). In Mission 5, Topic D, students count up and down by tens to 100, count within tens by ones, and count across tens, building the procedural skill of sequence counting regardless of the starting number. Specifically, on the Lesson 15 Exit Ticket, students count up and down by 10 building procedure to count forward beginning from a given number within a known sequence (LSSM K.CC.A.2).</p>
	<p>Required 3c) Attention to Applications: Materials are designed so that teachers and students spend sufficient time working with engaging applications, 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</p>	<p>Yes</p>	<p>The materials are designed so that students spend sufficient time working with engaging applications. Kindergarten has one application standard, LSSM K.OA.A.2. In order for students to fully master the standard, they solve four types of problems within 10: Result Unknown/Add To, Result Unknown/Take From, Total Unknown/Put Together - Take Apart, and, Both Addends Unknown/Put Together - Take Apart. These problem types are evidenced throughout Module 4.</p>

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	<p>problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.</p>		<p>In Module 4, Topic C, Lesson 16, students engage in word problems that present a scenario with an original number of objects and then find the unknown total when an additional number of objects is added to the original number of objects (Result Unknown/Add to). For example, in the Optional Problem Set, students solve the following problem, “There are 4 snakes sitting on the rocks. 2 more snakes slither over. How many snakes are on the rock now?” Students are to add to the original number of snakes and find the total number of snakes on the rock. In Lesson 17, students put together objects in order to find the unknown (Total Unknown/Put Together - Take Apart). In another example from the Optional Problem Set, students solve the following problem, “There are 4 green balloons and 3 orange balloons in the air. How many balloons are in the air?” Students put together the number of balloons to find the total number of balloons. In Lesson 18, students engage in problems addressing scenarios where the total is given, but both addends are unknown (Both Addends Unknown/Put Together - Take Apart). In the Optional Problem Set, students also solve the following problem, “Devin has 6 pencils. He put some in his desk and the rest in his pencil box. Write a number sentence to show how many pencils Devin might have in his desk and his pencil box.” Students also find number pairs to make the number sentence true. In Module 4, Topic D, students solve problems involving finding the unknown by taking away (Result Unknown/Take From). For example, in Lesson 21, students are to solve the following problem, “Tanisha had 5 grapes. She gave 3 grapes to a friend. How many grapes does Tanisha have now? Draw the grapes, and fill in the number sentence.” Students begin with a number and have to take away from this number in order to find the unknown number of grapes.</p> <p>This standard is also addressed in Mission 4, Topic H, as well as in Mission 5. In Mission 4, Topic H, Lesson 39, students solve the following word problem,</p>

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			<p>“Mittens the cat had 6 mice. She needed 10 mice in all to take home to her family for dinner?” Students solve the problem by finding how many more mice she needs, and then represent the word problem with a drawing. In Mission 4, Topic H, End of Mission Assessment, students are asked to choose an equation to represent the following story, “5 fish were swimming in a pond. Then, 3 frogs jumped in the pond. Now, there are 8 animals in the pond. Which equation matches the story?” and “There were 8 animals in the pond. The 3 frogs jumped out and went home. Now, there are 5 animals in the pond. Which equation matches the story?” The student is not actively solving the word problem, but is choosing the equation to represent the problem. In a word problem within Module 5, Topic E, Lesson 21, students solve the following problem, “Peter saw 8 puppies at the pet store in a cozy cage. While he was watching them, 2 hid in a little box. How many could Peter see then? Draw a picture, and write a number bond and a sentence to match the story.” Each of the cited examples align with the application component of LSSM K.OA.A.2.</p>
	<p>Required 3d) Balance: The three aspects of rigor are not always treated together and are not always treated separately.</p>	<p>Yes</p>	<p>It is evident in the materials that the three aspects of rigor are not always treated together and are not always treated separately. The balance of rigor is apparent, as every lesson begins with a fluency activity, as well as an application activity. Conceptual development is often built during many of the lesson activities. The fluency activities do not always pertain to the standards being taught in the lesson, but give students the opportunity to practice applying fluency skills in support of meeting standard expectations. For example, in the fluency activity of Mission 2, Topic B, Lesson 6, students practice their fluency with number order. The students follow the teachers counting on a number path. The teacher says, “Beep,” and students are asked to say the number. Mission 6, Topic A, Lesson 2, the fluency activity is a sprint in which students practice facts to 5 (K.OA.A.5). The lessons connect procedural skill and fluency to application. For</p>

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			<p>example in Mission 4, Topic B, Lesson 7, the students are asked to model a word problem using linking cubes. Once the students have solved the word problem, the students must create other ways to make the number. In the fluency activity found in Mission 5, Topic D, Lesson 16, the numbers 11 to 19 are created using “hide zero cards.” This aids in the students conceptual understanding of standard (K.NBt.A.1a). When necessary, materials focus on one or two aspects of rigor when called for by the standards. For example, in Module 1, Topic B, Lesson 4, students sort toys into groups, understanding that items can be categorized by different attributes. In Lesson 5, students continue to sort, then determine the count in each which helps students implement correct counting procedures, and then reason about how the last number called determines the total (K.CC.B.4 and K.MD.B.3).</p>
<p>Non-negotiable 4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Required 4a) Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.</p>	<p>Yes</p>	<p>The materials address the practice standards in such a way as to enrich the content standards of Kindergarten. The mathematical practices are listed and explained at the beginning of each Mission in the Teacher Overview and then labeled within the teacher lessons as they are utilized. For example, in Mission 3, Overview, Mathematical Practices (MP) 2, 3, 5, 6 and 7 are listed with a brief, but specific, description of how the students may use practice in the Mission. For example, MP.2 is utilized in the Module as students “compare quantities by drawing objects in columns and matching the objects one to one to see that one column has more than another and draw conclusions that 6 is more than 4 because 2 objects do not have to match.” The use of this practice is evidenced in Topic G, Lessons 26 and 27 as students match and count to compare two sets of objects and then state which is more or which is less. Use of the practice helps enrich content standards, specifically LSSM K.CC.C.6 and K.CC.B.4. Mission 1, Topic F, Lesson 26 describes the use of MP.7 within the lesson. Students develop place value patterns through building groups of 5 in rows</p>

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			with objects, such as beans and cubes, enriching the K.CC standards. In Mission 6, Topic B, Lesson 7, students use MP.4 as they are given a bag of shapes and must manipulate the shapes in a way to make a square. The students trade their shapes with their neighbors and must create another shape with the new bag, enriching LSSM K.G.B.6.
Section II: Additional Criteria of Superior Quality			
<p>5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Required 5a) Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.</p>	<p>Yes</p>	<p>The materials provide all students extensive work with course-level problems. Students engage in activities to help build mathematical skills and concepts and have the opportunity to work with grade level problems in the Optional Problem Set and as digital activities. For example, in Mission 4, Topic A, Lesson 2, students use number bond templates and linking cube sticks to model the composition and decomposition of numbers to 5. Students then model adding and subtracting numbers to 5 using actions, objects, and drawings in the Optional Problem Set (K.OA.A.1). The digital activities are designed to build number sense for numbers 5 to 20 in progression. For additional practice, students can review digital activities at any time. The missions work to build student understanding over time, with extensive work that follows the progression of the Kindergarten standards. Mission 1 focuses on numbers to 10, and solidifies their understanding 5 groups and the numbers 6, 7, 8, and 9 relative to the number 5. In Mission 5, students build upon the understanding of 10 and extend it to 20. It should be noted that the standard has students stop at 19 (K.NBT.A.1b).</p>
	<p>Required 5b) Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.</p>	<p>Yes</p>	<p>The material build concepts from each standard to accommodate new knowledge. Concepts are taught in a logical order and maintain progressions consistent with those contained within the standards. In Mission 1, students begin working with and understanding numbers to 10. Students first order, count, write up to ten, and then answer “how many questions.” Later in the mission, students focus on composing and decomposing 5. In Mission 3, students use their understanding of 10 to</p>

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			<p>compare length, weight, and capacity. Mission 4 builds upon student’s understanding of 5, as they apply their knowledge of 5 to create addition and subtraction problems. In Mission 2, students seek out flat and solid shapes in their world. Students learn to identify flats and solids. This allows them to see the relationship of the simple to the complex as in a mountain’s top to a plastic triangle and cone sitting on their desk. The concept of geometry is expanded in Mission 6, geometry unit. By the end of the year, students have become more familiar with flats and solids as they compose new flat shapes (“Can you make a rectangle from these two triangles?”) and build solid shapes from components (“Let’s use these straws to be the edges and these balls of clay to be the corners of a cube!”).</p>
	<p>5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.</p>	<p>Yes</p>	<p>Materials include learning objectives that are visibly shaped by LSSM cluster headings and standards. Each Mission Overview summarizes the objectives to be taught within each Mission Topic with the standards identified in the summary. For example, the Mission 1 Overview states, “Students use their understanding of numbers and matching numbers with objects to answer how many questions about a variety of objects, pictures, and drawings (K.CC.5)” which mirrors the standard’s wording for LSSM K.CC.B.5. In addition, each topic includes an objective aligned to a standard or group of standards and includes a set of lessons that address parts of, or each of the standards listed within the Topic. Mission 1 focuses on numbers to 10 and reflects a portion of the Counting and Cardinality domain as in Topic B, where the objective is to “Classify to Make Categories and Count,” addressing LSSM K.CC.B.4a, K.CC.B.4b, and K.MD.B.3. In Lesson 4, students “classify items into predetermined categories,” reflecting LSSM K.MD.B.3. In Lesson 5, students “classify items into three categories, determine the count in each, and reason about how the last number named determines the total,” reflecting LSSM K.MD.B.3, K.CC.B.4a, and K.CC.B.4b. Learning objectives are also shaped by LSSM</p>

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			<p>clusters. For example, in Mission 1, Topics C, D, E, and F have students order, count, and write up to ten objects from a variety of configurations in order to answer “how many” questions. Students demonstrate their understanding of knowing number names and the count sequence, reflecting the Counting and Cardinality Cluster A. Learning objectives are also shaped by LSSM domains. Mission 5 focuses on numbers 10-20 and count to 100 by 10s and ones. In Topic A, students begin at a concrete level by counting straws. Next, they separate 10 objects from concrete and pictorial counts up to 20 in order to see two distinct sets as 10 ones and no ones or 10 ones and some ones (K.CC.1, K.NBT.1). By the end of Topic B, students have the ability to model and write a teen number without forgetting that the 1 in 13 represents 10 ones (K.CC.3). In Topic E, students decompose and compose teen numbers and represent the numbers in addition sentences (K.NBT.1). This reflects the Numbers and Operations in Base 10, and Counting and Cardinality domains.</p>
<p>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.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Required 6a) Materials attend to the full meaning of each practice standard. 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. Alignments to practice standards are accurate.</p>	<p>Yes</p>	<p>Materials attend to the full meaning of each practice standard. Each Mission Overview lists the Mathematical Practice Standards (MP) and briefly describes the activities that meet the practice. Evidence of the Mathematical Practice is noted on the side of the teacher’s lesson. In Mission 1, students are to represent quantities with numbers. In Topic B, Lesson 6, students sort objects. In Topic C, the students create linear configurations of five and then determine hidden partners (MP.2, Reason abstractly and quantitatively). In Mission 2, Topic A, Lesson 1, students sort shapes by their attributes. The students are encouraged to verbalize attributes such as corners, curved lines, straight lines, number and length of sides, and missing pieces (MP.6, Attend to Precision). In Mission 3, Topic B, Lesson 7, students are given a riddle about linking cube sticks and use their 5-stick to help solve the riddle. For example, “We are two different sticks. We are each shorter than the 5-stick, but when you put us</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			<p>together, we are the same length as the 5-stick!"</p> <p>Students find various ways to make the riddle true, for example, using a 1-stick and a 4-stick (MP.7, Look for and make use of structure). In Mission 4, Topic C, Lesson 13, students learn about a boy named Noah and how he likes to play with magnets. The magnets are represented with 2 squares and 3 circles. Students use a number bond to represent the number of magnets Noah has. Students decide where each of the parts go on the number bond and then write an equation to represent both the scenario and number bond (MP.4, Model with mathematics). In Mission 4, Topic H, Lesson 41, students select a way of representing number sentences. Given a set of linking cubes, students are asked to represent their stick in as many ways as they can. Students record these different representations on a piece of construction paper (MP.5, Use appropriate tools strategically). In Mission 5, Topic C, Lesson 14, students count objects in a circular configuration, put them in a line, and must prove that the amount is the same as their original. A partner then decides if they have proved it or not and must explain why or why not (MP.3 Construct viable arguments and critique the reasoning of others). In Mission 6, Topic A, Lesson 2 students are given sticks and clay to make two dimensional shapes (MP.4, Model with mathematics).</p> <p>Students also have the opportunity to explain their thinking throughout the activities, as well as during the lesson's Student Debrief sections. In the Student Debrief section, the teacher asks questions for students to reflect on and consolidate their learning. For example, in Mission 1, Topic D, Lesson 13, the Student Debrief questions ask, "What do you do when you need to find out how many? What are some ways that you can tell or show how many? What could we tell someone by writing numbers?" (MP. 3, Construct viable arguments and critique the reasoning of others).</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	<p>Required 6b) 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.</p>	<p>Yes</p>	<p>Sufficient opportunities are available for students to construct viable arguments and critique the arguments of others concerning key Kindergarten mathematics. In Mission 1 Topic Overview, an example is provided as to how the students will utilize MP.3 which states, “Students reason about each other’s ways of counting fingers or a scattered set of objects. They reason about counting fingers by comparing the fingers counted and about scattered objects by comparing counting paths through a set of up to 10 scattered objects.” This is evidenced in Topic C, Lesson 8 of the Student Debrief section where teachers are given a combination of questions to lead a discussion about the strategies students use to count objects in the Lesson or in the Optional Problem set. With the Optional Problem Sets, in Lesson 8, students use “Turn and Talk” to discuss the strategy they used to count the different objects. If teachers opt not to use the Optional Problem Sets, it is suggested they draw an array of stars and have students use the same discussion techniques as those in the Optional Problem Set to discuss their strategy for counting. In Mission 2, students use shape attributes to defend identification of a plane or solid shape. For example, in Lesson 2, students defend their reasoning for identifying shapes as triangles using the attributes of the shape. In Mission 5, students explain their thinking about teen numbers as 10 ones and some ones and how to represent those numbers as addition sentences.</p>
	<p>6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students’ mathematical development.</p>	<p>Yes</p>	<p>Teacher-directed materials explain the role of the practice standards in the classroom and in students’ mathematical development. Each Mission Overview includes Focus Standards for Mathematical Practices section and provides specific descriptions of how students use the practice standards within the Mission. For example, in Mission 2, the Focus on Mathematical Practice states, “Students will make sense of problems and persevere in solving them. Students distinguish shapes from among variants, palpable distractors, and difficult distractors. (See</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			<p>examples on p. 4.)” (MP.1). In Mission 5, the Focus on Mathematical Practice states, “Students will use the structure of 10 ones to reason about teen numbers. They compare teen numbers using the structure of the 10 ones to compare one” (MP.7). In Mission 6, the Focus on Mathematical Practice states, “Attend to precision. Ordinal numbers provide students with vocabulary to precisely describe the spatial organization of ten shapes in a straight line” (MP.6). The math practices are labeled to the side of activities within the teacher lessons. For example, in Mission 3, Topic B, Lesson 4, one activity is labeled “MP.2” out to the side. Students reason quantitatively and abstractly as they use linking cube sticks to compare the size of a 5 stick to other sticks while determining which is longer or shorter than the 5 sticks and to determine if the numbers are greater than or less than 5.</p>
	<p>6d) Materials explicitly attend to the specialized language of mathematics.</p>	<p>Yes</p>	<p>The materials explicitly attend to the specialized language of mathematics. Each Mission Overview contains a Terminology section which is broken down into subheadings of New or Recently Introduced Terms and Familiar Terms and Symbols. In Mission 4, Topic A, Lesson 1, the newly introduced term “number bond” is bolded, as well as “put together” and “take apart.” The teacher first displays a picture of 2 hens and 3 geese, then writes the number sentence on the board. The teacher then creates the number bond and then tells students that they can represent the number of ducks and hens with a “number bond.” The teacher continues to explain the connection that 3 and 2 make 5 by explaining the two groups were “put together” in order to make 5 in the number bond. The teacher uses the same example and explains that a number bond can show the total number of birds in a number bond and how they can “take apart” the 5 in order to create two groups of hens and geese. In Mission 2, Topic A, Lesson 2, the term “geoboard” is introduced and practiced with students using the geoboards as a hands-on experience. In Mission 5, Topic A, the term “teen</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			number” is in bold. Students work to identify teen numbers as well as break them apart into ten ones and another part.
<p>7. INDICATORS OF QUALITY: Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Required 7a) There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.</p>	<p>Yes</p>	<p>Students are asked to produce answers in a variety of ways. The curriculum provides Optional Problem Sets, sprints, assessments, as well as digital activities. The assessments are given in a one-on-one setting due to the nature of Kindergarten. Students complete questions in a variety of ways such as drawings, selections, and manipulation of materials. In Mission 1, Topic F, Lesson 23, students color three items and write the total number of those items. In Mission 3, Mid Mission Assessment, students use manipulatives to compare length and height, as well as weight. Students then explain their reasoning. In the Mission 4, Mid Mission Assessment, students use cubes to answer a story problem, then write a number sentence to match what happened (K.OA.1, K.OA.2,K.OA.4). On the Hip, Skip, Splash 1-19 digital activity, students write the missing digit in the number line (K.CC.A.3). In Mission 6, Topic A Lesson 2, students complete a sprint. In the sprint, students write the missing number, supporting the students in reaching the goal of mastering facts to five.</p>
<p>Required 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 student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.</p>	<p>Yes</p>	<p>The materials provide separate teacher materials that support and reward teacher study. Teachers are provided with a Kindergarten Overview, Mission Overview, and professional development videos. A Curriculum Overview provides a table which outlines the missions, lessons, estimated duration of content, and the standards to be covered. The Mission Overview explains the strategies that will be taught and contains notes on pacing, differentiation, and when lessons can be extended or omitted. For example, the Mission 1 Overview states, "If pacing is a challenge, consider the following modifications. Consider consolidating Lessons 1 and 2 if students are competent in recognizing and discussing subtle differences in the attributes of objects." In Mission 5, notes on Pacing for Differentiation suggest that teachers use art time to build their Reckenrecks or</p>	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			<p>to send the Rekenrek home as an at home project. In Mission 2, the notes on Pacing for Differentiation suggest that if pacing is a challenge teachers can omit Lessons 5 and 8 and that students can practice position words throughout the day to reinforce the standards taught in these lessons (K.G.A.1). Terminology developed within the Mission is also found at the end of each Mission Overview. Each lesson is scripted for the teacher and student. The curriculum points out notes within the lesson to help the teacher explicitly teach the strategy or learning that is to take place. In Mission 1, Topic C, Lesson 10, the curriculum suggests scaffolding by pairing students up to count their beans. In Mission 5, Topic D, Lesson 15, a teacher note states, "Now that counting teen numbers in circular configurations has been introduced, the goal is to develop accuracy. Encourage students to select a starting point they can remember, so they know when to stop." Lessons also include optional problem and homework sets. Some lessons include Multiple Means of Action and Expression note boxes that provide extensions for enrichment. For example, in Mission 3, Topic E, Lesson 16, the note states "For enrichment, challenge students to explain how they were able to cover one square with one circle, 16 small squares, or many beans. Encourage them to use the math words that they know."</p>
	<p>7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.</p>	<p>Yes</p>	<p>The materials support English Language Learners and other special populations. For example, in Mission 5, Topic A, Lesson 1, on the right hand side of the page, a small box states, "NOTE MULTIPLE MEANS OF ENGAGEMENT: To help English Language Learners develop oral language skills, alternate between choral response and written response. Provide personal white boards for students to write the answer during frame flashes." In Mission 3, Topic D, Lesson 15, on the right hand side of the page, a small box states, "NOTE MULTIPLE MEANS OF ACTION AND EXPRESSION: Scaffold the lesson for English Language Learners by using motions. For</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			<p>example, hold up the scoop when directing students to count the scoops it takes to fill their containers, and hold up the funnel when directing students to use the funnel if they need it.” In Mission 4, Topic A, Lesson 1, a note suggests, “For students with processing or memory issues, place cards faceup to play the game. Students can match partners of 5 without the added memory requirement.” Within the same lesson, a “Multiple Means of Action and Expression” support box is noted to the side of the lesson and suggests that in order to scaffold the problem for students who need more support, give them linking cubes in order to solve the problem, and once they are comfortable using manipulatives to solve problems they can transition to a pictorial strategy of representing the problem by drawing.</p>
	<p>7d) The underlying design of the materials distinguishes between problems and exercises. In essence, the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.</p>	<p>Yes</p>	<p>The underlying design of the materials distinguishes between problems and exercises. The curriculum has optional problem sets. These problem sets give the student an opportunity to practice the material that they learned during the lesson. Fluency practice also gives the students an opportunity to practice skills they have already learned. In Mission 4, Topic A, students use pictures, numerals, and number bonds to compose and decompose facts to 5 (K.OA.5). In the lesson activities, students develop procedural skill and fluency in adding and subtracting within 5. Students then demonstrate this learning in the Optional Problem Set and Fluency Practice. Students are also given the opportunity to practice fluency of five facts in Mission 6, Topic A, Lesson 2, as they complete sprint fluencies. In Mission 5, Topic B, Lesson 6, students develop an understanding of using place value to represent numbers from 10 to 20 through the lesson activities. Students then have the opportunity to apply their learning on an Optional Problem Set and Exit Ticket, which are labeled at the top of the page accordingly. On the Exit Ticket students “draw the number shown on the Hide Zero cards with a drawing in the ten-frame” and then “write the number below after the 0 is hidden. Show the</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	<p>7e) Lessons are appropriately structured and scaffolded to support student mastery.</p>	<p>Yes</p>	<p>number again on the right with a count of 10 ones and 4 ones. Circle the 10 ones.” (K.NBT.A.1).</p> <p>Lessons are appropriately structured and scaffolded to support student mastery. The curriculum begins with hands on learning and slowly progresses from pictorial to abstract. The materials are structured and scaffolded in a way to build upon student understanding as they work through the lessons and missions of the curriculum. For example, Mission 1, Topic G, begins with Lesson 29 where students begin to learn, practice, and understand that each successive number name refers to a quantity that is 1 greater than the number before. In Lesson 30, students internalize the concept of “1 more” by building linking cube stairs. From this concrete exercise, the students then arrange, analyze, and draw 1 more up to 10 in configurations other than the stair or tower format. This concept is extended in Lesson 32 as students analyze and draw sequences of quantities of 1 more, beginning with numbers other than 1. In Mission 2, students begin engaging in activities with two dimensional shapes in order to build their knowledge to three dimensional shapes later in the Mission and later in the curriculum. At the start of the mission, students first find and describe flat shapes in the world around them. Students then begin classifying the shapes based on the shape’s attributes. Students use this same approach as they learn about solid shapes, and students realize the presence of flat shapes within the solid shapes. Students build upon this understanding in Module 6, as they use flat shapes to compose geometric shapes. Students use the idea of composing and decomposing shapes to further understand that smaller units can combine to make larger units. The same structured and scaffolded approach is also evidenced in Mission 4 as students begin adding and subtracting numbers within 10. Up to this point, students have built an understanding of counting numbers, the value of numbers and the decomposition and composition of numbers (up to 5), and apply these concepts and</p>

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			skills to reasoning about and solving addition and subtraction problems up to 10. Students move beyond the decomposition and composition of 5, progressively working towards 10 as they move through the lessons. By the end of the mission, students add and subtract with equations and expressions up to 10.
	7f) Materials support the uses of technology as called for in the Standards.	Yes	Although the standards do not call for technology, the materials support the use of technology. For example, digital activities are used to build number sense, which is appropriate for the grade level. In Next Step Top 3-5, students create number bonds within 5. In Counting Train 10-15, students practice a group of ten and some more, addressing LSSM K.NBT.A.1.A. In addition, Counting and Cardinality standards are practiced in digital activities such as, The Counting Train and Hop Skip Splash. The digital activity Make or Break supports LSSM K.OA.A.4.
FINAL EVALUATION			
<i>Tier 1 ratings</i> receive a “Yes” for all Non-negotiable Criteria and a “Yes” for each of the Additional Criteria of Superior Quality.			
<i>Tier 2 ratings</i> receive a “Yes” for all Non-negotiable Criteria, but at least one “No” for the Additional Criteria of Superior Quality.			
<i>Tier 3 ratings</i> receive a “No” 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		
I: Non-negotiable Criteria of Superior Quality⁴	1. Focus on Major Work	Yes	The materials devote 113 out of 152 lessons (74%) to the major work of the grade and spend minimal time on content outside of the grade level.
	2. Consistent, Coherent Content	Yes	Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. Materials include problems and activities that connect two or more clusters in a domain or two or more domains in the grade level where these connections are natural and important. K.MD.C.4, to develop student recognition pennies, nickels, dimes and quarters by name and value, is not present in the missions.

⁴ Must score a “Yes” for all Non-negotiable Criteria to receive a Tier I or Tier II rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	3. Rigor and Balance	Yes	The materials develop conceptual understanding of key mathematical concepts and are designed so that students attain the fluencies and procedural skills required by the standards. The three aspects of rigor are not always treated together and are not always treated separately.
	4. Focus and Coherence via Practice Standards	Yes	The materials address the practice standards in such a way to enrich the content standards of Kindergarten.
II: Additional Criteria of Superior Quality⁵	5. Alignment Criteria for Standards for Mathematical Content	Yes	The materials provide extensive work with course-level problems and provide activities to help build mathematical skills and concepts using grade level problems. The material build concepts from each standard to accommodate new knowledge with the concepts taught in logical order and follow a progression consistent with those contained within the standards. Learning objectives are visibly shaped by LSSM cluster headings and standards.
	6. Alignment Criteria for Standards for Mathematical Practice	Yes	The materials attend to the full meaning of each practice standard and provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key Kindergarten mathematics. In addition, teacher-directed materials explain the role of the practice standards in the classroom and in students' mathematical development. The materials explicitly attend to the specialized language of mathematics.
	7. Indicators of Quality	Yes	Students are able to produce answers in a variety of ways and separate teacher materials support and reward teacher study. In addition, the materials support English Language Learners and other special populations. The underlying design of the materials distinguishes between problems and exercises and lessons are appropriately structured and scaffolded to support student mastery.
FINAL DECISION FOR THIS MATERIAL <u>Tier I, Exemplifies quality</u>			

⁵ Must score a "Yes" for all Additional Criteria of Superior Quality to receive a Tier I rating.

Instructional materials are one of the most important tools educators use in the classroom to enhance student learning. It is critical that they fully align to state standards—what students are expected to learn and be able to do at the end of each grade level or course—and are high quality if they are to provide meaningful instructional support.

The Louisiana Department of Education is committed to ensuring that every student has access to high-quality instructional materials. In Louisiana all districts are able to purchase instructional materials that are best for their local communities since those closest to students are best positioned to decide which instructional materials are appropriate for their district and classrooms. To support local school districts in making their own local, high-quality decisions, the Louisiana Department of Education leads online reviews of instructional materials.

Instructional materials are reviewed by a committee of Louisiana educators. Teacher Leader Advisors (TLAs) are a group of exceptional educators from across Louisiana who play an influential role in raising expectations for students and supporting the success of teachers. Teacher Leader Advisors use their robust knowledge of teaching and learning to review instructional materials.

The [2019-2020 Teacher Leader Advisors](#) are selected from across the state and represent the following parishes and school systems: Ascension, Beauregard, Bossier, Caddo, Calcasieu, Caldwell, City of Monroe, Desoto, East Baton Rouge, Einstein Charter Schools, Iberia, Jefferson, Jefferson Davis, KIPP New Orleans, Lafayette, Lafourche, Lincoln, Livingston, LSU Lab School, Orleans, Orleans/Lusher Charter School, Ouachita, Plaquemines, Pointe Coupee, Rapides, Richland, RSD Choice Foundation, St. John the Baptist, St. Charles, St. James, St. Landry, St. Mary, St. Tammany, Tangipahoa, Vermillion, Vernon, West Baton Rouge, West Feliciana, and Zachary. This review represents the work of current classroom teachers with experience in grades K-8.

Appendix I.

Publisher Response

The publisher had no response.

Appendix II.

Public Comments

There were no public comments submitted.