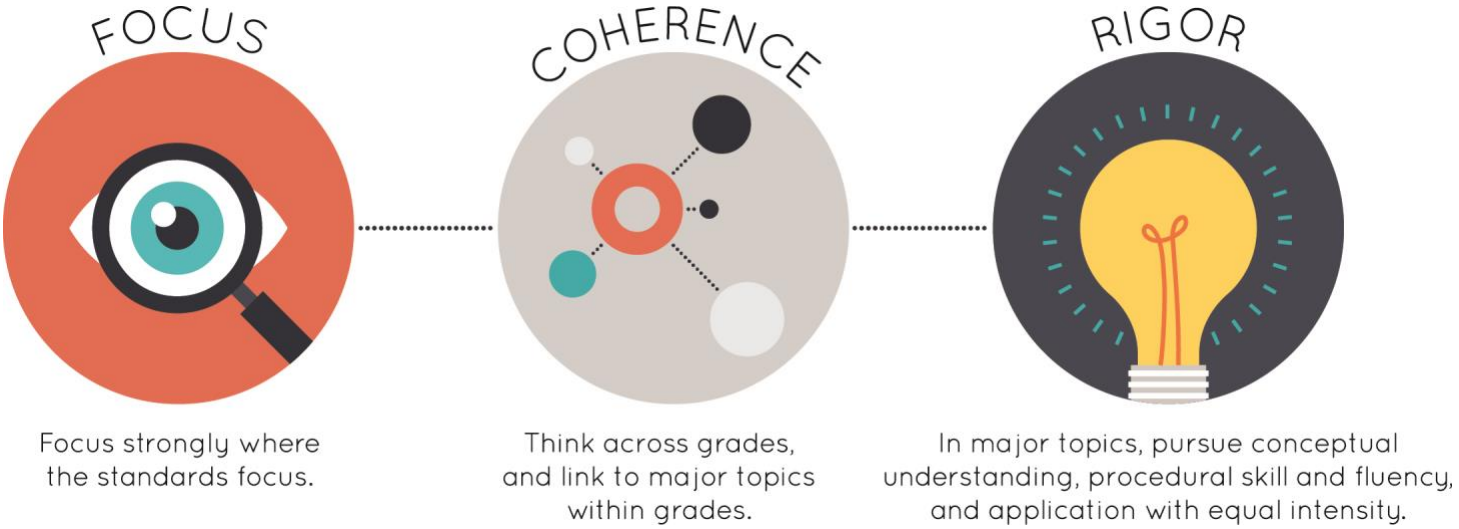
# Instructional Materials Evaluation Review for Alignment in Mathematics Grades K – 12 (IMET)

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:




Title: **Ready Louisiana Mathematics Gr K-5**

Grade/Course: **K-5**

Publisher: **Curriculum Associates, LLC**

Copyright: **2017**

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 Coh. via Practice Std (Non-Negotiable) | |
| 5. Alignment Criteria for Stnds. for Math Content | |
| 6. Alignment Criteria for Stnds. for Math Practice | |
| 7. Indicators of Quality | |

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, but at least one "No" 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 1) Grade 1 (Tier 1) Grade 2 (Tier 1)
Grade 3 (Tier 1) Grade 4 (Tier 1) Grade 5 (Tier 1)

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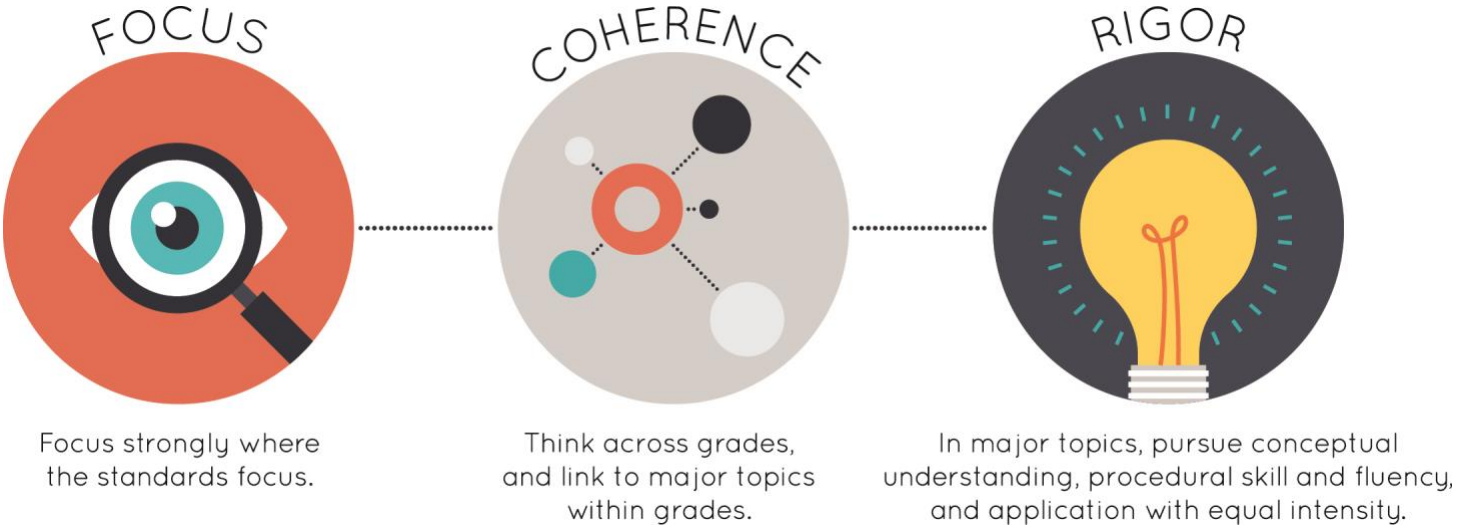


Title: **Ready Louisiana Mathematics Gr K-5** Grade/Course: **K**

Publisher: **Curriculum Associates, LLC** Copyright: **2017**

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| 7. Indicators of Quality | |

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**<br>**1. FOCUS ON MAJOR WORK[1]:**<br>Students and teachers using the materials as designed devote the large majority[2] of time to the major work of the grade/course.<br>☒ Yes ☐ No | **REQUIRED**<br>**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** | A large majority of class time is devoted to the major work of the grade. In this curriculum, there are 33 lessons, and each lesson is intended to be taught for one week. 27 lessons, or 82%, are focused on major content, while the remaining 6 lessons are focused on supporting and additional content. |
| | **REQUIRED**<br>**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 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. | **Yes** | There is minimal time spent on content outside of Kindergarten. All lessons in the materials are aligned with requirements of the Kindergarten Standards. In addition, there are no assessment items that assess content beyond Kindergarten Standards. |
| **Non-Negotiable**<br>**2. CONSISTENT, COHERENT CONTENT**<br>Each course's instructional materials are coherent and consistent with the content in the Standards.<br>☒ Yes ☐ No | **REQUIRED**<br>**2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. | **Yes** | Materials connect supporting content to major standards in meaningful ways. For example, in Lesson 28, students count objects (K.CC.B.5) in order to sort the objects into groups (K.MD.B.3). In Lesson 28A, students sort coins by putting all matching coins together and naming the coins. The teacher is prompted to ask students, "Which coin do you have the most of? Which coin do you have the least of?" This questioning effectively connects supporting Standard K.MD.C.4 to major Standard K.CC.C.6. In Lesson 31, students learn how to compare shapes. Throughout the lesson, they are encouraged to count the number of sides and corners shapes have, effectively connecting supporting Standard K.G.B.4 to major Standard K.CC.B.4. |

[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%.

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| | **REQUIRED**<br>**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. | **Yes** | The materials for Kindergarten include problems and activities that connect two or more clusters in a domain and two or more domains. For example, Lesson 4 connects Standard K.CC.A.3 and K.CC.B.4 as students engage in counting groups of objects and writing the number of objects within 5. Lesson 23 focuses on Standard K.NBT.A.1, which requires students to gain an understanding of place value using numbers in the teens. In the lesson, students must write the teen numbers, as well as the decomposition of the teen numbers as 10 and some more. This effectively connects to Standard K.CC.A.3, which requires students to write numbers 0 to 20. Lesson 13 connects Standards K.OA.A.3 and K.OA.A.4 to K.CC.A.3. In the lesson, students use counters to find all the ways to make ten, and they write the numerals to show the combinations. |
| **Non-Negotiable**<br>**3. RIGOR AND BALANCE:**<br>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.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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 develop conceptual understanding of key mathematical concepts. For example, the concept of making 10 (K.OA.A.4) is developed in Lesson 13 as students use ten-frames and two-colored counters to explore and find all the ways to make 10. Standard K.OA.A.1 focuses on representing addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations. In Lesson 14, students draw pictures of things they might add together (2+1), and then they add two of the items to another item using the words "add" and the "addition sign." Students are given two different colors of connecting cubes to add. Students also use their cubes to write addition number sentences in order to connect what they made and what they write. Finally, students work with a partner to find the pairs of addends to make 4. The concept of subtraction (K.OA.A.1) begins to be developed in Lesson 17 through the use of real-world scenarios and pictures. Students draw and cross out pictures to represent "take away" situations. In addition, the teacher is prompted to ask students high-level questions to help them develop a deep understanding, such as, "How can |

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| | | | you find 4-2 if you know 4-1?" Cluster K.NBT.A addresses conceptual understanding of working with numbers 11-19 to gain foundations for place value. In Lesson 21, students first show how to count to 11 using their fingers and then use a partner to show an additional finger. Next, they use ten blue counters and then add on another red counter to show 11 and come to the understanding that 11 is 10 and 1 more. Students then use counters and 10-frames to add 10 and 1 more to conclude that they can count on from 10 instead of starting at 1. |
| | **REQUIRED**<br>**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. Each lesson has specific parts for building fluency. For example, in Lesson 14 on page 80 in the Teacher Resource Book, students practice rote counting to 60 (K.CC.A.1). In Lesson 28 on page 164 in the Teacher Resource Book, students practice rote counting to 100 and practice comparing numbers to 10. In addition, students have opportunity for repeated practice of Standard K.OA.A.5, which explicitly calls for fluency with addition and subtraction within 5. Before addition and subtraction are formally taught in Lessons 14-17, students begin practicing with ways to make 2, 3, 4, and 5. For example, in Lesson 7 on page 41 of the Teacher Resource Book, there is a fluency building activity which requires students to practice ways to make 2, 3, 4, and 5. In Lesson 8 on page 44 of the Teacher Resource Book, students practice showing combinations to 5 on their fingers. All of Lessons 14 and 15 focus on addition within 5, and all of Lessons 16 and 17 focus on subtraction within 5. In Lesson 18 on page 104 in the Teacher Resource Book, students engage in fluency practice of adding and subtracting within 5. Lesson 20 is focused on building fluency with facts to 5. |
| | **REQUIRED**<br>**3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample | **Yes** | The materials are designed so that teachers and students spend sufficient time working with engaging applications. For example, Lesson 4, which is focused on counting to 5, begins with the teacher |

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| | 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. | | posing the problem, "It's Jinya's birthday. He is 5 years old. What are some different ways to place 5 candles on his cake?" Students then use a work mat and counters to show different ways 5 candles could be placed on the cake (K.CC.B.4 and K.CC.B.5). Lesson 10, which is focused on ways to make 10, also begins with the teacher posing a problem: "How many ways can you make a group of 10 children with some number of boys and some number of girls?" Students in the class are then used to model different combinations of ten (K.OA.A.4). Each lesson begins with the teacher posing an engaging problem, usually dealing with a real-world situation, similar to the two examples given. In addition, there are ample opportunities for students to solve addition and subtraction word problems, as required by Standard K.OA.A.2. Starting with Lesson 3, there are 3 addition and/or subtraction word problems for students to solve. For example, in Lesson 28 on page 165b in the Teacher Resource Book refers the teacher to the online Teacher Toolbox for 3 addition and subtraction word problems within 10. In Lesson 15, students are prompted to think of an addition story problem they could tell using the given numbers. |
| | **REQUIRED**<br>**3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately. | **Yes** | The three aspects of rigor are not always treated together and not always treated separately. For example, in Lesson 5, students develop conceptual understanding of comparing numbers (K.CC.C.6) as they decide whether a friend has more, the same, or fewer number of snacks. Students then use counters to identify the values. Students then develop procedural skill and fluency as they count, identify sets, and compare sets to written numbers. Lesson 14 focuses on building conceptual understanding of addition (K.OA.A.1). In the lesson, students use what they know about combinations of 5 to begin understanding addition. They draw pictures to represent addition sentences within 5 and answer questions, such as, "How can you find the total number of cubes in each picture?" In this lesson, students also engage in application as they solve 3 |

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| | | | addition and subtraction within 5 problems (K.OA.A.2). In Lesson 20, students build fluency as they practice addition and subtraction facts within 5 with no pictures (K.OA.A.5). |
| **Non-Negotiable**<br>**4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:**<br>Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | The materials address the practice standards in a way that enriches the content standards of Kindergarten. For example, in Lesson 20, students engage in MP7, Look for and make use of structure. In the lesson, the teacher is prompted to guide students to look for patterns as they compare number sentences (K.OA.A.5). The SMP TIP explains, "Seeing the relationship between addition and subtraction facts helps children to look for and make use of structure. Encouraging children to use this relationship between addition and subtraction will help them to add and subtract more fluently." In Lesson 28A, students engage in MP3, Construct viable arguments and critique the reasoning of others, and MP5, Use tools strategically. In the lesson, the teacher is prompted to ask students how they could prove that a nickel is 4 cents more than a penny (K.MD.C.4). Students are encouraged to use counters, connecting cubes, or fingers as concrete tools to help explain the relationship between 5 cents and 1 cent. In every lesson beginning with Lesson 3, students engage in MP1, Make sense of problems and persevere in solving them, and MP4, Model with mathematics. Each lesson includes 3 addition/subtraction word problems (K.OA.A.2). There is a teacher note encouraging teachers to provide students with sufficient time to think through the problems on their own. Students are encouraged to try a different approach if their first or second try does not work. In Lesson 31, students engage in MP6, Attend to precision, as they learn how to compare shapes (K.G.A.2). When they compare, they are encouraged to use precise math language to describe how they compared shapes, such as, "These shapes have faces," or "These shapes have 3 straight sides." |
| **SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY** | | | |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| **Additional Criterion**<br>**5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | Materials provide all students extensive work with course-level problems. Students spend five days in a lesson working with grade-level standards. During Modeled and Guided Instruction, students explore ways to solve problems using multiple representations and prompts to reason and explain their thinking. The Guided Practice allows students to solve problems and discuss their solution methods. The Independent Practice provides students the opportunity to work with problems in a variety of formats to integrate and extend concepts and skills. The Practice and Problem-Solving Guide provides additional practice problems for each of the lessons, and the back of the Practice and Problem-Solving Guide provides problems for additional skills practice. Each lesson also has math center activities which provide additional practice with grade-level problems. For example, in Lesson 12, students are provided with multiple problems aligned with Standards K.CC.B.4, K.CC.C.6, and K.CC.C.7. Problems require students to count sets of objects within 10, identify whether one group has more, same or less than another group, and to make sets with more, the same, or less. Lesson 20 provides students with multiple problems to practice facts to 5, which is aligned to Standard K.OA.A.5 Fluently add and subtract within 5. Since there are no previous grade levels, there is no review material. |
| | **REQUIRED**<br>**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. | **Yes** | There are no previous grade levels before Kindergarten to which the materials could relate; however, the materials are designed so that prior knowledge built in Kindergarten is built upon and extended throughout the year. Lessons 1-13 focus on students building understanding of counting objects 1-10 (K.CC.A, K.CC.B). They begin by understanding 1, 2, and 3 in Lesson 2 and then build on that understanding to count and make larger numbers. As students make larger numbers, they find the smaller numbers they already know within the larger numbers. For example, in Lesson 9, students learn to count groups of 8 and 9. Within |

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| | | | the lesson, students are also guided to find smaller groups within the larger groups. In Modeled Instruction, students count 9 children getting on a school bus. They then look for groups of other sizes, such as 3 students wearing blue coats and 6 students wearing orange coats. In each Lesson Overview, there is a section highlighting the learning progression, which explains how the new learning in the lesson builds on what students have previously learned and how it will build in future lessons. For example, in Lesson 21 the progression states, "In Kindergarten, children learn the counting sequence to 100 and count objects to 20. In previous lessons, they have recognized that the numbers 1-10 represent quantities and that these quantities can be combined to form greater quantities through addition." Additionally, each unit begins with a progression overview document. This document connects grade level concepts to specific standards from prior grades, and this document also connects grade-level concepts to future standards. Student prior knowledge is activated and connected to new skills and concepts on the first day of each lesson in Use What You Know. For example, in Lesson 21 students begin with a review of rote counting to 20, which was learned in earlier Kindergarten lessons. Students use this prior knowledge as a foundation for learning teen numbers, which is new mathematics content for the grade level. |
| | **5c)** Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. | **Yes** | The learning objectives in the materials are visibly shaped by the Standards. For example, Lesson 1 Understand Counting: Understand that counting tells how many, and that the last number said tells how many in the whole group is shaped by K.CC.B, Count to tell the number of objects. Lesson 4's content objectives are stated as follows: Count groups of 5 objects, count out 5 objects, and recognize and write the number 5. These objectives are clearly connected to the identified Clusters K.CC.A, Know number names and the count sequence, and K.CC.B, Count to tell the number of objects. Lesson 21 Understand Teen Numbers: |

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| | | | Understand teen numbers as 10 ones and some more ones is shaped by K.NBT.A, Work with numbers 11-19 to gain foundations for place value. The content objectives for Lesson 30 are stated as follows: Correctly name shapes regardless of their orientation or overall size and identify shapes as flat or solid. These objectives clearly align to the identified Standards K.G.A.2, Correctly name shapes regardless of their orientation or overall size, and K.G.A.3, Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). |
| | **5d)** Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. | **Yes** | Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. Coherence is evident throughout the materials, as connections are consistently made to what students have previously learned. Learning Progressions in each Lesson Overview allow teachers to see how the new learning in the lesson is connected to what students have previously learned, as well as how it will connect to future learning. |
| **Additional Criterion**<br>**6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | Mathematical practice standards are accurately identified in the lessons and are present throughout the materials. For example, in Lesson 3, students engage in MP2, Reason abstractly and quantitatively as they match a group of 4 counters to 4 apples helping them make sense of the abstract idea of 4 as a quantity (K.CC.B.4). In Lesson 22, students learn to count teen numbers (K.CC.A.3, K.CC.B.4, K.CC.B.5). They draw 13 objects, and the teacher is prompted to encourage them to check their work by circling 10 of their objects, then counting the extras to determine they drew the correct number. The SMP TIP in the margin states, "As children repeatedly see that teen numbers are a group of 10 and some extras, they begin to develop awareness of the structure of the base-ten system. (SMP 7 and 8)" In Lesson 24, there is a Talk About It section to encourage discussion after students identify tens on a hundreds chart (K.CC.A.1). The teacher is prompted to ask students, "What do you notice about all the tens numbers?" Possible responses |

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| | | | listed are that they all have 1 or 2 zeros and that the zero(s) can be found on the right and the non-zero digit is on the left. The SMP TIP for Repeated Reasoning listed in the margin states, "The Talk About It question encourages children to look for patterns in numbers. If time allows, ask children to describe other patterns they see in the hundreds chart. (SMP 8)" In most lessons, there is a Problem-Solving Connection page that features 3 real-world problems. On each of these pages, the teacher is encouraged to let students work independently to solve the problems and to allow them sufficient time to work through the problems on their own. The SMP TIP states, "Allowing children sufficient time to think through the problem on their own encourages them to try different approaches if their first or second attempt does not work. This builds confidence in finding ways to use what they learned from those attempts to revise their thinking on subsequent attempts. (SMP 1)" |
| | **REQUIRED**<br>**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. | **Yes** | Students are given opportunities throughout the materials to construct viable arguments and critique the reasoning of others around major grade-level concepts. For example, in Lesson 1 students look at the counting depicted on the student practice page and think about whether the objects on the page were counted correctly. The students discuss, “What is the mistake in counting the soccer balls? What is the mistake in counting the children?” (K.CC.B.4) In Lesson 5, students listen to the work of their peers’ and analyze their peers’ work by determining how their own explanations are similar and different (K.CC.B.4). In Lesson 12, students listen to their peers and then ask questions or make comments about the explanations given for drawing an appropriate picture based on the number given (K.CC.B.4). In Lesson 19, students solve subtraction within 10 problems (K.OA.A.2) using models, and they share how they used the models with the class. The SMP TIP in the margin states, "When children share different ways they used the models, they are constructing arguments using concrete referents. |

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| | | | Encourage children to respond to each other's strategies. (SMP 3)" While not always explicitly identified to the teacher, students are given multiple opportunities to construct viable arguments and critique the reasoning of others within the materials. For example, in Lesson 16, students learn to understand subtraction (K.OA.A.1). In the Guided Practice section, students analyze number sentences, such as 2-1=3, to determine if they are correct or not. The teacher is prompted to have students justify their response using words and physical models. In Lesson 28, students learn to sort objects (K.MD.B.3). They explain how they decided which object does not belong in a given group, realizing that more than one answer is possible. |
| | **6c)** There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. | **Yes** | There are multiple SMP TIPs (Standards for Mathematical Practice TIPs) written in the margins throughout the materials, with each lesson including 2-4 SMP TIPs. These notes explain to teachers what practice standard is being highlighted and how students engage in that practice during the activity. For example, Lesson 3 includes 4 SMP TIPs, Lesson 13 includes 3 SMP TIPs, and Lesson 28A includes 2 SMP TIPs. In Lesson 19, students solve subtraction within 10 problems (K.OA.A.2) using models, and they share how they used the models with the class. The SMP TIP in the margin states, "When children share different ways they used the models, they are constructing arguments using concrete referents. Encourage children to respond to each other's strategies. (SMP 3)" |
| | **6d)** Materials explicitly attend to the specialized language of mathematics. | **Yes** | The materials do attend to the specialized language of mathematics. In each Lesson Overview, there is a section highlighting lesson vocabulary. The materials for both students and teachers provide multiple ways for students to engage with the vocabulary of Mathematics. The Student Practice and Problem-Solving Book has notes at the bottom of the pages where mathematical vocabulary is defined. Throughout the lessons, the vocabulary is used, and teachers are reminded in the marginal notes to use specific vocabulary. In Lesson 14, students learn to |

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| | | | understand addition (K.OA.A.1). The term "add" is explicitly introduced to students as a word for joining or putting together numbers. Students also learn "plus" as another word that can be used instead of "and". In Lesson 27, students learn to compare weight (K.MD.A.2). They learn the math terms "weight," "heavy" and "heavier," "light" and "lighter," and "compare weight." Teachers are prompted in the notes to explicitly teach the meaning of the words to students using examples and models. Students are encouraged to use the words as well as they learn to use precise language to explain their thinking. Lessons also contain language objectives. For example, Lesson 15 states, "Tell put-together and add-to addition problems to match a given picture. Count pictures to find the total for an addition sentence." (K.OA.A.2) |
| **Additional Criterion**<br>**7. INDICATORS OF QUALITY:**<br>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.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | The materials provide students opportunities to produce a variety of responses. They are asked not only to produce answers but to provide evidence through drawings, representations, and written explanations. Students are often asked to analyze and defend the work of others. They must justify their conclusions with verbal statements and mathematical reasoning. Lessons are designed with a consistent routine that includes whole group, partner, and independent work. Problem, Talk About It, Hands-On Activity, Practice, and Problem-Solving portions of each lesson require students to represent the problem in a drawing and make connections between the drawing and the equations. Question types vary and include draw a model, short answer, solve, explain, and multi-step performance tasks. For example, in Lesson 7, students write numbers, color objects representing a given number, and make drawings of a given number (K.CC.A, K.CC.B). In Lesson 11, students explain orally how to count sets of ten objects in different arrangements, represent a set of ten objects using counters in different arrangements, use numerals for 10 to show the total number of objects represented, and finally shade ten objects |

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| | | | (K.CC.B.4). In Lesson 14, students draw a picture showing 2 groups of objects that can be added to get a total of 5. Then students share their pictures and tell a story about the addition, using the "addition" words they learned in the lesson (K.OA.A.1). In Lesson 22, students count groups of 11 to 20 objects aloud and write the number, color 11 to 20 objects to show a given number, draw 11 to 20 objects to show a given number, and discuss with a partner ideas for how to keep track of the count for counting up to 20 items (K.CC.A.3). |
| | **REQUIRED**<br>**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. | **Yes** | 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. The instructional materials provide resources to support teacher planning. For example, the Teacher Resource Book provides a separate pacing guide for the year, month, week, and day; The Unit Overview page includes lesson titles, page numbers, the primary and supporting standards, prerequisite skills, content objectives, learning progressions, lesson vocabulary, and a detailed pacing guide for whole and small group instruction for each lesson; Two Common Core correlation charts, Ready Instruction Correlation and Interim Assessment Correlation, are included; and The Cognitive Rigor and Ready Chart lists specific questions identified as DOK level 3. The Teacher Resource Book also contains components to assist with lesson delivery. For example, At a Glance explains what students will be doing during each component of the lesson. Each lesson has several Step By Step directions to guide teachers in implementing the activities. These directions organize the lessons into chunks and detail the flow of the activity, including questions to |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | ask, key concepts to explain, and what to have students do. Mathematical Discourse includes questions to engage students and advance their learning. Possible answers and key ideas to listen for in student responses are included. For example, in the Lesson 3 Independent Practice section, after students engage in a counting activity (K.CC.A and K.CC.B), the teacher is prompted to engage students in mathematical discourse. One question provided is, "How can you be sure there are 4 red circles and 4 blue circles?" It goes on to explain, "Look for explanations that involve counting. If a child says he or she colored 3 and 1 and that is 4, ask the child to explain. Guide others to suggest how the child can be sure he or she is right by counting." Try It Solutions provide complete explanations and multiple solutions. Concept Extensions, ELL Support, and Visual Models provide support, suggestions, and strategies to engage students with activities that support varied abilities. For example, Lesson 7 includes an Error Alert, which states, "Some children may still struggle with keeping track of their counting. Have them start with the triangle at the top and count in a clockwise direction, making light pencil marks as they count. Suggest that children count again before coloring." Quick Check and Remediation includes an exit slip to monitor understanding. A chart includes error analysis and remediation suggestions. |
| | **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. | **Yes** | Support for English Language Learners and other special populations is evident throughout the materials. For example, in Lesson 2, students learn to recognize the numbers 1, 2, and 3 and to count and identify groups of 1, 2 or 3 objects. In the Guided Practice section of this lesson, the teacher is prompted to show students the homophones "to", "two", and "too" and to use each of the words in a sentence. The purpose of this activity is to help students understand that there are other words that sound like "two" but have different meanings. Lesson 13 includes an English Language Learners Tip: “Guide children to look at the bats at the bottom of |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | the page. Ask children to tell the numbers that describe the two groups that make the 10 bats." In Lesson 27, students are introduced to comparing the weights of objects. In the Modeled Instruction section of this lesson, the teacher is prompted to help students understand the term "light" as in something that does not have much weight as opposed to a physical object which helps them see. Using visuals and examples, the teacher helps students understand the different meanings. In addition to the ELL Support Tips, many lessons include a Differentiated Instruction page. For example, Lesson 24 includes a Quick Check and Remediation, which helps teachers to identify the errors students are making in counting to 100 by tens and target remediation to fix the misconceptions. It also includes a Hands-On Activity and a Challenge Activity. Lesson 31: Compare Shapes also includes a Quick Check and Remediation, Hands-On Activity, and a Challenge Activity. Math Center Activities are provided On Level, Below Level, and Above Level. |
| | **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. | **Yes** | The materials distinguish between problems and exercises. Each lesson follows the same instructional sequence: Introduction, Modeled and Guided Instruction, Guided Practice, and Independent Practice. During the Introduction and Modeled and Guided Instruction, students are solving problems as they learn new concepts. In Guided Practice and Independent Practice, students are completing exercises to practice the concepts learned. For example, in Lesson 12 students compare two written numbers from 1 to 10 (K.CC.C.7). In the Introduction, the teacher is instructed to give one student six crayons and another seven. The teacher asks: "Who has more crayons? How do you know?" Students then work in pairs to compare six and seven counters to find out who has more. During the Practice Together section, students use 10-frames to compare which number is less in a given pair of numbers. During the Practice by Myself: Independent Practice Hands-On Activity "Make sets |

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| | | | with more, less, and the same," students are given thirty counters, 10-frame cards, and cards with six, seven, eight, or nine dots. Students engage with problems requiring them to choose a card and use counters to show more than that number. They continue using counters to show less than the number and the same as the number represented on their cards. In the Practice and Problem-Solving Books, teachers are guided to have students complete more practice with ten frames and counters to compare different numbers within 10. In Lesson 14, the Introduction, is focused on students using what they know to understand addition (K.OA.A.1). In the Modeled Instruction and Guided Exploration, students explore addition through hands on activities, mathematical discourse, and making drawings to represent addition expressions. In Guided Practice, students begin to apply what they have learned about addition to check whether given addition sentences match the picture. Finally, in Independent Practice, students draw a picture showing 2 groups of objects that can be added to get a total of 5, and they fill in the numbers in the equation. |
| | **7e)** Lessons are appropriately structured and scaffolded to support student mastery. | **Yes** | Lessons are appropriately structured and scaffolded using a gradual release model. Each lesson consists of 4 components: Introduction, Modeled and Guided Instruction, Guided Practice, and Independent Practice. Students are guided by the teacher in the beginning of instruction, move toward work with partners or in small groups, and finally work independently. As students move through the lessons, they move from concrete and pictorial representations to more abstract representations. For example, in Lesson 17, students subtract within 5 (K.OA.A.2). In the Introduction, students act out subtraction and use pictures. In Modeled and Guided Instruction, students continue to use pictures of real objects and also fingers to model subtraction. In Guided Practice, students continue to use pictures of objects, but begin to cross out some of the objects to show the |

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| | | | subtraction. In Independent Practice, students use pictures of counters on 5-frames to solve subtraction within 5 problems. |
| | **7f)** Materials support the uses of technology as called for in the Standards. | **N/A** | The LSSM for Kindergarten does not call for use of technology. |

**FINAL EVALUATION**

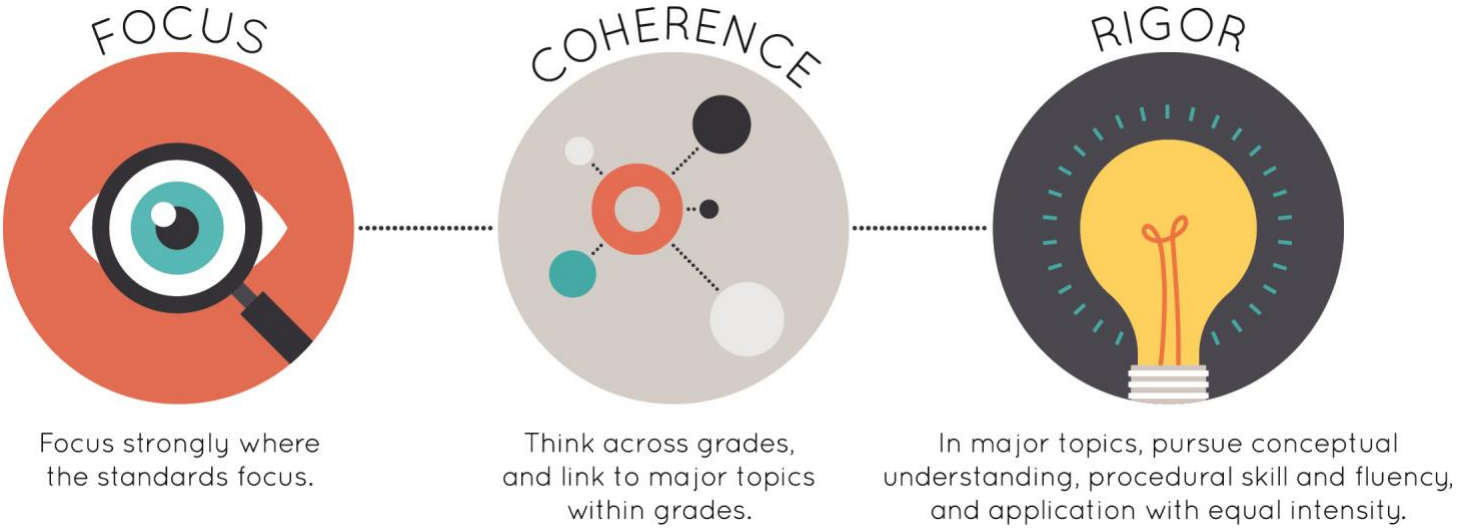
***Tier 1 ratings*** receive a "Yes" in Column 1 for Criteria 1 – 7.
***Tier 2 ratings*** receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
***Tier 3 ratings*** receive a "No" in Column 1 for at least one of the 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 | **Yes** | 82% of the lessons are focused on the major work of the course. |
| | 2. Consistent, Coherent Content | **Yes** | The materials connect supporting content to major content in meaningful ways and include problems and activities that connect two or more clusters in a domain and two or more domains. |
| | 3. Rigor and Balance | **Yes** | The materials are designed so that students develop conceptual understanding, procedural skill and fluencies, and engage in applications. |
| | 4. Focus and Coherence via Practice Standards | **Yes** | The materials address the practice standards in a way that enriches the content standards of the grade. |
| **II: Additional Alignment Criteria and Indicators of Quality** | 5. Alignment Criteria for Standards for Mathematical Content | **Yes** | The materials are consistent with the progressions in the Standards. |
| | 6. Alignment Criteria for Standards for Mathematical Practice | **Yes** | The materials make purposeful connections between the practice standards and the content standards. |
| | 7. Indicators of Quality | **Yes** | The materials give teachers and students the tools they need to meet the expectations of the Standards. |

FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**

Strong mathematics instruction contains the following elements:




Title: **Ready Louisiana Mathematics Gr K-5** Grade/Course: **1**

Publisher: **Curriculum Associates, LLC** Copyright: **2017**

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 Coh. via Practice Std (Non-Negotiable) | |
| 5. Alignment Criteria for Stnds. for Math Content | |
| 6. Alignment Criteria for Stnds. for Math Practice | |
| 7. Indicators of Quality | |

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 |
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| **SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.** | | | |
| **Non-Negotiable**<br>**1. FOCUS ON MAJOR WORK[3]:**<br>Students and teachers using the materials as designed devote the large majority[4] of time to the major work of the grade/course.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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** | A large majority of class time is devoted to the major work of the grade. In this curriculum, there are 37 lessons. 29 lessons, or 78%, are focused on major content, while the remaining 8 lessons are focused on supporting and additional content. Furthermore, 80% of the instructional days are devoted to the major work of the grade. |
| | **REQUIRED**<br>**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 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. | **Yes** | There is minimal time spent on content outside of Grade 1. All lessons in the materials are aligned with requirements of the Grade 1 Standards. In addition, there are no assessment items that assess content beyond Grade 1 Standards. |
| **Non-Negotiable**<br>**2. CONSISTENT, COHERENT CONTENT**<br>Each course's instructional materials are coherent and consistent with the content in the Standards.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. | **Yes** | Materials connect supporting content to major content in meaningful ways. There are two supporting standards in Grade 1: Standards 1.MD.C.4 and 1.MD.D.5. In Lesson 30, students interpret data in picture graphs and in charts with tally marks (1.MD.C.4) by answering questions about the data that require addition and subtraction. This connects to major Standard 1.OA.A.1, which requires students to use addition and subtraction to solve word problems within 20. Lesson 35 connects supporting Standard 1.MD.D.5 to major Standard 1.OA.C.5. In the lesson, students count on to find the total value of coins. |

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

[4] 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 |
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| | **REQUIRED**<br>**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. | **Yes** | The materials for Grade 1 include problems and activities that connect two or more clusters in a domain and two or more domains. For example, Lessons 6-9 connect Clusters 1.OA.A and 1.OA.C as students use addition and subtraction strategies (1.OA.C.6) to solve word problems (1.OA.A.1). Lesson 18 connects Standard 1.OA.C.5 and Standard 1.NBT.A.1. In the lesson, students count to 120 using a 120 chart (1.NBT.A.1) and then use the 120 chart to add by counting on (1.OA.C.5). Students use the chart to count up to see that 90 and 5 more is 95. Lesson 23 effectively connects Clusters 1.NBT.B and 1.NBT.C as students add within 100, adding tens to tens and ones to ones (1.NBT.C.4). In the lesson, students decompose given 2-digit numbers into tens and ones (1.NBT.B.2) in order to add them to the other addend. |
| **Non-Negotiable**<br>**3. RIGOR AND BALANCE:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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 develop conceptual understanding of key mathematical concepts. For example, in Lesson 12, students begin to develop conceptual understanding of teen numbers as a "ten" and some ones. The lesson begins with students modeling teen numbers using their fingers with a partner. They continue to develop their understanding by using cubes to model teen numbers and by engaging in discussions around high-quality questions, such as, "How are the cubes like counting with your fingers?" and "What is the same about teen numbers? What is different?" Students also use ten frames and number bonds to model tens and ones in teen numbers. In Lesson 14, students develop an understanding of making a ten to add (1.OA.C.6). In the lesson, students use ten frames and counters to model moving part of one addend to the other to make a ten and then add the rest. They also model making a ten to add on a number line, and they write the related equations. In Lesson 19, the teacher uses connecting cubes, base-ten blocks, counters, and number cards to engage students in finding out how adding and subtracting 10 (1.NBT.C.5) is similar to the number line. The teacher is prompted to ask high-quality questions, |

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| | | | such as, "How is finding 10 more and 10 less on the 120 chart like adding and subtracting 10 cubes?" |
| | **REQUIRED**<br>**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. Each lesson has specific parts for building fluency. For example, in Lesson 2, students practice building fluency with subtraction within 10 and writing corresponding addition sentences. In Lesson 4, one student solves an addition equation and his partner solves the related subtraction equation (1.OA.C.6). Lessons 7, 8, and 9 are focused on number partners for 6, 7, 8, 9, and 10. In these lessons, students write addition and subtraction sentences that equal the target number, helping to build fluency with addition and subtraction within 10 (1.OA.C.6). Lesson 11 is focused on addition facts within 10. Students use the addition table to identify facts they know and then practice adding within 10 (1.OA.C.6). In Lesson 14, the Fluency Practice section focuses on students practicing facts within 10. |
| | **REQUIRED**<br>**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 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 teachers and students spend sufficient time working with engaging applications. Most lessons include some word problems. For example, Lesson 3 is focused on addition and subtraction word problems (1.OA.A.1). Lesson 4 introduces the concept of missing addend problems (1.OA.B.4) using put together, part unknown word problems. Lesson 5 is focused on comparing word problems (1.OA.A.1). Lesson 14 begins with an exploration of an addition word problem as an introduction to making a ten to add. Lesson 15, which introduces adding 3 numbers (1.OA.A.2), also begins with an exploration of an addition word problem. Students solve word problems throughout this lesson. |
| | **REQUIRED**<br>**3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately. | **Yes** | The three aspects of rigor are not always treated together and not always treated separately. For example, students practice addition and subtraction within 10 (1.OA.C.6) in Lessons 7, 8, and 9 using real-word situations and modeling equations with number bonds, ten frames, and cubes, building conceptual understanding. In Lesson 11, students |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | build procedural skill and fluency with addition within 10 as they solve all the facts within 10, fill in missing addends for sums within 10, and write all the addition facts within 10. Lesson 18 is focused on building conceptual understanding and procedural skill as students use a 120 chart to find patterns in the number system and count. The following lesson, Lesson 19, brings in application as students solve word problems by mentally adding or subtracting 10 (1.NBT.C.6). |
| **Non-Negotiable**<br>**4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:**<br>Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | The materials address the practice standards in a way that enriches the content standards of Grade 1. For example, in Lesson 12, students engage in MP3, Construct viable arguments and critique the reasoning of others, as they learn about teen numbers. In the lesson, students are shown a ten stick and 3 unit cubes, then are told that Buzz thinks it is 4. They are asked if they agree or disagree and why. The SMP TIP prompts teachers to extend students' ability to critique and justify their thinking by asking, "Why do you think Buzz said that the model shows 4? What did he do wrong?" In Lesson 31, students also engage in MP3 as they learn to order objects by length (1.MD.A.1). On page 221, there is a picture of 3 flowers of different lengths and a statement that says, "Boom says the red flower is the shortest." Students are asked to agree or disagree and explain their thinking. In Lesson 13, students engage in MP7, Look for and make use of structure, as they learn to add numbers with sums greater than 10 (1.OA.C.6). In the Concept Extension, students explore sums to 13 and begin to notice that if the same number is subtracted from one addend and added to the other, the sum remains the same. In Lesson 15, students engage in MP4, Model with mathematics, and MP8, Look for and express regularity in repeated reasoning. In the lesson, students model real-world situations using number sentences, and they add 3 numbers by making a ten. The SMP TIP for MP8 explains, “Children have found partners of 10 and have learned to use the make-a-ten strategy to add 2 |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | one-digit numbers. Emphasize the benefit in making a ten to add 3 one-digit numbers. This important calculation will be repeated as children learn to add two-digit numbers and as they learn later concepts." |
| **SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY** | | | |
| **Additional Criterion**<br>**5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:**<br>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.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | Materials provide all students extensive work with grade-level problems. Students solve grade-level problems during all parts of the lessons in the Student Instruction Book. During modeled and guided instruction, students explore ways to solve problems using multiple representations and prompts to reason and explain their thinking. The guided practice allows students to solve problems and discuss their solution methods. The independent practice provides students the opportunity to work with problems in a variety of formats to integrate and extend concepts and skills. Teachers are also advised to assign pages from the Student Practice and Problem-Solving Book to provide students with more practice solving grade-level problems. For example, In the Student Practice and Problem-Solving Book, there are 15 problems for students to solve over the course of the week for Lesson 15: Add Three Numbers (1.OA.A.2). Lesson 18: The 120 Chart includes 13 problems in the Student Practice and Problem-Solving Book that require students to count up from given numbers on the 120 chart and to find a specific number more than a given number using the 120 chart (1.OA.C.5, 1.NBT.A.1). |
| | **REQUIRED**<br>**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. | **Yes** | Materials relate grade-level concepts explicitly to prior knowledge from earlier grades. The materials are designed so that students connect prior knowledge to new concepts. For example, in Lesson 7, students are finding number partners of 6 and 7 (1.OA.D.8). As students explore using counters, the teacher is prompted to listen for students to use strategies they learned in previous lessons, such as counting on. In Lesson 15 students are making tens to add three addends (1.OA.A.2). In Kindergarten students solve addition and subtraction problems and add and subtract within 10, using objects and |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | drawings. In Grade 1, students first learn to solve word problems that call for addition of two whole numbers. They learn strategies such as counting on, making ten and creating equivalent but easier or known sums to add. Students also apply properties of operations as strategies to add and subtract. In this lesson, students solve word problems that involve three addends. They use the associative property to group addends to make a ten and then add the third addend. In Lesson 21, students learn to understand tens and ones (1.NBT.B.2). In the lesson, students are given a bag of 45 connecting cubes, and they tasked with deciding how to count the cubes. The teacher is prompted to remind students of previous lessons where they made ten-trains. Each Lesson Overview provides a Learning Progression. The Learning Progression explains connections between prior grades and the lesson. For example, in Lesson 17, the progression states, "In Kindergarten children count by tens to 100 and write numbers to 20, observing place value." Additionally, each unit begins with a progression overview document. This document connects grade level concepts to specific standards from prior grades and also connects grade-level concepts to future standards. Student prior knowledge is activated and connected to new skills and concepts on the first day of each lesson in Use What You Know. |
| | **5c)** Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. | **Yes** | The learning objectives in the materials are visibly shaped by the Standards. For example, the content objectives for Lesson 9 state, "Fluently add and subtract within 10, apply strategies to addition and subtraction of sums within 10, and understand inverse operations as a tool for adding and subtracting." These objectives are clearly shaped by Standard 1.OA.C.6, which states, "Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on, making ten, decomposing a number leading to a ten, using the relationship between addition and subtraction…" The content objectives |

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| | | | for Lesson 17 state, "Understand that the base-ten system is made up of groups of tens and ones, organize 10 ones into a group of ten, express ten ones as 1 ten and 1 ten as 10 ones, identify and write two-digit numbers in terms of tens and ones." These objectives are visibly shaped by Cluster 1.NBT.B Understand place value. |
| | **5d)** Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. | **Yes** | Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. Rigor is evident in that the materials engage students in the components of rigor as required by the Standards. For example, in Lesson 20, students learn to add and subtract tens (1.NBT.C.6). This standard calls for conceptual understanding. In the lesson, students add in unit form (3 tens + 2 tens) and using connecting cubes, both of which enhance conceptual understanding. Coherence is evident throughout the materials, as connections are consistently made to what students have previously learned. Learning Progressions in each Lesson Overview allow teachers to see how the new learning in the lesson is connected to what students have previously learned, as well as how it will connect to future learning. |
| **Additional Criterion**<br>**6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | Mathematical practice standards are accurately identified in the lessons and are present throughout the materials. In Lesson 14, students engage in MP1 Make sense of problems and persevere in solving them. In the lesson, students complete several word problems by using different strategies and models to add two numbers whose sum is greater than 10 (1.OA.C.6). For some of the problems, students have to make sense of the problem to determine what information they have and which strategy or model they would like to use. Students also persevere in solving the problems as they have the opportunity to revisit their initial solutions if they are not correct. In Lesson 2, students engage in MP2 Reason abstractly and quantitatively. In the lesson, students are asked to find the difference between two numbers based on word problems (1.OA.C.6). The SMP TIP for in the lesson for MP2 states, “Ask |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | children to describe how the number sentence tells what is happening in the problem. In order to contextualize and decontextualize the information in this problem, children need to make a clear connection between the problem situation, the illustration, and the number sentence." In Lesson 23, students engage in MP4 Model with mathematics. In the lesson, students use models to solve problems involving adding tens to any number (1.NBT.C.4) and then share their models so that students can find efficient models to use in problem solving. In Lesson 20, students engage in MP5 Use appropriate tools strategically. In the lesson, students solve word problems that involve adding and subtracting tens (1.NBT.C.6). Students can choose from tens blocks, number bonds, or a 120 chart to help them complete the problems. In Lesson 7, students use MP8 Look for and express regularity in repeated reasoning. In the lesson, students use repeated reasoning to find all the equations with a sum of 6. In Lesson 9 students also use repeated reasoning to find all the equations for the sum of 10 using ten frames. |
| | **REQUIRED**<br>**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. | **Yes** | Students are given opportunities throughout the materials to construct viable arguments and critique the reasoning of others around major grade-level concepts. For example, in Lesson 7, students examine the partners for 6 and 7 by first modeling physical and pictorial representations of the partners, and then by completing number bonds and number sentences (1.OA.D.8). Throughout the lesson students pair visual models with the symbolic representation to help them analyze the structure and reasoning inherent in number partners. In the Talk About It section, students analyze the work of fictional students and answer questions, such as "Who is right? How do you know?" In Lesson 10, students are introduced to the equal sign, working with picture models and number bonds that show equal quantities on both sides of the equal sign (1.OA.D.7). Students also write number sentences to show that equivalent expressions are equal, identify |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | true and false number sentences and rewrite false number sentences as true. Students construct an argument as they answer “Do they have the same number of cubes? How do you know?” In Lesson 12 in the Connect It section, Problem 6 states, "Explain. Buzz says that this shows 4 (visual of 1 ten stick and 3 ones). Do you agree? Why or why not?" The SMP TIP for Critiquing Reasoning advises, "Extend children's ability to critique and justify their thinking by asking: Why do you think Buzz said that the model shows 4? What did he do wrong? (SMP 3)" In Lesson 17, Problem 6 states, "Explain. David says this shows 14 (visual of 5 ten sticks). Do you agree? Why or why not?" (1.NBT.B.2). In Lesson 20, students learn to add and subtract tens (1.NBT.C.6). In the Learn Together section, students engage in a Talk About It activity. The question reads, "Who is right? How do you know? Buzz says 60 - 20 = 40. Boom says 6 tens - 2 tens = 4 tens." In the marginal notes, it states, "As children discuss Talk About It, suggest that they model both subtractions to justify their responses. Emphasize that ‘60’ is another way to describe ‘6 tens,’ making both Buzz and Boom correct." In Lesson 21, students decompose two-digit numbers into groups of tens and ones, representing them in multiple ways (1.NBT.B.2). They recognize that the digit in the tens place of a two-digit number denotes a number of tens, and they write two-digit numbers by placing each digit in the appropriate place-value location. Students think about the work of Buzz, a fictional student. Buzz says, “5 tens 8 ones = 5 + 80.” Students explain why they do or do not agree with Buzz. |
| | **6c)** There are teacher-directed materials that explain the role of the practice standards in the classroom and in students’ mathematical development. | **Yes** | There are multiple SMP TIPs (Standards for Mathematical Practice TIPs) written in the margins throughout the materials, with each lesson including 2-3 SMP TIPs. These notes explain to teachers what practice standard is being highlighted and how students engage in that practice during the activity. For example, Lesson 2 includes 3 SMP TIPs and Lesson 6 includes 2 SMP TIPs. In Lesson 11 the teacher shows an incorrect problem 3 + 4 = 8 and |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | asks students to respond. The students (along with teacher guidance) discuss how miscalculating this one problem causes all the other number sentences in the chart to be incorrect. Lesson 17 prompts teachers to have students model tens with connecting cubes and then show a partner. The materials tell teachers to "Encourage students to justify their decision." |
| | **6d)** Materials explicitly attend to the specialized language of mathematics. | **Yes** | The materials do attend to the specialized language of mathematics. In each Lesson Overview, there is a section highlighting lesson vocabulary. Throughout the lessons, the vocabulary is used, and teachers are reminded in the marginal notes to use specific vocabulary. Teachers are prompted in the notes to explicitly teach the meaning of the words to students using examples and models. Students are encouraged to use the words as well as they learn to use precise language to explain their thinking, and the Student Practice and Problem-Solving Book has notes at the bottom of the pages where mathematical vocabulary is defined. For example, Lesson 10 Try It states, "Encourage children to use the words 'is the same as' when describing totals." (1.OA.D.7) In Lesson 22, students learn to compare numbers (1.NBT.B.3). The Lesson Vocabulary lists the definitions for the following terms: <, >, greater than, less than, more than, compare, equal sign, fewer, and more. In the lesson, students model numbers to compare them, then describe how the numbers compare. They engage in discussion about how the words "fewer" and "less" describe smaller quantities and the words "greater" and "more" describe larger quantities. Teachers are advised to note throughout the lesson whether children accurately use the words in their descriptions. In Lesson 26, students learn to describe the defining attributes of shapes (1.G.A.1). The Lesson Vocabulary lists definitions of the following terms: corner, hexagon, rectangle, rhombus, side, square, trapezoid, and triangle. During the lesson, students are encouraged to use precise vocabulary when describing shapes, such as "closed" and "straight |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | sides." |
| **Additional Criterion**<br>**7. INDICATORS OF QUALITY:**<br>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.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | The materials provide students opportunities to produce a variety of responses. Students are asked not only to produce answers but to provide evidence through drawings, representations, and written explanations. Students are often asked to analyze and defend the work of others. They must justify their conclusions with verbal statements and mathematical reasoning. For example, in Lesson 6, students learn to use doubles and doubles plus 1 as strategies to add (1.OA.C.6). In the lesson, they use counters to model problems, they write number sentences, and they engage in mathematical discourse around such questions as, "How is 3 + 4 related to 3 + 3?" and "How is 3 + 3 + 1 like 3 + 4?" In Lesson 10, students complete addition equations with missing numbers, determine if equations are true or false (1.OA.D.7) and explain their answers in writing, draw pictures to explain their answers, and correct equations that were initially incorrect. In Lesson 22, students use models of base-ten blocks to compare the number of tens and ones in 2 two-digit numbers (1.NBT.B.3). They use quick drawings and draw their own representations to compare 2 two-digit numbers. Students write >, <, or = to record their comparisons. In Lesson 26, students sort shapes, draw shapes that are closed and have straight sides in the Introduction. In the Modeled Instruction section, students identify the names of shapes (1.G.A.1) and engage in mathematical discourse around such questions as, "Boom says the pink shape in the hexagon box can't be a hexagon because it has square corners and the other ones don't. What do you think?" and "How are triangles, rectangles, and hexagons alike? How are they different?" In the Guided Practice section, students classify shapes by coloring them, draw the shape named, and discuss if a given shape is a rectangle or not and how they know. In the Independent Practice section, students choose a shape to draw in 3 different ways and write to explain how all the shapes they drew are alike and how they are |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | different. |
| | **REQUIRED**<br>**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. | **Yes** | 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. The instructional materials provide resources to support teacher planning. The Teacher Resource Book provides a separate pacing guide for the year, month, week, and day. For example, the Unit Overview page includes lesson titles, page numbers, the primary and supporting standards, prerequisite skills, content objectives, learning progressions, lesson vocabulary, and a detailed pacing guide for whole and small group instruction for each lesson; Two Common Core correlation charts, Ready Instruction Correlation and Interim Assessment Correlation, are included and the Cognitive Rigor and Ready Chart lists specific questions identified as DOK level 3. Within the teacher manual, each lesson includes components to assist with lesson delivery. Each lesson has several Step By Step directions to guide teachers in implementing the activities. These directions detail the flow of the activity, including questions to ask, key concepts to explain, and what to have students do. Mathematical Discourse includes questions to engage students and advance their learning, and possible answers and key ideas to listen for in student responses are included. For example, in Lesson 8, students find numbers partners for 8 and 9 (1.OA.B.3). In the Guided Practice section, there is a marginal note stating, "Guide children to see the similarities among the addition sentences in Model It for both 8 and 9. Ask, 'If you know one addition sentence, how does that help you know another one?' Reinforce that the commutative property allows them to 'flip' the |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | addends to make another sentence." Lessons also include possible misconceptions students may have and ideas to address them. For example, in Lesson 25, students learn to add and regroup (1.NBT.C.4). A marginal note in the Independent Practice advises teachers to watch for children who fail to interpret 7 tens as 70 in Problem 4 and to encourage them to use base-ten blocks to model the problem and check their answer. |
| | **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. | **Yes** | Support for English Language Learners and other special populations is evident throughout the materials. In the Lesson 1 Introduction, students are provided with the following problem, "There are 5 girls and 3 boys on a team. How many children are on the team?" (1.OA.C.5) After giving students the opportunity to attempt to solve, there is a note in the margin of the teacher manual advising teachers to use the Hands-On Activity in the lesson where students model addition with counters as extra support for students who were unable to represent the problem or complete the sentence correctly. In Lesson 3 in the Explore Together section, the following problem is provided: "3 children are sitting. More children sit down. Now there are 5 children. How many more children sit down?" There is a note advising teachers to support English Language Learners by discussing and demonstrating the difference between "are sitting" and "sit down" to help students understand what is happening in the word problem. Lesson 18 includes an English Language Learners Tip: “To present visual language support for children who need help distinguishing between a row and a column, provide a 120 chart labeled with the words “column” and “row.” The labels should include an arrow pointing to a column and a row.” (1.OA.C.5) In addition to the ELL Support Tips, many lessons include a Differentiated Instruction page. For example, Lesson 11 includes a Quick Check and Remediation, which helps teachers to identify the errors students are making with addition and subtraction facts within 10 and target remediation to fix the misconceptions. It also |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | includes a Hands-On Activity where students play an addition and subtraction game using counters and a Challenge Activity where students write clues for number partners. |
| | **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. | **Yes** | The materials distinguish between problems and exercises. Each lesson follows the same instructional sequence: Introduction, Modeled and Guided Instruction, Guided Practice, and Independent Practice. During the Introduction and the Modeled and Guided Instruction sections, students are solving problems as they learn new concepts. In the Guided Practice and Independent Practice sections, students are completing exercises to practice the concepts learned. For example, in Lesson 14, students learn to make a ten to add (1.OA.C.6). In the Introduction, students act out a scenario in which they make a ten to add. They model the problem with counters and discuss, and then students solve a new problem. In the Modeled and Guided Instruction section, students solve and discuss more problems by making a ten using counters and ten frames and number paths. In the Guided Practice section, students solve and discuss more problems by making a ten and they explain how to use the strategy to add two numbers. In the Independent Practice section, students work independently to solve 3 addition problems by making a ten. In Lesson 15, students practice adding three digits (1.OA.A.2) using ten-frames, number paths, and by completing number sentences in the Practice and Problem Solving Book. During Guided Practice students are presented with the problem, "Jon has 7 apples. Tom has 3 apples. Bo has 5 apples. How many apples do they have?" Students are given a number path and complete three number sentences: 7 + ___ = 10, 10 + 5 = 15, and 7 + 3 + 5 = 15. The Mathematical Discourse states: "Are there other ways you could solve the word problem at the top of the page instead of using a number path to add numbers? Tell about the other ways." |
| | **7e)** Lessons are appropriately structured and scaffolded to support student mastery. | **Yes** | Lessons are appropriately structured and scaffolded using a gradual release model. Each lesson consists |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | of 4 components: Introduction, Modeled and Guided Instruction, Guided Practice, and Independent Practice. As students move through the lessons, they move from concrete and pictorial representations to more abstract representations. In addition, there are often notes in the margins advising teachers on how to support the class as a whole or specifically for students who are struggling to obtain mastery. For example, in Lesson 8, students are using properties of addition and subtraction to find partners of 8 and 9 (1.OA.B.3). The first note under Step By Step in Independent Practice states, "Before children work on this page, review the models used in the lesson. Emphasize that children are free to use whatever way helps them solve the problems." This support for the whole class of students will ensure more students are successful with the independent practice. In Lesson 12, students learn to understand teen numbers (1.NBT.B.2). In the Guided Instruction, there is a note to help teachers support struggling students, which states, "Ask Mathematical Discourse question 2 to reinforce the concept that 10 ones are equal to 1 ten. For children who struggle with this concept, refer to the 1 ten as '1 group of ten.'" |
| | **7f)** Materials support the uses of technology as called for in the Standards. | **N/A** | The LSSM for Grade 1 does not call for use of technology. |

**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.

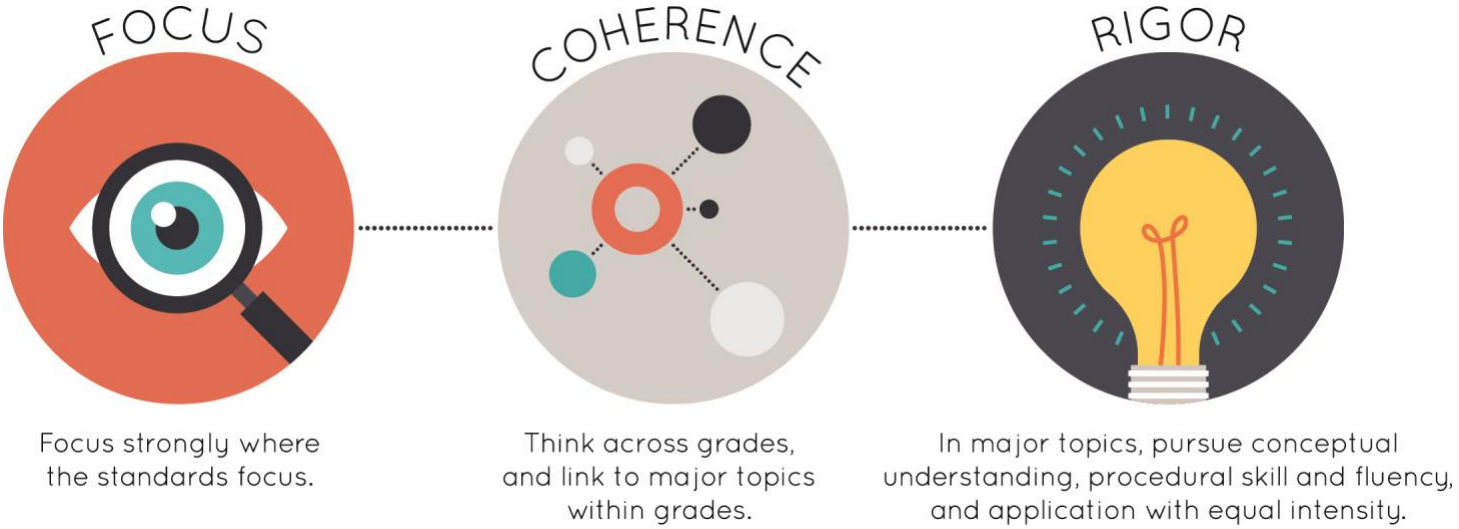
***Tier 3 ratings*** receive a "No" in Column 1 for at least one of the non-negotiable criteria.

**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 | **Yes** | 78% of the Lessons and 80% of the instructional days are devoted to the major work of the grade. |
| | 2. Consistent, Coherent Content | **Yes** | The materials connect supporting content to major content in meaningful ways and include problems and activities that connect two or more clusters in a domain and two or more domains. |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | 3. Rigor and Balance | **Yes** | The materials are designed so that students develop conceptual understanding, procedural skill and fluencies, and engage in applications. |
| | 4. Focus and Coherence via Practice Standards | **Yes** | The materials address the practice standards in a way that enriches the content standards of the grade. |
| **II: Additional Alignment Criteria and Indicators of Quality** | 5. Alignment Criteria for Standards for Mathematical Content | **Yes** | The materials are consistent with the progressions in the Standards. |
| | 6. Alignment Criteria for Standards for Mathematical Practice | **Yes** | The materials make purposeful connections between the practice standards and the content standards. |
| | 7. Indicators of Quality | **Yes** | The materials give teachers and students the tools they need to meet the expectations of the Standards. |
| FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality** | | | |

Strong mathematics instruction contains the following elements:




Title: **Ready Louisiana Mathematics Gr K-5** Grade/Course: **2**

Publisher: **Curriculum Associates, LLC** Copyright: **2017**

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 Coh. via Practice Std (Non-Negotiable) | |
| 5. Alignment Criteria for Stnds. for Math Content | |
| 6. Alignment Criteria for Stnds. for Math Practice | |
| 7. Indicators of Quality | |

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**<br>**1. FOCUS ON MAJOR WORK[5]:**<br>Students and teachers using the materials as designed devote the large majority[6] of time to the major work of the grade/course.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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** | A large majority of the class time is devoted to the major work of the grade. In this curriculum, there are 28 lessons and 4 Math In Action lessons where students apply skills from the unit to solve real-world problems. 26 of the 32 lessons, or 81%, focus on major content for Grade 2. The remaining 6 lessons focus on additional and supporting content. Furthermore, 83% of the instructional days are devoted to the major work of the grade. |
| | **REQUIRED**<br>**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 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. | **Yes** | There is minimal time spent on content outside of Grade 2. All lessons in the materials are aligned with requirements of the Grade 2 Standards. In addition, there are no assessment items that assess content beyond Grade 2 Standards. |
| **Non-Negotiable**<br>**2. CONSISTENT, COHERENT CONTENT**<br>Each course's instructional materials are coherent and consistent with the content in the Standards.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. | **Yes** | Materials connect supporting content to major content in meaningful ways. Lesson 4 connects supporting Standard 2.OA.C.3 to major Standard 2.OA.B.2. As students find even and odd numbers, they connect to doubles and doubles +1 facts. Students determine whether the sums of doubles and doubles +1 facts are even or odd and explain why. Lesson 5 connects supporting Standard 2.OA.C.4 to major Standard 2.NBT.A.2. In the lesson, students find the total number of objects in array formations and connect repeated addition to skip counting. Lesson 24 connects supporting Standard 2.MD.C.7 and major Standard 2.NBT.A.2 as students skip count by 5's in order to tell time. |

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

[6] 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 |
|---|---|---|---|
| | **REQUIRED**<br>**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. | **Yes** | The materials for Grade 2 include problems and activities that connect two or more clusters in a domain and two or more domains. For example, Lesson 14 connects clusters 2.NBT.A and 2.NBT.B. In the lesson, students use their understanding of place value (2.NBT.A.1) to subtract 3-digit numbers (2.NBT.B.7). Lessons 6 and 9 connect Standards 2.OA.A.1 and 2.NBT.B.5 as students use addition and subtraction within 100 to solve word problems. |
| **Non-Negotiable**<br>**3. RIGOR AND BALANCE:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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 develop conceptual understanding of key mathematical concepts. For example, in Lesson 10, students begin to develop conceptual understanding of 3-digit numbers by exploring what 100 means. Students use base ten blocks and pictures of base ten blocks to understand the meaning of hundreds, tens, and ones. Students are encouraged to explain their understanding of place value by answering questions such as, "Why is it important to add the zero on the end of 260? [It makes the 26 mean 26 tens, not 26 ones.]" and "How do the models help you think about the number 345?" In Lesson 14, students begin to develop conceptual understanding of subtraction within 1000 (2.NBT.B.7) by building on their understanding of place value. They use base ten blocks to model subtraction, subtract hundreds from hundreds, tens from tens, and ones from ones, and engage in mathematical discourse around high-quality questions, such as, "What would happen if you forgot to cross out the 6 and write 5 to show a ten was decomposed?" Students also compare various methods of subtracting 3-digit numbers. Cluster 2.MD.A focuses on measuring and estimating lengths in standard units. In Lesson 16, students consider the strengths and limitations of measuring with paperclips to develop an authentic need for a standard unit. Students are then given concrete manipulatives that are the same length as standard units and are asked to consider, through mathematical discourse, the reason that standard units are needed. Students also answer questions such as, "Why do we need standard units such as |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | inches and centimeters?" and "What if you use inches to measure your shoe, and your friend uses paper clips to measure her shoe? Can you compare the lengths of the two shoes?" |
| | **REQUIRED**<br>**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. Lesson 1 begins students' opportunity to build fluency with addition and subtraction within 20 using mental strategies (2.OA.B.2) as they explore fact families and mental math strategies. Lesson 3 gives students another opportunity to build fluency with addition and subtraction within 20 using mental strategies as they make a ten to add and subtract. While there are not many opportunities for students to explicitly practice, fluency built into the remainder of the lessons, at the beginning of each unit, teachers are reminded to assign students Fluency Skills Practice and Fluency Repeated Reasoning Practice worksheets throughout the unit. These worksheets are found at the end of the Student Practice and Problem Solving Book, from page 316, which focuses on addition facts within 10, to page 355, which focuses on using place value patterns to subtract within 1000. |
| | **REQUIRED**<br>**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 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 teachers and students spend sufficient time working with engaging applications. For example, Lesson 2 is focused on solving one-step addition and subtraction word problems (2.OA.A.1). Lesson 6 is focused on solving two-step addition and subtraction word problems (2.OA.A.1). Lesson 9 is focused on solving one-step addition and subtraction word problems with 2-digit numbers (2.OA.A.1). Lesson 21 focuses on addition and subtraction of length measures and includes word problems as required by Standard 2.MD.B.5. Lesson 25 provides students with the opportunity to solve word problems involving money amounts (2.MD.C.8). In addition to these lessons focused on applications, almost every lesson in the Student Practice and Problem Solving Book contains word problems. |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | **REQUIRED**<br>**3d)** ***Balance:*** The three aspects of rigor are not always treated together and are not always treated separately. | **Yes** | The three aspects of rigor are not always treated together and are not always treated separately. For example, Lesson 7 begins with having students show addition of 2-digit numbers within 100 (2.NBT.B.5) in a variety of ways that demonstrate understanding, such as using base ten blocks; decomposing addends into tens and ones, then adding tens with tens and ones with ones; adding to the next ten, then adding the rest; adding in unit form, and adding on open number lines. Later in the lesson, students engage in application as they solve addition and subtraction word problems within 100. Lesson 12 begins with developing conceptual understanding of comparing two 3-digit numbers based on place value (2.NBT.A.4) through the use of base ten blocks and high-level questions, such as, "Write a number sentence to compare 761 and 716. Explain why the number sentence is true." Later in the lesson, students build procedural skill with comparing as they compare six pairs of 3-digit numbers. In addition, Math in Action lessons occur at the end of each unit. These lessons focus on application problems where students apply procedural skill and conceptual understanding to solve problems in a non-routine, real-world context. |
| **Non-Negotiable**<br>**4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:**<br>Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | The materials address the practice standards in a way that enriches the content standards of Grade 2. For example, in Lesson 1, students engage in MP3, Construct viable arguments and critique the reasoning of others, as they develop their understanding of fact families, counting on, and counting back (2.OA.B.2). They are given the statement, "Katie says she would not count on 9 from 2 to find 2 + 9. Do you agree? Why or why not?" The teacher is prompted to encourage students to explain why their thinking makes sense. In Lesson 2, students engage in MP2, Reason abstractly and quantitatively, as they solve addition and subtraction word problems (2.OA.A.1). The teacher is prompted to have students identify what the numbers and unknowns in their equations represent in the word problems. In Lesson 6, |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | students engage in MP4, Model with mathematics, as they write equations to solve two-step addition and subtraction word problems (2.OA.A.1). In Lesson 14, students engage in MP6, Attend to precision, as they develop conceptual understanding of subtracting 3-digit numbers (2.NBT.B.7). The SMP TIP explains to the teacher, "As students explain their thinking, guide them to use accurate vocabulary and clear explanations. Help them evaluate their solutions to ensure they make sense in the context of the problem." In Lesson 17, students engage in MP5, Use appropriate tools strategically, and MP6, Attend to precision, as they learn how to measure length (2.MD.A.1). The SMP TIP for MP5 states, "Throughout this lesson, students use tiles, rulers, yardsticks, and meter sticks to measure. This gives them the opportunity to find out how the different tools look and feel and to practice using appropriate tools strategically." The SMP TIP for MP6 states, "Lining up the 0 mark of a measuring tool correctly is a good opportunity for students to attend to precision. You may want to have students move objects to the left and right of the 0 mark to see how this affects the measurement." |
| **SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY** | | | |
| **Additional Criterion**<br>**5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:**<br>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.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | Materials provide all students extensive work with grade-level problems. Students solve grade-level problems during all parts of the lessons in the Student Instruction Book. Teachers are also advised to assign pages from the Student Practice and Problem Solving Book to provide students with more practice solving grade-level problems. For example, in the Student Practice and Problem Solving Book Lesson 4: Understand Even and Odd Numbers (2.OA.C.3), students are given 12 problems to solve during the course of the lesson. In the Student Practice and Problem Solving Book, there are 18 problems for students to practice solving one- and two-step word problems (2.OA.A.1) over the course of Lesson 6. Another example, in the Student Practice and Problem Solving Book Lesson 14: |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | Subtract Three-Digit Numbers (2.NBT.B.7), students are given 24 problems to solve throughout the course of the lesson. In addition, review material is clearly labeled as such for teachers and students. For example, at the beginning of Lesson 5, in which students learn add using arrays (2.OA.C.4), they review adding 3 one-digit numbers (1.OA.A.2). In the Lesson Overview, adding 3 one-digit numbers is identified as a prerequisite skill, and it is also identified as such in the Student Practice and Problem Solving Book. |
| | **REQUIRED**<br>**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. | **Yes** | Materials relate grade-level concepts explicitly to prior knowledge from earlier grades. There are Learning Progressions in each Lesson Overview to help teachers understand how previous learning is connected to the grade-level concepts. For example, in Lesson 5, the Learning Progression states, “In Grade 1 students add up to 3 one-digit numbers. They use equations to express a variety of situations that involve addition. Students also apply counting skills to add, including skip counting. In Grade 2 students work toward fluency with sums to 20. They continue to use addition equations and skip counting to model addition. In this lesson students apply their knowledge of addition and skip counting to an array.” (2.OA.C.4) In Lesson 10, the Learning Progression states, “In Grade 1 students are introduced to the concept of place value as it applies to two-digit numbers. This concept is reinforced in Grade 2 as students add and subtract two-digit numbers. In this lesson students use base-ten blocks to understand that one hundred can be seen as 100 ones or 10 groups of ten.” (2.NBT.A.1) The materials also help students make connections to what they have previously learned. For example, in Lesson 4, the materials help students connect what they learned in Grade 1 about doubles and doubles +1 facts to even and odd numbers (2.OA.C.3). During Guided Instruction, students write some doubles and doubles +1 facts, and then they answer the questions, "Are sums of doubles odd or even numbers? Are sums of doubles +1 odd or even |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | numbers? Explain." In addition, the materials are designed so that students connect prior knowledge to new concepts. For each lesson, the Introduction presents a problem that helps students connect what they already know to what they will learn in the lesson. For example, in Lesson 6, students solve two-step word problems (2.OA.A.1). In the Introduction, it tells students explicitly, "Use What You Know: You know how to solve one-step word problems." Students review solving one-step word problems, and then connect that to two-step word problems. In Lesson 20, students learn to compare lengths (2.MD.A.4). In the Introduction, it tells students, "Use What You Know: You know how to measure length." Students review measuring the length of objects, and then connect that to finding the difference in lengths. In addition, there is a marginal note in this lesson advising teachers to ask Mathematical Discourse Question 2 to connect the process of comparing lengths to fact families, which students learned about in Lesson 1. The question states, "How is comparing lengths like working with fact families?" |
| | **5c)** Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. | **Yes** | The learning objectives in the materials are visibly shaped by the Standards. For example, the content objectives for Lesson 4 state, "Identify odd and even numbers, relate doubles and doubles +1 facts to odd and even numbers, and use skip counting by 2s to identify even numbers." These objectives are visibly shaped by Standard 2.OA.C.3 Determine whether a group of objects has an odd or even number of members, e.g. by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends. The content objectives for Lesson 5 state, “Describe an array of up to 5 rows and 5 columns, calculate the number of items in an array using repeated addition and skip counting and write an equation to express the sum of items in an array.” These objectives are clearly shaped by the Standard 2.OA.C.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | columns; write an equation to express an even number as a sum of equal addends. The content objectives for Lesson 10 state, “Identify ones, tens, and hundreds in a three-digit number; interpret models to determine the combination of hundreds, tens and ones in a number; and write a three-digit number in terms of varied combinations of hundreds, tens, and ones.” These objectives are clearly shaped by the Standard 2.NBT.A.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens and ones. The content objectives for Lesson 28 state, "Identify and name halves, thirds, and fourths as parts into which a shape is divided, recognize that fractional parts are equal in size, and understand that the more parts a whole is divided into, the smaller the size of each part." These objectives are visibly shaped by Standard 2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe the share using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. |
| | **5d)** Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. | **Yes** | Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. Rigor is evident in that the materials engage students in the components of rigor as required by the Standards. For example, in Lesson 10, students use base-ten blocks to understand that one hundred can be seen as 100 ones or 10 groups of ten (2.NBT.A.1). This standard calls for conceptual understanding. In the lesson, students count groups of blocks, they record the number in a chart to aid in connecting the concept that a digit is used to indicate the number of groups of objects within a number. This leads to the realization that a digit’s value is dependent upon its placement in a number, which enhances conceptual understanding. In Lesson 25, students learn to solve word problems involving money. Standard 2.MD.C.8 calls for application. The lesson begins with students |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | practicing procedural skill of counting coins before moving into solving word problems involving money amounts. Coherence is evident throughout the materials, as connections are consistently made to what students have previously learned. Learning Progressions in each Lesson Overview allow teachers to see how the new learning in the lesson is connected to what students have previously learned, as well as how it will connect to future learning. |
| **Additional Criterion**<br>**6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | Mathematical practice standards are accurately identified in the lessons and are present throughout the materials. For example, in Lesson 3, students add and subtract within 20 (2.OA.B.2). MPs 1, 3, 4, 5, 7, and 8 are identified in the Lesson Overview. The SMP TIP in the lesson for MP7 states, "Formal exploration of the associative property validates the structure informally used by students and provides a foundation for future applications of the property." The SMP TIP in the lesson for MP8 states, "Encourage students to look for consistencies in patterns by following the structure of the Concept Extension, but beginning with a different set of numbers like 8 + 8 = 10 + ___." In the Unit 3 Math in Action lesson, students engage in MP5 Use appropriate tools strategically. In the lesson, students measure scraps of wood and answer various questions about the measurements they obtain. Students are given the opportunity to choose what tool they will use to measure the scraps of wood, what units they will measure the scraps in, and whether exact measurement is needed or if estimation is sufficient (2.MD.A.1). In Lesson 7, students engage in MP7 Look for and make use of structure. In the lesson, students look for and use place value structure to add numbers within 100. Students examine pictures of objects and place them into groups of ten in order to help with addition. Students also use place value structure as they work with base ten blocks and open number lines to add within 100 (2.NBT.B.7). In Lesson 15, students engage in MP8 Look for and |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | express regularity in repeated reasoning as they use different number facts when adding up to four two-digit numbers (2.NBT.B.6). |
| | **REQUIRED**<br>**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. | **Yes** | Students are given opportunities throughout the materials to construct viable arguments and critique the reasoning of others around major grade-level concepts. For example, in Lesson 3, students use mental math strategies to add within 20 (2.OA.B.2). During Guided Practice, students write answers to questions such as, "Show how to make a 10 to find 6 + 9. Explain your thinking," and "Ming added 9 + 8." See her work at the right. What did she do wrong? What is the correct answer?" In Lesson 7, students add and subtract within 100 (2.NBT.B.5). In the Practice and Problem Solving Book, students read word problems and choose the correct answer out of four. They are then asked, “Tim chose A. This is wrong. How did Tim get his answer?” In Lesson 12, students compare three-digit numbers (2.NBT.A.4). During the lesson, they have several opportunities to construct viable arguments and critique the reasoning of others. In the Introduction, students discuss the question, "Why is a three-digit number always greater than a two-digit number?" Teachers are prompted to encourage students to use reasoning and to allow the use of base-ten blocks to support their thinking. During the Modeled and Guided Instruction, students answer questions such as, "Look at the models on the previous page. Can you use the numbers in the hundreds place to decide which number is greater? Why or why not?" and "Bart says 2 < 8, so 352 < 358. Is this correct? Explain." |
| | **6c)** There are teacher-directed materials that explain the role of the practice standards in the classroom and in students’ mathematical development. | **Yes** | There are multiple SMP TIPs (Standards for Mathematical Practice TIPs) written in the margins throughout the materials, with each lesson including 2-3 SMP TIPs. For example, in Lesson 10 there are 2 SMP TIPs, and in Lesson 16 there are 2 SMP TIPs. These notes explain to teachers what practice standard is being highlighted and how students engage in that practice during the activity. For |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | example, in Lesson 6, students solve two-step word problems (2.OA.A.1). During Modeled and Guided Instruction, students model a two-step problem using pictures and number lines. Then they model the problem using equations. There is a SMP TIP that states, "Ask students to look at the drawing in Step 2 of Picture It. Have students circle the quarters they think Dad put in the jar and then explain their thinking to a partner. Analyzing a model to find a solution and then justifying it builds perseverance in making sense of a mathematical situation. (SMP 1)" In Lesson 25, students solve word problems involving money. In the Introduction, students review counting coins. The SMP TIP explains to teachers how to engage students in looking for and using structure. It states, "Show students a ones block, a tens block, and a hundreds block. Place a penny below the ones block, a dime below the tens block, and a dollar below the hundreds block. Discuss the similarities in the structure of money and our base-ten system of numeration. (SMP 7)" |
| | **6d)** Materials explicitly attend to the specialized language of mathematics. | **Yes** | The materials do attend to the specialized language of mathematics. In each lesson overview, there is a section highlighting lesson vocabulary. Throughout the lessons, the vocabulary is used, and teachers are reminded in the marginal notes to use specific vocabulary. Teachers are prompted in the notes to explicitly teach the meaning of the words to students using examples and models. Students are encouraged to use the words as well as they learn to use precise language to explain their thinking, and the Student Practice and Problem Solving Book has notes at the bottom of the pages where mathematical vocabulary is defined. For example, the lesson vocabulary for Lesson 5 includes array, row, and column (2.OA.C.4). The terms are explicitly taught to students. The students engage in a hands-on activity where they use classroom objects to make arrays. Teachers are prompted to encourage students to share their solutions using the vocabulary words they learned. |
| **Additional Criterion** | **REQUIRED** | **Yes** | The materials provide students opportunities to |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| **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.<br><br>☒ 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. | | produce a variety of responses. Students are asked not only to produce answers but to provide evidence through drawings, representations, and written explanations. Students are often asked to analyze and defend the work of others. They must justify their conclusions with verbal statements and mathematical reasoning. For example, in Lesson 7, students model an addition problem with base-ten blocks and compare this method to solving on an open number line. Then they solve two-digit addition word problems using a variety of strategies and explain their thinking. Students analyze some incorrect work and explain how the student got the incorrect answer. Students also analyze a strategy to add two-digit numbers (2.NBT.B.5), explain the strategy, and then solve the same problem in a different way. In Lesson 12, students compare three-digit numbers (2.NBT.A.4) through picture models, charts, and number sentences. Numbers are applied to a variety of settings, extending the concept of number beyond physical quantity. Students model situations involving inequalities using the appropriate symbol. In Lesson 21, students add and subtract lengths (2.MD.B.5). In the lesson, students model subtraction on a number line, write equations that can be used to solve problems, and explain their thinking to questions such as, "Explain how the jumps on the number line show that Michaela cuts off 8 centimeters," and "Ethan has two pieces of border. One is 24 inches long, and the other is 5 feet long. He says that the total length is 29 inches. What did he do wrong?" When students solve word problems in this lesson, they can choose to use pictures, diagrams, or other models to help them make sense of the problems. In Lesson 24 students are engaged in learning how to tell time to the nearest five minutes (2.MD.C.7). In the lesson, students are asked to read an analog and digital clock to the nearest five minute. Students are also engaged in thinking about the structure of analog clocks that enables them to use skip counting to read or place the minute hand. Students differentiate between and draw clock hands to |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | indicate what the time is between two hours and to show the number of minutes that have passed. Students explore the concept of am and pm and determine whether an event occurs in an am or pm time. |
| | **REQUIRED**<br>**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. | **Yes** | 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. The instructional materials provide resources to support teacher planning. The Teacher Resource Book provides a separate pacing guide for the year, month, week, and day. For example, the Unit Overview page includes lesson titles, page numbers, the primary and supporting standards, prerequisite skills, content objectives, learning progressions, lesson vocabulary, and a detailed pacing guide for whole and small group instruction for each lesson; Two Common Core correlation charts, Ready Instruction Correlation and Interim Assessment Correlation, are included and the Cognitive Rigor and Ready Chart lists specific questions identified as DOK level 3. The Teacher Resource Book also contains components to assist with lesson delivery. For example, At a Glance explains what students will be doing during each component of the lesson; Step by Step organizes the lesson into chunks and provides guiding questions; SMP Tips highlight specific Standards for Mathematical Practice; Mathematical Discourse includes questions to engage students and advance their learning; Possible answers and key ideas to listen for in student responses are included. For example, in Lesson 1, students are learning about fact families (2.NBT.B.5). There is a marginal note that states, "Students may mistakenly think that the numbers in |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | a fact family can be put in any place in an addition or subtraction problem. For example, they may think 12 + 3 = ? and 12 - 3 = ? are in the same fact family. Using number bonds helps students identify the greatest number in the fact family and avoid this type of misconception." In Lesson 8, students learn to subtract 2-digit numbers (2.NBT.B.5). Mathematical Discourse question 1 in the Introduction states, "We know that there is a group of 9 in 34, so why are there not enough ones to subtract 9? Students should respond that since the blocks are grouped in tens and ones, there are not enough ones blocks to subtract 9." |
| | **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. | **Yes** | Support for English Language Learners and other special populations is evident throughout the materials. For example, in Lesson 3, there is a teacher note advising teachers on how to help students who are struggling with the mental math addition strategy of make-a-ten. The note states, "If students are unable to identify the error, model the situation with ten frames." In Lesson 9, there is a tip for teachers to help students, specifically English Language Learners, understand word problems (2.OA.A.1). The tip states, "Some students may struggle to comprehend the language used in word problems. You may want to pair an English Language Learner with a proficient reader…You may want to write the information given in the problem on the board: 24 books taken away, 38 books left, how many books to start with?" In Lesson 11, students read and write numbers within 1000 (2.NBT.A.3). The Modeled and Guided Instruction includes the following English Language Learners Tip: “For students who are not familiar with American dollars, use money from their native country whose denominations are in powers of ten, such as the Mexican 1 peso coin, 10 peso coin, and 100 peso bill.” In addition to the tips written within the lesson, many lessons include a Differentiated Instruction page. For example, in Lesson 7, there is a Quick Check and Remediation, which helps teachers identify where students are struggling with adding |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | two-digit numbers and provides ways to remediate the specific misconceptions. There is also a hands-on activity where students use a hundreds chart to add two-digit numbers and a challenge activity in which students devise a new addition strategy. |
| | **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. | **Yes** | The materials distinguish between problems and exercises. Each lesson follows the same instructional sequence: Introduction, Modeled and Guided Instruction, Guided Practice, and Independent Practice. During the Introduction and the Modeled and Guided Instruction sections, students are solving problems as they learn new concepts. In the Guided Practice and Independent Practice sections, students are completing exercises to practice the concepts learned. For example, in the Modeled and Guided Instruction in Lesson 8, students analyze strategies for solving subtraction problems such as counting up on a number line and regrouping using base ten blocks. They answer questions such as, "Why do you add 3 first?", "Why do you make 10 ones with 1 ten in 42?", and "How many tens and ones are left after you subtract in Step 2?" In the Guided Practice and Independent Practice, students solve subtraction problems (2.NBT.B.5) using chosen strategies and analyze strategies given. They answer questions such as, "Greg subtracted 73-44. He forgot the last step. Write the last step and the answer in the boxes. Explain how Greg subtracted," and "Show another way to subtract 73-44. Make sure it is different from what you did in Problem 5." |
| | **7e)** Lessons are appropriately structured and scaffolded to support student mastery. | **Yes** | Lessons are appropriately structured and scaffolded using a gradual release model. Each lesson consists of 4 components: Introduction, Modeled and Guided Instruction, Guided Practice, and Independent Practice. As students move through the lessons, they move from concrete and pictorial representations to more abstract representations. In addition, there are often notes in the margins advising teachers on how to support the class as a whole or specifically for students who are struggling to obtain mastery. For example, in Lesson 10, students understand three-digit numbers |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | (2.NBT.A.1). They begin by exploring what 100 is and representing 100 as hundreds, tens, and ones. During Guided Instruction, students use counting strategies to understand three-digit numbers. Then students interpret models and organize three-digit numbers in varied ways. During Guided Practice and Independent Practice, students demonstrate understanding of three-digit numbers by analyzing different ways to represent them. Then students represent quantities in different ways. |
| | **7f)** Materials support the uses of technology as called for in the Standards. | **N/A** | The LSSM for Grade 2 does not call for use of technology. |

**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.

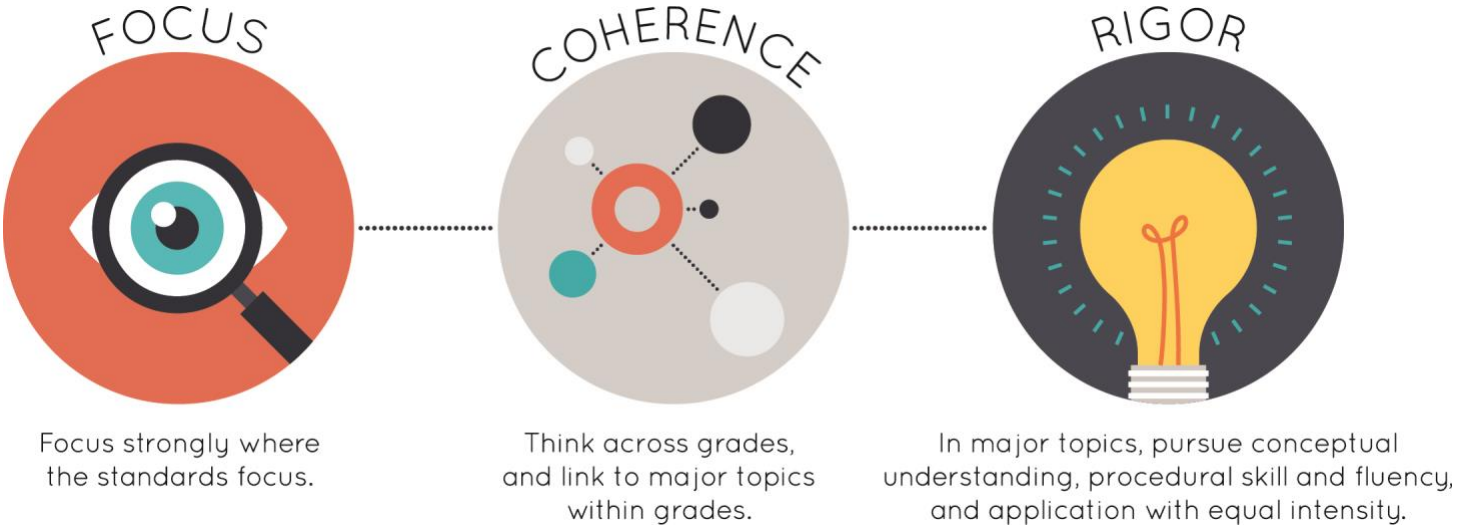
***Tier 3 ratings*** receive a "No" in Column 1 for at least one of the non-negotiable criteria.

**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 | **Yes** | 81% of the lessons and 83% of the instructional days are devoted to the major work of the grade. |
| | 2. Consistent, Coherent Content | **Yes** | The materials connect supporting content to major content in meaningful ways and include problems and activities that connect two or more clusters in a domain and two or more domains. |
| | 3. Rigor and Balance | **Yes** | The materials are designed so that students develop conceptual understanding, procedural skill and fluencies, and engage in applications. |
| | 4. Focus and Coherence via Practice Standards | **Yes** | The materials address the practice standards in a way that enriches the content standards of the grade. |
| **II: Additional Alignment Criteria and Indicators of Quality** | 5. Alignment Criteria for Standards for Mathematical Content | **Yes** | The materials are consistent with the progressions in the Standards. |
| | 6. Alignment Criteria for Standards for Mathematical Practice | **Yes** | The materials make purposeful connections between the practice standards and the content standards. |
| | 7. Indicators of Quality | **Yes** | The materials give teachers and students the tools they need to meet the expectations of the Standards. |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality** | | | |

Strong mathematics instruction contains the following elements:




Title: **Ready Louisiana Mathematics Gr K-5** Grade/Course: **3**

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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 Coh. via Practice Std (Non-Negotiable) | |
| 5. Alignment Criteria for Stnds. for Math Content | |
| 6. Alignment Criteria for Stnds. for Math Practice | |
| 7. Indicators of Quality | |

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 |
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| **SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.** | | | |
| **Non-Negotiable**<br>**1. FOCUS ON MAJOR WORK[7]:**<br>Students and teachers using the materials as designed devote the large majority[8] of time to the major work of the grade/course.<br>☒ Yes ☐ No | **REQUIRED**<br>**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** | A large majority of class time is devoted to the major work of the grade. Including the Math In Action lessons, there are 40 lessons in Grade 3. Of these lessons, 32 of them, or 80% focus on major content with the remaining lessons focused on supporting and additional content. |
| | **REQUIRED**<br>**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 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. | **Yes** | There is minimal time spent on content outside of Grade 3. All lessons in the materials are aligned with requirements of the Grade 3 Standards. It should be noted that during our initial review there were found some items that extend beyond the content limitations of Grade 3, due to the uniqueness of the LSSM; however, the publisher was made aware of the concerns and has plans to address them. As such, this should not be concerning to potential users. |
| **Non-Negotiable**<br>**2. CONSISTENT, COHERENT CONTENT**<br>Each course's instructional materials are coherent and consistent with the content in the Standards.<br>☒ Yes ☐ No | **REQUIRED**<br>**2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. | **Yes** | Materials connect supporting content to major content in meaningful ways. For example, Lessons 24 and 25 meaningfully connect supporting Standard 3.MD.B.3 to major Standard 3.OA.A.1. In the lessons, students use multiplication to help them interpret scaled picture graphs and to help them determine the scale as they draw scaled bar and picture graphs. Lesson 33 connects supporting Standard 3.G.A.2 to major Standard 3.MD.C.7 as students partition rectangles into parts with equal areas, use multiplication to find the total number of equal parts, and then express area as fractions. |
| | **REQUIRED**<br>**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 | **Yes** | Materials include problems and activities that serve to connect two or more clusters in a domain or two or more domains in a grade. For example, Lesson 2 connects Clusters 3.OA.A and 3.OA.B. In the lesson, students use properties of operations (3.OA.B.5) to |

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

[8] 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 |
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| | connections are natural and important. | | solve multiplication word problems (3.OA.A.3). Lesson 5 also connects Clusters 3.OA.A and 3.OA.B. In the lesson, students demonstrate understanding of related facts (3.OA.B.5), and they determine the unknown whole number in multiplication and division equations relating three whole numbers (3.OA.A.4). Lesson 10 connects Domains 3.NBT and 3.OA. In the lesson, students use the associative and distributive properties (3.OA.B.5) to help them multiply single-digit numbers by multiples of 10 (3.NBT.A.3). |
| **Non-Negotiable**<br>**3. RIGOR AND BALANCE:**<br>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.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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 develop conceptual understanding of key mathematical concepts. For example, in Lesson 1, students begin to develop conceptual understanding of multiplication as equal groups (3.OA.A.1). In the lesson, students interpret and draw models to help them think about multiplication situations. Students are also expected to explain their thinking to questions such as, "How is multiplication like adding? How is it different?" and "Explain what each number in your equation means." In Lesson 4, students interpret and draw models to help them think about division situations. Students engage in mathematical discourse around questions that encourage conceptual understanding, such as, "How did you use the array to help you think about 42 ÷ 7?" Lesson 9 helps students build conceptual understanding of adding and subtracting within 1000 (3.NBT.A.2). In the lesson, students break apart numbers using place value before adding or subtracting. Students also use an open number line to show how to subtract by adding on and explain their thinking by answering questions, such as, "Explain how you can start with 96 and add on to solve." Lesson 15 helps students develop conceptual understanding of fractions on a number line (3.NF.A.2) by connecting the concept to whole numbers on a number line. In the lesson, students engage in mathematical discourse around questions that build conceptual understanding, such as, "How is counting by 1/4s on the number line different from counting whole numbers on the number line?" |

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| | | | Students also have opportunities to critique other students' responses, explain why they are correct or incorrect, and justify their own conclusions by explaining how they got their answers. In Lesson 16, students engage in a hands-on activity where they use paper strips to build models of fractions that are equivalent to ½ (3.NF.A.3). Students explain their thinking to questions such as, "Explain why it takes more 1/8s than 1/4s to make a fraction equivalent to ½." |
| | **REQUIRED**<br>**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. For example, Standard 3.OA.C.7 requires students to fluently multiply and divide within 100. Lesson 6 focuses on this standard and includes opportunities for students to practice procedural skill with multiplication and division facts within 100. Standard 3.NBT.A.2 requires students to fluently add and subtract within 1000. While there are not many opportunities for students to practice fluency built into the lessons, at the beginning of each unit, teachers are reminded to assign Fluency Skills Practice and Fluency Repeated Reasoning Practice worksheets throughout the unit. These worksheets are found at the end of the Student Practice and Problem Solving Book, from page 386, which focuses on adding within 1000 (3.NBT.A.2), to page 433, which focuses on multiplying by tens (3.NBT.A.3). Pages 386-399 focus on addition and subtraction within 1000 (3.NBT.A.2), and pages 400-423 focus on multiplication and division facts (3.OA.C.7). |
| | **REQUIRED**<br>**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 problem solving. The problems attend thoroughly to | **Yes** | The materials are designed so that teachers and students spend sufficient time working with engaging applications. For example, in Lesson 1, students solve multiplication word problems as they begin to understand multiplication as equal groups (3.OA.A.3). In the Unit 1 Math in Action Lesson, students, working within given constraints, decide how to use pie plates to build robot props using multiplication and division. Lessons 11, 12, 13, and the Unit 3 Math in Action Lesson focus on solving one- and two-step word problems involving the four |

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| | those places in the content Standards where expectations for multi-step and real-world problems are explicit. | | operations (3.OA.D.8). In addition to these lessons focused on applications, almost every lesson in the Student Practice and Problem Solving Book contains word problems. |
| | **REQUIRED**<br>**3d)** ***Balance:*** The three aspects of rigor are not always treated together and are not always treated separately. | **Yes** | The three aspects of rigor are not always treated together and are not always treated separately. For example, Lesson 4 begins with developing conceptual understanding of division using real-world situations as an anchor and pictures, whether given or drawn by the student (3.OA.A.2). Later in the lesson, students engage in application as they solve division word problems (3.OA.A.3). Pages 414-423 in the Student Practice and Problem Solving Book provide opportunities for students to practice building fluency with division facts (3.OA.C.7). In addition, Math in Action lessons occur at the end of each unit. These lessons focus on application problems where students apply procedural skill and conceptual understanding to solve problems in a non-routine, real-world context. |
| **Non-Negotiable**<br>**4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:**<br>Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | The materials address the practice standards in a way that enriches the content standards of Grade 3. For example, in Lesson 1 in the Student Practice and Problem Solving Book, on page 8, students are asked to analyze a student's thinking about multiplication, and use pictures, numbers, or words to explain what the student did right and what she did wrong, effectively engaging students in MP3, Construct viable arguments and critique the reasoning of others. Students are given multiple opportunities to practice critiquing the reasoning of others, such as this one, throughout the materials. In Lesson 2, students engage in MP4, Model with mathematics, as they write equations and draw arrays to model real-world multiplication situations. In Lesson 12, students engage in MP4, Model with mathematics, and MP5, Use appropriate tools strategically, as they solve real-world problems using drawings and equations. The SMP TIP explains, "As students learn to use appropriate tools, it is helpful for them to evaluate tools for their usefulness in a given situation. Help them do this for this two-step |

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| | | | problem by asking questions such as: Why is it helpful to use words and numbers to model the problem? What can using a drawing show us that words and numbers may not?" In Lesson 17, students engage in MP6, Attend to precision, as they explain how they find equivalent fractions. The SMP TIP states, "Discuss with students how important it is to communicate clearly when explaining how to find a fraction equivalent to a whole. Encourage them to use precise math terms, such as numerator, denominator, and equivalent when sharing their thinking." |
| **SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY** | | | |
| **Additional Criterion**<br>**5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | Materials provide all students extensive work with grade-level problems. Students solve grade-level problems during all parts of the lessons in the Student Instruction Book. Teachers are also advised to assign pages from the Student Practice and Problem Solving Book to provide students with more practice solving grade-level problems. For example, in the Student Practice and Problem-Solving Book Lesson 3: Split Numbers to Multiply (3.OA.B.5), students are given 30 problems to solve during the course of the lesson. In the Student Practice and Problem Solving Book, there are 22 problems for students to practice making connections between multiplication and division (3.OA.B.6) over the course of Lesson 5. In the Student Practice and Problem-Solving Book Lesson 9: Use Place Value to Add and Subtract (3.NBT.A.2), students are given 36 problems to solve throughout the course of the lesson. There are 20 problems for students to practice solving two-step word problems involving the four operations (3.OA.D.8) over the course of Lesson 13. |
| | **REQUIRED**<br>**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 | **Yes** | Materials relate grade-level concepts explicitly to prior knowledge from earlier grades. Each Lesson Overview provides a Learning Progression, which sets a context for the standards of the lessons based on how the standard builds on prior knowledge particularly from the previous grades and how it leads to expectations for the next year. For example, |

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| | knowledge. | | in Lesson 7, the Learning Progression states, “In Grade 2 students explored patterns of odd and even numbers in a number chart. In Grade 3 students develop an understanding of a pattern as something that repeats, and students identify basic arithmetic patterns.” (3.OA.D.9) In Lesson 8, the Learning Progression states, “In Grade 2 students relied on place-value understanding to compare three-digit numbers using concrete models such as base-ten blocks, place-value charts, and pictures. Students then compared numbers by writing number sentences using >, <, and =. In Grade 3, students apply their place-value knowledge to round numbers to the nearest ten or hundred.” (3.NBT.A.1) In addition, the materials are designed so that students connect prior knowledge to new concepts. For each lesson, the Introduction presents a problem that helps students connect what they already know to what they will learn in the lesson. For example, during the Introduction of Lesson 9, students use what they know about place value to break apart three-digit numbers in order to add them (3.NBT.A.2). In Lesson 15, students learn to understand fractions as numbers on a number line (3.NF.A.2). In the lesson, students represent fractions greater than 1 on number lines. In the Introduction, Mathematical Discourse question 5 helps students relate what they know about counting by whole numbers on a number line to counting by fractions on a number line. The question states, "How is counting by 1/4s on the number line different from counting whole numbers on the number line?" In addition, there is a marginal note that states, "Remind students that previously they've built other fractions from unit fractions. Point out that the number lines show this also. Give the example that 5/4 is built from 5 one-fourth sections." During the Introduction of Lesson 20, students connect what they know about telling time to the nearest half hour and nearest 5 minutes to help the figure out how to tell time to the nearest minute (3.MD.A.1). |

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| | **5c)** Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. | **Yes** | The learning objectives in the materials are visibly shaped by the Standards. For example, the content objectives for Lesson 3 state, "Break apart a factor as a strategy for multiplying (distributive property of multiplication), apply the distributive property of multiplication as a strategy to learn multiplication facts and to solve multiplication problems." These objective are visibly shaped by Standard 3.OA.B.5. The content objectives for Lesson 5 state, "Understand the relationship between multiplication and division, demonstrate that fact families are related multiplication and division equations, and find the unknown number in a whole number multiplication or division equation." These objectives are clearly shaped by the Standard 3.OA.B.6 Understand division as an unknown-factor problem. The content objectives for Lesson 11 state, "Solve multiplication and division word problems involving equal groups, solve multiplication and division word problems involving arrays, and solve multiplication and division word problems involving area models." These objectives are clearly shaped by the Standard 3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays and measurement quantities. The content objectives for Lesson 16 state, "Understand that two fractions are equivalent if they are the same size, cover the same area, or are on the same point on a number line; recognize and generate equivalent fractions using fraction models and number lines; explain why two fractions are equivalent by using a fraction model or number line." These objectives are visibly shaped by Standard 3.NF.A.3. |
| | **5d)** Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. | **Yes** | Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. Rigor is evident in that the materials engage students in the components of rigor as required by the Standards. For example, in Lesson 13, students solve two-step word problems using the four operations. Standard 3.OA.D.8 calls for conceptual understanding and application. Students |

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| | | | engage in application as they solve word problems, and they engage in conceptual understanding as they assess the reasonableness of their answers. In the Modeled and Guided Instruction, students solve the following problem: "A zoo names an elephant Tiny. On Saturday, Tiny ate 152 pounds of food. On Sunday he ate 12 more pounds of food than he did on Saturday. How many pounds of food did Tiny eat that weekend?" Problem 12 asks students, "Do you think your answer is reasonable? Explain why." In Lesson 15, students understand fractions as numbers on a number line (3.NF.A.2). This standard calls for conceptual understanding. In the lesson, students extend their understanding of fractions as equal parts of a whole to include the concept of fractions as numbers on a number line. Students recognize that marking equal intervals on a number line can show whole numbers and that, similarly, marking equal intervals between whole numbers can represent fractions. Students come to recognize that a location on a number line can have more than one name. For example, the same location can be named as 1 whole or 4/4 (four fourths). This understanding paves the way for students to understand and generate simple equivalent fractions in their work in the next two Grade 3 lessons, which enhances conceptual understanding. Coherence is evident throughout the materials, as connections are consistently made to what students have previously learned. Learning Progressions in each Lesson Overview allow teachers to see how the new learning in the lesson is connected to what students have previously learned, as well as how it will connect to future learning. |
| **Additional Criterion**<br>**6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:**<br>Aligned materials make meaningful and purposeful connections that | **REQUIRED**<br>**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 | **Yes** | Mathematical practice standards are accurately identified in the lessons and are present throughout the materials. For example, in Lesson 6, MPs 1, 2, 6, 7, and 8 are identified in the Lesson Overview. The first SMP TIP in the lesson for MP7 states, “Students are asked to look at the structure of multiplication and division equations to make sense of the |

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| 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.<br><br>☒ Yes ☐ No | develop the habits of mind described in the practice standard. Alignments to practice standards are accurate. | | relationship between the two operations." The SMP TIP in the lesson for MP6 states, "Discussing strategies and patterns gives students the opportunity to practice using precise mathematical terms to communicate their ideas to others." In Lesson 12, MPs 1, 2, 4, and 5 are identified in the Lesson Overview. The SMP TIP for MP1 states, "You may wish to have students present their interpretations of the models and describe the relationships between them. Students make sense of problems in different ways and benefit from hearing how others think." The SMP TIP for MP5 states, "As students learn to use appropriate tools, it is helpful for them to evaluate tools for their usefulness in a given situation. Help them do this for this two-step problem by asking questions such as: Why is it helpful to use words and numbers to model the problem? What can using a drawing show us that words and numbers may not?" In Lesson 26, students engage in MP5, Use appropriate tools strategically, as they generate measurement data by measuring lengths (3.MD.B.4). In the lesson, students choose from rulers or yardsticks as they measure earthworms in some problems and the length of their stride in other problems. In Lesson 10, students engage in MP8, Look for and express regularity in repeated reasoning, as they learn to multiply one-digit whole numbers by multiples of 10 (3.NBT.A.3). The SMP TIP states, "Multiplying by multiples of 10 is an example of a repeated calculation. Encourage students to look for shortcuts for finding the products. Provide several multiplication equations, for example 4x40=160, 3x60=180, 7x30=210, and 8x30=240. Have students work with a partner to discuss the patterns they find." |
| | **REQUIRED**<br>**6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level | **Yes** | Students are given opportunities throughout the materials to construct viable arguments and critique the reasoning of others around major grade-level concepts. For example, in the Practice and Problem Solving Book Lesson 3 (3.OA.B.5), students read a |

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| | 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. | | word problem and choose the correct answer out of four. They are then asked, “Mitch chose A as the correct answer. How did he get that answer?” In Lesson 14, students are learning to understand what a fraction is (3.NF.A.1). Mathematical Discourse question 3 in the Guided Instruction reads, "When you want to identify a fraction shown by a model or in real life, what do you look at first? Why? Next? Why?" The marginal note guides teachers in how to facilitate students constructing arguments and using examples to support their thinking. It states, "…If some students think it matters which parts out of the whole you shade, ask for volunteers on each side of the question to defend their thinking and give examples." In Lesson 23, students learn to measure and estimate masses of objects (3.MD.A.2). Problem 7 on page 256 of the Student Practice and Problem Solving book requires students to construct an argument in writing. The problem states, "George says that his bicycle has a mass of 15 grams. Janet says the bicycle has a mass of 15 kilograms. Who do you think is correct? Why do you think so?" |
| | **6c)** There are teacher-directed materials that explain the role of the practice standards in the classroom and in students’ mathematical development. | **Yes** | There are multiple SMP TIPs (Standards for Mathematical Practice TIPs) written in the margins throughout the materials, with each lesson including 2-3 SMP TIPs. For example, in Lesson 8 there are 3 SMP TIPs, and in Lesson 15 there are 2 SMP TIPs. These notes explain to teachers what practice standard is being highlighted and how students engage in that practice during the activity. For example, in Lesson 6, students relate multiplication and division (3.OA.B.6). The SMP TIPs in the margin of the Introduction state, "Students are asked to look at the structure of multiplication and division equations to make sense of the relationship between the two operations (SMP 7)," and "Students make sense of the relationship between the numbers in a division equation (SMP 2)." In Lesson 15, students learn to understand fractions on a number line (3.NF.A.2). Problem 10 in the Guided Practice shows a point on a number line, and states, "Amira says that A is at 7/8. Is she right? Explain why |

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| | | | or why not." The SMP TIP for critiquing reasoning states, "Students critique a response and explain why it is not correct. They justify their own conclusions by explaining how they got their answers (SMP 3)." |
| | **6d)** Materials explicitly attend to the specialized language of mathematics. | **Yes** | The materials do attend to the specialized language of mathematics. In each lesson overview, there is a section highlighting lesson vocabulary. Throughout the lessons, the vocabulary is used, and teachers are reminded in the marginal notes to use specific vocabulary. Teachers are prompted in the notes to explicitly teach the meaning of the words to students using examples and models. Students are encouraged to use the words as well as they learn to use precise language to explain their thinking. For example, when learning about multiplication and division, teachers and students are consistently encouraged to use precise terminology of factors, products, divisors, and dividends. In Lesson 6, students explore multiplication and division fact families. During the Modeled and Guided Instruction, students identify the part of the equation missing in each fact in given equations (factor, quotient, or dividend) (3.OA.A.4). In Lesson 14, students learn to understand what a fraction is (3.NF.A.1). The Lesson Vocabulary includes definitions of fraction, numerator, denominator, and unit fraction. Each of these terms is clearly defined with examples given in the Student Instruction book, and teachers and students are encouraged to use the correct terms throughout the lesson. |
| **Additional Criterion**<br>**7. INDICATORS OF QUALITY:**<br>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. | **REQUIRED**<br>**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. | **Yes** | The materials provide students opportunities to produce a variety of responses. Students are asked not only to produce answers but to provide evidence through drawings, representations, and written explanations. Students are often asked to analyze and defend the work of others. They must justify their conclusions with verbal statements and mathematical reasoning. For example, in Lesson 13, students model and solve two-step word problems involving all four operations, but students calculate with up to three-digit numbers (3.OA.D.8). Students |

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| ☒ Yes ☐ No | | | model problem situations with diagrams and tables and write and solve equations using letters for unknowns. Students use estimation and mental math strategies to check the reasonableness of their answers. In Lesson 21, students solve problems involving time (3.MD.A.1). Throughout the lesson, students produce a variety of responses. Students use a model of a clock to count elapsed time, and they make jumps on a number line diagram to find elapsed time. Students also write explanations, such as to Problem 5 in the Modeled and Guided Instruction, which states, "Explain how to find the end time when you know the start time and the total elapsed time." In addition, students construct arguments orally and in writing. Problem 6 on page 236 of the Student Practice and Problem Solving Book reads, "Sharna leaves school at 3:10. It takes 12 minutes for her to walk home from school. It takes 7 minutes for her to gather her soccer equipment and 10 more minutes to get to the soccer field. Soccer practice starts at 3:45. Sharna thinks she will be late. Do you agree? Explain." In Lesson 25, students build on their understanding of scaled graphs to draw picture graphs and bar graphs to represent given data (3.MD.B.3). Students recognize the usefulness of using a scale other than 1 in order to display data that involve greater numbers. They think about whether a given scale is appropriate for a certain set of data or whether another scale might be used. Students title their graphs, write a key and labels, and draw symbols or bars to represent the data. In Lesson 28, students learn to multiply to find area (3.MD.C.7). In the lesson, students produce a variety of responses. Students find the area of given models, and they draw models to help them solve area problems. Students also write explanations and construct arguments, such as in Problem 6 on page 302 of the Student Practice and Problem Solving book, which asks, "Can you make a rectangle that has two rows of squares with an area of 11 square units? Why or why not?" |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | **REQUIRED**<br>**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. | **Yes** | 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. The instructional materials provide resources to support teacher planning. The Teacher Resource Book provides a separate pacing guide for the year, month, week, and day. For example, the Unit Overview page includes lesson titles, page numbers, the primary and supporting standards, prerequisite skills, content objectives, learning progressions, lesson vocabulary, and a detailed pacing guide for whole and small group instruction for each lesson; Two Common Core correlation charts, Ready Instruction Correlation and Interim Assessment Correlation, are included, and the Cognitive Rigor and Ready Chart lists specific questions identified as DOK level 3. The Teacher Resource Book also contains components to assist with lesson delivery. For example, At a Glance explains what students will be doing during each component of the lesson; Step by Step organizes the lesson into chunks and provides guiding questions; SMP Tips highlight specific Standards for Mathematical Practice; Mathematical Discourse includes questions to engage students and advance their learning, and Student Misconception Alerts let teachers know about common misconceptions for which they should observe. For example, in Lesson 6, students write multiplication and division facts that are in the same fact family (3.OA.A.4, 3.OA.C.7). In the margin of the Modeled and Guided Instruction, there is an error alert for teachers that states, "Students who wrote only one multiplication and one division fact may not remember they can switch the order of the factors to create another multiplication fact and switch the numbers for the divisor and quotient to |

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| | | | create another division fact." In Lesson 28, students learn to multiply to find area (3.MD.C.7). In the Modeled and Guided Instruction, marginal notes guide teachers in how to facilitate the Try It problem, Problem 18. The note states, "Have students complete the Try It problem individually and then compare solutions in pairs or groups. Invite volunteers to explain their solutions to the rest of the class." There is also an error alert, which states, "Students who wrote 18 square units may have found the perimeter of the rectangle instead of the area. Remind students that area is a measure of the space inside the rectangle, not the distance around the outside." |
| | **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. | **Yes** | Support for English Language Learners and other special populations is evident throughout the materials. For example, in Lesson 4, students are learning to understand the meaning of division (3.OA.A.2). In the Introduction, there is a tip to help teachers support English Language Learners but could also be used with any students who need more support. The tip reads, "To give students extra support with reading division equations, post some equations around the room. At different moments in the day, point to an equation and read it aloud together." In Lesson 16, students reason about equivalent fractions (3.NF.A.3). The lesson includes the following English Language Learners Tip: "Discuss the two different-size rectangles. Emphasize the first step in finding equivalent fractions is making sure the wholes of the fractions are the same size." In Lesson 26, students learn to generate measurement data by measuring lengths and to show the data on line plots (3.MD.B.4). In the Modeled and Guided Instruction, there is a tip to help teachers support English Language Learners. The tip states, "Write 'inch' on the board and draw a line 1 inch long. Have students use rulers showing inches and centimeters to do the same on a piece of paper. Write 'centimeter' on the board and draw a line 1 cm long. Have students do the same on a piece of paper. Explain that many countries use |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | centimeters. In the United States we use both inches and centimeters. Both are small units generally used to measure small objects, or are used along with larger units to measure large objects more precisely." In addition to the tips written within the lesson, many lessons include a Differentiated Instruction page. For example, in Lesson 17, there is a Quick Check and Remediation, which helps teachers identify where students are struggling with finding equivalent fractions (3.NF.A.3) and provides ways to remediate the specific misconceptions. There is also a hands-on activity where students work in pairs to explore different ways to divide a 4x4 square into two equal amounts to show the fraction 2/2, and a challenge activity in which students explore different ways to divide a 4x4 square into four equal parts to show the fraction 4/4. |
| | **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. | **Yes** | The materials distinguish between problems and exercises. Each lesson follows the same instructional sequence: Introduction, Modeled and Guided Instruction, Guided Practice, and Independent Practice. During the Introduction and the Modeled and Guided Instruction sections, students are solving problems as they learn new concepts. In the Guided Practice and Independent Practice sections, students are completing exercises to practice the concepts learned. After each lesson section, there are pages from the Student Practice and Problem Solving book that the teacher is directed to assign. These pages feature exercises for students practice what they just learned in the Student Instruction book. For example, in Lesson 1 Understand the Meaning of Multiplication (3.OA.A.1), students use pictures to think about equal groups and how these can help solve multiplication problems. As the lesson develops, students use rectangular models to represent multiplication, completing exercises to explain, create, and analyze. During Independent Practice, students write a multiplication equation for an array explaining what each factor and the product mean, and then create equal groups to |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | model their equation. In Lesson 10, students learn to multiply a one-digit whole number by multiples of 10 (3.NBT.A.3). In the Introduction, students answer a series of questions designed to help them multiply a one-digit whole number by a multiple of 10. After students complete this section, they are to be assigned Practice and Problem Solving pages 103-104 and complete the exercises there. In the Modeled and Guided Instruction, students use base-ten blocks and the associative property to multiply a one-digit whole number by a multiple of 10. Teachers are instructed to assign Practice and Problem Solving pages 105-106 after students have completed this section, which include 8 exercises for students to practice multiplying one-digit by a multiple of 10. |
| | **7e)** Lessons are appropriately structured and scaffolded to support student mastery. | **Yes** | Lessons are appropriately structured and scaffolded using a gradual release model. Each lesson consists of 4 components: Introduction, Modeled and Guided Instruction, Guided Practice, and Independent Practice. As students move through the lessons, they move from concrete and pictorial representations to more abstract representations. In addition, there are often notes in the margins advising teachers on how to support the class as a whole or specifically for students who are struggling to obtain mastery. For example, in Lesson 11, students solve one-step multiplication and division word problems (3.OA.A.3). This lesson comes after several lessons focused on understanding multiplication and division. In the Introduction, students answer a series of questions that breaks down the thinking for writing a word problem for a given picture. Then students use multiplication and division equations to model and solve problems. In the Modeled and Guided Instruction, students model a word problem about equal groups using a drawing and both a multiplication and division equation. Then students revisit the problem and solve it using an equation with an unknown and solve more one-step word problems about equal groups. Questions posed in the Student Instruction |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | book help students to break down the thinking process. Problem 2 on page 115 asks, "What does the 24 stand for in the problem? What does the 4 stand for?" and Problem 3 asks, "What is the unknown number in the problem?" Problem 4 states, "Use the letter F to stand for the unknown number. Write a division equation that can be used to solve the problem." In the Guided Practice, students solve more word problems independently, and then they share their solutions with a partner or group. In the Independent Practice, students solve problems such as ones that might appear on a math test. Throughout the lesson, there are hands-on activities and opportunities for mathematical discourse to support students' understanding. |
| | **7f)** Materials support the uses of technology as called for in the Standards. | **N/A** | The LSSM for Grade 3 does not call for use of technology. |

**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 | **Yes** | 80% of the lessons are devoted to the major work of the grade. |
| | 2. Consistent, Coherent Content | **Yes** | The materials connect supporting content to major content in meaningful ways and include problems and activities that connect two or more clusters in a domain and two or more domains. |
| | 3. Rigor and Balance | **Yes** | The materials are designed so that students develop conceptual understanding, procedural skill and fluencies, and engage in applications. |
| | 4. Focus and Coherence via Practice Standards | **Yes** | The materials address the practice standards in a way that enriches the content standards of the grade. |
| **II: Additional Alignment Criteria and Indicators of Quality** | 5. Alignment Criteria for Standards for Mathematical Content | **Yes** | The materials are consistent with the progressions in the Standards. |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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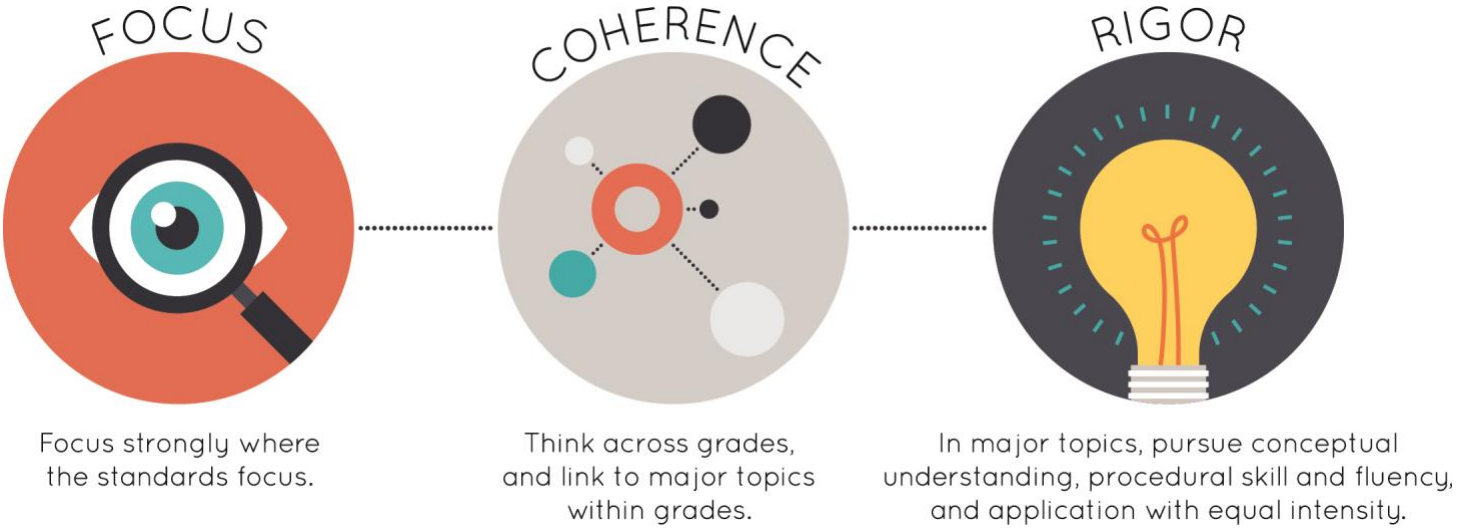
| | 6. Alignment Criteria for Standards for Mathematical Practice | **Yes** | The materials make purposeful connections between the practice standards and the content standards. |
| | 7. Indicators of Quality | **Yes** | The materials give teachers and students the tools they need to meet the expectations of the Standards. |
| FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality** | | | |

Strong mathematics instruction contains the following elements:




Title: **Ready Louisiana Mathematics Gr K-5** Grade/Course: **4**

Publisher: **Curriculum Associates, LLC** Copyright: **2017**

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 Coh. via Practice Std (Non-Negotiable) | |
| 5. Alignment Criteria for Stnds. for Math Content | |
| 6. Alignment Criteria for Stnds. for Math Practice | |
| 7. Indicators of Quality | |

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 |
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| **SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.** | | | |
| **Non-Negotiable**<br>**1. FOCUS ON MAJOR WORK[9]:**<br>Students and teachers using the materials as designed devote the large majority[10] of time to the major work of the grade/course.<br>☒ Yes ☐ No | **REQUIRED**<br>**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** | A large majority of class time is devoted to the major work of the grade. Including the Math In Action lessons, there are 39 lessons in Grade 4. Of these lessons, 29 of them, or 72%, focus on major content with the remaining 10 lesson focused on supporting and additional content. |
| | **REQUIRED**<br>**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 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. | **Yes** | There is minimal time spent on content outside of Grade 4. All lessons in the materials are aligned with requirements of the Grade 4 Standards. It should be noted that during our initial review there were found some items that extend beyond the content limitations of Grade 4, due to the uniqueness of the LSSM; however, the publisher was made aware of the concerns and has plans to address them. As such, this should not be concerning to potential users. |
| **Non-Negotiable**<br>**2. CONSISTENT, COHERENT CONTENT**<br>Each course's instructional materials are coherent and consistent with the content in the Standards.<br>☒ Yes ☐ No | **REQUIRED**<br>**2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. | **Yes** | Materials connect supporting content to major content in meaningful ways. For example, Lesson 27 connects supporting Standard 4.MD.B.4 to major Standard 4.NF.B.3. In the lesson, students represent data on line plots (4.MD.B.4) and add and subtract fractions (4.NF.B.3) using the data from the lines plots. In another example, Lesson 25 connects supporting Standard 4.MD.A.2 to major Standard 4.NF.B.3. In the lesson, students solve word problems involving units of measure (4.MD.A.2), and Problems 12 and 13 are word problems involving addition and subtraction of fractions (4.NF.B.3) of liquid volume units. |

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

[10] 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%.

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| | **REQUIRED**<br>**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. | **Yes** | Materials include problems and activities that serve to connect two or more clusters in a domain or two or more domains in a grade. For example, the Unit 1 Math in Action Lesson connects Clusters 4.NBT.A and 4.NBT.B. In the lesson, students examine a problem about the number of visitors to a web blog, and they compare (4.NBT.A.2) and add multi-digit numbers (4.NBT.B.4). The Unit 3 Math in Action Lesson connects Domains 4.NBT and 4.OA. In the lesson, students solve multistep word problems (4.OA.A.3) that include multi-digit multiplication and division (4.NBT.B.5 and 4.NBT.B.6). In another example, the Unit 4 Math in Action Lesson connects understanding fraction equivalence (4.NF.A) to building fractions from unit fractions (4.NF.B) and using decimal notation for fractions and comparing decimal fractions (4.NF.C). Lesson 31 connects Domains 4.MD and 4.G. In the lesson, students identify angles in given figures (4.G.A.1), and they deepen their understanding of acute and obtuse angles by relating them to angle measure (4.MD.C.5). |
| **Non-Negotiable**<br>**3. RIGOR AND BALANCE:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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 develop conceptual understanding of key mathematical concepts. For example, in Lesson 11, students begin to develop conceptual understanding of multi-digit multiplication. In the lesson, students use area models and partial products to find the products of 4-digit by 1-digit multiplication problems. They engage in mathematical discourse around such questions as, "How can you determine if your answer to the problem is reasonable?" and "When you multiply the ones in 28 and the tens in 16, why is the product 80 and not 8? [There are 8 groups of 10, which is 80.]" Problem 13 in Lesson 11 asks students to list two different ways they could break up the numbers in 34 x 12 to find the product and to explain why both ways would have the same product. In Lesson 14, students use number lines and benchmark fractions to help them develop conceptual understanding of fraction comparison (4.NF.A.2). Students also use note cards and divide them into |

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| | | | thirds, fourths, fifths, and tenths to compare fractions. Students are encouraged to explain their reasoning to such questions as Problem 12, "Which fraction, 11/10 or ⅞, is greater? Explain why." In Lesson 15, students relate adding and subtracting whole numbers to adding and subtracting fractions (4.NF.B.3). They use number lines and visual models to solve problems involving addition and subtraction of fractions. Students also engage in a hands-on activity where they use fraction strips to subtract fractions. In Lesson 16, students cut a piece of notebook paper into 12 equal strips and practice adding twelfths, and they also use number lines to add fractions. Students engage in a hands-on activity to where they practice subtracting fractions by dividing paper plates into eighths, shading ⅝, and cutting out 2 eighths using scissors to determine how much is remaining. |
| | **REQUIRED**<br>**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. For example, Standard 4.NF.B.4 requires students to develop procedural skill of multiplying a fraction by a whole number. In Lessons 18 and 19, students have multiple opportunities to multiply a fraction by a whole number, and pages 202-207 in the Student Practice and Problem Solving Book provide more opportunities. Standard 4.NBT.B.4 requires students to develop fluency with multi-digit addition and subtraction. Lesson 3 focuses on this standard. While there are not many opportunities for students to practice fluency built into the lessons, at the beginning of each unit, teachers are reminded to assign Fluency Skills Practice and Fluency Repeated Reasoning Practice worksheets throughout the unit. These worksheets are found at the end of the Student Practice and Problem Solving Book. Pages 396-407 focus on multi-digit addition and subtraction (4.NBT.B.4). Pages 408-417 focus on adding and subtracting fractions and mixed numbers (4.NF.B.3), and pages 418-435 focus on multi-digit multiplication (4.NBT.B.5) and multi-digit division (4.NBT.B.6). |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | **REQUIRED**<br>**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 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 teachers and students spend sufficient time working with engaging applications. For example, Lesson 6 is focused on multiplication and division word problems (4.OA.A.2). In the lesson, students use skip counting, visual models, and bar models to solve multiplicative comparison word problems, as required by the standard. Lesson 9 and 10 are focused on multi-step word problems (4.OA.A.3). In these lessons, students use bar models, number lines, and equations to solve multi-step word problems. The Unit 2 Math in Action Lesson also focuses on multiplication in word problems. Standard 4.NF.B.3 requires students to solve word problems involving addition and subtraction of fractions. In Lessons 16 and 17, students use visual models, number lines, and equations to solve word problems involving addition and subtraction of fractions and mixed numbers. Standard 4.NF.B.4 requires students to solve word problems involving multiplication of a fraction by a whole number. In Lesson 19, students solve multiple word problems aligned with this standard. In addition to these lessons focused on applications, almost every lesson in the Student Practice and Problem Solving Book contains word problems. |
| | **REQUIRED**<br>**3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately. | **Yes** | The three aspects of rigor are not always treated together and are not always treated separately. For example, Lesson 12 begins with helping students develop conceptual understanding of multi-digit division through using partial products and area models. Students answer questions, such as, "Explain how an area model can help you break apart a division problem to make it easier to solve." Within the lesson, students also build procedural skill as they solve division problems with no context. Later in the lesson, students engage in application as they apply their understanding and procedural skill to real-world situations. Lesson 18 begins to build students' conceptual understanding of multiplying a fraction by a whole number (4.NF.B.4) as students use number lines, visual models, and repeated |

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| | | | addition to understand the concept. In the following lesson, Lesson 19, students continue developing conceptual understanding, but also engage in applications as they solve word problems aligned with this standard. There are also Fluency Skills Practice and Fluency Repeated Reasoning Practice worksheets at the end of the Student Practice and Problem Solving Book, which give students the opportunity to build procedural skill with the following skills: multi-digit addition and subtraction (4.NBT.B.4), fraction addition and subtraction (4.NF.B.3), multi-digit multiplication (4.NBT.B.5), and multi-digit division (4.NBT.B.6). In Lesson 24, students explain procedures for finding elapsed time, total time, conversion between units of time, money spent/saved and conversion between units of money. Through Guided and Independent Practice, students demonstrate multiple strategies to solve time and money problems, building procedural skill. During Independent Practice, students also demonstrate conceptual understanding through error analysis. Teachers receive guidance to set up a classroom store, and students use the store as a place to apply what they have learned about money to a real-world, ongoing application. |
| **Non-Negotiable**<br>**4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:**<br>Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | The materials address the practice standards in a way that enriches the content standards of Grade 4. Each lesson has SMP TIPs to explain to teachers how students are engaging in the various mathematical practices. For example, in Lesson 5, students engage in MP2, Reason abstractly and quantitatively. In the lesson, students use bar models and equations to solve multiplicative comparison word problems (4.OA.A.2). Students are encouraged to explain what the parts of the bar models and equations represent in context. The SMP TIP explains, “Students must reason abstractly and quantitatively as they translate between words, symbols, and bar models that each represent the same multiplicative comparison. They must make sense of quantities and their relationships and attend to the meaning of |

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| | | | those quantities." In Lesson 9, students also engage in MP2 as they write equations to represent real-world problems (4.OA.A.3). The SMP TIP states, "Writing multi-step equations to represent word problems requires students to reason abstractly and quantitatively. To successfully complete this problem, students need to see that 2 + 1 is more than just an addition fact to be computed. They must see 2 + 1 as the quantity of hours worked in one day that will then be multiplied by the number of days worked." In Lesson 11, students engage in MP5, Use appropriate tools strategically, as they use an area model to help them understand 4-digit by 1-digit multiplication (4.NBT.B.5). The SMP TIP states, "Discuss with students the benefits of using an area model. An area model is a tool they can use to help visualize the multiplication problem, which can sometimes seem abstract. Models also break down the problem into smaller, simpler pieces that can be easier to multiply." In Lesson 17 in the Student Practice and Problem Solving Book, Problem 7 engages students in MP3, Construct viable arguments and critique the reasoning of others. The problem asks students to determine if a student's reasoning about subtracting mixed numbers (4.NF.B.3) is correct or incorrect and to explain why. Another example where students engage in MP3 is in Lesson 19. Problem 2 in the Student Practice and Problem Solving Book provides an incorrect response to a word problem involving multiplication of a fraction and whole number (4.NF.B.4). Students are asked to explain how the student got the incorrect answer. There are multiple opportunities throughout the materials for students to engage in MP3, as in the previous examples. In Lesson 23, students engage in MP8, Look for and express regularity in repeated reasoning, as they convert measurements (4.MD.A.1). The SMP TIP states, "Point out to the students that there is repeated reasoning involved when converting from a larger unit to a smaller unit. The number given in the larger unit will always be multiplied by the number of smaller units that make up one larger unit." |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| **SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY** | | | |
| **Additional Criterion**<br>**5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | Materials provide all students extensive work with grade-level problems. Students solve grade-level problems during all parts of the lessons in the Student Instruction Book. Teachers are also advised to assign pages from the Student Practice and Problem Solving Book to provide students with more practice solving grade-level problems. For example, in the Student Practice and Problem-Solving Book, Lesson 3: Add and Subtract Whole Numbers (4.NBT.B.4), students are given 23 problems to solve over the course of the lesson. In the Student Practice and Problem Solving Book, there are 25 problems for students to practice generating and identifying number and shape patterns (4.OA.C.5) over the course of Lesson 8. In the Student Practice and Problem-Solving Book, Lesson 13: Understand Equivalent Fractions (4.NF.A.1), students are given 15 problems to solve over the course of the lesson. There are 22 problems for students to practice multiplying fractions by whole numbers (4.NF.B.4) over the course of Lesson 19. In addition, review material is clearly labeled as such for teachers and students. For example, in Lesson 5, students learn to understand multiplicative comparison (4.OA.A.1). On page 47 of the Student Practice and Problem Solving book, which begins Lesson 5, students review ways to show and write multiplication (3.OA.A.1). This is clearly labeled at the top of the page, "Prerequisite: How do you show and write multiplication?" |
| | **REQUIRED**<br>**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. | **Yes** | 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. For example, in Lesson 4, the Learning Progression states, “In Grade 3 students learned to round two-and three-digit numbers to the nearest ten and to the nearest hundred. Students used a variety of models, such as place-value charts, number lines, hundreds charts, and place-value drawings, to help them round |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | numbers. In this lesson students round four-, five-, and six-digit numbers to the nearest ten, hundred, thousand, or ten thousand (4.NBT.A.3). They use place-value reasoning and number lines to round. Students also begin to understand the importance of rounding to estimate a solution to a problem." Another example is in Lesson 11 Multiply Whole Numbers (4.NBT.B.5). The Learning Progression in this lesson states, "In Grade 3 students used equations, rectangular arrays, and the properties of operations to develop an understanding of multiplication. They learned basic multiplication facts and combined their knowledge of the basic facts with place-value understanding to multiply one-digit numbers by multiples of 10. Earlier in Grade 4 students broadened their conceptual understanding of multiplication to include the idea of multiplication as a comparison of two numbers. In this lesson students use area models and partial products to multiply. They apply their understanding of place value to multiply three and four-digit numbers by a one-digit number and to multiply a two-digit number by a two-digit number. This helps build a foundation for Grade 5 when students will use the standard multiplication algorithm." In addition to the learning progressions, which help teachers understand the connections, the materials are designed so that students themselves connect prior knowledge to new concepts. For example, on pages 65-66 of the Student Practice and Problem Solving book, the first pages of Lesson 7, students review fact families they learned in Grade 3 to help them relate to finding factors and multiples (4.OA.B.4). For most lessons, the Introduction presents a problem that helps students connect what they already know to what they will learn in the lesson. For example, in Lesson 9, students learn to model multi-step word problems (4.OA.A.3). In the Introduction of the Student Instruction book, it states, "You know how to solve two-step word problems. Now, you will extend those skills to multi-step problems." Students then answer a series of questions designed to help them understand how to |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | write a multi-step equation to represent the problem. |
| | **5c)** Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. | **Yes** | The learning objectives in the materials are visibly shaped by the Standards. For example, the content objectives for Lesson 8 state, “Use rules to generate or extend a number pattern; use manipulatives or drawings to show a shape pattern; and describe, analyze, and extend patterns in numbers and shapes.” These objectives are clearly shaped by the Standard 4.OA.C.5 Generate a number or shape pattern that follows a given rule; identify apparent features of the pattern that were not explicit in the rule itself. The content objective for Lesson 9 states, "Use equations with a letter standing for the unknown to represent multi-step word problems." This objective is visibly shaped by Standard 4.OA.A.3. The content objectives for Lesson 16 state, "Add fractions with like denominators, subtract fractions with like denominators; and use fraction models, number lines, and equations to represent word problems." These objectives are visibly shaped by Standard 4.NF.B.3. |
| | **5d)** Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. | **Yes** | Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. Rigor is evident in that the materials engage students in the components of rigor as required by the Standards. For example, in Lesson 13, students learn to understand equivalent fractions. Standard 4.NF.A.1 calls for conceptual understanding and procedural skill. Students engage in conceptual understanding as they use different types of models to find equivalent fractions and explain their thinking, and they build procedural skill as they practice generating equivalent fractions using multiplication. Coherence is evident throughout the materials, as connections are consistently made to what students have previously learned. Learning Progressions in each Lesson Overview allow teachers to see how the new learning in the lesson is connected to what students have previously learned, as well as how it will |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | connect to future learning. |
| **Additional Criterion**<br>**6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | Mathematical practice standards are accurately identified in the lessons and are present throughout the materials. For example, in Lesson 9, MPs 1, 2, 4, 5, 6, and 7 are identified in the Lesson Overview as students learn to solve multi-step word problems (4.OA.A.3). The SMP TIP in the lesson for MP2 states, “Writing multi-step equations to represent word problems requires students to reason abstractly and quantitatively. To successfully complete this problem, students need to see that 2 + 1 is more than just an addition fact to be computed. They must see 2 + 1 as the quantity of hours worked in one day that will then be multiplied by the number of days worked.”<br>In Lesson 12, students engage in MP4, Model with mathematics, as they solve real-world division problems (4.NBT.B.6). In the lesson, students solve word problems using equations, bar models, or area models, and students can use the model they choose to revise their initial solution if there are errors or it does not make sense. Another example is in Lesson 23, in which students learn to convert larger units to smaller units (4.MD.A.1). MPs 2, 5, 6, and 8 are identified in the Lesson Overview. The SMP TIP in the lesson for MP8 states, “Point out to the students that there is repeated reasoning involved when converting from a larger unit to a smaller unit. The number given in the larger unit will always be multiplied by the number of smaller units that make up one larger unit.” In Lesson 25, students engage in MP5, Use appropriate tools strategically, as they convert feet to inches to solve a multi-step word problem (4.MD.A.1). In the lesson, students have the opportunity to choose from different tools as they engage with solving problems involving length. The SMP TIP states, "Encourage students to use and/or draw visual models when confronted with various problems. A visual model can be a useful tool in deciding the necessary steps to finding a solution. Visual models often make the problem seem more 'real' and less abstract." |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | **REQUIRED**<br>**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. | **Yes** | Students are given opportunities throughout the materials to construct viable arguments and critique the reasoning of others around grade-level concepts. For example, in Lesson 8 in the Connect It section, Problem 5 states, “Describe another pattern you see in this set of numbers, and Problem 6 states, “Explain how you found the additional pattern(s) (4.OA.C.5). The SMP TIP for critiquing reasoning states, “Facilitate discussion in which you encourage students to listen and respectfully respond to, build on, or critique each other’s ideas as they share answers to Problems 5 and 6 (SMP 3). In Lesson 13, students are learning to understand equivalent fractions (4.NF.A.1). Problem 15 in the Guided Practice reads, "Think about the problem below. Fia needs 3/4 of a cup of brown sugar. She only has a 1/3-cup measuring cup and a 1/8-cup measuring cup. Which should she use and why?" The SMP TIP explains, "Problem 15 provides an opportunity for students to construct viable arguments and critique the reasoning of others. Encourage students to think out loud and test out their ideas with their peers. Ask students if they agree or disagree with their classmates' ideas. If students think that a line of reasoning is incorrect, ask them to demonstrate what the problem is and explain why it does not work, using concepts of equivalent fractions…." Another example is in Lesson 15, in which students learn to add fractions (4.NF.B.3). In the Let’s Talk About It section, the SMP TIP for constructing arguments and critiquing reasoning states, “During this time, you may choose to ask a particular group to prepare to share their thinking or solution. Encourage students to critique the group’s reasoning, especially if it shows a different way to show or think about one of the problems or shows a misconception that surfaced during the group work time (SMP 3)”. In Lesson 27, students learn to solve problems using information presented in line plots (4.MD.B.4). Problem 2 on page 299 of the Student Practice and Problem Solving book requires students to critique another student's reasoning in writing. The problem provides an answer chosen by a |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | fictional student and asks students to explain how she got that answer. Typically, lessons include at least one problem with a similar structure in the Student Practice and Problem Solving book, in addition to other opportunities for students to construct viable arguments and critique the reasoning of others orally or in writing. |
| | **6c)** There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. | **Yes** | There are multiple SMP TIPs (Standards for Mathematical Practice TIPs) written in the margins throughout the materials, with each lesson including 2-3 SMP TIPs. For example, Lesson 5 includes 2 SMP TIPs, and Lesson 11 includes 3 SMP TIPs. These notes explain to teachers what practice standard is being highlighted and how students engage in that practice during the activity. For example, in Lesson 6, students use multiplication and division to solve word problems (4.OA.A.2). Problem 6 in the Modeled and Guided Instruction asks students to write an equation using numbers to show how many oranges Simone needs. There is a marginal note suggesting to the teacher to ask a volunteer to model how they created an equation from the bar model. The SMP TIP for reasoning abstractly and quantitatively in the margin of the Modeled and Guided Instruction states, "Asking students to think carefully and explain how they wrote an equation from a drawing and problem helps students think deeply about the meaning of the quantities and the relationships between them (SMP 2)." In Lesson 20, students learn to understand fractions as tenths and hundredths (4.NF.C.5). The SMP TIP for using structure states, "Use the familiar structure of dollars, dimes, and cents to guide students through their first experience of adding fractions with unlike denominators. Ask students questions to focus their attention on the relationship between tenths and hundredths and guide them to use pictures and models of that relationship to solve the problem (SMP 7)." |
| | **6d)** Materials explicitly attend to the specialized language of mathematics. | **Yes** | The materials do attend to the specialized language of mathematics. In each lesson overview, there is a section highlighting lesson vocabulary. Throughout |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | the lessons, the vocabulary is used, and teachers are reminded in the marginal notes to use specific vocabulary. Teachers are prompted in the notes to explicitly teach the meaning of the words to students using examples and models. Students are encouraged to use the words as well as they learn to use precise language to explain their thinking, and the Student Practice and Problem Solving Book has notes at the bottom of the pages where mathematical vocabulary is defined for students. For example, when learning about multi-digit division (4.NBT.B.6), teachers and students are consistently encouraged to use precise terminology, such as dividend, divisor, partial quotient, division, quotient, and remainder. In Lesson 12, these math terms are used consistently in the marginal notes and the problems in the Student Instruction book. During the Modeled and Guided Instruction, students explain how an area model can help them break apart a division problem to make it easier to solve. In the marginal notes, correct terminology is encouraged. The note states, "Have students explain their answer to Problem 4. Make sure students understand that you can multiply the divisor 960 by any number, as long as the product is less than the dividend (50). By repeatedly subtracting these products, you will eventually end up with a number that is less than the divisor (6). When you end up with a difference of 0, the sum of these products is the answer to the division problem." In Lesson 31, students learn to identify points, line segments, lines, rays, and angles (4.G.A.1). In the Introduction, students give directions to a partner on how to draw a rectangle. There is a SMP TIP for attending to precision that states, "Students need to be aware of the importance of communicating precisely to others when solving problems and creating drawings with points, lines, rays, and angles. They should be able to give clear and accurate descriptions of geometric figures both verbally and in writing. (SMP 6)" Students are provided with the definitions of the words, and throughout the lesson, the teacher and students are encouraged to use appropriate math |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | terms. |
| **Additional Criterion**<br>**7. INDICATORS OF QUALITY:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | The materials provide students opportunities to produce a variety of responses. For example, in Lesson 7, students list the factors of a whole number (4.OA.B.4); they skip count aloud or silently to find multiples of 2, 5, and 10; they draw diagrams to justify arguments about factors, multiples, prime numbers and composite numbers; and they orally define and use in discussion the key mathematical terms factor, factor pair, multiple, composite number and prime number. In Lesson 13, students learn to understand equivalent fractions (4.NF.A.1). Throughout the lesson, students produce a variety of responses. Students draw models to find equivalent fractions. Students also write explanations, such as to the Reflect problem in the Modeled and Guided Instruction, which states, "Explain how you can find equivalent fractions." The problem on page 154 of the Student Practice and Problem Solving book reads, "Find a fraction equivalent to 2/5 that has a denominator of 20. Show your work. Use models, words, and numbers to explain your answer." In Lesson 15, students create number lines and area models to represent adding or subtracting fractions with like denominators (4.NF.B.3), then compare different models for the same problem and describe how the models are the same and different. In Lesson 28, students solve problems involving area and perimeter (4.MD.A.3). In the lesson, students produce a variety of responses. Students find the area and perimeter of given models by writing equations. Students also write explanations and construct arguments, such as in Problem 4 in the Modeled and Guided Instruction, which reads, "Keegan uses the formula P=2(l+w) to find the amount of fence he needs. Does Keegan's formula work? Why or why not?" |
| | **REQUIRED**<br>**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 | **Yes** | 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 |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | 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. | | 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. The instructional materials provide resources to support teacher planning. The Teacher Resource Book provides a separate pacing guide for the year, month, week, and day. For example, the Unit Overview page includes lesson titles, page numbers, the primary and supporting standards, prerequisite skills, content objectives, learning progressions, lesson vocabulary, and a detailed pacing guide for whole and small group instruction for each lesson; Two Common Core correlation charts, Ready Instruction Correlation and Interim Assessment Correlation, are included and the Cognitive Rigor and Ready Chart lists specific questions identified as DOK level 3. The Teacher Resource Book also contains components to assist with lesson delivery. For example, At a Glance explains what students will be doing during each component of the lesson; Step by Step organizes the lesson into chunks and provides guiding questions; SMP Tips highlight specific Standards for Mathematical Practice; Mathematical Discourse includes questions to engage students and advance their learning; Possible answers, key ideas to listen for in student responses, and common misconceptions are included. For example, in Lesson 5, students learn to understand multiplicative comparison (4.OA.A.1). They use bar models to answer questions, reinforcing their understanding of multiplication as comparison. In the margin of the Modeled and Guided Instruction, there is a Student Misconception Alert for teachers that states, "Some students may find the difference between the bar lengths rather than compare the lengths. If the two bars are 1 unit and 6 units long, then the 6-unit bar is 5 units longer than the 1-unit bar, but its length is 6 times as many units as the 1-unit bar. Help students identify the correct comparison by asking: |

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| | | | 'How many of the top bar do you need to make the bottom bar?'" In Lesson 13, students learn to understand equivalent fractions (4.NF.A.1). In the Guided Instruction, marginal notes guide teachers in how to facilitate student understanding. One such note states, "Organize students into pairs or groups. You may choose to work through Problem 8 as a class. Walk around to each group, listen to, and join in on discussions at different points. Make sure that students understand why they must multiply or divide both the numerator and the denominator by the same number." There is also a Student Misconception Alert, which states, "If students struggle with Question 7, they may not understand the need to reduce the numerator by a factor of 10 when the denominator is reduced by a factor of 10. Help the student identify 10 equal parts in the model and count the shaded parts. [3] Point out that each of the 10 equal parts has 10 of the original parts in it, for a total of 100 original parts. Ask the student how many original parts are shaded [30] and what happened to make this new equivalent fraction. [10 times fewer parts, each composed of 10 smaller parts were marked. Out of those 10 parts, 3 are shaded.]" |
| | **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. | **Yes** | Support for English Language Learners and other special populations is evident throughout the materials. For example, Lesson 6 includes the following English Language Learners Tip, “To help students make connections between what to think, say and write for an equation that has a missing factor, write the following sentence on the board or wall: What number times ___ = ___?” (4.OA.A.2) In Lesson 13, students are learning to understand equivalent fractions (4.NF.A.1). In the Introduction, there is a tip to help teachers support English Language Learners, but the tip could be used with any students who need more support. The tip reads, "Explain that the word 'equivalent' is related to the word 'equal.' Equivalent fractions have equal value but they show their value in a different way. Have students name the equivalent fractions on the |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | page." In addition to the tips written within the lesson, many lessons include a Differentiated Instruction page. For example, in Lesson 12, there is a Quick Check and Remediation, which helps teachers identify where students are struggling with dividing whole numbers (4.NBT.B.6) and provides ways to remediate the specific misconceptions. There is also a hands-on activity where students work in pairs using base-ten blocks to understand division problems, and a challenge activity in which students solve two-step word problems involving division. |
| | **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. | **Yes** | The materials distinguish between problems and exercises. Each lesson follows the same instructional sequence: Introduction, Modeled and Guided Instruction, Guided Practice, and Independent Practice. During the Introduction and the Modeled and Guided Instruction sections, students are solving problems as they learn new concepts. In the Guided Practice and Independent Practice sections, students are completing exercises to practice the concepts learned. After each lesson section, there are pages from the Student Practice and Problem Solving book that the teacher is directed to assign. These pages feature exercises for students practice what they just learned in the Student Instruction book. For example, in Lesson 10, students learn to solve multi-step word problems (4.OA.A.3). In the Introduction, students answer a series of questions designed to help them break down the steps in solving a multi-step word problem. After students complete this section, they are to be assigned Practice and Problem Solving pages 95-96 and complete the exercises there. In the Modeled and Guided Instruction, students use a number line to review writing equations to solve multi-step word problems. Students are also asked to interpret remainders. Teachers are instructed to assign Practice and Problem Solving pages 97-98 after students have completed this section, which include 5 exercises for students to practice solving multi-step word problems. |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | **7e)** Lessons are appropriately structured and scaffolded to support student mastery. | **Yes** | Lessons are appropriately structured and scaffolded using a gradual release model. Each lesson consists of 4 components: Introduction, Modeled and Guided Instruction, Guided Practice, and Independent Practice. As students move through the lessons, they move from concrete and pictorial representations to more abstract representations. In addition, there are often notes in the margins advising teachers on how to support the class as a whole or specifically for students who are struggling to obtain mastery. For example, in Lesson 6, students use multiplication and division to solve word problems involving multiplicative comparison (4.OA.A.2). In the Introduction, students answer a series of questions that breaks down the thinking for solving a multiplicative comparison word problem. Then students use a bar model to represent the comparison, and then they write an equation using the bar model. In the Modeled and Guided Instruction, students analyze a bar model that represents a word problem involving multiplicative comparison. Then students revisit the problem and solve it using an equation. Questions posed in the Student Instruction book help students to break down the thinking process. Problem 2 on page 55 asks, "You don't know how many oranges Simone needs. What symbol on the bar model shows how many she needs?", Problem 3 asks, "How does the bar model show how many oranges are in one bag?", and Problem 4 asks, "How does the bar model show how many oranges Simone needs?" In the Guided Practice, students solve more word problems independently, and then they share their solutions with a partner or group. In the Independent Practice, students solve problems such as ones that might appear on a math test. Throughout the lesson, there are hands-on activities and opportunities for mathematical discourse to support students' understanding. |
| | **7f)** Materials support the uses of technology as called for in the Standards. | **N/A** | The LSSM for Grade 4 does not call for use of technology. |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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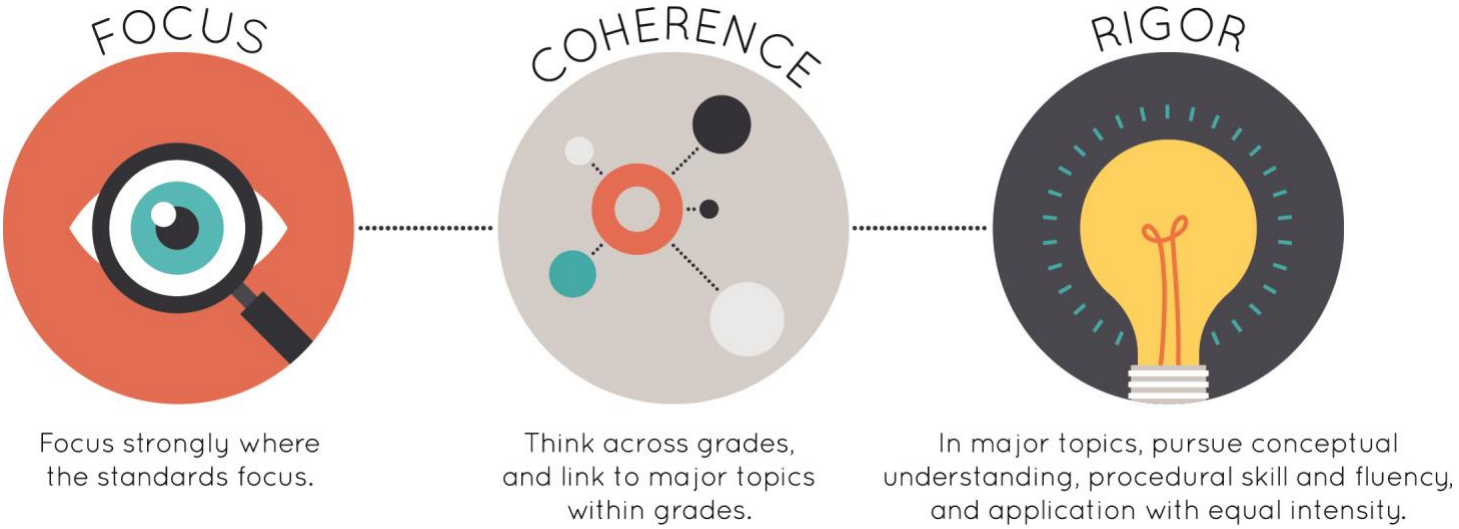
| **FINAL EVALUATION**<br>***Tier 1 ratings*** receive a "Yes" in Column 1 for Criteria 1 – 7.<br>***Tier 2 ratings*** receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.<br>***Tier 3 ratings*** receive a "No" in 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 | **Yes** | 72% of the lessons are devoted to the major work of the grade. |
| | 2. Consistent, Coherent Content | **Yes** | The materials connect supporting content to major content in meaningful ways and include problems and activities that connect two or more clusters in a domain and two or more domains. |
| | 3. Rigor and Balance | **Yes** | The materials are designed so that students develop conceptual understanding, procedural skill and fluencies, and engage in applications. |
| | 4. Focus and Coherence via Practice Standards | **Yes** | The materials address the practice standards in a way that enriches the content standards of the grade. |
| **II: Additional Alignment Criteria and Indicators of Quality** | 5. Alignment Criteria for Standards for Mathematical Content | **Yes** | The materials are consistent with the progressions in the Standards. |
| | 6. Alignment Criteria for Standards for Mathematical Practice | **Yes** | The materials make purposeful connections between the practice standards and the content standards. |
| | 7. Indicators of Quality | **Yes** | The materials give teachers and students the tools they need to meet the expectations of the Standards. |
| FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality** | | | |

Strong mathematics instruction contains the following elements:




Title: **Ready Louisiana Mathematics Gr K-5** Grade/Course: **5**

Publisher: **Curriculum Associates, LLC** Copyright: **2017**

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 Coh. via Practice Std (Non-Negotiable) | |
| 5. Alignment Criteria for Stnds. for Math Content | |
| 6. Alignment Criteria for Stnds. for Math Practice | |
| 7. Indicators of Quality | |

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 |
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| **SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.** | | | |
| **Non-Negotiable**<br>**1. FOCUS ON MAJOR WORK[11]:** Students and teachers using the materials as designed devote the large majority[12] of time to the major work of the grade/course.<br>☒ Yes ☐ No | **REQUIRED**<br>**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** | A large majority of class time is devoted to the major work of the grade. Including the Math In Action lessons, there are 36 lessons in Grade 5. Of these lessons, 29 of them, or 81% focus on major content, while the remaining lessons focus on supporting and additional content. |
| | **REQUIRED**<br>**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 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. | **Yes** | There is minimal time spent on content outside of Grade 5. All lessons in the materials are aligned with requirements of the Grade 5 Standards. In addition, there are no assessment items that assess content beyond Grade 5 Standards. |
| **Non-Negotiable**<br>**2. CONSISTENT, COHERENT CONTENT**<br>Each course's instructional materials are coherent and consistent with the content in the Standards.<br>☒ Yes ☐ No | **REQUIRED**<br>**2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. | **Yes** | Materials connect supporting content to major content in meaningful ways. For example, Lessons 21 and 22 connect supporting Standard 5.MD.A.1 to major Standard 5.NBT.B.7. In the lessons, students convert between units of measurement, which includes multiplying and dividing by decimals, such as in Problem 2 on page 235 of the Student Practice and Problem Solving Book. For Problem 2, students must convert 3.5 kilograms to grams. Another example is Problem 13, where students must find how many centimeters are in 2.37 meters. Lesson 23 connects supporting Standard 5.MD.B.2 to major Standards 5.NF.A.2 and 5.NF.B.4. In the lesson, students interpret the data on line plots and solve word problems involving fraction operations using the data on the line plots. Problem 5 on page 250 of the Student Practice and Problem Solving Book |

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

[12] 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 |
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| | | | reads, "What is the difference between the weights of the heaviest and lightest squash sold?" To solve this, students would subtract 2 ⅞ - 2 ¼ (5.NF.A.2). Problem 5 on page 254 reads, "How many times longer are the longest strips than the shortest strips? Explain."(5.NF.A.4). |
| | **REQUIRED**<br>**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. | **Yes** | The materials for Grade 5 include problems and activities that connect two or more clusters in a domain and two or more domains. For example, the Unit 1 Math in Action Lesson connects Clusters 5.NBT.A and 5.NBT.B. In the lesson, students apply skills such as adding, subtracting, and multiplying whole numbers and decimals (5.NBT.B) and comparing and rounding decimals (5.NBT.A) to solve real-world problems relating to a pet fair. The Unit 2 Math in Action Lesson connects Clusters 5.NF.A and 5.NF.B. In the lesson, the students examine a problem about installing solar lights along a sidewalk, and they use the skills multiplying fractions (5.NF.B) and adding and subtracting fractions (5.NF.A). Lesson 29 connects graphing data points on a coordinate grid (5.G.A) to numerical patterns (5.OA.B). |
| **Non-Negotiable**<br>**3. RIGOR AND BALANCE:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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 develop conceptual understanding of key mathematical concepts. For example, Clusters 5.NBT.A and 5.NBT.B focus on understanding the place value system and performing operations with multi-digit whole numbers and decimals to hundredths. In Lesson 3, students use a meter stick to measure pieces of strings given in tenths and hundredths to write down and read decimals correctly (5.NBT.A.3). During this lesson, students are also given cards to build a model of expanded from. Students also draw a place-value chart for the number 1.016 and deconstruct sixteen thousandths to create the expanded form. Finally, students create place-value charts and use counters to model decimal numbers. In Lesson 7, students begin to develop conceptual understanding of operations with decimals (5.NBT.B.7). In the lesson, students use place value charts, number lines, and base-ten models to add and subtract decimals to hundredths. |

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| | | | They engage in a hands-on activity where they use counters on a place value chart to add decimals. Students engage in mathematical discourse around high-quality questions, such as, "Why is it useful to think of 6 tenths as 60 hundredths?" and "How are the grid model and place value chart similar? How are they different?" In Lesson 13, students begin developing conceptual understanding of fraction multiplication (5.NF.B.4). They explore what it means to multiply a number by a fraction, beginning with multiplying whole numbers by fractions and progressing to multiplying fractions by fractions. Students use area models and number lines to support understanding. In addition, students answer questions that encourage conceptual understanding, such as, "Landon said that ⅔ x ⅙ = ⅚. Tell how Landon found his product, and then explain how to find the correct product." In Lesson 14, students continue to build conceptual understanding of multiplying fractions. In the lesson, students engage in a hands-on activity where they fold paper to model eighths and the equation ¼ x ½ = ⅛, and they continue to use visual models to represent fraction multiplication. In Lesson 17, students begin to build conceptual understanding of division with unit fractions (5.NF.B.7). In the lesson, students explain how dividing with fractions is related to multiplying with fractions. They analyze area models and number line models to explain how the models help students understand dividing a whole number by a unit fraction. Students also engage in a hands-on activity where they use fraction circles to divide by a unit fraction and another hands-on activity where they act out a real-life situation using measuring cups and sand. Cluster 5.MD.C addresses concepts of volume and how volume relates to multiplication and addition. In Lesson 25, students draw models to connect finding the area of a rectangle to finding the volume of a prism. Students show how they can determine the number of cubes in the bottom layer of a rectangular prism without counting them. Students use unit cubes to create the bottom layer of a prism and take measurements of the length and |

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| | | | width. They continue adding layers to the prism to find its height. Once the prism is built, students calculate the volume then check their work by counting the cubes (5.MD.C.4). |
| | **REQUIRED**<br>**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. Standard 5.NBT.B.5 is the only Grade 5 standard that requires students to develop fluency. By the end of Grade 5, students should be able to fluently multiply multi-digit whole numbers using the standard algorithm. Upon initial review we found the curriculum to be a little light on resources for developing the expected fluency; however, the publisher has created additional supports that will be included for LA users. Additionally, the publisher pointed out that there are multiple opportunities for student to practice the expected fluency, though not always in isolation. |
| | **REQUIRED**<br>**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 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 teachers and students spend sufficient time working with engaging applications. For example, Standard 5.NF.A.2 requires application of addition and subtraction of fractions in word problems. Lesson 11 focuses on this standard and includes 6 word problems involving addition and subtraction of fractions. Lesson 16 focuses on multiplying fractions in word problems, as required by Standard 5.NF.B.6. Pages 158-162 in the Student Practice and Problem Solving Book provide students with 6 word problems aligned with this standard to solve. Lesson 17 focuses on division with unit fractions (5.NF.B.7), which requires application. Pages 165-170 in the Student Practice and Problem Solving Book provide 2 word problems for students to engage in application of this standard. Lesson 18 continues with Standard 5.NF.B.7 with a focus on applications. Pages 173-180 provide students with 7 word problems aligned with this standard to solve. Standard 5.MD.C.5 requires application of volume measurement. Lessons 26 and 27 provide students with opportunities to engage in application of this skill through real-world problems. |

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| | **REQUIRED**<br>**3d)** ***Balance:*** The three aspects of rigor are not always treated together and are not always treated separately. | **Yes** | The three aspects of rigor are not always treated together and are not always treated separately. For example, Cluster 5.MD.C calls for students to demonstrate conceptual understanding, procedural skill, and application with volume measurement. Lesson 24 begins building students' conceptual understanding of volume measurement by relating it to area measurement. Students discuss how finding area of two-dimensional figures with unit squares is similar to finding volume of three-dimensional figures with unit cubes and how counting the number of cubes in each layer can help one find the volume of a figure. Students engage in a hands-on activity where they build given figures with unit cubes and count the number of unit cubes they used to determine the volume. In the following lesson, Lesson 25, students use visual models to explore different ways to find the volume of a rectangular prism, including multiplication. In Lesson 26, students are formally introduced to the volume formula, and they begin to apply the formula to solve real-world volume problems. In addition, Math in Action lessons occur at the end of each unit. These lessons focus on application problems where students apply procedural fluency and conceptual understanding to solve problems in a non-routine, real-world context. |
| **Non-Negotiable**<br>**4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:**<br>Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards.<br><br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | The materials address the practice standards in a way that enriches the content standards of Grade 5. Each lesson has SMP TIPs to explain to teachers how students are engaging in the various mathematical practices and how to support students. For example, in Lesson 7, students engage in MP6, Attend to precision, as they discuss how to add and subtract decimals (5.NBT.B.7). The SMP TIP states, "Make sure students attend to precision when they discuss the regrouping process. Monitor discussions and encourage them to state the meaning of each digit according to place value." In Lesson 11, students engage in MP5, Use appropriate tools strategically, as they learn to use a number line as a tool to help them add and subtract fractions (5.NF.A.2). The SMP |

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| | | | TIP states, "Take time to demonstrate how to draw a number line with benchmark fractions and give students an opportunity to practice. This number line is a practical tool that students can use in many situations to help the estimate a solution. When students are comfortable constructing this number line, they will use it often." In Lesson 18, students engage in MP4, Model with mathematics, as they write equations to solve word problems involving division of a fraction by a whole number (5.NF.B.7). The SMP TIP explains, "As students develop models (including equations) for problems, ask them to explain how each feature of their model represents the quantities and the situation in the problem. Students' models are only as useful as their connection to the problem being solved." In Lesson 21, students engage in MP7, Look for and make use of structure, as they convert measurements. The SMP TIP states, "Students are looking for and making use of structure as they examine numerical patterns and relate the pattern to a rule. Encourage students to use a table to help them understand how to convert units of measure." In the Unit 2 Math in Action Lesson, students engage in MP1, Make sense of problems and persevere in solving them, and MP3, Construct viable arguments and critique the reasoning of others as they attempt to solve a non-routine real-world problem involving addition, subtraction, and multiplication of fractions (5.NF.A.2, 5.NF.B.4). The SMP TIP offers, "When students suggest a solution strategy, have them explain in mathematical terms how the approach works. Invite students to build on each other's ideas or propose different approaches." |
| **SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY** | | | |
| **Additional Criterion**<br>**5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:**<br>Materials foster focus and coherence by linking topics (across | **REQUIRED**<br>**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. | **Yes** | Materials provide all students extensive work with grade-level problems. Students solve grade-level problems during all parts of the lessons in the Student Instruction Book. Teachers are also advised to assign pages from the Student Practice and Problem Solving Book to provide students with more practice solving grade-level problems. For example, |

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| domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards.<br><br>☒ Yes ☐ No | | | in the Student Practice and Problem Solving Book, there are 8 problems for students to practice multiplying and dividing by powers of 10 (5.NBT.A.2) over the course of Lesson 2. In the Student Practice and Problem-Solving Book, Lesson 4: Compare and Round Decimals (5.NBT.A.3, 5.NBT.A.4), students are given 21 problems to solve over the course of the lesson. Another example is in the Student Practice and Problem-Solving Book, Lesson 15: Understand Multiplication as Scaling (5.NF.B.5), students are given 14 problems to solve over the course of the lesson. In addition, review material is clearly labeled as such for teachers and students. For example, in Lesson 5 students learn to multiply multi-digit whole numbers (5.NBT.B.5). On pages 39-40, which begin Lesson 5 in the Student Practice and Problem Solving book, students review multiplying two-digit numbers (4.NBT.B.5). This is clearly labeled at the top of the page, "Prerequisite: Multiply Two-Digit Numbers." |
| | **REQUIRED**<br>**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. | **Yes** | 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. For example, in Lesson 5: Multiply Whole Numbers (5.NBT.B.5), the Learning Progression states, “In Grade 4 students used basic multiplication facts and an understanding of place value to multiply three-and four-digit numbers by a one-digit number and to multiply a two-digit number by a two-digit number. They built a conceptual understanding of multi-digit multiplication by multiplying with area models and finding partial products. In this lesson students apply place-value understanding as they begin to use the standard algorithm for multiplication. They use the distributive property and area models to break apart factors and compute partial products. They combine partial products to find products.” Another example is in Lesson 13: Understand Products of Fractions (5.NF.B.4a). The Learning Progression in this lesson states, “In Grade 4 students applied and extended |

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| | | | their previous understanding of multiplication to multiply a fraction by a whole number. They recognized that ⅗ represents 3 X ⅕ (three one-fifth parts). In Grade 5 students further extend their understanding of multiplication to multiply a fraction or whole number by a fraction using visual models. In this lesson students apply the concept of area to understand what happens when two fractions are multiplied, i.e., when multiplying two fractions, the numerators are multiplied and the denominators are multiplied." In addition to the learning progressions, which help teachers understand the connections, the materials are designed so that students themselves connect prior knowledge to new concepts. In most lessons, the Introduction presents a problem that helps students connect what they already know to what they will learn in the lesson. For example, in Lesson 4, students learn to compare and round decimals (5.NBT.A.3, 5.NBT.A.4). In the Introduction of the Student Instruction book, it states at the top of the page, "You already know how to compare and round whole numbers. In this lesson, you will use place-value understanding to compare and round decimals." In Lesson 7, students learn to multiply decimals (5.NBT.B.7). In the Introduction, it states at the top of the page, "You already know how to multiply whole numbers by whole numbers and by fractions. Now you'll learn how to multiply whole numbers by decimals." After the students complete the Introduction, the materials suggest they work on pages 65-66 of the Student Practice and Problem Solving book, where there are 6 problems to review whole number multiplication using place value, which helps students relate to the new concept. |
| | **5c)** Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. | **Yes** | The learning objectives in the materials are visibly shaped by the Standards. For example, the content objectives for Lesson 5 state, "Multiply three-digit numbers by two-digit numbers; use the distributive property to break apart factors in order to solve multi-digit multiplication problems; and use the standard algorithm to solve multi-digit |

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| | | | multiplication problems with whole numbers." These objectives are clearly shaped by Standard 5.NBT.B.5 Fluently multiply multi-digit whole numbers using the standard algorithm. The content objectives for Lesson 6 state, "Divide three- and four-digit dividends by two-digit divisors, use the relationship between multiplication and division to estimate quotients, and divide whole numbers using [a variety of strategies]." These objectives are visibly shaped by Standard 5.NBT.B.6. In Lesson 10, students learn to add and subtract fractions with unlike denominators. The content objectives for this lesson state, "Given two fractions with unlike denominators, write equivalent fractions with a common denominator; use visual model to represent adding and subtracting fractions with unlike denominators; use equivalent fractions to add and subtract fractions and mixed numbers with unlike denominators." These objectives are visibly shaped by Standard 5.NF.A.1. Another example is in Lesson 20. The content objectives for this lesson state, "Generate a numerical pattern given a rule; identify relationships between corresponding terms of two patterns; and plot corresponding terms of two patterns as ordered pairs in the first quadrant of the coordinate plane." These objectives are clearly shaped by Standard 5.OA.B.3 Generate two numerical patterns using two given rules; identify apparent relationships between corresponding terms; form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. |
| | **5d)** Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. | **Yes** | Materials preserve the focus, coherence, and rigor of the Standards even when targeting specific objectives. Rigor is evident in that the materials engage students in the components of rigor as required by the Standards. For example, Standard 5.MD.A.1 calls for procedural skill and application. Students need to be able to convert among different-sized standard measurement units and use the conversions to solve multi-step, real-world problems. In Lesson 21, students build procedural |

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| | | | skill as they use tables and patterns to explore how to convert different-sized units, such as kilometers to meters and cups to quarts. Then in Lesson 22, students engage in application as they solve word problems involving conversions, such as Problem 5 on page 242 of the Student Practice and Problem Solving book, which reads, "Ms. Monet is combining 15 cups of green paint with 15 cups of white paint. She is pouring the paint mixture into empty quart bottles. How many quart bottles does she need? Explain." Coherence is evident throughout the materials, as connections are consistently made to what students have previously learned. Learning Progressions in each Lesson Overview allow teachers to see how the new learning in the lesson is connected to what students have previously learned, as well as how it will connect to future learning. |
| **Additional Criterion**<br>**6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:**<br>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.<br>☒ Yes ☐ No | **REQUIRED**<br>**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. | **Yes** | Mathematical practice standards are accurately identified in the lessons and are present throughout the materials. For example, in Lesson 4, students learn to compare and round decimals (5.NBT.A.3, 5.NBT.A.4). MPs 1, 2, 4, 5, 6, and 7 are identified in the Lesson Overview. The SMP TIP in the lesson for MP1 states, “Students might not realize it, but the Model It activities are helping them make sense of the problem by presenting a variety of entry points for understanding what the numbers mean and how they are related. Ask students how these models add to their understanding of the problem and ways they could solve it.” The SMP TIP in the lesson for MP4 states, “Support students’ efforts to use mathematical models when they solve problems. Encourage students to represent the quantities in Try It on a number line or in a place-value chart.” In Lesson 11, students learn to solve word problems involving addition and subtraction of fractions (5.NF.A.2). MPs 1, 2, 3, 4, 5, 6, 7, and 8 are identified in the Lesson Overview. The SMP TIP for MP5 states, “Take time to demonstrate how to draw a number line with benchmark fractions and give students an opportunity to practice. This number line is a |

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| | | | practical tool that students can use in many situations to help the estimate a solution. When students are comfortable constructing this number line, they will use it often." The SMP TIP for MP6 states, "Encourage students to attend to precision in their pictures and models. Point out the way that the number line and the fraction strips are labeled. Ask students to suggest additional ways to label the models." Another example is in Lesson 15. In the lesson, students learn to understand multiplication as scaling (5.NF.B.5). In the Introduction, students engage in MP7, Look for and make use of structure, as they analyze what happens to the product in a multiplication equation when both factors are greater than one and what happens to the product when one of the factors is less than one. Students predict what will happen with a different factor. In Lesson 27, students learn to understand volume and use it to solve word problems (5.MD.C). In the lesson, students engage in MP4, Model with mathematics, as they solve real-world problems involving volume, such as Problem 8 on page 284 of the Student Practice and Problem Solving book, which reads, "Marina made this raised bed for growing vegetables. She put 100 cubic feet of loam in the bed. She wants to mix in some potting soil and fill it to the top. How much potting soil does Marina need?" |
| | **REQUIRED**<br>**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. | **Yes** | Students are given opportunities throughout the materials to construct viable arguments and critique the reasoning of others around major grade-level concepts. For example, in Lesson 2, students learn to multiply and divide by powers of 10 (5.NBT.A.2). The problem on page 16 of the Student Practice and Problem Solving book gives students an opportunity to construct viable arguments and critique the reasoning of others. The problem states, "Stefan was finding the quotients of decimals and powers of ten. Here is what Stefan wrote for two problems: 0.2÷100=20 and 0.02÷10=0.2 What did Stefan do correctly? What did he do wrong? What can you tell him to help him divide correctly with powers of ten |

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| | | | the next time?" In Lesson 6, students learn to divide multi-digit whole numbers (5.NBT.B.6). In the Introduction, students solve 345÷15 and explain their thinking. The teacher is prompted to have students to share their explanations. The SMP TIP for constructing arguments and critiquing reasoning states, "Help students present clear reasoning and critique reasoning of other students. When students present explanations, encourage them to build arguments step by step in a logical fashion so others can follow their reasoning. Have students build on each other's ideas. (SMP 3)" In Lesson 13, students learn to understand products of fractions (5.NF.B.4). In the Put it Together section, the SMP TIP for constructing arguments/critiquing reasoning states, "Encourage students to share their thinking or solution. This provides an opportunity for students to practice constructing viable arguments and critiquing the reasoning of others. Model and explain how students can explain their reasoning step by step, rephrase each other's explanation, ask for clarification, or point out a misconception." Another example is in Lesson 26 in the Connect It Section. The SMP TIP for constructing arguments states, "Students use a picture and a model to construct an argument in order to explain the relationship between the dimension of a rectangular prism and its volume (5.MD.C.5). Have students explain the relationship to a partner. (SMP 3)" |
| | **6c)** There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. | **Yes** | There are multiple SMP TIPs (Standards for Mathematical Practice TIPs) written in the margins throughout the materials, with each lesson including 2-3 SMP TIPs. For example, Lesson 4 includes 2 SMP TIPs, and Lesson 13 includes 3 SMP TIPs. These notes explain to teachers what practice standard is being highlighted and how students engage in that practice during the activity. For example, in Lesson 8, students learn to multiply decimals (5.NBT.B.7). As they multiply using partial products, students should begin to notice a pattern. The SMP TIP for using structure explains, "Students should recognize the place-value pattern that occurs when |

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| | | | multiplying by 1/10. Encourage them to make use of this pattern or structure when they multiply decimals. Students should be able to explain the shift in the values of the digits. (SMP 7)" In Lesson 14, students learn to understand products of fractions. In the Guided Instruction, students use an area model to find products of fractions. Then they use a number line model to connect to a multiplication expression. The SMP TIP for using appropriate tools strategically states, "The number line is a flexible tool that students can use in many ways. Guide them to understand the use of the number line for multiplying fractions. (SMP 5)" |
| | **6d)** Materials explicitly attend to the specialized language of mathematics. | **Yes** | The materials do attend to the specialized language of mathematics. In each lesson overview, there is a section highlighting lesson vocabulary. Throughout the lessons, the vocabulary is used, and teachers are reminded in the marginal notes to use specific vocabulary. Teachers are prompted in the notes to explicitly teach the meaning of the words to students using examples and models. Students are encouraged to use the words as well as they learn to use precise language to explain their thinking. For example, in Lesson 19, students learn the Lesson Vocabulary 'evaluate' and 'parentheses' as they learn to evaluate and write expressions (5.OA.A.1). These terms are clearly defined with examples given in the Student Instruction book. These terms are used throughout the marginal notes for teachers as well as in the problems in the Student Instruction book. In Lesson 24, students learn to understand volume (5.MD.C.3). The Lesson Vocabulary introduced and defined include plane figure, solid figure, volume, cubic unit, and rectangular prism. These terms are clearly defined with examples given in the Student Instruction book. Throughout the lesson, these terms are used in the Student Instruction book, the Student Practice and Problem Solving book, and the teacher manual. |
| **Additional Criterion**<br>**7. INDICATORS OF QUALITY:**<br>Quality materials should exhibit the | **REQUIRED**<br>**7a)** There is variety in what students produce. For example, students are asked to produce answers and | **Yes** | The materials provide students opportunities to produce a variety of responses. For example, in Lesson 2, students record and extend place-value |

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| indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards.<br><br>☒ Yes ☐ No | solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc. | | patterns using models and equations (5.NBT.A.2), use language of equivalent fractions to describe equivalent decimals, record decimals in place-value charts to show the effect of multiplying or dividing by a power of 10, read powers of 10 written with exponents, and write powers of 10 using exponents. In Lesson 7, students learn to add and subtract decimals (5.NBT.B.7). Throughout the lesson, students produce a variety of responses. Students solve equations using the standard algorithm, use a number line diagram to solve equations, and model problems using base ten blocks. Students also write explanations and construct arguments, such as in Problem 14 in the Modeled and Guided Instruction, which reads, "Explain how to subtract two decimals and how to tell if your answer is reasonable." In Lesson 15, students learn to interpret multiplication as scaling (5.NF.B.5). Throughout the lesson, students produce a variety of responses. Students solve problems involving multiplication of a fraction by a fraction, and they draw area models and number line models to represent multiplying a fraction by a fraction. Students produce explanations, both orally and in writing. In the Introduction, students discuss the question, "Do you think adding 6 is the same as scaling? Why or why not?" Students write in response to the Reflect question on page 137 of the Student Instruction book, which reads, "Describe the products you get if you multiply 8 by factors less than 1. Describe the products you get if you multiply 8 by factors greater than 1. Give some examples that justify your answers." In Lesson 16, students draw pictures to represent word problems involving multiplication of fractions and mixed numbers (5.NF.B.6), write equations to represent word problems involving multiplication of fractions, and compare a visual model and an equation that both represent the same problem situation. |
| | **REQUIRED**<br>**7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: | **Yes** | There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and |

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| | 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. | | 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. The instructional materials provide resources to support teacher planning. The Teacher Resource Book provides a separate pacing guide for the year, month, week, and day. For example, the Unit Overview page includes lesson titles, page numbers, the primary and supporting standards, prerequisite skills, content objectives, learning progressions, lesson vocabulary, and a detailed pacing guide for whole and small group instruction for each lesson; Two Common Core correlation charts, Ready Instruction Correlation and Interim Assessment Correlation, are included and the Cognitive Rigor and Ready Chart lists specific questions identified as DOK level 3. The Teacher Resource Book also contains components to assist with lesson delivery. For example, At a Glance explains what students will be doing during each component of the lesson; Step by Step organizes the lesson into chunks and provides guiding questions; SMP Tips highlight specific Standards for Mathematical Practice; Mathematical Discourse includes questions to engage students and advance their learning; Possible answers, key ideas to listen for in student responses, and common student misconceptions are included. For example, in Lesson 8, students learn to multiply decimals (5.NBT.B.7). There is a marginal note that provides an error alert for teachers. The note states, "Students who wrote 2.728 may not yet understand how far to shift the decimal point. Have them write each factor in expanded form, using 'x0.1' or 'x1/10,' and shift the decimal point accordingly. Then compare the solution with their estimate." In Lesson 15, students learn to interpret multiplication as scaling (5.NF.B.5). In the Guided Instruction, marginal notes discuss important mathematics of the lesson, desired student |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
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| | | | behaviors, and possible misconceptions. Some of the notes state, "Make sure students understand how to represent fraction multiplication on the number line: break up one factor into the number of equal parts specified in the second factor's denominator. Then use the second factor's numerator to guide how many parts to shade." "Encourage students to use their own words to explain their thinking, even when they agree with their classmates." "Student Misconception Alert: Students may still believe that multiplication always makes quantities 'bigger.' Talk with students about finding 'half of' or 'one-third of' a quantity. Demonstrate this on a number line with a simple example, such as 'one third of 6' (1/3 x 6 = 2). Then demonstrate 'one third of 1' (1/3 x 1 = 1/3). Finally, work Problem 2 with students (1/3 x 3/4 = 1/4).” |
| | **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. | **Yes** | Support for English Language Learners and other special populations is evident throughout the materials. For example, Lesson 3 includes the following English Language Learners tip: “Help students understand that a decimal point is not the same as a period in a sentence. A decimal point separates the whole number part of a number from the fraction part; we say “and” to read the decimal point to show that the two parts together make up the number (5.NBT.A.3).” In Lesson 4, students learn to compare and round decimals to thousandths (5.NBT.A.3, 5.NBT.A.4). In the Introduction, there is a tip for teachers to support English Language Learners. The tip suggests, "Review the meaning of the term 'round.' Introduce the phrase 'round number,' meaning a number that ends in one or more zeros. We use round numbers (multiples of 10) because they are easy to work with. When we round to a given decimal place, the digits in the decimal places to the right are replaced with zeros, or simply not written at all." In Lesson 7, students learn to add and subtract decimals (5.NBT.B.7). In the Modeled and Guided Instruction, there is suggestion to remind students that the words 'tenths' and 'hundredths' refer to place values of |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | digits to the right of the decimal point. Write the word, decimal, and fractional equivalents of each, as needed." Another example is in Lesson 11. In the lesson, the English Language Learners tip states, "Discuss the features of the number line. For instance, it extends from 0 to 2. It shows halves and fourths. Ask questions such as: How many fourths are equivalent to ½? [2] Which is greater 1 ½ or 1 ¾? [1 ¾] (5.NF.A.2)." In addition to the tips written within the lesson, many lessons include a Differentiated Instruction page. For example, in Lesson 14, there is a Quick Check and Remediation, which helps teachers identify where students are struggling with multiplying fractions using an area model (5.NF.B.4) and provides ways to remediate the specific misconceptions. There is also a hands-on activity where students draw an area model where one of the fractions is greater than 1 and a challenge activity where students write area word problems in which both fractions are greater than 1. |
| | **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. | **Yes** | The materials distinguish between problems and exercises. Each lesson follows the same instructional sequence: Introduction, Modeled and Guided Instruction, Guided Practice, and Independent Practice. During the Introduction and the Modeled and Guided Instruction sections, students are solving problems as they learn new concepts. In the Guided Practice and Independent Practice sections, students are completing exercises to practice the concepts learned. For example, in Lesson 19, students learn to evaluate and write expressions (5.OA.A.1, 5.OA.A.2). In the Introduction, students answer a series of questions designed to help them break down the steps in writing an expression. After students complete this section, they are to be assigned Practice and Problem Solving pages 195-196 and complete the exercises there. In the two Modeled and Guided Instruction sections, students use pictures and words to evaluate a numerical expression containing a grouping symbol and explore how to write a numerical expression for a verbal expression. Teachers are instructed to assign |

| CRITERIA | INDICATORS OF SUPERIOR QUALITY | MEETS METRICS (YES/NO) | JUSTIFICATION/COMMENTS WITH EXAMPLES |
|---|---|---|---|
| | | | Practice and Problem Solving pages 197-198 and 199-200 after students have completed these two sections, which include 14 exercises for students to practice evaluating and writing expressions. |
| | **7e)** Lessons are appropriately structured and scaffolded to support student mastery. | **Yes** | Lessons are appropriately structured and scaffolded using a gradual release model. Each lesson consists of 4 components: Introduction, Modeled and Guided Instruction, Guided Practice, and Independent Practice. As students move through the lessons, they move from concrete and pictorial representations to more abstract representations. In addition, there are often notes in the margins advising teachers on how to support the class as a whole or specifically for students who are struggling to obtain mastery. For example, in Lesson 25, students learn to find volume using unit cubes (5.MD.C.4). In the Introduction, students answer a series of questions that breaks down the thinking of using visual models to understand volume. In the Modeled and Guided Instruction, students use visual models to find and understand volume of a rectangular prism. Then students revisit this problem and find the volume using multiplication. Questions posed in the Student Instruction book help students to break down the thinking process. Problem 2 on page 251 asks, "Look at the models on the previous page. How can you find the number of cubes in one layer without counting the cubes?", Problem 3 asks, "Once you know how many cubes are in one layer, what else do you need to know to find the volume?", Problem 4 asks, "Since there are 8 cubes in each layer, and you know there are 3 layers, what multiplication expression can you write to find the volume of the prism?", and Problem 5 asks, "What is the volume of Abigail's rectangular prism?" Then Problem 6 helps students generalize what they have learned by asking students to explain how they can use multiplication to find the volume of any rectangular prism. In the Guided Practice, students solve more problems involving volume independently, and then they share their solutions with a partner or group. In the |

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|---|---|---|---|
| | | | Independent Practice, students solve problems such as ones that might appear on a math test. Throughout the lesson, there are hands-on activities and opportunities for mathematical discourse to support students' understanding. |
| | **7f)** Materials support the uses of technology as called for in the Standards. | **N/A** | The LSSM for Grade 5 does not call for use of technology. |

**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 | **Yes** | 81% of lessons focus on the major work of the grade. |
| | 2. Consistent, Coherent Content | **Yes** | The materials connect supporting content to major content in meaningful ways and include problems and activities that connect two or more clusters in a domain and two or more domains. |
| | 3. Rigor and Balance | **Yes** | The materials are designed so that students develop conceptual understanding, procedural skill and fluencies, and engage in applications. |
| | 4. Focus and Coherence via Practice Standards | **Yes** | The materials address the practice standards in a way that enriches the content standards of the grade. |
| **II: Additional Alignment Criteria and Indicators of Quality** | 5. Alignment Criteria for Standards for Mathematical Content | **Yes** | The materials are consistent with the progressions in the Standards. |
| | 6. Alignment Criteria for Standards for Mathematical Practice | **Yes** | The materials make purposeful connections between the practice standards and the content standards. |
| | 7. Indicators of Quality | **Yes** | The materials give teachers and students the tools they need to meet the expectations of the Standards. |

FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**

# Appendix I.

# Publisher Response

The publisher had no response.

# Appendix II.

# Public Comments

There were no public comments submitted.