DEPARTMENT of EDUCATION
louisiana Believes

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

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:

FOCUS
Focus strongly where the standards focus.

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

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

Title: **Ready Classroom Math**   Grade/Course: **K-5**

Publisher: **Curriculum Associates, LLC**   Copyright: **2020**

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

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

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

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.
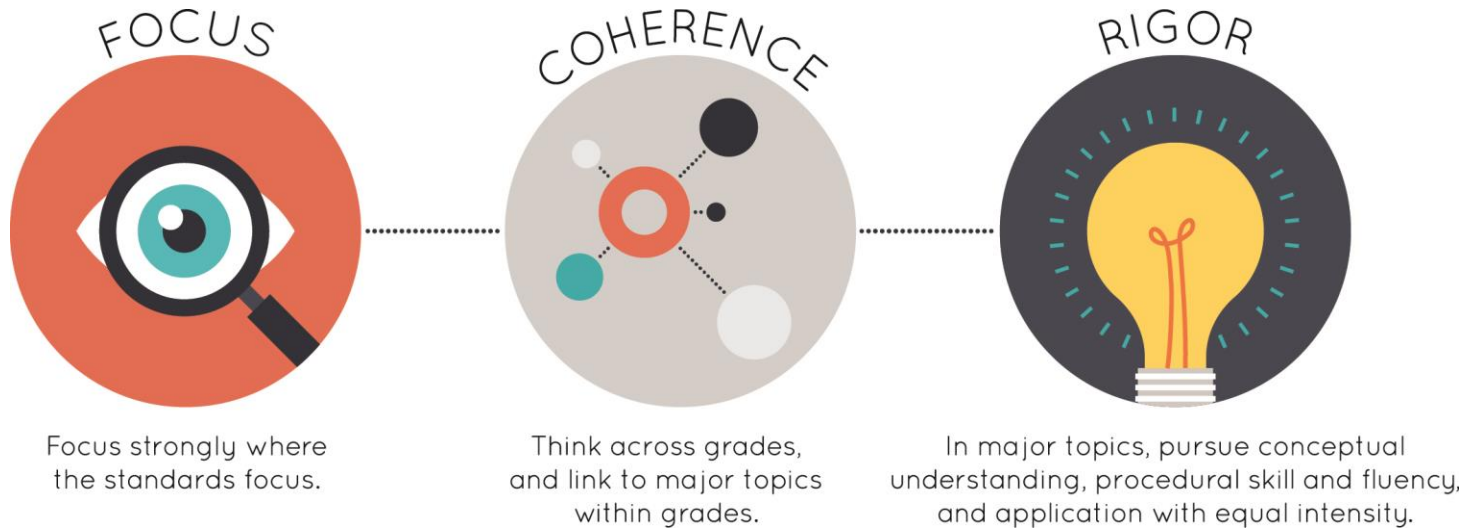
Click below for complete grade-level reviews:

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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Grade/Course: **K**

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4. Focus and Coherence via Practice Standards (Non-negotiable)	
5. Alignment Criteria for Standards for Mathematical Content	
6. Alignment Criteria for Standards for Mathematical Practice	
7. Indicators of Quality	

To evaluate instructional materials for alignment with the standards and determine tiered rating, begin with **Section I: Non-negotiable Criteria**.

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

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

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

Tier 1 ratings receive a "Yes" for all Non-negotiable Criteria and a "Yes" for each of the Additional Criteria of Superior Quality.
Tier 2 ratings receive a "Yes" for all Non-negotiable Criteria, but at least one "No" for the Additional Criteria of Superior Quality.
Tier 3 ratings receive a "No" for at least one of the Non-negotiable Criteria.

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Section I: Non-negotiable Criteria of Superior Quality **Materials must meet all of the Non-negotiable Criteria 1-4 in order for the review to continue to Section II.**			
Non-negotiable **1. FOCUS ON MAJOR WORK[2]:** Students and teachers using the materials as designed devote the large majority[3] of time to the major work of the grade/course. ☒ Yes ☐ No	**Required** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	Yes	Materials devote a majority of time to the major work of Grade K with 78% of lessons focused on major content standards. For example, the major work for Grade K should focus on the Counting and Cardinality (CC), Operations and Algebraic Thinking (OA), and the Number and Operation in Base Ten (NBT) domains of the Louisiana Student Standards for Mathematics (LSSM). In Unit 1, Lesson 2, Session 1, students make groups of 1, 2, 3, 4, and 5. They practice counting using one-to-one correspondence to find how many are in a group and then use counters, drawings, and fingers to model 1, 2, and 3. Students also count groups of objects they see in pictures (LSSM K.CC.A.3, K.CC.B.4a, K.CC.B.4b, K.CC.B.5). In Unit 4, Lesson 17, Session 1, students act out add-to addition situations, model with counters, and see addition expressed as an addition equation (LSSM K.OA.A.2). In Unit 5, Lesson 26, students begin to understand teen numbers as ten ones and some more ones. Students show teen numbers using fingers, ten frames, and counting cubes, and practice counting on from ten to find a teen number (LSSM 1.NBT.A.1). LSSM K.MD.C.4, to develop the ability to recognize pennies, nickels, dimes, and

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[2] For more on the major work of the grade, see Focus by Grade Level.
[3] The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			quarters by name and value, is however, not addressed in any Unit.
	Required **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit 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	Materials spend the appropriate amount of time on grade-level work while assessing grade-level standards. The assessment components do not make students or teachers responsible for topics before the grade level in which they are introduced. The lessons are aligned to the Kindergarten LSSM and assessments are grade-level appropriate. The forms of assessments include Exit Tickets after each session, Lesson Quizzes at the end of each lesson, and End of Unit Assessments. For example, in Unit 2, Lesson 7, Session 1, students find 1 more than a number by working through the counting numbers to 10, and then add one more to existing groups to find a new total (LSSM K.CC.B.4c). On the Exit Ticket for the session, students place objects on the pictured counters, counting as they go, and then place one more counter to find the new total. In Unit 5, Lesson 26, LSSM K.NBT.A.1 is addressed within 5 sessions, each providing an exit ticket. A quiz is then available to assess student mastery of skills and concepts presented. Throughout the lesson and on the assessments, students match teen numbers to pictures showing 10 ones and some more ones. In Unit 1, the End of Unit Assessment aligns with LSSM K.CC.A.3, K.CC.B.4.a, K.CC.C.6, and K.CC.B.5 where on Form A students count, write, and compare objects up to 5. In the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			second problem, starting with one and ending with three, students draw a line from each object to a number, saying the numbers as they draw the lines, demonstrating one-to-one correspondence (LSSM K.CC.B.4a). In another problem, students place counters to represent the numbers 3 and 1 and then circle the number that is less (LSSM K.CC.C.6).
Non-negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**Required** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.	Yes	Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. In Kindergarten, there are 3 supporting clusters, K.MD.B, K.MD.C, and K.G.B. In Unit 2, Lesson 9, students classify objects and count the number of objects in each category connecting supporting LSSM K.MD.B.3, to major LSSM K.CC.A.3, and K.CC.B.5. Unit 3, Lesson 14, in which students analyze and compare two and three-dimensional shapes and count to answer "How many" questions connecting supporting LSSM K.G.B.4 and major LSSM K.CC.B.5.
	Required **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	Yes	The materials for Kindergarten include problems and activities that connect two or more clusters in a domain and two or more domains in the grade level where these connections are natural and important. For example, in Unit 1, Lesson 5, Operations and Algebraic Thinking (OA) domain is connected to the Counting and Cardinality (CC) domain. In this Lesson, students count groups of objects to recognize how many are in the group, then compose and decompose to form

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			numbers. In Session 3, students use color cubes to make "trains" of 3, 4, and 5, then record their compositions by coloring boxes. In Unit 2, Lesson 6, clusters K.CC.A (Know number names and count the sequence) and K.CC.B (Count to tell the number of objects) are connected. In Session 6, "Connect It" problem the teacher asks, "How do you keep track of the objects you have counted?" Students mark the objects as they count or touch each object when counting. After counting, they match the dot card to the picture card with the same quantity. In Unit 5, Lesson 28, Number and Operations in Base Ten (NBT) and Counting and Cardinality (CC) domains are connected in the "Try It" problem during Session 3. Students represent the number 17 by coloring the tens-frame, decompose 17 as 10 and 7 ones, then represent the number as addition "10 + 7 = 17" (LSSM K.NBT.A.1, K.CC.A.3, K.CC.B.5).
Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**Required** **3a)** *Attention to Conceptual Understanding:* Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	Yes	Materials develop conceptual understanding of key mathematical concepts for Kindergarten. Six units are used to build out conceptual understanding. In Unit 1, Lesson 2, students write numbers 0-20 and represent a number with objects (LSSM K.CC.A.3). The students will make groups of 1, 2, 3, 4, and 5 with practice counting using one-to-one correspondence to find how many (LSSM K.CC.B.4). The students model the quantity using counters, drawings and fingers. In Lesson 2, Session 3, "Connect It" problem, students develop

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			conceptual understanding as they first trace and then write numerals. Students then match numerals to groups that show that number of shapes, modeling the relationship between numbers and quantities (LSSM K.CC.B.4). In Unit 4, Lesson 16, students act out stories on 'addition' using objects to add and symbols (+) and (=) to represent putting together and equality (LSSM K.OA.A.1). In Lesson 16, Session 3, "Model It" problem, students use cubes to show 3 + 1 and relate the concrete representation to the abstract words such as "plus" and "equal" to build conceptual understanding of sentences about addition. In Unit 4, Lesson 28, Section 4, students use counters and drawings to make teen numbers. They decompose the numbers into 10 and some more. Students represent this in two different ways, as using a number bond and an equation (LSSM K.NBT.A.1).
	Required **3b) *Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	Yes	Materials are designed so that students attain the fluencies and procedural skills required by the standards for Kindergarten. Students are expected to develop fluency in counting to 100 by ones and tens beginning from a given number or in a set (LSSM K.CC.A.1), count forward beginning from a given number within the known sequence(LSSM K.CC.A.2), count objects up to 20, arranged in a line, a rectangular array, or a circle (LSSM K.CC.B.5b), and objects up to 10 in a scattered configuration (LSSM K.CC.B.5b), and when given a number from 1-20, count out that many objects (LSSM.

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CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			K.CC.B.5c). Students have several opportunities throughout the materials to meet these fluency expectations. For example, in Unit 1, Numbers 0-5: Counting, Writing, and Comparing, students count and recognize numbers 0-5 to begin to develop fluency in counting 100 and representing numbers to 20. In Lesson 1, Session 2, Additional Practice, students practice rote counting to 10. In Lesson 3, Session 3, Additional Practice, students write numbers 1-5 and identify groups with each number of objects. In Lesson 5, Session 3, Additional Practice, students make the number 4 using pairs of numbers and represent the pairs with cubes, then write the numeral. By the end of the unit, students have had multiple opportunities to count, write, and represent numbers 0-5. In Unit 2: Numbers 6-10: Counting and Writing, Comparing and Sorting, similar procedural skill and fluency with numbers 6-10 is built. In alignment to the procedural skill and fluency standards for Kindergarten, procedural skill and fluency is built across the materials through various components including Interactive Practice activities, Learning Games, Fluency Skills and Practice sheets, Math Center Activities, and Unit Games. Fluency is often labeled as "Building Fluency" and "Fluency Practice" in green boxes throughout the teacher materials within the "Additional Practice" sections to help facilitate and build procedural skill and fluency expectations. In addition, the fluency expectation to add and subtract

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			within 5 by the end of Kindergarten (LSSM K.OA.A.5) is addressed in Unit 4: Numbers Within 10: Addition and Subtraction, Lessons 16 - 20. For example, in Lesson 17, Session 2, Additional Practice, students color groups of animals demonstrating adding within 5. In the same session, students engage in a fluency activity in which they make 5 with dot cards
	Required **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	Yes	Materials are designed so that students spend sufficient time working with engaging applications for Kindergarten. Kindergarten has one application standard, LSSM K.OA.A.2. In order for students to fully master the application standard, they must be able to solve addition and subtraction word problems and number sentences within 10 using objects or drawings to represent the problems. In Unit 4: Numbers in 10 Addition and Subtraction, Lesson 16, Session 1, students act out add-to addition situations and then model the same situation with counters. They are then able to understand the addition situation represented as a written addition expression. In Unit 4, Lesson 17, Session 5, students are given the following problem, " 4 = __ + __". Students use two color counters to find the unknown addends then write the equation for the counters they used. In Unit 4, Lesson 21, Session 2, the focus is also on LSSM K.OA.A.2. In this session, students tell 'addition' story problems for various groups of objects then match equations to the pictures of story problems. In Unit 4, Lesson 23, the teacher is prompted to tell

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			the story about "4 flowers minus 2 flowers." Students use the pictures on the worksheet to model the story (LSSM K.OA.A.2). In Lesson 24 of the same unit, students continue to solve addition and subtraction word problems within 10. In Session 3, students are given the following problem, "Gill read 6 books. He reads 2 more. How many books has he read now?" Students model the word problem with counters, use drawings to represent the word problem, solve the problem, then write an equation to match.
	Required **3d)** *Balance:* The three aspects of rigor are not always treated together and are not always treated separately.	Yes	The three aspects of rigor are not always treated together and are not always treated separately. Each lesson provides 4 to 5 sessions that develop the Kindergarten standards. The three components of rigor are found within different parts of the lesson, and the lessons align with the expectations of rigor within each standard. For example, in the "Additional Practice" lessons, students have an opportunity to work with fluency standards for Kindergarten. In Unit 2, Lesson 9, students classify objects into given categories and count the number of objects in the category (LSSM K.MDB.3). Students begin the lesson by sorting themselves into two groups and counting the total in the group to build conceptual understanding. By the end of the lesson, students sort objects into three groups, count and compare groups, and work on fluency by comparing numbers up to 10. In Unit 4, Lesson 17, students work on mastering application LSSM K.OA.A.2

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			(solving addition and subtraction word problems within 10 using objects or drawings to represent the problem). Students also work on fluency standard K.OA.A.5 (Fluently add and subtract within 5). Unit 3, Lesson 12, focuses on LSSM K.G.A.2 (fluency) and LSSM K.G.A.3 (conceptual understanding). In Session 2, students are asked to identify and discuss two- and three- dimensional shapes in a picture. They then distinguish between flat and solid shapes. Students also have lessons where not all the components of rigor are addressed. For example, in Unit 6, Lesson 31, which focuses on conceptual understanding, students compare length and height to describe the measurable attributes of objects (LSSM K.MD.A.1).
Non-negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☒ Yes ☐ No	**Required** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	Yes	Materials address the practice standards in such a way to enrich the content standards of the grade. The Teacher's Guide lists the practice standards that are addressed within each lesson in the table of contents. In the Lesson Overview in the Teachers Guide on the left hand side of the page, the Standards for Mathematical Practice (MP) that are utilized in the lesson are listed. The practices are utilized in a way to enrich the content standards and not detract from them as seen in Unit 4, Lesson 20, which emphasizes the use of MP.2, MP.5, and MP.7. In the lesson, students reason quantitatively when they tell a story of 5 fish and 2 swimming away (MP.2), supporting LSSM K.OA.A.2. In the same lesson, students examine the relationship between addition and

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			subtraction when discussing how knowing 1 = 3 - 4 helps to find 1 + 4 = ? (MP.7, Look for and make use of structure). In Unit 4, Lesson 19, Session 3, students create subtraction story problems to match equations, then use counters to solve each problem and complete the equation, supporting LSSM K.OA.A.2. Within the "Discuss It" portion of the lesson, students support their reasoning by discussing with a small group or partner, modeling the use of MP.3, construct viable arguments, and critique the reasoning of others. Students also use MP.3 in Unit 4, Lesson 23, Session 3, to model subtraction word problems using connecting cubes, then compare pictures with equations and complete the equations. Students construct an argument for why their picture matches the equation in the "Connect It" portion of the lesson. In Unit 1, Lesson 3, students recognize the precision in counting (MP.6) when counting the four flowers three times and getting a different number each time, counting a flower more than once, skipping a flower, and counting accurately (LSSM K. CC.B.4). Later in the same lesson, students discuss that as they count the next number is one more than the previous (MP.8, Look for and express regularity in repeated reasoning). In Unit 4, Lesson 21, students practice MP.4 (Model with mathematics) as they match pictures to the equations with addition in support of LSSM K.OA.A.2.

Section II: Additional Criteria of Superior Quality

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	**Required** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.	**Yes**	Materials provide students extensive work with Kindergarten problems. There are 6 Units and 32 lessons that are broken into 4 to 5 sessions with options for additional practice. The materials provide students the opportunity to work with problems in a variety of formats to integrate and extend concepts and skills. For example, in Unit 1, Lesson 4, 36 problems that align to LSSM K.CC.A.3 and K.CC.C.6 are offered over the course of 5 sessions. In Unit 2, Lesson 8, students work on writing and representing numbers 0 to 20 and compare numbers to identify greater than, less than, or equal to. In Session 2, "Try It" problem, students draw lines to match puppies to collars, then answer the teacher's questions "Can each puppy get a collar? How do you know?" aligning to LSSM K.CC.C.6. In Unit 5, Lesson 29, 43 problems are available to solve over the course of 5 sessions. In Session 5, students use knowledge learned throughout the lesson to refine counting by tens to complete lists of tens numbers without the aid of a hundreds chart to practice (LSSM K.CC.A.1). In Unit 3, Lesson 13, there are 5 sessions offering 51 problems that work on shapes and positioning. In the sessions, students work on following verbal directions to place and draw shapes in different positions. In Session 2, a scene is presented and students connect objects and shapes with what they see using teacher prompted questioning (LSSM K.G.A.1).

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	Required **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	**Yes**	Materials are designed so that students connect prior knowledge to new concepts learned in Kindergarten using concepts that are taught in a logical order and consistent with the progressions of the standards. In Kindergarten, students develop an understanding of cardinality, or counting to tell how many. They learn to subitize, or recognize how many are in a small group without having to count. In Unit 1, students master counting, writing, and comparing numbers 0-5. The unit begins with understanding that counting tells how many, one-to-one correspondence, and that the order in which objects are counted does not change the total number of objects. Lessons progress into students recognizing, reading, writing, and comparing the numbers 0-5. Students end the unit composing and decomposing 3, 4, and 5. In Unit 2, students further develop their understanding of counting, writing, and comparing numbers 6-10 and expand knowledge to sorting. Students model this knowledge when sorting objects into two groups, counting the objects in the group, comparing, and recording the answer by writing numerals. Specifically, in Unit 2, Lesson 11, students work on building their knowledge of lesser numbers, using manipulatives to model different ways to make 6, 7, 8, and 9. They record their work on a 10-frame and build their knowledge of LSSM K.OA.A.3 (Decompose numbers less than or equal to 10 into pairs in more than one way). In Unit 3, students learn to

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			recognize, compare, and build shapes. Students develop geometric concepts and spatial reasoning using previous experiences of shapes in their environment. They build upon previous knowledge to name flat shapes by defining attributes. They then combine the flat shapes to form solid shapes. In Unit 4, students use their knowledge of numbers to add and subtract within 10. Unit 5 continues to build student knowledge of counting and cardinality to 100. Students begin the unit learning about teen numbers as ten and some more. Later in the unit, students count by tens to 100 using a hundreds chart. In Unit 6 students compare length, height, and weight of objects. Students use previous knowledge of comparing numbers as describe and compare measurable attributes throughout the unit.
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	**Yes**	Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards for Kindergarten. For example, Unit 1, Lesson 1, objectives state "understand that counting tells how many, and that the last number said tells how many in the whole group; practice one-to-one correspondence in counting; understand the importance of keeping track of the number count and objects counted; develop strategies for keeping track of objects counted; understand that the order in which objects are counted does not change the total number of objects." Objectives reflect the language and intent

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			of LSSM K.CC.A.3 (write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20), LSSM K.CC.B.4a (understand the relationship between numbers and quantities; connect counting to cardinality when counting objects in standard order, say the number names as they relate to each object in the group, demonstrating one-to-one correspondence), and LSSM K.CC.B.4b (understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted). Unit 6, Lesson 32, objectives state "compare the weight of two objects to identify which is heavier and which is lighter; describe several measurable attributes of a single object." Objectives reflect the language and intent of LSSM K.MD.A.1 (describe measurable attributes of objects, such as length or weight; describe several measurable attributes of a single object) and LSSM K.MD.A.2 (directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. ⊠ Yes ☐ No	**Required** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	Yes	Materials attend to the full meaning of each practice standard for Kindergarten. MP.1, Make sense of problems and persevere in solving them is integrated throughout the lessons. In Unit 1, Lesson 2, students engage in MP.1 as students work on the Connect It problem. Students use previously learned knowledge to persevere in finding different approaches to the problem through prompted questions "How can you match the groups?: What can you do if you try to solve a problem and your first try does not work?" In Unit 4, Lesson 17, students engage in MP.2, Reason abstractly and quantitatively. In Lesson 17, students discuss the equations and recognize that equations represent quantities, not specific objects, using the teacher prompted questions, "Show me how you can show 2 little pigs plus 1 big pig with your fingers?; What different stories can you tell for 2 + 1 =3?; Is the story the same in all the stories for 2 + 1? Why do you think that?" In Unit 3, Lesson 12, Session 2, students engage in MP.6, Attend to precision. In Lesson 12, students discuss the problems using precise mathematical vocabulary to differentiate shapes, using the teacher prompted questions, "How could you describe this shape?: How can you tell which shape is which?" In Unit 2, Lesson 6, students engage in MP.7, Use structure. In Lesson 6, students think about how the structure of the groups can help with counting. Teachers use the prompted question, "Did you have to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			count both groups in each problem to know how many there were?" to engage students in identifying that there are different ways to use the structure of counting to find how many are in a group.
	Required **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	Yes	Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key Kindergarten mathematics that is detailed in the content standards. Each lesson has a Try-Discuss-Connect Routine that allows students to discuss their solution strategies, and explain and critique their reasoning. For example, in Unit 5, Lesson 27, students describe the quantity they see in pictures, match quantities to teen numbers, and then talk to a partner about their answers (LSSM K.CC.B.5). Teachers are prompted to guide the discussion with the following: "Did you find any groups your partner did not find? Have you and your partner counted the same number for a particular group? How did you and your partner keep track of the objects as you counted them?" In doing so, students engage in MP.6 as they begin to develop their mathematical communication skills to explain their reasoning. In Unit 6, Lesson 31, Session 2, students compare objects based on height and length (LSSM K.MD.A.2). Students discuss with a partner the following questions, "Did you and your partner say

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			the same comparison statement for the same set of objects, or did you say something different? Did you and your partner find any objects to compare that you did not? Did you agree with all of your partner's statements?" Students compare the solutions and construct arguments using objects and pictures.
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	Yes	Materials include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. A section titled "Standards for Mathematical Practice in Every Lesson" is provided at the beginning of the Teacher Version. This section explains where the teacher will find and use the Mathematical Practice within the lessons. The table of contents pages for each unit lists the practices under each lesson. The Lesson Overview lists the mathematical practices emphasized in the lesson. Lessons in the teacher edition include sections titled "Deepen Understanding," "Discourse Questions," and "Structure and Reasoning." These sections guide teachers in helping students develop and utilize the math practices. For example, in Unit 2, Lesson 11, Session 3, the "Deepen Understanding" section provides teacher guidance on helping students utilize MP.7: Look for structure. The Teacher's guidance states, "When describing the number of objects in each group, ask children to look at how the objects are arranged." The teacher is prompted to ask "How does the 10-frame help you know the number of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			objects in each smaller group?" Student "Listen Fors" are also provided. The Mathematical Practices are embedded in the "Try-Discuss-Connect" instructional routine in each lesson. In Unit 4, Lesson 25, Session 1, examples of teacher questions provided to help students explain their thinking include "What do you need to know from the problem? What do you need to find? How could you discover how many are on the plate? Is this the only way Mateo could place apples on the plate? How is this problem like the last problem? How did you decide how many cubes to put in the circle?"
	6d) Materials explicitly attend to the specialized language of mathematics.	Yes	Materials explicitly attend to the specialized language of mathematics. Each Lesson Overview includes language objectives and lesson vocabulary. For example, in Unit 2, Lesson 10, Lesson Overview, the lesson vocabulary includes "equal" and "ten." In Session 1, Additional Practice, students use words, numbers, and pictures to define 10 and explore composing numbers to make ten (LSSM K.OA.A.4). In Unit 2, Lesson 5, the lesson vocabulary is "equal", "five" and "zero." This lesson focuses on LSSM K.OA.A.3 with the term "five" defined in Session 1. Students create a graphic organizer of different ways to model the number 5. In Unit 4, Lesson 22, Session 3, students recognize the relationship between part and whole to expand their vocabulary for deeper mathematical discourse when using the 10-frame with counters providing concrete examples of the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			relationship between part and whole. The teacher is prompted to say "together, all ten of these counters make up the whole." A portion of the frame is covered by a sheet of paper, then students answer, "Part of the whole is missing? What part is missing?" (LSSM K.OA.A.4).
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. ☒ Yes ☐ No	**Required** **7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	Yes	In the materials, students are asked to produce answers in a variety of ways. Students are asked to produce answers and solutions in arguments, explanations, diagrams and mathematical models. For example, Unit 4, End of Unit Assessment, a variety of problem types includes multiple choice, fill in the blank, drawing models, and multiple select formatted problems in which students solve addition and subtraction problems, decompose numbers less than or equal to 10 into pairs in more than one way (LSSM K.OA.A.2, K.OA.A.3, K.OA.A.4 and K.OA.A.5). In Unit 4, Lesson 24, students solve addition and subtraction word problems within 10 using pictures or objects (LSSM K.OA.A.2). In Session 1, students use cubes to model the addition equations. In Session 2, they use pictures to solve the equations. In Sessions 3-5 students choose a strategy to solve the problem using drawings or cubes. In the lesson quiz, students model their understanding using pictures or cubes and write the equation, after the teacher reads the word problem. Alternatively, teachers may assign the Digital Comprehension Check online to assess students' understanding of the material. In Unit 5, Lesson 27, students write, count, and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			answer questions about teen numbers (LSSM K.CC.A.3, and K.CC.B.5). In Session 1 of this lesson, students are given counters and asked to build a teen number and place it in the ten-frame. They share the different numbers created and in Session 3, build on this knowledge when asked to circle 13 flowers, 16 crayons, and 15 butterflies from various pictures. In Unit 3, Lesson 15, Session 1, students compose shapes from smaller shapes (LSSM K.G.B.5 and K.G.B.6). In the "Try It" section, students use 6 large paper squares, then cut them diagonally to form triangles. Students use the paper shapes to complete the "Connect It" activity in which they add shapes to create squares and triangles on a worksheet. After completing the problems, students justify their answers through a class discussion. The lesson closes with an Exit Ticket where students create an arrow using the shapes provided.
	Required **7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	Yes	Materials provide separate teacher materials that support and reward teacher study. The instructional materials provide teacher planning and guidance to support the instructional process. A Teacher's Guide is provided in two volumes. Volume 1 contains Units 1, 2, and 3: Lessons 1-15 and Volume 2 contains Units 4, 5, and 6: Lessons 16-32. Before each unit, a Math Background is included and provides information to aid the teacher in unpacking the models, progressions, and teaching tips for the unit. Lesson Overviews provided before each lesson

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			lists standards, objectives, vocabulary to be learned and includes a Lesson Pacing Guide. Also listed, are the prerequisite skills and the Learning Progression of what is learned in Kindergarten, what will be learned in the lesson, and how learning within the lesson will prepare them for accessing Grade 1 content. The Teacher Guide supports the instructional process through the lesson with teacher prompted questions provided along with "Listen for" suggestions. For example, in Unit 5, Lesson 30, Count to 100 by Ones, the teacher is prompted to have students share what they know about calendars. The "Listen for" suggestions are, "They help me to know the date. They show me the different months. They show the days in the month. I can count the days in a month." Teachers are also provided with "Real-World Connections" throughout the materials. In this same lesson, the materials suggest that teachers "Encourage students to think about situations in the real world in which they would need to count to 100. Give them some ideas, such as counting steps, counting stairs in a tower, counting when playing hide and seek, etc." In Unit 3, Lesson 14, Session 2, students look at a variety of shapes and are asked to circle all shapes that do not have curves. The teacher is encouraged to ask students, "Is there another way they are alike or different?" and to "Listen for students to respond, they all have straight sides. They

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			all have corners" as a way to observe their understanding.
	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	Materials include support for English Language Learners and other special populations. Support is thoughtful and helps those students meet the same standards as all other students. A Language Expectations Rubric is available to provide the teacher with details about English Language proficiency levels in connection with the math standards covered in the unit. For each lesson, an English Language Learner Differentiated Instruction chart is provided to help the teacher when planning instruction to prepare for the activities. An example of the chart is located in Unit 2, Lesson 8 and is designed to help ELL students in preparation for Session 2, "Connect It." Varying levels of support are provided for listening and speaking. For example, in Unit 4, Lesson 18, which addresses LSSM K.OA.A.1, the materials suggest having students read aloud the "Connect It" problem from Session 1. Teacher-guided sentence frames, such as "start with____, take away ____, and ___ are left" assist learners. In Unit 3, Lesson 15, students identify smaller shapes within bigger shapes (LSSM K.G.B.5). The chart suggests that students look at "Connect It" with the teacher and that they repeat the following phrase and add in their answer: "I arranged two squares and made a ____."
	7d) The underlying design of the materials distinguishes between problems and exercises. In essence, the difference is that in solving problems, students learn	Yes	The underlying design of the materials distinguishes between problems and exercises. Session 1 focuses on "Exploring"

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.		the lesson standard(s), Sessions 2 and 3 focuses on "Developing" student understanding of the lesson standard(s), and Session 4 and 5 focus on "Refining" student understanding of the lesson standard(s). During these sessions, students learn new math. For example, in Unit 3, Lesson 13, there are 5 sessions that address LSSM K.G.A.1. In the first session, "Explore," students take part in new learning and in Additional Practice. In the second and third sessions, "Develop," students develop strategies and understanding through problem solving followed by Additional Practice. In the fourth and fifth sessions, "Refine, students strengthen their skills in using position words to describe the relative position of objects in the environment which is also followed by Additional Practice where students apply newly learned mathematical skills and concepts. Each lesson builds in fluency, as seen in Unit 6, Lesson 31 (LSSM K.MD.A.1 and K.MD.A.2) where fluency practice is provided in Sessions 1, 2, and 3. In Session 2, fluency is focused on counting and recognizing numbers to 10.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery using a gradual release model. Each lesson is constructed of three components used over the course: Explore, Develop, and Refine. In Unit 1, Lesson 1, Session 1, students explore counting by thinking about items that people might count and identify items to count in pictures. In

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Sessions 2 and 3, students develop an understanding of counting by finding the total number of objects in a group. In Session 4, students refine their learning by counting to match objects to tiles to find the total number (LSSM K.CC.A.3 and K.CC.B.4). In Unit 1, Lesson 4, Session 1, students develop an understanding of comparing within 5 by using snacks and then counters (LSSM K.CC.C.6). In the session that follows, students further develop strategies for comparing groups of objects by drawing lines to match objects one-to-one. In Session 3, students show more and fewer using dots on a card then compare two groups with the greater number of objects. Additionally, lessons are appropriately structured and scaffolded across units to support student mastery. In Unit 3: Geometry, student knowledge is built over 4 lessons and in Lesson 12, student vocabulary and knowledge of attributes to name shapes is developed. In Lesson 13, students use position words to describe objects in the environment and then apply this knowledge in Lesson 14 as they compare shapes. Students use all knowledge of shapes gained from the unit to create three dimensional shapes in Lesson 15.
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	The LSSM does not call for use of technology for Kindergarten.

FINAL EVALUATION
Tier 1 ratings receive a "Yes" for all Non-negotiable Criteria and a "Yes" for each of the Additional Criteria of Superior Quality.
Tier 2 ratings receive a "Yes" for all Non-negotiable Criteria, but at least one "No" for the Additional Criteria of Superior Quality.
Tier 3 ratings receive a "No" for at least one of the Non-negotiable Criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
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-negotiable Criteria of Superior Quality[4]	1. Focus on Major Work	**Yes**	Materials devote a larger majority of time to the major work of the grade. In this curriculum, 25 out of 32 lessons, or 78%, are focused on major content standards for kindergarten. Materials spend the appropriate amount of time on grade work, while assessing grade level standards.
	2. Consistent, Coherent Content	**Yes**	Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. Materials connect two or more clusters in a domain and two or more domains in the grade level.
	3. Rigor and Balance	**Yes**	Materials are designed so that students develop conceptual understanding of key mathematical concepts, attain fluency and procedural skills, and spend sufficient time working with engaging applications required by the LSSM for Kindergarten. It is evident in the materials that the three aspects of rigor are not always treated together and are not always treated separately.
	4. Focus and Coherence via Practice Standards	**Yes**	Materials address the practice standards in such a way to enrich the content standards of the grade.
II: Additional Criteria of Superior Quality[5]	5. Alignment Criteria for Standards for Mathematical Content	**Yes**	Materials provide extensive work with Kindergarten problems. The problems provide students with the opportunity to practice the standard to build to mastery. In addition, the materials relate

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Kindergarten concepts explicitly to prior knowledge from earlier lessons and are designed so that students connect prior knowledge to new concepts. Materials also include learning objectives that are visibly shaped by LSSM cluster headings and standards for Kindergarten.
	6. Alignment Criteria for Standards for Mathematical Practice	Yes	Materials attend to the full meaning of each practice standard for Kindergarten and provide sufficient opportunities for students to construct viable arguments and critique those of others concerning key mathematics detailed in the content standards. In addition, teacher-directed materials explain the role of the practice standards in the classroom and in student mathematical development. Materials explicitly attend to the specialized language of mathematics. Each Lesson Overview includes language objectives and lesson vocabulary.
	7. Indicators of Quality	Yes	Materials ask students to produce answers in a variety of ways such as solutions in arguments, explanations, diagrams, and mathematical models. Separate teacher materials support and reward teacher study with planning and guidance that supports the instructional process and includes support for English Language Learners and other special populations that is thoughtful and designed to help struggling students. Materials distinguish between problems and exercises with lessons appropriately structured and scaffolded to support student mastery. In addition, the LSSM does not call for use of technology in Kindergarten.

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

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

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:

FOCUS

Focus strongly where the standards focus.

COHERENCE

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

RIGOR

In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.
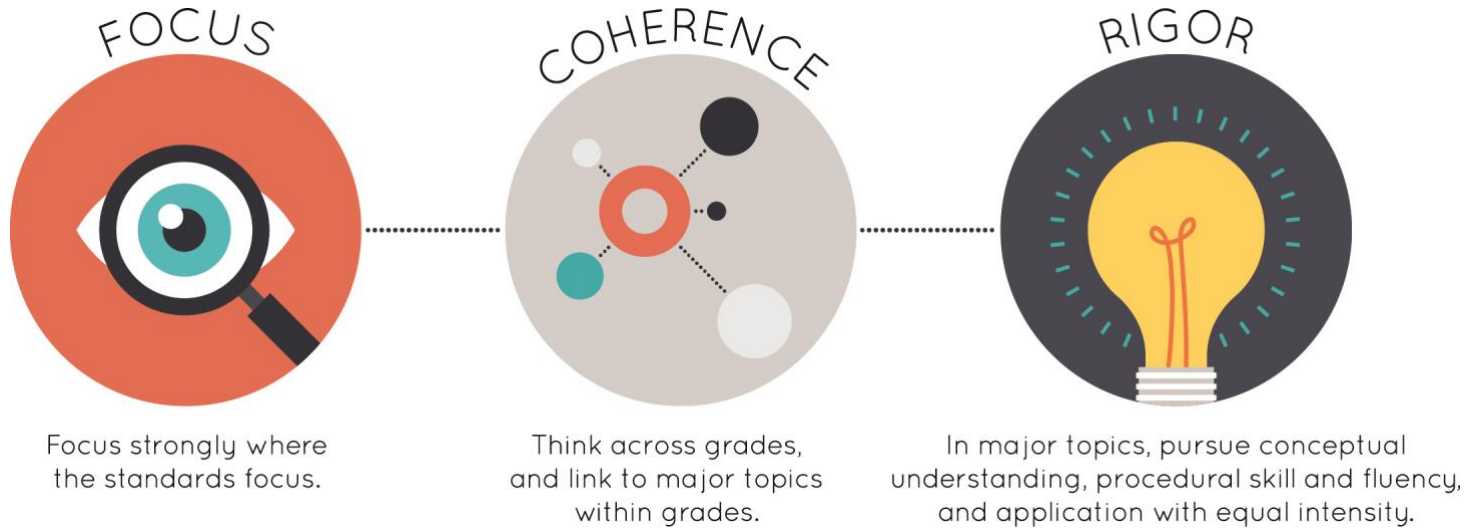
Title: **Ready Classroom Math**   Grade/Course: **1**

Publisher: **Curriculum Associates, LLC**   Copyright: **2020**

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

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

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

To evaluate instructional materials for alignment with the standards and determine tiered rating, begin with **Section I: Non-negotiable Criteria**.

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

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

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

Tier 1 ratings receive a "Yes" for all Non-negotiable Criteria and a "Yes" for each of the Additional Criteria of Superior Quality.
Tier 2 ratings receive a "Yes" for all Non-negotiable Criteria, but at least one "No" for the Additional Criteria of Superior Quality.
Tier 3 ratings receive a "No" for at least one of the Non-negotiable Criteria.

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Section I: Non-negotiable Criteria of Superior Quality **Materials must meet all of the Non-negotiable Criteria 1-4 in order for the review to continue to Section II.**			
Non-negotiable **1. FOCUS ON MAJOR WORK[2]:** Students and teachers using the materials as designed devote the large majority[3] of time to the major work of the grade/course. ☒ Yes ☐ No	**Required** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	**Yes**	Materials devote a majority of time to the major work of Grade 1 with 86% of lessons focused on major content standards. For example, major work for Grade 1 should focus on Operations and Algebraic Thinking and Number and Operations Base Ten of the Louisiana Student Standards for Mathematics (LSSM). Out of 6 units for Grade 1, Units 1 and 2 focus on the Operations and Algebraic Thinking standards of LSSM. In Unit 1, Lesson 7, Session 3, students solve problems with an unknown to understand and apply the properties of operations and the relationship between the addition and subtraction (LSSM 1.OA.B.3). Also in Unit 1, Lessons 1, 5, and 8 focus on LSSM 1.OA.C.6 add and subtract within 20, demonstrating fluency for addition and subtraction with 10 using various strategies. Units 3 and 4 focus on the major standards for Number and Operations in Base Ten. For example, in Unit 3, Lessons 1, 2, and 7 focus on LSSM 1.NBT.B.2, understanding that two digits of a two-digit number represent the amount of tens and ones. In Unit 3, Lesson 19, Session 4, students draw and write to explain the relationship between 1 ten and

[2] For more on the major work of the grade, see Focus by Grade Level.
[3] The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			10 ones to understand that the two digits of a two-digit number represent amounts of tens and ones (LSSM 1.NBT.B.2a).
	Required **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit 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	Materials spend the appropriate amount of time on grade-level work while assessing grade-level standards. The assessment components do not make students or teachers responsible for topics before the grade level in which they are introduced. The lessons and assessments are aligned to the Louisiana Student Standards for Mathematics (LSSM). Assessments include End of Lesson quizzes, Mid Unit Assessments, and End of Unit Assessments. In Unit 3, Lesson 21 Quiz, students decompose two-digit numbers into tens and ones (LSSM 1.NBT.b2). In Unit 1, End of Unit Assessment, students solve word problems for addition and subtraction, apply properties to add and subtract, determine unknown numbers in equations, relate counting to addition and subtraction, and add and subtract within 20 for fluency (LSSM 1.OA.A.1, 1.OA.B.3-4, 1.OA.C.5-6, 1.OA.D.7-8). The Unit 2 End of Unit Assessment assesses student mastery of LSSM 1.MD.C.4, 1.OA.A.2, 1.NBT.B.2a, 1.NBT.B.2b, 1.OA.C.6, and 1.OA.D.8. All items align with Grade 1 LSSM.
Non-negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional	**Required** **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 so that focus and coherence are enhanced throughout the year. In Grade 1, there are

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No			2 supporting standards, LSSM 1.MD.C.4 and 1.MD.D.5. In Unit 2, Lesson 18, students sort objects into categories and answer questions about data using addition, subtraction, and comparison strategies connecting supporting LSSM 1.MD.C.4 to major LSSM 1.OA.A.1. Lesson 24, which is labeled as optional, addresses supporting LSSM 1.MD.D.5 but aligns to LSSM 2.MD.C.8. This is the only lesson that addresses LSSM 1.MD.D.5 and goes beyond the scope of the standard. However, because students are counting coins and using place value concepts as they count by tens and ones, the content supports Major LSSM 1.NBT.A.1.
	Required **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	Yes	Materials for Grade 1 include problems and activities that connect two or more clusters in a domain and two or more domains in the grade level where these connections are natural and important. For example, in Unit 2, Lesson 13, students add within 20 (LSSM 1.OA.C.6) by composing and decomposing numbers to create tens using ten frames and base ten blocks (LSSM 1.NBT.B.2) connecting the Operations and Algebraic Thinking (OA) and Number and Operations in Base Ten (NBT) domains. The OA and NBT domains are also connected in Unit 2 as students first begin to understand teen numbers (LSSM 1.NBT.B.2) and then add numbers by making a 10 (LSSM 1.OA.C.6). In Unit 2, Lesson 18, students collect and organize data (LSSM 1.MD.C.4) and then answer

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			comparison questions by adding and subtracting the data (LSSM 1.OA.A.1 and LSSM 1.OA.A.2) connecting the Operations and Algebraic Thinking (OA) and Measurement and Data (MD) domains. In Unit 3, Lesson 23, and Unit 6, Lesson 35, students refer to fractions of a clock, connecting the Measurement and Data (MD) and Geometry (G) domains. Students practice telling time to the half-hour using analog clocks (LSSM 1.MD.B.3). The clock is partitioned in two different colors to represent the fraction half (LSSM 1.G.A.3). In Units 1 and 2, several connections are made between the clusters of the OA domain. For example, in Unit 2, Lesson 12, the lesson focuses on making a ten to add numbers within 20 (1.OA.C.6) as students apply properties of operations (1.OA.B.3) and use common addition and subtraction situations (such as add to, take from, put together, take apart, and compare) to add one-digit numbers (1.OA.A.1). The lesson connects clusters A, Represent and solve problems involving addition and subtraction; B, Understand and apply properties of operations and the relationship between addition and subtraction; and C, Add and subtract within 20 which are all part of the OA domain.
Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials	**Required** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical	Yes	Materials develop a conceptual understanding of key mathematical concepts for Grade 1. For example, in Unit

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
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. ☒ Yes ☐ No	concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.		1, Lesson 6, students 'count on' to subtract in problem 2 of the Connect It section in Session 2. The problem states, "There are 8 children. 5 are boys. How many are girls?" Students begin with the minuend to 'count on' to equal the subtrahend. This action relates addition to subtraction to build conceptual understanding (LSSM 1.OA.C.5). In Unit 2, Lesson 14, the students add three numbers using the properties of addition, such as the associative property of addition, by strategically grouping the addends to make ten (LSSM 1.OA.B.3). Specifically, in Unit 2, Lesson 14, Session 1, Additional Practice problem 3, students use pictures to add three digits in the word problem which states, "Fong picks up 8 red crayons. Mel picks up 2 blue crayons. Roy picks up 6 green crayons. How many crayons do the children pick up?" Students add 8 and 2 to make a ten, then add 6 to equal 16. This connects the students prior knowledge of 2 digit addition to a new concept that will in later grade levels be regrouping. In Unit 3, Lesson 19, students "show 10 ones and show 1 ten." Students discuss each problem and how they represent the same amount (LSSM 1.NBT.B.2). Materials also help develop conceptual understanding through vocabulary development. For example, in Unit 2, Lesson 12, Session 1, students complete a graphic organizer to solidify their understanding of the doubles plus 1 strategy. Students write a definition

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			in their own words, draw a picture, and then create examples and non examples.
	Required **3b) *Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	Yes	Materials are designed so that students attain the fluency and procedural skills required by the standards for Grade 1. Students are expected to develop fluency in addition and subtraction within 10 by the end of Grade 1 (LSSM 1.OA.C.6). Students have several opportunities throughout the materials to meet these fluency expectations. Throughout Unit 1, Numbers within 10: Addition and Subtraction, students learn several strategies to solve addition and subtraction problems and, through this repetition, develop fluency for addition and subtraction within 10. For example, in Lesson 1, students use the counting on strategy to find an unknown sum. In Lesson 2, students use the strategies of doubles and doubles plus 1 to find sums. Other strategies developed in Unit 1 include adding in any order, understanding missing addends, finding number partners for 10, and counting on to subtract. By the end of the unit, students have had multiple opportunities to practice and build fluency for adding and subtracting within 10. Students continue to practice fluency as they progress through the units and build upon this skill as they add and subtract within 20. Opportunities to attain fluency and procedural skills are present in sections entitled Additional Practice and Fluency Practice found within the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Additional Practice portion of the session. For example, in Unit 4, Lesson 25, Session 2, Additional Practice, Fluency Practice, students practice adding multiples of tens using number cards and creating statements to solve. The first partner draws the cards, such as 3 tens and 4 tens. The other partner writes the equation showing the two-digit number for each addend and writes the total, such as 30+40=70. In Unit 5, Lesson 30, Session 2, Additional Practice, students order objects by length (LSSM 1.MD.A.1). In Unit 3, Lesson 20, Session 2, pairs of students complete the Fluency Practice "Count by Ones and Tens" as they take turns counting out loud within different ranges and alternate counting by ones and tens, such as counting by ones from 31 to 38 then counting by tens from 40 to 120 (LSSM 1.OA.C.5).
	Required **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	Yes	Materials are designed so that students spend sufficient time working with engaging applications for Grade 1. There are three application standards for Grade 1: 1.OA.A.1, 1.OA.A.2, and 1.MD.C.4. In order for students to fully master the application standards, students must solve addition and subtraction word problems with two to three whole numbers within 20 using objects, drawings, and equations and must use data to ask and answer questions. In Unit 1, Lesson 7, students apply strategies such as counting on, doubles, doubles plus 1, and missing

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			addends as they use addition and subtraction to solve word problems (LSSM 1.OA.A.1). Students solve word problems such as, "2 dogs drink from a bowl. More dogs come. Now there are 6 dogs. How many more dogs came?" and "Mara has some comic books. She gets 5 more comic books. Now she has 9 comic books. How many comic books did she start with?" Application practice continues in the next lesson as students answer the following word problem, "There are 9 frogs. There are 5 lily pads. How many more frogs are there?" Students are given a drawing to represent and help them solve the problem (LSSM 1.OA.A.1). In Unit 2, Lesson 14, students solve word problems by adding three numbers with a sum less than or equal to 20 (LSSM1.OA.A.2). For example, in Session 2 of the lesson, students solve the problem, "Pat collects 8 cans of food. Max collects 2 cans. May collects 4 cans. How many cans do they collect in all?" After students solve the problem, they discuss the strategy used to group the addends and solve the problem. In Unit 2, Lesson 18, students sort data about types of pets then use pictures to represent the data. After the data table is created, students answer questions like, "How many dogs and cats? How many children have a bird, dog, or cat? How many more children have a dog than a bird?" which allows them to apply what they have learned about addition and

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			subtraction in order to solve the word problem (LSSM 1.MD.C.4).
	Required **3d)** *Balance:* The three aspects of rigor are not always treated together and are not always treated separately.	Yes	The three aspects of rigor are not always treated together and are not always treated separately. Each lesson provides five sessions that develop the Grade 1 standards. The three components of rigor are found within different parts of the lesson, and the lessons align with the expectations of rigor within each standard. For example, in the "Additional Practice" lessons, students have an opportunity to work with fluency standards for Grade 1. In Unit 6, Lesson 34, students build a conceptual understanding of shapes as they identify and understand their attributes. By the end of the lesson, students put shapes together to form new shapes with new attributes (LSSM 1.G.A.2). Within the same lesson, students have the opportunity to work on fluency practice adding two-digit and one-digit numbers, with and without regrouping (LSSM 1.NBT.C.4). In Unit 5, Lesson 30, students order objects by length combining conceptual understanding and procedural skill and fluency (LSSM 1.MD.A.1). Unit 2, Lesson 16, addresses LSSM 1.OA.D.8, "Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = ? – 3, 6 + 6 = ?." Students demonstrate conceptual

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			understanding by using counters to find the unknown of a given problem, such as ? + 7 = 15. Within this lesson, students also work on the fluency standard 1.OA.D.7. Students also have lessons where not all the components of rigor are addressed. For example, in Unit 3, Lesson 19, students focus on conceptual understanding that two-digit numbers represent amounts of tens and ones (LSSM 1.NBT.B.2). In this lesson, students use connecting cubes and ten frames as they compose ones into tens and decompose tens into ones.
Non-negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☒ Yes ☐ No	**Required** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	Yes	Materials address the practice standards in such a way to enrich the content standards of the grade. The Teacher's Guide lists the practice standards that are addressed within each lesson in the table of contents. Additionally, in the Lesson Overview of the Teachers Guide, the Standards for Mathematical Practice are listed, and it is explained where they can be found within the lessons. The practices are utilized in a way to enrich the content standards and not detract from them as seen in Unit 4, Lesson 26, which emphasizes the use of MP.5, MP.7, and MP.8. In the lesson, students recognize the pattern when finding 10 more and 10 less resulting in a change in the tens digit as the one's digit remains the same (MP.8) supporting LSSM 1.NBT.C.5 (ex. When finding "10 more than 48?" or "10 less than 48?"). In the same lesson, students talk to a partner about their drawings of tens and ones. Students

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			are encouraged to describe how they show 10 more and 10 less and strengthen their development of mathematical communication skills by explaining their reasoning (MP.6, MP.2) which also supports LSSM 1.NBT.C.5. In Unit 5, Lesson 31, Session 4, students identify the length of a watch, provide reasoning for their answer, and use their reasoning to explain that the length of measuring units must always be the same to measure an object. This is an example of students using concrete referents to construct an argument to explain their thinking (MP.3) in support of LSSM 1.MD.A.2.

Section II: Additional Criteria of Superior Quality			
5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	**Required** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.	Yes	Materials provide students with extensive work with Grade 1 problems. Students solve grade-level problems in all but one lesson within the curriculum (see Unit 2, Lesson 24 which is optional). In addition, the problems within each session are designed to help build student mastery through practice with the standards. For example, each lesson is broken into 5 sessions with options for additional practice and the opportunity to work with problems in a variety of formats to integrate and extend concepts and skills. In Unit 4, Lesson 25, there are 47 problems for students to solve over the course of the 5 sessions. Students work on using methods such as *counting on using a hundreds chart* to find the sum in the

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			following problem, "Tessa has 30 erasers in a jar. She gets 20 more. How many erasers does she have now?" (LSSM 1.NBT.C.4). In Unit 3, Lesson 22, there are 55 problems aligning with grade-level standards for students to solve over the course of 5 sessions. In Session 1, students solve the problem, "Rosa carries 24 books. Ryan carries 37 books. Who carries more books? Who carries fewer books?" Students use base ten blocks to represent the problem. Students use <, > or = to compare the numbers (LSSM 1.NBT.B.3). In Unit 3, Lesson 23, there are 46 problems for students to solve over the course of 5 sessions. In this lesson, students develop the concept and skill of telling time to the hour and half-hour on analog and digital clocks (LSSM 1.MD.B.3).
	Required **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	Yes	Materials are designed so that students connect prior knowledge to new concepts learned in Grade 1, and in each Lesson Overview a Learning Progression chart is provided. For example, in Kindergarten, students learn how to add and subtract up to 5 (LSSM K.OA.A.5). This skill is then built upon in Unit 1, Lesson 1, as students use the *count on* strategy. Students add 3 and 4 by counting to 3 and then *counting on* to 7 (LSSM 1.OA.C.5). In Unit 2, Lesson 15, students begin by reviewing decomposition of teen numbers and then move to subtraction where they use their prior knowledge of decomposing numbers. Students "Act Out" making a ten in the

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			following problem: "Maria has 16 markers. 9 markers fell out of her bag. How many are left?" by connecting that "16 is 10 and 6 ones, 9 is one less than 10, the answer is 7 because there is 1 left from the 10 added to the 6 ones" (LSSM 1.OA.C.6). In Unit 1, Lesson 4, students explore the relationship between addition and subtraction in order to find missing addends (LSSM 1.OA.B.3 and 1.OA.B.4). In Kindergarten, students learned to solve addition and subtraction problems within 10 using objects and drawings (LSSM K.OA.A.2). In Grade 1, students build upon this knowledge to find unknown addends in problems using the commutative and associative properties (LSSM 1.OA.B.3). In Unit 4, Lesson 25, students work on mastering 1.NBT.C.4 and 1.NBT.C.6. In Kindergarten, students organize objects into groups of 10 and count by 10. Lesson 25 extends this thinking as students view 10 ones as 1 ten. Students draw 40 ones and bundle them into groups of ten (LSSM 1.NBT.C.4). In Unit 5, Lesson 30, students compare the lengths of three objects (LSSM 1.MD.A.1). In Kindergarten, students compare the length of two objects with a measurable attribute in common to see which object is longer or shorter, then describe the difference. In Grade 1, students build upon this prior knowledge to order three objects by length and compare the lengths of two objects indirectly by using the third object (LSSM 1.MD.A.1).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	Yes	Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards for Grade 1. For example, in Unit 1, Lesson 3, the objectives are for students to "Demonstrate fluency for addition within 10 using strategies such as *counting on*; Use the strategy of applying properties of addition to add; Determine the unknown addend that makes the addition equation true for sums of 10; and, Add numbers in any order to find the same total." Objectives reflect the language for addition in LSSM 1.OA.B.3 and 1.OA.D.8, which state, "Apply properties to add and subtract" and "Determine the unknown whole number in an addition or subtraction equation relating three whole numbers." In Unit 6, Lesson 33 the objectives are "Identify the defining attributes of a shape;" "Distinguish between defining and non-defining attributes;" and "Classify a shape based on its defining attribute." These objectives reflect the language of LSSM 1.G.A.1 which states, "Distinguish between defining attributes versus non-defining attributes. Build and draw shapes that possess defining attributes."
6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than	**Required** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice	Yes	Materials attend to the full meaning of each practice standard for Grade 1. In Unit 1, Lesson 7, students engage in MP.1: Make sense of problems and persevere in solving them. In Lesson 7, students discuss the picture in the Model It section. Students communicate how they connect

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detract from the focus and include additional content/skills to teach which are not included in the Standards. ☒ Yes ☐ No	standard. Alignments to practice standards are accurate.		the meaning of the problem to different strategies and models through prompted questions such as, "How would you describe the problem to someone using your own words? How did you begin to solve this problem? Could you begin it in a different way? and What other equation could you use to solve this problem?" These questions support students in the process of making sense of and solving problems. In Unit 1, Lesson 6, students engage in MP.2: Reason abstractly and quantitatively. In Lesson 6, students work on a subtraction word problem. The teacher is prompted in the Teachers Version to ask a series of questions such as, "What does the picture show? How can you change the picture to show what is happening in the problem? How can you write an equation to show what is happening in the problem? and How can a picture help you solve a problem?" These prompted questions help students recognize that a number represents a specific quantity and that quantity is written with symbols in an equation. Creating the picture to match the equation uses reasoning with numbers representing a problem while focusing on the meaning of the quantities. Use of MP.3: Construct viable arguments and critique the reasoning of others is evidenced in Unit 1, Lesson 4, Session 4, Problem 3. Students are asked, "There are 5 beads in all. 4 beads are on the table. The rest are in a

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			cup. Buzz says there are 9 beads in the cup. Do you agree? Why? Why not?" Students use counters to work the problem and discuss their answers with a partner using the following teacher prompted questioning, "Why do you think there cannot be 9 beads in the cup? What do you think Buzz did wrong?" Students analyze the error in the student response and explain the mistake. MP.4: Model with Mathematics is found throughout the curriculum during the Model It portion of student work. Specifically, Unit 2, Lesson 8, Session 3, Problem 5 states, "Joy has 6 square stickers. She has 2 circle stickers. How many fewer circle stickers does she have?" Students compare two quantities to solve problems about which group has fewer by using pictures and concrete objects. MP.5: Use appropriate tools strategically is addressed in Unit 2, Lesson 10, Session 2, Model It problem. Students use a fact table to help with adding numbers. Teachers are prompted to ask the students, "How can the addition fact table help you?" In Unit 5, Lesson 32, students engage in MP.6: Attend to precision. In the lesson, students measure different objects using different tools (toothpicks, paperclips, and/or string). Students attend to precision by being careful about specifying units of measure. An example of MP.7: Look for and make use of structure is evidenced in Unit 3, Lesson 23, Session 3, Model It where

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			students answer questions regarding reading time to the half-hour. Questions include: "What do you know about circles that might help you read time? Why do you think half of the clock face is yellow? Do you think when the minute hand points to 6 it is half past the hour?" In Unit 2, Lesson 13, students engage in MP.8: Look for and express regularity in repeated reasoning. In the lesson, students work with a partner using connecting cubes to make identical cube trains, both beginning with 5 and increase each train by 1. This repeated reasoning helps students to understand doubles facts that have totals greater than 10. Students notice the repetitive actions through the counting and computation of totals greater than 10 to gain a better understanding of place value.
	Required **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	Yes	Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key Grade 1 mathematics detailed in the content standards. Each lesson has a Try-Discuss-Connect Routine that allows students to discuss their solution strategies and explain and critique their reasoning. With this model, students explore, discuss, and connect their learning. For example, in Unit 1, Lesson 6, students are presented with the problem, "6 children are outside. 4 play ball. How many are not playing ball?" Students are asked to model their thinking using a

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			drawing then discuss this question, "How can counting help solve the problem?" (LSSM 1.OA.C.5). In Unit 3, Lesson 19, students model a number using base ten blocks and then talk to a partner about their models (LSSM 1.NBT.B.2). Teachers are prompted to guide the discussion with the following questions: "What is the same and what is different about the numbers of tens and ones? Would it make sense to count the tens and ones the same way? Explain." This discussion demonstrates the use of MP.6 in which the students begin to develop their mathematical communication skills as they explain their reasoning. In Unit 5, Lesson 30, Session 3, students observe a picture of three flowers of different heights. They are asked, "Buzz says the red flower is the shortest. Do you agree or not? Explain." (LSSM 1.MD.A.1). Students must explain their viewpoint and be able to support their answer. In Unit 6, Lesson 34, students use pattern blocks to make hexagons (LSSM 1.G.A.2). Students discuss with a partner the following questions, "Did you use different pattern blocks than your partner? Can you describe your picture to your partner? Do you think there is another way to make this hexagon?" Students compare the different representations and identify how they are related. Students then answer the following questions, "What is the fewest number of shapes someone can use to make the hexagon? and What is the

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			greatest number of shapes someone used?"
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	Yes	Materials include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. A section entitled, "Standards for Mathematical Practice in Every Lesson" is provided at the beginning of the Teacher Version. This section explains where the teacher will find and use the Mathematical Practice within the lessons. The table of contents pages for each unit lists the practices under each lesson. The Lesson Overview lists the mathematical practices emphasized in the lesson. The Teacher Version includes sections such as Make Sense of the Problem that explain the role of the math practices specific to the lesson. For example, in Unit 2, Lesson 16, teacher guidance states, "Read the problem aloud. To support children in making sense of the problem, prompt them to relate the problem to the previous session. Ask How is this problem like the ones you solved in the previous session? How is it different?" Lessons also include "Deepen Understanding," "Discourse Questions," and "Structure and Reasoning" sections in the Teacher Version. These sections guide teachers to help students develop and utilize the math practices. For example, in Unit 2, Lesson 16, Session 2, the Deepen Understanding section provides the teacher guidance on helping

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			students utilize MP.7: Look for and make use of structure. Teachers are instructed to ask, "Why is making a ten frame a strategy that helps solve this problem? What are some other strategies you could use? Why do you think it is important to know facts like number partners for 10 and doubles facts when solving an equation with an unknown number?" Student "Listen Fors" are also provided. The Mathematical Practices are embedded in the "Try-Discuss-Connect" instructional routine found in each lesson. Throughout the materials, teacher questions are provided that encourage students to explain their thinking such as, "What strategy did you use to keep track of your counting? How did you show adding the pennies? and How did using tens help you find the total?" as evidenced in Unit 5, Lesson 29.
	6d) Materials explicitly attend to the specialized language of mathematics.	Yes	Materials explicitly attend to the specialized language of mathematics. Each Lesson Overview includes language objectives and lesson vocabulary. For example, in Unit 1, Lesson 1, Session 3, "Develop Language," students practice writing questions about the total number of objects using terms "how many" and "in all" (LSSM 1.OA.C.5). Mathematical terminology is written in black bold lettering on the Student Version throughout the units. For example in Unit 2, Lesson 18, the vocabulary includes the following terms: data, picture graph, sort, tally chart, tally marks, and compare (LSSM

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			1.MD.C.4). Each term is defined, and in Session 1, Lesson 18, students are to create a graphic organizer on ways to sort. In Session 2 of the same lesson, the following words are bold on the Student Version: data, tally chart, tally marks, and picture graph, drawing attention to the terminology used to discuss organizing data in charts and graphs (LSSM 1.MD.C.4). In Unit 3, Lesson 21, Lesson Overview, lesson vocabulary includes digits and place value. In Session 1, Additional Practice, students use words, numbers, and pictures to define digit and explore the meaning of place value (LSSM 1.NBT.B.2). Another example is found in Unit 4, Lesson 29, where the term "tens" is listed in the Lesson Overview. In Session 1, students brainstorm using a graphic organizer and list what they know about tens and different ways to represent them (LSSM 1.NBT.C.4).
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. ☒ Yes ☐ No	**Required** **7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	**Yes**	In the materials, students are asked to produce answers in a variety of ways. Students are asked to produce answers and solutions in arguments, explanations, diagrams, and mathematical models. For example, in the Unit 2, Lesson 15, Lesson Quiz, students fill-in the blanks with correct answers, circle the correct responses, and write a number sentence that is used to solve problems that involve addition and subtraction with the unknown in different positions (LSSM 1.OA.D.8). In Unit 2, Lesson 16, students

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			find the unknown (LSSM 1.OA.D.8). In Session 1 of the lesson, students answer the following, "5 lions are drinking. More lions join them. Now there are 9 lions. How many lions joined them?" Students draw a representation of the problem to find the answer. In the same lesson, students are shown 7 red counters and 8 yellow counters and asked to complete the following, " 7 + __ = 15." In Unit 3, Lesson 22, students compare numbers to find which is greater (LSSM 1.NBT.B.3). Students use base ten blocks and place value charts to determine how the position of the digits in the number determines the number's value. Students model the problem using base ten blocks or the place value chart, then discuss their method with a partner in the "Try It" section of the page. From their model, students write a statement justifying who has more from the problem in the "Model It" section of the page. Students continue to compare numbers describing the method they have chosen in the "Connect It" section of the page. Finally, students are given the opportunity to practice comparing two digit numbers in the "Apply It" section. After completing the problems independently, students justify their answers through class discussion. The lesson closes with an "Exit Ticket" where students choose the method of solving the comparison. In Lesson 34, students identify the names of different types of

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			shapes (LSSM 1.G.A.2). These shapes include 3D and flat shapes. Students are then given pattern blocks and asked to create hexagons using the shapes given.
	Required **7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	Yes	Materials provide separate teacher materials that support and reward teacher study. The instructional materials provide teacher planning and guidance to support the instructional process. A Teacher's Guide is provided in two volumes. Volume 1 contains Units 1 and 2: Lessons 1-18 and Volume 2 contains Units 3 through 6: Lessons 19-35. Before each unit, a Math Background is included and provides information to aid the teacher in unpacking the models, progressions, and teaching tips for the unit. Lesson Overviews provided before each lesson list the standards, objectives, and vocabulary to be learned and includes a Lesson Pacing Guide. The Teacher Guide helps guide the instructional process through the lesson. Teacher prompted questions are provided with "Listen for" suggestions. For example, in Unit 1, Lesson 6, under the heading "Act Out the Problem," the teacher asks, "How many children do not wear caps? How do you know?" The suggested "Listen for" states, "2 children do not wear caps. The group of 5 is broken into a group of 3 who do wear caps and the rest, which is a group of 2." Within each lesson the Deepen Understanding section provides teachers insight into probing questions in order to help students grasp the content. For

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			example, in Unit 2, Lesson 15, the teacher is encouraged to ask, "How can you use the parts and the whole to explain why 9 + __ = 13 can help you solve 13 - 9 = ___." Teachers are then provided what to listen for and generalizations that should take place. Another example is the Lesson Overview in Unit 5, Lesson 31, in the Learning Progression section. The progression describes what students learned in Kindergarten, what they have previously learned in Grade 1, and what they will learn in Grade 2 in connection with the standard (1.MD.A.1).
	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	Materials include support for English Language Learners and other special populations. Support is thoughtful and helps those students meet the same standards as all other students. A Language Expectations Rubric is available to provide the teacher with details about English Language proficiency levels in connection with the math standards covered in the unit. For each lesson, an English Language Learner Differentiated Instruction chart is provided to help the teacher when planning instruction to prepare for the activities. An example of a chart is located in Unit 2, Lesson 12, Session 1, "Additional Practice." Small group differentiation is also provided in "Lesson Pacing" found on the right hand side of the page. In Unit 2, Lesson 14, materials suggest having a group of 3 or 4 students brainstorm ways to complete the

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			sentence starter, "A ten-frame helps me add three numbers because ___." It goes on to give other examples for high achieving ELL students. In Unit 2, Lesson 15, Session 2, students make a ten when subtracting in the following problem: "Sam has 15 stamps. He uses 9 stamps. How many stamps are left?" The teacher guide advises the use of a visual model and states, "If the student is unable to make a ten to subtract, then use the visual model provided as an alternate way to seeing a 10 as an anchor number." Another example is evidenced in Unit 3, Lesson 24, which focuses on LSSM 1.NBT.C.4. The section for ELL learners suggests pulling a hundreds chart to help build understanding and saying, "Circle 22. How can you *count on*?" Students share their thoughts. The teacher then writes 38 as 3 tens and 8 ones. The teacher models counting on from 22 by adding 3 tens and 8 ones. In Unit 4, Lesson 25, Session 2, an "Error Alert" statement is given under the Exit Ticket in the Teacher's Guide. If students do not write the correct answer of "60 tens+30 tens," the teacher is advised to help them visualize 60 tens using base ten blocks, if needed.
	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 underlying design of the materials distinguishes between problems and exercises. Session 1 focuses on "Exploring" the lesson standard(s), Sessions 2 and 3 focus on "Developing" student understanding of the lesson standard(s),

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			and Sessions 4 and 5 focus on "Refining" student understanding of the lesson standard(s). During these sessions, students learn new math. Additional Practice, also available in Sessions 1-4, provides the opportunity to apply newly learned math. For example, Unit 4 Lesson 25, students add and subtract tens and multiples of tens (LSSM 1.NBT.C.4). In the first session, "Explore," students take part in new learning and the Additional Practice helps them practice their newly learned strategies. In the second and third sessions, "Develop," students continue to develop strategies and understanding through problem solving, followed by Additional Practice. In the fourth and fifth sessions, "Refine," students continue to strengthen their skills in adding and subtracting tens and multiples of tens followed by Additional Practice to apply newly learned mathematical skills and concepts.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery using a gradual release model. Each lesson is constructed of three components used over the course in 5 sessions: Explore, Develop, Refine. Lessons begin by connecting to prior knowledge. For example in Unit 1, Lesson 9, students explore the understanding of true and false equations (LSSM 1.OA.D.7) by "Acting Out" two different addition problems with the same total. Students draw out a

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			representation and an equation to match the first problem, "Tom has seven beads but lost three." Students then draw out the second problem and then represent it with an equation, "Dee has 6 beads but lost two." Students are then asked if Tom and Dee have the same number of beads. Later, in Session 3, students use different number bonds to show the same total. Another example is evidenced in Unit 3, Lesson 23, as students develop concepts and skills to tell time (LSSM 1.MD.B.3). Students begin Session 1 by drawing the hour hand to show the time listed. At this point, students are identifying only the hour. In Session 3, students begin to identify the hour and half hour. In Unit 4, Lesson 28, students review making a ten to add to with a single-digit number (LSSM 1.NBT.C.4). This activity helps to prepare the student to add two digit numbers. Students are then presented with the problem, "Lou has 18 blue buttons and 7 red buttons. How many buttons in all?" Students are to model the problem using counters. Next, students model the problem in a pictorial way using sticks and circles as tens and ones. Later, in Session 3, Lesson 28, students add using abstract strategies. In addition, notes are written in the margins of the Teacher's Guide advising teachers on how to support the class as a whole or specifically for students who are struggling to obtain mastery.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	7f) Materials support the uses of technology as called for in the Standards.	**Yes**	The LSSM does not call for use of technology for Grade 1

FINAL EVALUATION

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

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

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

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

Section	Criteria	Yes/No	
I: Non-negotiable Criteria of Superior Quality[4]	1. Focus on Major Work	**Yes**	Materials devote the majority of the time to the major work of the grade with 30 out of 35 (86%) lessons focused on major content standards for Grade 1. In addition, the materials spend the appropriate amount of time on grade level work while assessing grade level standards.
	2. Consistent, Coherent Content	**Yes**	Materials connect supporting content to major content in meaningful ways so that the focus and coherence are enhanced throughout the year. Materials connect two or more clusters in a domain and two or more domains in the grade level.
	3. Rigor and Balance	**Yes**	Materials are designed so that students develop conceptual understanding of key mathematical concepts, attain fluency and procedural skills, and spend sufficient time working with engaging applications required by the standards for Grade 1. The three aspects of rigor are not always treated together and are not always treated separately.
	4. Focus and Coherence via Practice Standards	**Yes**	Materials address the practice standards in such a way to enrich the content standards

[4] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier I or Tier II rating.
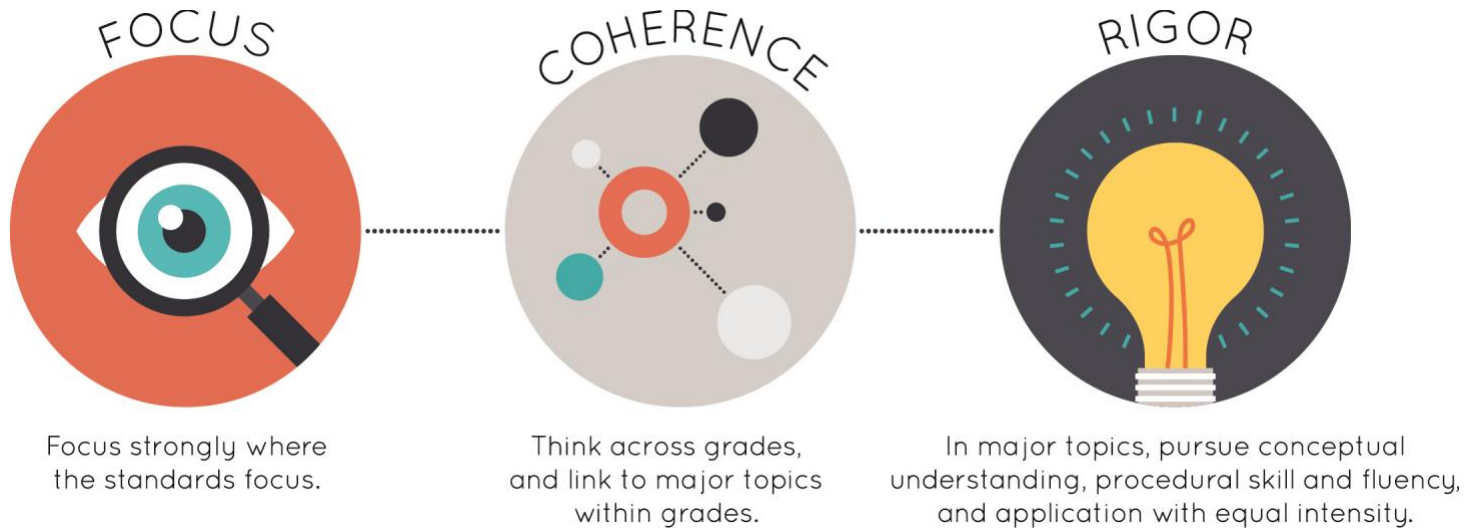
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			of the grade.
II: Additional Criteria of Superior Quality[5]	5. Alignment Criteria for Standards for Mathematical Content	Yes	Materials provide extensive work with Grade 1 problems which students solve in all but one lesson within the curriculum. The problems provide students with the opportunity to practice the standard to build to mastery. In addition, the materials are designed so that students are able to connect prior knowledge to new concepts. Materials also include learning objectives that are visibly shaped by LSSM cluster headings and standards for Grade 1.
	6. Alignment Criteria for Standards for Mathematical Practice	Yes	Materials attend to the full meaning of the practice standards for Grade 1 and provide sufficient opportunities for students to construct viable arguments and critique those of others concerning key mathematics detailed in the content standards. In addition, teacher-directed materials explain the role of the practice standards in the classroom and in student mathematical development. Materials explicitly attend to the specialized language of mathematics. Each Lesson Overview includes language objectives and lesson vocabulary.
	7. Indicators of Quality	Yes	Materials ask students to produce answers in a variety of ways such as solutions in arguments, explanations, diagrams, and mathematical models. Separate teacher materials support and reward teacher study with planning and guidance that supports the instructional process and

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			includes support for English Language Learners and other special populations that is thoughtful and designed to help struggling students. Materials distinguish between problems and exercises with lessons appropriately structured and scaffolded to support student mastery. In addition, the LSSM does not call for use of technology in Grade 1.

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

Instructional Materials Evaluation Tool for Alignment in

Mathematics Grades K – 12 (IMET)

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:

FOCUS

Focus strongly where
the standards focus.

COHERENCE

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

RIGOR

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

Title: **Ready Classroom Math**   Grade/Course: **2**

Publisher: **Curriculum Associates, LLC**   Copyright: **2020**

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

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

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

To evaluate instructional materials for alignment with the standards and determine tiered rating, begin with **Section I: Non-negotiable Criteria**.

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

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

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

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

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

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

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Section I: Non-negotiable Criteria of Superior Quality **Materials must meet all of the Non-negotiable Criteria 1-4 in order for the review to continue to Section II.**			
Non-negotiable **1. FOCUS ON MAJOR WORK[2]:** Students and teachers using the materials as designed devote the large majority[3] of time to the major work of the grade/course. ☒ Yes ☐ No	**Required** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	Yes	Materials devote a majority of time to the major work of Grade 2 with 75% of the lessons focused on major content standards. For example, major work for Grade 2 should focus on Operations and Algebraic Thinking, Measurement and Data, and Number and Operations Based Ten of the Louisiana Student Standards for Mathematics (LSSM). In Volume 1, Unit 2, Lesson 7, Session 2, students fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction (LSSM 2.NBT.B.5). In Volume 2, Unit 3, Lesson 14, Session 2, students compare 2 three-digit numbers through picture models, charts, and by using terms greater than, less than, or equal to (LSSM 2.NBT.A.4).
	Required **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit 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	Materials spend minimal time on content outside of the appropriate grade level. In assessment materials, the components do not make students and teachers responsible for any topics before the grade in which they are introduced. Lesson 0 provides a set of 5 sessions to use at the start of the first unit in order to review key concepts for the start of the school year and to familiarize students with the Try-

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[2] For more on the major work of the grade, see Focus by Grade Level.
[3] The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Discuss-Connect it routine that is used throughout the materials. The materials clearly state the purpose of this lesson, and the lesson is suggested for teachers to use before starting Lesson 1. The remaining 32 lessons focus on grade level standards. For example, in Unit 1, Lesson 2, students add and subtract within 20 by making ten, counting on, and using related addition fact strategies, aligning to LSSM 2.OA.B.2. In Unit 5, Lesson 29, students partition shapes in fractional parts and identify those parts as halves, thirds, and fourths, aligning to LSSM 2.G.A.3. The assessment components include lesson quizzes, mid-unit assessments, and unit assessments. Each assessment item directly correlates to the LSSM for Grade 2. For example, the Unit 2, Mid-Unit assessment aligns to LSSM 2.NBT.B.5. In the first problem, students select different ways to find 38 + 26. In the third problem, students analyze a worked example (73 - 46 = 33) by first stating whether the answer is correct and then explaining how addition can be used to check the answer. In Unit 3, Lesson 14 Quiz, students use place value understanding using symbols, words, and numbers to compare three-digit numbers (LSSM 2.NBT.A.4).
Non-negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and	**Required** **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 so that focus and coherence are enhanced throughout the year. In Grade 2, there are 3 supporting clusters, 2.OA.C, 2.MD.C, and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
consistent with the content in the Standards. ☒ Yes ☐ No			2.MD.D. In Unit 1, Lesson 4, students collect data and represent it on a graph, then solve addition and subtraction problems connecting supporting LSSM 2.MD.D.10 to major LSSM 2.OA.A.1. In Unit 2, Lesson 11, students read time to the nearest 5-minute interval by skip counting by fives connecting supporting LSSM 2.MD.C.7 to major LSSM 2.NBT.A.2. In Unit 4, Lesson 27, Session 2, students compare and organize measurements, then summarize their data on a number line connecting supporting LSSM 2.MD.D.9 to major LSSM 2.MD.B.6.
	Required **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	Yes	Materials for Grade 2 include problems and activities that connect two or more clusters in a domain and two or more domains in the grade level where these connections are natural and important. For example, in Unit 2, Lesson 9 connects the Number and Operations in Base Ten (NBT) and Operations and Algebraic Thinking domains (OA). In Session 1, students solve one and two-step word problems using a number line (LSSM 2.OA.A.1 and 2.NBT.B.5). In Unit 2, Lesson 10, students solve word problems involving money (LSSM 2.MD.C8 and 2.OA.A.1). In Session 3 of the lesson, students identify the value of coins then add the amounts together to find the total amount of money. Unit 3, Lesson 15 connects clusters (A. Understand Place Value and B. Use place value understanding of operations to add and subtract) within the same domain,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Number and Operations in Base Ten (NBT). In this lesson, students skip count by 5s, 10s, and 100s from various starting points, such as 45 or 235, then identify patterns as they skip count. In doing so, students develop strategies to mentally add 10 and 100 to three-digit numbers and subtract 10 and 100 from three-digit numbers.
Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**Required** **3a) _Attention to Conceptual Understanding:_** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	Yes	Materials develop conceptual understanding of key mathematical concepts for Grade 2. For example in Unit 2, Lesson 6, students draw on their knowledge of adding one-digit numbers in order to add two-digit numbers. Students model their thinking by drawing pictures and explore other models that represent adding. In Unit 2, Lesson 8, students explain why addition and subtraction strategies work (LSSM 2.NBT.B.9). In Session 3, students are to "Explain how you find the missing addend in this equation: ? + 48 = 83." In Unit 3, Lesson 12, students model three digit numbers using base ten blocks. The lesson builds conceptual understanding as students model three digit numbers as ones, tens, and hundreds then write the digits into a place value chart (LSSM 2.NBT.A.1). In Unit 5, Lesson 32, students begin to explore even and odd numbers through pictures and define numbers as even or odd depending on whether they can be represented in two equal groups or groups of two without leftovers. Students move toward identifying odd and even numbers

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			by writing an equation to express doubles or as two equal addends connecting the concept to the picture (LSSM 2.OA.C.3).
	Required **3b)** *Attention to Procedural Skill and Fluency:* The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	Yes	Materials are designed so that students attain the fluencies and procedural skills required by the standards for Grade 2. Students are expected to develop fluency (LSSM 2.OA.B.2) in single digit sums and differences and (LSSM 2.NBT.B.5) in addition and subtraction within 100. In Unit 1, students build an understanding of addition and subtraction within 20 and over time build strategies that help them become fluent in single digit sums and differences. In Unit 2, students continue to build upon this understanding as they learn strategies to add and subtract within 100. This extends to include money and time, allowing students additional practice in adding and subtracting within 100. Additionally, procedural skill and fluency is built across the materials through various components including Interactive Practice activities, Learning Games, Fluency Skills and Practice sheets, Math Center Activities, and Unit Games. Fluency, labeled as "Building Fluency" and "Fluency Practice" in green boxes throughout the teacher materials within the "Additional Practice" sections builds procedural skill and fluency expectations. For example, in Unit 1, Lesson 2, Session 3, the Additional Practice Fluency activity, students practice solving subtraction problems by using the counting on and making a ten strategy

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			(LSSM 2.OA.B.2). In Unit 2, Lesson 7, Session 2, Additional Practice Fluency activity, students practice the skill of subtracting two digit numbers by adding up. In Session 3, Additional Practice Fluency activity, students practice regrouping a ten when subtracting two digit numbers (LSSM 2.NBT.B.5). In Unit 4, Lesson 24, students compare the lengths of objects by determining which measure is greater or less and then use addition and subtraction to compare lengths. Students then have the opportunity to practice these skills during Session 2, Additional Practice Fluency activity, as students practice measuring lengths in centimeters and then use subtraction to find the difference between two lengths (LSSM 2.MD.C.4).
	Required **3c) _Attention to Applications:_** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	Yes	Materials are designed so that teachers and students spend sufficient time working with engaging applications for Grade 2. There are four application standards for Grade 2: 2.OA.A.1, 2.MD.B.5, 2.MD.C.8, and 2.MD.D.10. The materials provide opportunities to meet these expectations. For example, in Unit 1, Lesson 3, Session 4, students answer the following word problem: "There are 14 dogs at the dog park. There are 6 black dogs. The rest are brown. How many brown dogs are at the dog park?" Students can apply their knowledge of addition and subtraction to solve the one-step word problem (LSSM 2.OA.A.1). In Unit 1, Lesson 5, students use

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			strategies to solve one-step word problems in order to solve two-step word problems by seeing two-step problems as a sequence of a one-step problem. This is evidenced in the first problem of the Explore section which states, "Eve has 3 striped banners and 3 dotted banners. She makes 7 white banners. How many banners does she have now?" Students are asked to show their thinking through models such as drawings, counters, bar models or equations (LSSM 2.OA.A.1). Another example is found in Unit 2, Lesson 10, which focuses on LSSM 2.MD.C.8. Students use their knowledge of counting by 1s, 5s, and 10s to count money. In the lesson, students are asked to solve the following problem: "Sadie has the same amount as one quarter. What amounts are the same?" Students circle all the amounts that apply. In Unit 4, Lesson 25, students use addition and subtraction to solve problems involving lengths (LSSM 2.MD.B.5). This is seen in the first problem of the Develop section which states, "Michaela has a string of beads that is 56 centimeters long. She cuts off 8 centimeters to make it the right length for a necklace. How long is the string of beads now?"
	Required **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	Yes	The three aspects of rigor are not always treated together and are not always treated separately. Each lesson provides 3 to 5 sessions that develop Grade 2 standards. The three components of rigor

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			can be found in different parts of the lesson. For example, in the "Additional Practice" lessons, students have an opportunity to work with fluency standards. In Unit 4, Lesson 22, students use rulers to measure objects in various units, then compare the lengths of the objects to nonstandard units. In Lesson 22, the "Additional Practice" section, students practice using fluency (LSSM 2.MD.A.1 and 2.MD.A.2). In Lesson 8, the "Additional Practice" section, Session 2, students practice fluency by finding a missing addend (LSSM 2.NBT.B.5). The lessons also include a blend of rigor components when necessary. For example, in Unit 3, Lesson 14, students "evaluate models of three-digit numbers to determine whether numbers are greater than, less than, or equal to each other." In the Explore section, students use various strategies to compare a two-digit and three-digit number, such as using base-ten blocks, place value number cards. Students then compare numbers of each place value and write the numbers in expanded form to compare the hundreds, tens, and ones. Students use similar strategies in the Develop section as they compare two 3-digit numbers. Although the lesson focuses on the conceptual understanding of comparing 3-digit numbers, students also have the opportunity to fluently practice comparing 3-digit numbers in the Additional Practice Fluency activity of the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			lesson. Unit 1, Lesson 4 focuses on procedural skill and fluency and application, as expected by the standard. In the lesson, students work on the procedural skill of collecting and graphing data on a bar graph or picture graph and then compare the data. Throughout the lesson, students also apply these skills as they solve addition and subtraction word problems within 20, based on data. (LSSM 2.MD.D.10 and 2.OA.A.1).
Non-negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☒ Yes ☐ No	**Required** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	**Yes**	Materials address the practice standards in such a way to enrich the content standards of the grade. The Teacher's Guide lists the practice standards that are covered within each lesson in the table of contents. Additionally, in the Lesson Overview of the Teachers Guide, the Standards for Mathematical Practice (MP) are listed, and it is explained where they can be found within the lessons. For example, in Unit 2, Lesson 6 states that the lesson will emphasize MP.5 and MP.7. In Session 2, students choose tools strategically (MP.5) when adding two-digit numbers. Students recognize that there are multiple ways to solve a problem and that choosing the right model can be helpful when finding a solution. Students are encouraged to discuss the benefits of using base-ten blocks and a place value chart when adding two-digit numbers (LSSM 2.NBT.B.5). Utilization of this practice standard helps students build the conceptual understanding of adding two-

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			digit numbers by using place value concepts. Unit 3, Lesson 18, emphasizes use of MP.4, MP.5, and MP.7. Students look for structure (MP.7) as they use a number line (MP.4) to add 263 and 137 (LSSM 2.NBT.B.7). Students discuss how to use the structure of the number line to add three digit numbers by deciding the values to jump along the line. For example, when starting at 263, students first jump 7 ones to make a ten, then they jump 30 followed by 100. Using a model and the structure of the number line builds students' understanding that breaking the numbers into hundreds, tens, and ones can help them when adding three digit numbers.
Section II: Additional Criteria of Superior Quality			
5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	**Required** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.	Yes	Materials provide students extensive work with Grade 2 problems. Each lesson is divided into 3-5 sessions that include options for additional practice. The materials provide students work with problems in a variety of formats to integrate and extend concepts and skills. For example, in Unit 3, Lesson 18, students add and subtract within 100 using various methods to answer problems. In Session 5, students solve the following problem: "Juan solves this subtraction problem 900-289=601. Explain how Juan could use addition to find out if his subtraction is correct." (LSSM 2.NBT.B.7 and 2.NBT.B.9). There are 54 problems presented over the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			course of 5 sessions. In Unit 4, Lesson 27, students represent and interpret data using line plots. In Session 4, Problem 3, students solve problems involving line plots with measurement such as the following: "Bo is using straws to make a design. Measure the straws below in centimeters. Then make a line plot that shows lengths of all of Bo's straws." (LSSM 2.MD.D.9).
	Required **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	Yes	Materials are designed so that students connect prior knowledge to new concepts learned in Grade 2, and in each Lesson Overview a Learning Progression chart is provided. For example, in Grade 1, students explore the concept of place value by bundling groups of ten ones into one group of ten. Then add a two-digit number with and without composing a ten and mentally find 10 more or 10 less. Second grade extends their understanding of number and place value as they explore three-digit addition and subtraction. They model three-digit numbers and write them in expanded form. In Unit 3, Lesson 16, students extend upon this concept as they explain why addition and subtraction strategies work by using place value and the properties of operations (LSSM 2.NBT.B.7). In Unit 2, Lesson 7, students Subtract Two-Digit Numbers (2.NBT.B.5). In Grade 1, students subtract within 20, and are to recognize that decomposing a number leads to ten and are to utilize addition to solve subtraction problems. In

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Grade 2, students gain fluency in adding and subtracting within 20. Students apply concepts of fact families as they explore how inverse operations can be a tool in solving addition and subtraction problems.
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	Yes	Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards for Grade 2. For example, the Unit 3, Lesson 14 objectives state for students to "evaluate models of three digit numbers to determine whether the numbers are greater than, less than, or equal to each other; express equalities and inequalities using proper notation; and solve problems involving inequalities and justify solutions." Objectives reflect the language and intent of LSSM 2.NBT.A.2 which states, "compare two and three digit numbers based on meanings of the hundreds tens and ones digits using <,>,= symbols to record results." In Unit 6, Lesson 31, the objective is to "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; write an equation to express the sum of the items in an array." Objectives reflect the language and intent of LSSM 2.OA.C.4 to "use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends."

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. ☒ Yes ☐ No	**Required** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	Yes	Materials attend to the full meaning of each practice standard for Grade 2. For example, in Unit 5, Lesson 31, students engage in MP.1: Make sense of problems and persevere in solving them. Teacher notes are provided under "Try It" and guidance given to teachers to support students in making sense of the problem: "Mike puts some stickers into an array. Each row has 5 stickers. Each column has 4 stickers. How many stickers are there in all?" It is suggested to have students identify that the total number of stickers is unknown and is arranged in an array with 5 in each row and 4 in each column. In Unit 1, Lesson 3, students engage in MP.2: Reason abstractly and quantitatively. In Session 3, Picture It, students are given a problem along with an explanation and picture. The problem states, "A small bag holds 3 fewer soccer balls than a big bag. The small bag holds 9 soccer balls. How many balls does the big bag hold?" The teacher is prompted to discuss the explanation and picture and then ask the students to consider how the representation of the information is shown in the problem. Students share their reasoning for identifying the whole and parts of a word problem. In Unit 2, Lesson 10, students work with MP 4: Model with mathematics. The objective of this lesson is to solve word problems that require students to find the total value of a group of different coins. In Session 3 of the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			lesson, students are given a picture of a group of coins and then shown a box model with different coin values in each (10, 5, and 1) to represent the group of coins. They are then asked, "What does each box with a 10 represent? With a 5? With a 1?" The goal is for students to understand that each section with a 10 represents a dime, each section with a 5 represents a nickel, and that each section with a 1 represents. Students then use the model to find the total value of the coins. In Unit 4, Lesson 20, students engage in MP.5: Choose tools strategically. In Session 2, students explore different ways to measure in inches and centimeters. Students discuss correct ways to measure a piece of yarn using both an inch rule and a centimeter ruler. In Unit 2, Lesson 11, students engage in MP.6: Attend to precision. In Session 2, students discuss how to determine the hour and minutes on an analog clock. Students consider how the space between the numbers reflect the passage of time.
	Required **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	Yes	Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key Grade 2 mathematics detailed in the content standards. Each lesson has a Try-Discuss-Connect Routine that allows students to discuss their solution strategies, and explain and critique their reasoning. With this model, students explore, discuss, and then

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			connect their learning. Students are often partnered with one another and listen to and critique each other's reasoning. Students are provided sentence starters and questions for discussion which helps guide students in strengthening their mathematical discourse. For example, in Unit 1, Lesson 3, Session 2, students are presented with the following problem: "There are 15 players on a team. There are 7 girls. The rest of the players are boys. How many boys are on the team?" Students are asked to use a strategy to solve the problem. Then they are asked to discuss with a partner their chosen strategy and why they chose that particular strategy. In Unit 4, Lesson 24, Session 2, students make a bar model to compare the lengths of two pieces of tape and discuss how the lengths of the pieces and the differences can be shown with the model. Teachers are prompted to guide the discussion with the following questions: "How is your strategy like your partners? How is it different? How did your partner help you?" This activity demonstrates use of MP.3 while working towards the expectations of LSSM 2.MD.A.4.
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	Yes	Materials include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. A section titled "Standards for Mathematical Practice in Every Lesson" is provided at the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			beginning of the Teacher Version. This section explains where the teacher will find and use the Mathematical Practice within the lessons. The table of contents pages for each unit lists the practices under each lesson. The Lesson Overview lists the mathematical practices emphasized in the lesson. The Teacher Version includes sections, such as Make Sense of the Problem that explain the role of the math practices specific to the lesson. For example, in Unit 5, Lesson 32, Session 1, teacher guidance states, "To support students in making sense of the problem, help them understand that all of the hats for Rob's team are arranged on shelves. Ask Where does Rob's team put their hats? What are you trying to find out?" Lessons also include "Deepen Understanding," "Discourse Questions," and "Structure and Reasoning" sections in the Teacher Version. These sections guide teachers in helping students develop and utilize the math practices. For example, in Unit 3, Lesson 19, Session 2, the Deepen Understanding section provides teacher guidance on helping students utilize MP.6: Attend to precision. The teacher guidance states, "When discussing breaking the numbers into tens and ones, prompt students to consider how the tens and ones are combined in each pair, and then how the tens and ones in all four addends are combined to find the total. Ask How is each number written in the chart? What

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			do the 7 and 11 mean? What does 5 + 5 tens mean? How can the numbers below the chart be used to find the total of all four numbers?" Student "Listen Fors" are also provided. The Mathematical Practices are embedded in the "Try-Discuss-Connect" instructional routine in each lesson. Throughout the materials, teacher questions are provided that encourage students to explain their thinking such as, "What are you trying to find? What happened to the number of pears in Meg's basket when she picked more? When she gave some away to her friends? How do you know in what order you should add or subtract?" as evidenced in Unit 1, Lesson 5, Session 2.
	6d) Materials explicitly attend to the specialized language of mathematics.	Yes	Materials explicitly attend to the specialized language of mathematics. Each Lesson Overview includes language objectives and lesson vocabulary. For example in Unit 4 Lesson 26 Lesson Overview, lesson vocabulary includes "number line," "difference," "length," "longer," "shorter," and "taller." In Session 1, Additional Practice, students use words, numbers, and pictures to define "number line" and prepare to add and subtract using that strategy (LSSM 2.MD.B.6). In Unit 2, Lesson 11 the vocabulary is "AM," "PM," "skip-counting," "digital clock," "hour," "hour hand," "minute hand," and "minute." Each term is defined and in Lesson 11, Session 1, students create a graphic organizer stating the definition in

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			their own words and are to provide an example of each. The materials also provide teacher guidance to help students become familiar with and utilize the specialized language of mathematics appropriate to the grade level and in line with the standards. For example, in Unit 3, Lesson 12, teachers are prompted to guide classroom discussion with the following: "How do the models for 90 show that 90 is 90 ones or 9 tens?; Is it easier to count to 100 by tens or ones?; How do you know that 100 has 10 more ones or 1 more 10 than 90?" The prompting helps students utilize MP.6 as they develop mathematical communication skills to explain their reasoning about place value of three digit numbers (LSSM 2.NBT.A.1).
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. ☒ Yes ☐ No	**Required** **7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	Yes	In the materials, students are asked to produce answers in a variety of ways. Students are asked to produce answers and solutions in arguments, explanations, diagrams and mathematical models. For example, in Unit 2, Lesson 6, Lesson Quiz, a variety of problem types include choose "Yes" or "No," multiple choice, constructed response, and multiple select formatted problems that involve decomposing two digit numbers into tens and ones, explaining strategies to add two digit numbers, and regrouping when necessary (LSSM 2.NBT.B.5 and 2.NBT.B.9). In Unit 3, Lesson 12, students develop an understanding of one hundred through different models (2.NBT.A.1). In Session 1,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			students are to "Show 100 in different ways." Students are asked to tell how many ones are in 100, how many tens are in 100 and how many hundred are in 100. Students then discuss their findings. In Lesson 19 of the same unit, students build upon their knowledge of adding two 2-digit numbers by adding several 2-digit numbers. In Session 1, students add three 2-digit numbers in order to find the total number of steps taken. Students are encouraged to choose a strategy in order to add the three numbers. For example, students may choose to use a place value chart, base-ten blocks, connecting cubes, number bonds, bar models, or open number lines. Students then create a graphic organizer to think about what "breaking apart numbers" means. The first write a definition, followed by what they know about it. Students then write three different examples using three different strategies. Throughout the sessions students are shown various strategies and have the option to choose which strategy to use as they add several two digit numbers. Students apply this understanding by solving real world problems. In the Lesson Quiz, students engage in a variety of item types, including constructed response items in which they find a solution and either show their work or explain their thinking.
	Required **7b)** There are separate teacher materials that support	Yes	Materials provide separate teacher materials that support and reward teacher

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	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.		study. The instructional materials provide teacher planning and guidance to support the instructional process. A Teacher's Guide is provided in two volumes. Volume 1 contains Units 1 and 2: Lessons 1-11 and Volume 2 contains Units 3, 4, and 5: Lessons 12-32 . Before each Unit, A Math Background is included and provides information to aid the teacher in unpacking the models, progressions, and teaching tips for the unit. Lesson Overviews provided before each lesson list the standards, objectives, and vocabulary to be learned and includes a Lesson Pacing Guide. The Teacher Guide helps guide the instructional process through the lesson. Teacher prompted questions are provided with "Listen for" suggestions. For example, in Unit 4, Lesson 20, Measure in Inches and Centimeters the teacher is prompted to ask students to compare two students' models that helped them find the length of a marker. The suggested "Listen for" states, "One model lines up the zero on the ruler with the left end of the marker and writes the number that the other end of the marker lines up with. Another model lines up inch tiles below the marker then counts them." Teachers are provided Real-World Connections throughout the materials. In the same lesson, the materials suggest that teachers should "Encourage students to think about everyday places or situations where people might want to measure in either

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			inches or centimeters. Have volunteers share their ideas. Examples include: measuring a student's height, measuring the length of a window, or measuring how far apart two rows of desks are."
	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	Materials include support for English Language Learners and other special populations. Support is thoughtful and helps those students meet the same standards as all other students. A Language Expectations Rubric is available to provide the teacher with examples of what the English Language Learners can do based on English Language proficiency levels in connection with the math standards covered in the unit. For each lesson, an English Language Learner Differentiated Instruction chart is provided to help the teacher when planning instruction to prepare for the activities. An example of the chart is located in Unit 4, Lesson 22. The chart is designed to help ELL students in preparation for Session 1, Model It. Varying levels are provided, including Levels 1-3 for Listening/Speaking, 2-4 for Speaking/Writing, and 3-5 Reading/Writing. These types of suggestions are provided throughout the materials. For example, in Unit 4, Lesson 27, the materials suggest having students read aloud problem 3 from Session 3. Guiding questions for teachers include: "Where will you write the shortest length on the line plot? Where will you write the longest length? What will you write in

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			between." It is suggested that the teacher encourage students to draw a line plot and label the values they determine after measuring each straw (LSSM 2.MD.D.9). In Unit 2, Lesson 8, which addresses LSSM 2.NBT.B.5, the section for ELL learners suggests that students work with partners to answer the following question: "Elizabeth has 35 toy cars, what number could we choose to fit on the top shelf? Draw three bookcases with two shelves." Students check their answers by sharing their work with a partner.
	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 underlying design of the materials distinguishes between problems and exercises. Session 1 focuses on "Exploring" the lesson standard(s), Sessions 2 and 3 focuses on "Developing" understanding of the standard(s), and Session 4 and 5 focuses on" Refining" student understanding of the lesson standard(s). During these sessions, students learn new math. Additional Practice provides the opportunity to apply newly learned math. For example, in Unit 2, Lesson 7, there are 5 sessions that address LSSM 2.NBT.B.5 AND 2.NBT.B.9. In the first session, "Explore," students take part in new learning and the Additional Practice helps them practice their newly learned strategies. In the second and third sessions, "Develop," students continue to develop strategies and understanding through problem solving, followed by Additional Practice. In the fourth and fifth

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			sessions, "Refine," students continue to strengthen their skills in subtracting two-digit numbers, followed by Additional Practice for students to apply newly learned mathematical skills and concepts. Each lesson builds in fluency practice as seen in Unit 4, Lesson 25 (LSSM 2.MD.B.5) Sessions 2, 3, and 5. In Session 3, practice focuses on solving two-step problems about length.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery using a gradual release model. Each lesson is constructed of three components used over the course in 5 sessions: Explore, Develop, Refine. For example, in Unit 4, Lesson 23, Session 1, students develop an understanding of estimating lengths by exploring and sharing solution strategies for estimating the length of a toy car in inches (LSSM 2.MD.A.3). In the next session, students further develop strategies for estimating length by solving problems that require them to estimate the length of a postage stamp. In Session 3, students use different objects to estimate the length of different objects. In the final session, students build fluency for estimating and measuring length. Additionally, lessons are appropriately structured and scaffolded across units to support student mastery. Unit 1: Numbers within 20: Addition, Subtraction, and Data build student knowledge over the course of 5 lessons. In Lesson 1, students develop

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			mental math strategies for addition up to 20. In Lesson 2, students develop mental strategies for subtraction within 20. Students apply this knowledge in Lesson 3 as they solve one step word problems involving addition and subtraction within 20. Students then use addition and subtraction strategies as they read and interpret data using bar graphs and picture graphs in Lesson 4. Learning in lessons 1-4 is then extended upon as students solve two-step word problems involving addition and subtraction within 20.
	7f) Materials support the uses of technology as called for in the Standards.	Yes	The LSSM does not call for use of technology for Grade 2.

FINAL EVALUATION
Tier 1 ratings receive a "Yes" for all Non-negotiable Criteria and a "Yes" for each of the Additional Criteria of Superior Quality.
Tier 2 ratings receive a "Yes" for all Non-negotiable Criteria, but at least one "No" for the Additional Criteria of Superior Quality.
Tier 3 ratings receive a "No" for at least one of the Non-negotiable Criteria.

Compile the results for Sections I and II to make a final decision for the material under review.			
Section	**Criteria**	**Yes/No**	
I: Non-negotiable Criteria of Superior Quality[4]	1. Focus on Major Work	Yes	Materials devote the majority of the time to the major work of the grade with 24 out of 32 (75%) lessons focused on major content standards for Grade 2.
	2. Consistent, Coherent Content	Yes	Materials connect supporting content to major content in meaningful ways so that the focus and coherence are enhanced throughout the year. Materials connect two or more clusters in a domain and two or more domains in the grade level.

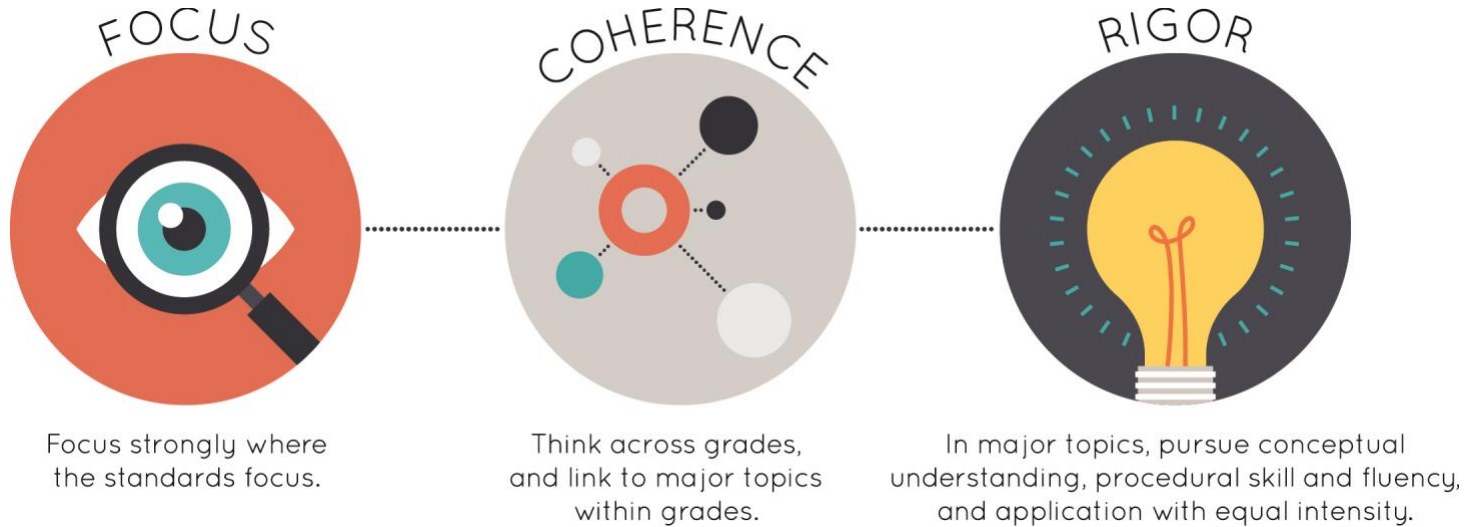[4] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier I or Tier II rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	3. Rigor and Balance	Yes	Materials are designed so that students develop a conceptual understanding of key mathematical concepts, attain fluency and procedural skills, and spend sufficient time working with engaging applications required by the standards for Grade 2. The three aspects of rigor are not always treated together and are not always treated separately.
	4. Focus and Coherence via Practice Standards	Yes	Materials address the practice standards in such a way to enrich the content standards of the grade.
II: Additional Criteria of Superior Quality[5]	5. Alignment Criteria for Standards for Mathematical Content	Yes	Materials provide extensive work with Grade 2 problems. The problems provide students with the opportunity to practice the standard to build mastery. In addition, the materials relate Grade 2 concepts explicitly to prior knowledge from earlier grades and courses and are designed so that students connect prior knowledge to new concepts. Materials also include learning objectives that are visibly shaped by LSSM cluster headings and standards for Grade 2.
	6. Alignment Criteria for Standards for Mathematical Practice	Yes	Materials attend to the full meaning of each practice standard for Grade 2 and provide sufficient opportunities for students to construct viable arguments and critique those of others concerning key mathematics detailed in the content standards. In addition, teacher-directed materials explain the role of the practice standards in the classroom and in student

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			mathematical development. Materials explicitly attend to the specialized language of mathematics. Each Lesson Overview includes language objectives and lesson vocabulary.
7. Indicators of Quality		Yes	Materials ask students to produce answers in a variety of ways such as solutions in arguments, explanations, diagrams, and mathematical models. Separate teacher materials support and reward teacher study with planning and guidance that supports the instructional process and includes support for English Language Learners and other special populations that is thoughtful and designed to help struggling students. Materials distinguish between problems and exercises with lessons appropriately structured and scaffolded to support student mastery. In addition, the LSSM does not call for the use of technology in Grade 2.

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

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

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:

FOCUS

Focus strongly where the standards focus.

COHERENCE

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

RIGOR

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

Title: **Ready Classroom Math**

Grade/Course: **3**

Publisher: **Curriculum Associates, LLC**

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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 and Coherence via Practice Standards (Non-negotiable)	
5. Alignment Criteria for Standards for Mathematical Content	
6. Alignment Criteria for Standards for Mathematical Practice	
7. Indicators of Quality	

To evaluate instructional materials for alignment with the standards and determine tiered rating, begin with **Section I: Non-negotiable Criteria**.

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

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

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

Tier 1 ratings receive a "Yes" for all Non-negotiable Criteria and a "Yes" for each of the Additional Criteria of Superior Quality.
Tier 2 ratings receive a "Yes" for all Non-negotiable Criteria, but at least one "No" for the Additional Criteria of Superior Quality.
Tier 3 ratings receive a "No" for at least one of the Non-negotiable Criteria.

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Section I: Non-negotiable Criteria of Superior Quality **Materials must meet all of the Non-negotiable Criteria 1-4 in order for the review to continue to Section II.**			
Non-negotiable **1. FOCUS ON MAJOR WORK[2]:** Students and teachers using the materials as designed devote the large majority[3] of time to the major work of the grade/course. ☒ Yes ☐ No	**Required** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	Yes	Materials devote the majority of time to the major work of the grade. For example, 81% of total instructional days are devoted to the major work as outlined by the Louisiana Student Standards for Math (LSSM). More specifically, 42% days address the major standards alone while 39% address a combination of major and supporting and additional standards. Approximately 19% of instructional days address the supporting and additional standards. The major work of grade 3 is found within the Operations and Algebraic Thinking (OA) and Numbers and Operation-Fractions (NF) domains. An example of major work is evident in Unit 2, Lesson 4, Understand the Meaning of Multiplication as students make meaningful connections between addition and multiplication. Another example is found in Unit 4, Lesson 21, Understand Fractions on a Number Line, as students learn how fractions compare to a whole unit. Lessons aligning to LSSM 3.MD.A.1b and 3.MD.E.9 were not found.

[2] For more on the major work of the grade, see Focus by Grade Level.
[3] The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	Required **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit 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	Materials spend the appropriate amount of time on grade-level work while assessing the grade-level standards. The assessment components include lesson quizzes, mid-unit assessments, and unit assessments. Each item directly correlates to LSSM for Grade 3. In Unit 1, End of Unit Assessment, students subtract three-digit numbers with regrouping, break apart three-digit numbers to add, and round to the nearest tens place of a three-digit number (LSSM 3.NBT.A.1, 3.NBT.A.2). In Unit 2, Lesson 4, the Lesson Quiz assesses students' ability to relate a multiplication sentence to a picture, correctly identify real-life situations that can be solved using a given multiplication sentence, and complete multiplication sentences that correspond with given information (LSSM 3.OA.A.1). In Unit 4, the Mid-Unit Assessment checks students' mastery of finding fractional units on a number line, describing a fraction model using a numerator and denominator, shading equivalent fractions, and describing a fraction model with a real-life situation (LSSM 3.NF.A.2a, 3.NF.A.2b, 3.NF.A.1, 3.NF.A.3a, 3.NF.A.3b, 3.NF.A.3c).
Non-negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards.	**Required** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.	Yes	Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. Lessons on Major Work precede most on Supporting Work, allowing the Major Work of the grade to be applied and reinforced while students

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
☒ Yes ☐ No			study the Supporting and Additional work of the grade. For example, Unit 3, Lesson 19, Session 2 connects the supporting LSSM 3.MD.B.3 (Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in a scaled bar graph) to major LSSM 3.OA.D.8 (Solve two-step word problems using the four operations). The connection is evidenced in the following problem: "Jamie asks students in his school to choose their favorite season. The picture graph shows how students answered. How many more students chose summer than chose winter as their favorite season?" Another example of the materials connecting a supporting standard to a major standard is found in Unit 4, Lesson 22, Session 3. This session connects supporting LSSM 3.G.A.2 (Partition shapes into parts with equal areas) to major LSSM 3.NF.A.1 (Understand a fraction 1/b, with denominators 2, 3, 4, 6, and 8, as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a part of size 1/b) and to LSSM 3.NF.A.3 (Explain equivalence of fractions with denominators 2, 3, 4, 6, and 8 in special cases, and compare fractions by reasoning about their size). This connection is evident in the following problem: "Four

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			friends each ate a part of their own granola bar. All the granola bars were the same size. Meg ate 4/6, Joe ate 4/8, Beth ate 6/8, and Amy ate 2/3. Which two friends ate the same amount of a granola bar? Complete the models to show that your answer is correct." Another example is seen in Unit 6, Lesson 33, Session 2 with the problem, "Brett folded a piece of paper three times as shown. He then colored ¼ of the total area of the paper red. How could he have colored his paper? Explain how you know your way is right." This connects supporting LSSM 3.G.A.2 to major LSSM 3.NF.A.3.
	Required **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	Yes	Materials include problems and activities that connect two or more clusters in a domain and two or more domains in the grade level where these connections are natural and important. For example, in Unit 2, Lesson 12, clusters 3.AO.A (Represent and solve problems involving multiplication and division) and 3.OA.C (Multiply and divide within 100) connect as students use multiplication charts and fact families to determine the unknown whole number in multiplication and division equations within word problems. In Unit 3, Lesson 18, cluster 3.OA.D connects with 3.OA.A and 3.OA.C as students solve two-step word problems using the four operations by modeling with an equation with an unknown before solving. In Session 3, Problem 8 states "Tabitha has a bag with 24 marbles. There are 6 marbles on

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			the ground. She puts all of the marbles together on the ground and makes rows of 5. How many rows of marbles, *r*, does Tabitha make? Write an equation that can be used to solve the problem. Then solve the problem. Show your work." In Unit 2, Math In Action two domains, Number and Operations in Base Ten (NBT) and Operations in Algebraic Thinking (OA), connect. In Unit 2, Math In Action, Try Another Approach, students are given the following problem: "Seat Set-Up Brandi is planning how to set up seats for a play. My Notes-Use between 80 and 100 seats, make 2 seating sections, the number of seats in each section can be the same or different and use equal rows of seats in each section. Help Brandi set up the chairs. Decide the number of chairs to use. Tell how many seats to put in each section. Tell the number of rows and the number of seats in each row." Three clusters from the domain Operations and Algebraic Thinking (OA) are connected. The clusters A (Represent and solve problems involving multiplication and division), B (Understand properties of multiplication and the relationship between multiplication and division), and C (Multiply and divide within 100) are connected in Unit 2, Lesson 7. For example, see Unit 2, Lesson 7, Session 4 where the problem is for students to "Break apart the array. Then write equations to show how you can use the parts to find 9 x9."

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Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**Required** **3a)** *Attention to Conceptual Understanding:* Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	Yes	Materials develop a conceptual understanding of key mathematical concepts. For example, in Unit 2, Lesson 9, Session 2, Develop, Practice Multiplying with Tens, Problem 6 asks students to "write the multiplication equation that the base ten model shows." Students are shown six groups of base ten rods with 30 in each group (LSSM 3.NBT.A.3). In the Student Worktext, Lesson 10, Session 2, Develop, students develop an understanding of division models and interpret whole-number quotients of whole numbers (LSSM 3.OA.A.2). In Model It: Equal Groups, Problem 1 states, "Marc has 24 oranges to put in bags. He decides to put 6 oranges in each bag. A. Draw a model to show how many bags he has. B. Write the division equation for your model. C. Use words to describe the total number of oranges, number in each group, and the number of groups." LSSM 3.MD.A.1 (understand time to the nearest minute), a conceptual standard, is addressed in Unit 5, Lesson 27. In Session 1, students use various strategies to figure out the time on the clock that displays 8:32. For example, students count by ones, skip count by fives, multiply the 5 and 6 and then add 2, and add 30 and 2. Another conceptual standard, LSSM 3.OA.A.2 (Interpret whole-number quotients of whole numbers), is taught in Unit 2, Lesson 10, Session 3, Apply It. Students are shown an array that Maddy drew. The question

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			asks, "Maddy draws this array of stars to show 8 divided by 4. What did she do wrong?" In Unit 4, Lesson 20, students begin to develop an understanding of what a fraction is (LSSM 3.NF.A.1). In Session 1, Explore, students learn how to name a fraction and then explore how unit fractions help them understand fractions with numerators greater than one. Students are introduced to the terms such as "equal parts, numerator, and denominator." Students are encouraged to use these terms as they answer the following questions, "Why do you need two numbers (numerator and denominator) to show a fraction? How do you know how to write 1/4 in words? Is there another word you could have used? How did you know how to write ½ in words?" In Session 2, Develop, students write fractions for partially shaded models by comparing the number of equal parts and shaded parts. In the problems, a model of a unit fraction is provided in Part a. Students name the unit fraction, such as 1/4, and then use the unit fraction to help name a fraction in Part b of the problem, such as 2/4. Teacher questions are provided to support students' understanding and include, "How did you use unit fractions in Part a to help you write the fractions in Part b in problems 1 and 2? What do you notice about the denominators in problems 1a and 1b? In 2a and 2b? How did you and your partner

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			approach answering problem 3?" In Session 3, Refine, students demonstrate their understanding of fractions and how to represent them. Students then divide and partially shade rectangles to match given fractions and explain their process. For example, in the Apply Problem, students answer the following problems, "1. Create. The part shown is 1/6 of a rectangle. Draw a model to show what the whole rectangle might look like. 2. Explain. Look at these squares. Each is divided into equal parts. Lynn says each square has the same fraction shaded. Rose says each square has a different fraction. Explain who is correct and why. 3. Compare. Look at these triangles. Each is divided into equal parts. What is the same about the fraction of each model that is shaded? What is different about the fraction of each model that is shaded?" Students then complete the lesson quiz to demonstrate understanding by writing fractions shown by an area model, identifying a model that represents a given fraction, and explaining how fractions represented by two models of different sizes are alike and different. This lesson sets the foundation for problem solving with fractions in the subsequent lessons. For example, In Unit 4, Lesson 24, Session 1 Model it, students answer the following question, "Which model at the right has more parts? Which model has smaller parts? Shade ⅓ of model A and ⅛ of model B. Use the

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			fractions ⅓ and ⅛ to complete the sentence _____ is greater than _____." (LSSM 3.NF.A.3d).
	Required **3b) *Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	Yes	Materials are designed so that students attain the fluency and procedural skills as required by the standards. In Unit 1, Lessons 2 and 3, "Fluency and Skills Practice," students add and subtract three-digit numbers. For example, "102 + 107, 317 + 283, 970 - 625, and 882-511." (LSSM 3.NBT.A.2). Students develop procedural and fluency skills with adding and subtracting using strategies and algorithms based on place value, properties of operations, and the relationship between addition and subtraction. Another example, LSSM 3.OA.C.7 (Fluently multiply and divide within 100) is addressed in Unit 2, Lesson 12, Fluency and Skills Practice for the lesson which consists of 20 mixed problems where students fill in the missing numbers in the multiplication or division problem where the empty spaces range from the product to the multiples. For example, "5 x 7 = __", "____ ÷ 5 = 7", and "81÷ __ = 9." LSSM 3.NBT.A.3 (Multiply one-digit whole numbers by multiples of 10 in the range 10 – 90 using strategies based on place value and properties of operations), a procedural skill and fluency standard, is addressed in Unit 2, Lesson 9, Session 3 where one problem is to "Multiply 6 x 90. Show your work." Another set of procedural skill and fluency standards are LSSM 3.G.A.1 (Understand

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			that shapes in different categories may share attributes and that the shared attributes can define a larger category. Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories) and LSSM 3.G.A.2 (Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole). These standards are taught in Unit 6, Lesson 31, and Lesson 33. In Unit 6, Lesson 31, Session 4, question 3 assesses LSSM 3.G.A.1 asking "Which shape is not a rectangle?" In Unit 6, Lesson 33, Session 3 students "Divide the hexagon into 6 equal triangles. Then shade ½ or ⅓ of the area of the hexagon. Tell how you know ½ or ⅓ of the area is shaded." (LSSM 3.G.A.2)
	Required **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	Yes	Materials are designed so that students spend sufficient time working with engaging applications. For example, in Lesson 15, Session 4, Refine, Apply It, Problem 4 states, "Mr. Frank is putting tile on a bathroom wall above the tub. The model shows the length and width of the wall. How many square feet of tile does he need to cover the wall?" A diagram of a rectangular room that is 7 ft X 6 ft is shown, thus addressing 3.MD.C.7b (Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems and represent whole-number products as rectangular

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			areas in mathematical reasoning). In Unit 5, Math in Action, Session 2, Persevere on Your Own states, "Max plans to make tomato soup. His recipe makes 24 liters of soup. He will freeze the soup in containers. Then he'll have plenty of soup snacks ready to go. Max wants to buy some 1-liter containers for the soup. He can buy different packages of 1-liter containers: Package of 4 containers; Package of 5 containers; Package of 6 containers. What packages should Max buy?" Students need to "Tell how many containers Max needs. Tell which packages Max should buy. Tell how many of each package he should buy. Show why their solution gives the exact numbers of containers Max needs" addressing LSSM 3.MD.A.2 (Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms, and liters. Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units.) Three standards taught to the application level of rigor are LSSM 3.OA.A.3 (Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities), 3.OA.D.8 (Solve two-step word problems using the four operations), and 3.MD.A.1.c (Solve word problems involving addition and subtraction of time intervals in minutes). These standards are addressed in Unit 3, Lessons 17 and 18, as

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			well as, Unit 5, Lesson 27. Unit 3, Lesson 17, Session 2 the following problem is given: "Jenna has 30 photos of her friends. She puts 6 photos on each page in her album. How many pages does Jenna use? Show your work." (LSSM 3.OA.A.3). Unit 3, Lesson 18, Session 5 the following problem is given: "Greg is packing a book order. He has already packed 3 boxes with 5 books in each box. There are 210 books left to pack. How many books are in the whole order? Show your work. (LSSM 3.OA.D.8). In Unit 5, Lesson 27, Session 3, students are presented with the following problem: "Jenna gets home from school at 3:30 pm. She does math homework for 10 minutes. Next, she does science homework for 15 minutes. Then she practices the piano for 22 minutes. What time does Jenna finish?" (LSSM 3.MD.A.1.c).
	Required **3d)** *Balance:* The three aspects of rigor are not always treated together and are not always treated separately.	Yes	The three aspects of rigor are not always treated together and are not always treated separately. For example, in Unit 3, Lesson 15, Session 2, "Develop," students build their conceptual understanding of "area" while using the procedural skills of multiplication and division to solve area problems and practice finding areas and side lengths. One problem asks "What is the area of the rectangle?" A picture of a rectangle with a length of 4 cm and a width of 2 cm is shown. "Picture It" states, "You can use square tiles to find the area." "Model It" states, "You can also use a multiplication equation to find the area."

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			(3.MD.C.7b: Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems.) In Unit 6, Math in Action, Persevere On Your Own, students engage in an application problem while applying conceptual understanding to solve the following problem: "At the community center Bella meets an artist who weaves trays. Bella asks the artist to make two snack trays for her. Bella's ideas are shown below (Two rectangles are displayed). Each tray is shaped like a rectangle. Both trays have the same area. The perimeter of each tray is different. The area of each tray is less than 100 square inches. What size trays can Bella ask the artist to make?" (LSSM 3.MD.D.8: Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.) In Unit 5, Lesson 29, Mass, Session 1, the purpose is to have "Students draw on the knowledge of measurement. They estimate and measure an object's mass to explore the concept of mass. They will look ahead to think about a more formal definition of mass and explore units of mass, gram, and kilogram." One problem from Unit 5, Lesson 29, Session 1, explains that "The paper clip measures about 1

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			gram on a scale. How could you estimate the mass of the paintbrush? How could you use paper clips to measure the mass of the paintbrush?" (LSSM 3.MD.A.2: measure and estimate masses of objects, solve word problems involving mass). In Unit 5, Lesson 29, Session 2, the purpose progresses to the following: "Students solve a problem that requires estimating the mass of an object. Students model their reasoning, either on paper or with manipulatives, to develop strategies for estimating mass." A sample problem from Unit 5, Lesson 29, Session 2 asks, "Would you estimate the mass of a table using grams or kilograms? Show your work." In Unit 5, Lesson 29, Session 4, the purpose then progresses to an application where "Students solve word problems involving mass by estimating and by finding exact answers. Then they discuss and confirm their answers with a partner." In Unit 4, Lessons 14 and 15 LSSM 3.MD.C.7 relate "area" to the operations of multiplication and addition. The purpose of Unit 4, Lesson 14 is to have "Students explore the idea of area as the amount of space covered by a shape. The act of measuring area is introduced by showing a rectangle covered in square units." A sample problem from Unit 4, Lesson 14, Session 2 asks "What is the area of the rectangle?" Students are given a rectangle broken into square units. The purpose of Unit 4, Lesson 15, Session 4 is to have "students solve

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			word problems involving finding the area of rectangles and then discuss and confirm their answers with a partner." (LSSM 3MD.C.7.B). A sample problem from this session asks "Which shape below has an area of 12 square feet?"
Non-negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☒ Yes ☐ No	**Required** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	Yes	Materials address the practice standards in such a way to enrich the content standards of the grade. The Math Practices (MP) emphasized in each lesson are included in the beginning of each lesson in the Lesson Overview. MP.1-MP.6 are integrated into every lesson through the Try-Discuss-Connect routine. For example, in Unit 1, Lesson 3, Session 1, Explore, Subtracting Three-Digit Numbers, students engage with MP.1 to solve the following problem: "Eva bought a bag of 475 glass beads. She used 134 beads to make a necklace. How many beads are left in the bag? Try It: To support students in making sense of the problem, have them identify the number of beads Eva used from her bag." (LSSM 3.NBT.A.2). Another example, in Lesson 7, Session 2, Develop, Model It, students engage in MP.6 (Attend to precision) as they use parentheses in expressions to solve, "Matt gives crackers to 8 friends. Each friend gets 7 crackers. How many crackers does Matt give away?" (LSSM 3.OA.A.3). Students see a diagram that shows 8 x 7 as the sum of 8 x (5 + 2) and (8 x 5) + (8 x 2). The materials state, "How are the first two expressions related? Do they have the same value? How does the

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			second expression look without the parentheses? What is the value of this expression? Will it equal 8 x 7? Explain. Why are the parentheses important in this second expression?" Unit 2, Lesson 12, Session 2, Deepen Understanding connects MP.2 (reason abstractly and quantitatively) to LSSM 3.OA.A.4 (determine the unknown whole number in a multiplication or division equation relating three whole numbers). The teacher guides the student discussion about which fact family works for the equation ? x 5 = 40. Unit 2, Lesson 9, Session 2, Deepening Understanding connects MP.4 (model mathematics) to 3.NBT.A.3 (multiply one-digit whole numbers by multiples of 10). Students are guided by the teacher in discussing how an array will look based on facts. Students engage with MP.7 and MP.8 throughout the materials as evidenced in sections, such as Deepen Understanding. For example, in Unit 1, Lesson 7, Session 4, students look for structure (MP.7) as students consider using subtraction when multiplying 8x9. Students use an array made of 8 rows and 10 columns to show that 8x10=80. They break the array apart to smaller arrays to represent 8x9 and 8x1. Students then subtract 8x1 from 8x10, resulting in 81.
Section II: Additional Criteria of Superior Quality			

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	**Required** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.	Yes	Materials provide extensive work with grade-level problems focused on Grade 3 math standards. Each lesson consists of 3-5 sessions that also offer additional practice. The materials provide students the opportunity to work with problems in a variety of formats to help integrate and extend concepts and skills. Learning objectives are listed in the Lesson Overview and align with the LSSM for Grade 3. For example, Unit 2, Lesson 10, the objectives are to "understand division as sharing, knowing the number of equal shares or groups and finding the number in each share or group; understand division as separating equal shares or groups and finding the number of shares or groups; and describe stories or contexts for division expressions, such as 244.The learning objectives and content within the lesson align to LSSM 3.OA.A.2. Within each session, students work through a variety of grade-level problems as they develop concepts and skills. At the end of each session, students complete an exit ticket and have additional practice with more grade-level problems. Some of the sessions offer "Fluency and Skills Practice" sheets as an opportunity for students to develop fluency skills aligned to the procedural and fluency expectations of the LSSM for Grade 3. For example, in Unit 4, Lesson 24 there are five sessions. The problems presented are aligned with 3.NF.A.3 (explain equivalence of fraction in

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			special cases, and compare fractions by reasoning about their size). Students engage a number of grade-level problems within each session and in the "Additional Practice" section. Fluency Skills and Practice sheets are also available for Session 2, 3, and 4. One example of grade-level problems in Session 3, "Additional Practice" has students use a number line to solve problems 5-8. In these problems, students express whole numbers as fractions and are provided more grade-level problems in the Fluency and Skills Practice sheet. Students continue writing whole numbers as fractions. In Unit 4, Lessons 20 - 26 (all sessions) address LSSM 3.NF.A (Develop an understanding of fractions as numbers). Students understand what a fraction is and use a number line, understand and find equivalent fractions, compare fractions using symbols, measure length and plot data on line points, and use fractions in the Math in Action lesson. Unit 2 focuses on LSSM 3.OA.A (Represent and solve problems involving multiplication and division) with Lessons 4 - 7 and Lesson 10 presenting opportunities for students to understand multiplication, multiply with factors of 0 - 8 and 10, and solve problems. Students continue their study of multiplication exploring place value and the connections between multiplication and division.

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	Required **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	Yes	Materials relate grade-level concepts explicitly to prior knowledge from earlier grades and courses. The materials include resources in the Teacher's Guide that explain the prior learning that should have taken place during the previous grade levels. At the beginning of each unit, a section is geared to identifying the learning from the previous year. For example, Unit 3, Lesson 14 (3.MD.C.5a, 3.MD.C.5b, and 3.MD.C.6) connects to Grade 1, Lesson 34 (1.G,A.2), Grade 2, Lesson 21 (2.MD.A.1) and Lesson 30 (2.G.A.2). Grade 3, Unit 3, Lesson 14 prepares the students for Grade 4, Lesson 16 (4.MD.A.3) and Grade 5, Lesson 1 (5.MD.C.3a, 5.MD.C.3b). Another example can be found in the Unit 6 overview where Lesson 30 (3.G.A.1) connects Grade 4, Lesson 30 and 31 (4.G.A.1, 4.MD.C.5, 4.MD.C.5a, 4.MD.C.5b, 4.MD.C.6). Grade 1, Lesson 33 (1.G.A.1), and Grade 2, Lesson 28 (2.G.A.1) prepares students for Grade 3, Unit 3, Lesson 14. In Unit 4, Lesson 20, the Learning Progression states the following: "In Grade 2 students used fraction language to describe dividing shapes into equal parts. They divided squares, circles, and rectangles into equal parts and named the parts as halves, thirds, and fourths. Through their work with models, students began to understand the concept of dividing a whole into equal parts. In Grade 3 students develop a more formal understanding of fractions. In this lesson,

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			students focus on the meaning of fractions and name fractions by the number of equal parts in the whole, such as sixths or eighths. Students learn about the structure of fractions, identifying the denominator as the equal number of parts in the whole and the numerator as the number of parts being considered. Students identify unit fractions, such as ⅓, ¼, ⅙, and ⅛, by using models with one part shaded out of a number of equal parts. Students apply their understanding of unit fractions to understand greater fractions that are built from unit fractions, such as ⅔, ¾, 4/6, and ⅝. This lesson builds a foundation for subsequent Grade 3 lessons that develop an understanding of fractions as numbers on a number line and introduce the concepts of equivalent fractions and comparing fractions by reasoning about their size. In Grade 4 students will use their understanding of fractions and fraction equivalency to add and subtract fractions."
			Additionally, sessions in "Explore" incorporate explicit connections to previous learning. Most lessons do this by presenting a problem situation followed by questions that guide students to access prior knowledge related to the current lesson. Many times, this knowledge is from previous grades and prepares students for the current content or helps them connect what they have previously learned to the

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			current content. For example, in Unit 1, Lesson 2, Session 1 draws on their prior knowledge of place value and addition as they explore how to add two- and three-digit numbers. Students use prior knowledge of breaking apart numbers in order to add them as they solve a word problem involving the addition of 147 and 212 (LSSM 3.NBT.A.2).
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	Yes	Materials include learning objectives that are visibly shaped by LSSM cluster headings and standards. The instructional materials identify a learning objective in each Lesson Overview with student learning targets in the Student Workbook. In Unit 1, Lesson 1, the following objectives are shared: "Round two- and three-digit numbers to the nearest ten, Round three-digit numbers to the nearest hundred, and Explain how to round numbers to the nearest ten and to the nearest hundred." These objectives are shaped by the Number and Operations in Base Ten domain (NBT), Cluster A, "Use place value understanding and properties of operations to perform multi-digit arithmetic," and reflect the language and intent of LSSM 3.NBT.A.1, "Use place value understanding to round whole numbers to the nearest 10 or 100." In Unit 4, Lesson 22, the objectives are to "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

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			fractions using fraction models and number lines, and Explain why two fractions are equivalent by using a fraction model or a number line." These objectives are shaped by the Number and Operations of Fractions domain (NF), Cluster A, "Develop an understanding of fractions as numbers," and reflect the language and intent of LSSM 3.NF.A.3a (understand two fractions as equivalent if they are the same size or the same point on a number line). In the Student Workbook, Unit 2, Lesson 8, the learning target is to "Apply properties of operations as strategies to multiply and divide," which aligns with LSSM 3.OA.B (Understand properties of multiplication and the relationship between multiplication and division).
6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. ⊠ Yes ☐ No	**Required** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	Yes	Materials attend to the full meaning of each practice standard. Every lesson integrates MP.1 (Make sense of problems and persevere in solving them), MP.2 (Reason abstractly and quantitatively), MP.3 (Construct viable arguments and critique the reasoning of others), MP.4 (Model with mathematics), MP.5 (Use appropriate tools strategically), and MP.6 (Attend to precision) through the Try-Discuss-Connect routine. This routine begins with Try it (MP.1, 2, 4, 5, and 6). In the Try It section, the teacher integrates language routines, such as Three Reads, to help students make sense of the problems presented (MP.1). During Three Reads, problems are read three times, first by the

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			teacher, then a student volunteer, and finally in partners. Students begin by sharing a word or phrase that describes the context of the problem as the teacher guides them and attends to the precision of mathematical language and communication (MP.6). Then they focus on understanding what is being asked and how they can rephrase the question. Lastly, students identify important information and make sense of the quantities and discuss relationships between the quantities and reason abstractly (MP.2). Students continue to work individually to represent and explain their thinking about problems as they model quantities and relationships (MP.4). Students have access to a variety of tools and manipulatives to represent the problem (MP.5). The routine then moves to the "Discuss It" section focused on MP.2, MP.3, and MP.6. In the "Discuss It," section, students explain and justify their strategies and solutions. Partners listen to and critique each other's reasoning (MP.3). During this time, the teacher shares sentence starters and questions for discussion that guide students to attend to greater precision in their communication, language, and vocabulary(MP.6). "Discuss It" continues as students share their thinking with the class, as well as the different approaches of strategies, as they reason abstractly and quantitatively (MP.2). The teacher prompts students to

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			understand other students' explanations through restating and rephrasing (MP.3). Students reason abstractly and quantitatively as they find similarities, differences, and connections among the strategies they have discussed (MP.2). The "Connect It" section focuses on MP.2, MP.4, and MP. 5. Students work independently to further strengthen the connections between the strategies discussed. Students think through the problems connecting the quantitative, concrete approaches to more abstract understanding (MP.2). Students apply what they have learned throughout the lesson to new problems. Students determine which strategy they feel is appropriate to model and solve (MP.4). Students choose from a variety of mathematical tools (MP.5). For example, in Unit 4, Lesson 23, Session 1, the initial problem states, "Izzy's mom bakes a cake. She puts the chocolate frosting on half of the cake and vanilla frosting on half of the cake. Then Izzy's mom cuts the cake into fourths so that each fourth has either all chocolate or all vanilla frosting. What fraction other than ½ names the part of the cake that has chocolate frosting?" In the "Try It" section, the teacher engages students in making sense of the problem (MP.1), then understand that the cake is visually divided into halves by the kinds of frosting, but that the cake will be cut into fourths, and that each fourth must be all

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			chocolate or all vanilla. In the "Discuss It" section, partner discussions reinforce the fact that the problem is asking for another name for ½, encouraging students to use the terms half and fourths as they talk to each other. The "Connect It" section looks for understanding that the amount of cake with chocolate frosting stays the same whether it is cut into halves or fourths. In Unit 2, Lesson 4, Session 3, students reason abstractly and quantitatively (MP.2) as they solve the following problem: "Amelia draws the array at the right to show 3 x 2 =6. How will Amelia's array change if she wants to show 4 x 2 =8. If Amelia draws one more triangle on each row of the original array, what multiplication equation would this show?" Additionally, in Unit 2, Lesson 12, Session 1, Explore, Try It states, "Kenny has 24 marbles. He puts the same number of marbles into each of 3 bags. How many marbles are in each bag?" Teacher guidance explains in "Make Sense of the Problem: To support students in making sense of the problem, have them describe what Kenny decides to do with his 24 marbles" (MP.1). During "Discuss It," students are encouraged to persevere in problem-solving and are instructed to "Ask your partner: How did you get started? Tell your partner: I knew... so I ..." In Unit 3, End of Unit, Unit Review, Performance Task, students reason quantitatively and abstractly (MP.2) when finding the area of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			a porch to solve the following problem: "Dan is planning to build a square porch attached to the side of his house. After the porch is built, he would like to cover the floor with 1-foot square tiles. The diagram below shows the measurements of the porch and the lawn where he plans to build. How many tiles will he need to cover the porch floor? After Dan bought all of the tiles he needed, he changed his mind about the shape of the porch. How could he change the shape of the porch, but still use the same number of tiles?" Students reason quantitatively when determining factor pairs for a specified area, then reason abstractly when determining which factor pairs are most suitable for the deck.
	Required **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	Yes	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. Every lesson integrates MP.1 - MP.6 through the "Try-Discuss-Connect" routines. MP.3 is practiced in the "Discuss It" section of the "Try-Discuss-Connect" routines. For example, Unit 2, Lesson 8, Session 2, students are presented with the following problem: "Chad reads books at the library each week for 6 weeks. He reads 3 books each week. Mia reads books at the library each week for 3 weeks. She reads 6 books each week. Who reads more books at the library, Chad or Mia?" During the "Discuss It" stage students ask each

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			other, "What strategy did you use?" The second partner shares ``I agree with you because…" In Unit 5, Lesson 27, Session1, the problem states, "Lily starts reading a book after breakfast at the time shown on the clock. What time does the clock show?" Students discuss in pairs whether they agree or disagree with their partners. They also discuss why or why not. In Unit 1, Lesson 2, Session 1, Explore, Connect It, students solve, "374 + 122." Problem 3 asks, "What is another way you could find 374+122?" In Unit 6, Lesson 31, Session 4, Refine, Apply It, Problem 9, the Math Journal states, "Jess says that a square cannot be a rectangle because a rectangle has 2 long sides and 2 short sides. Is he 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**	Materials include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. Every lesson integrates MP. 1, through MP.6 through the "Try-Discuss-Connect" routine as described in detail in the Teacher's Guide. In addition to the mathematical practices, the lessons emphasize other practices. The "Deepen Understanding" section explains the emphasized mathematical practice(s) and supports teachers in engaging students more deeply in practice standards connected to the concepts of the lesson. This is built into each lesson. For example, in Unit 3, Lesson 15, Session 2, "Deepen

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Understanding" focuses on MP.7 (look for structure). Students are prompted to think about how using the multiplication table relates to finding the area. In Unit 6, Lesson 29, Session 3, the focus is on MP.2. When discussing the scale, students are prompted to consider how they can use what they know about grams and kilograms to check if their answer makes sense. In Unit 1, Lesson 2, Session 3, Develop, Model It, the focus is on MP.8 (Look for and express regularity in repeated reasoning) and asks students to solve "225 + 229" using regrouping. The materials explain, "Deepen Understanding, Regrouping, MP.8 Use repeated reasoning. When discussing the algorithm, prompt students to consider that the steps that are taken to regroup tens would be the same as those taken to regroup ones." Ask: "How many tens are there altogether? How do we regroup the tens? (as 1 hundred and 5 tens) How do we record the tens that have been regrouped as a hundred? How is regrouping tens like regrouping ones? How is it different?" Listen for "Students should understand that the steps taken to regroup are essentially the same, but regrouped tens are recorded as an extra 1 in the hundreds place and regrouped ones are recorded as an extra 1 in the tens place." In Unit 3, Lesson 18, Session 2, Develop, Apply It, Problem 7 focuses on MP.4 (Model with mathematics) when it states, "Demarco

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			has 4 five-dollar bills. Then his grandfather gives him 1 ten-dollar bill. How much money does Demarco have now? Show your work." Teacher guidance clarifies that "For all problems, encourage students to use some kind of model to support their thinking." There are also student work samples that use pictures and models for the problem.
	6d) Materials explicitly attend to the specialized language of mathematics.	Yes	Materials explicitly attend to the specialized language of mathematics. The Lesson Overview identifies and defines the vocabulary that will be addressed and used in the lesson. For example Unit 3, Lesson 16, Lesson Vocabulary is "area," "product," and "square unit" with definitions for each term provided. Build Your Vocabulary, at the beginning of each unit, is used to support learning and using precise language and terminology. For example, in Unit 3, Beginning of Unit, teacher instructions are to "Display, point to, and read each review word aloud. Have students repeat chorally." Then suggests playing "I'm Thinking of a Word" with the Review words: "Read each clue aloud. When you get to the blank snap or clap as a signal to students to write the word you are thinking of on the table." The teacher reads, "I'm thinking of a word. It is what you do when you want to know how long something is or how tall something is. The word I'm thinking of is _____. What is the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			word? Write it on the table (measure)." Once all the clues are done, students discuss their answers and complete the table which has them describe the word. The material guidance states, "When students are finished, have them read their descriptions aloud. Encourage feedback. Clarify if descriptions are incorrect or incomplete. Have students revise their descriptions." The materials also include a Connect to Family letter that is intended to be sent home. The same Math vocabulary that is identified in the Lesson Overview is also discussed in the Connect to Family letter. For example, Unit 2, Lesson 8, Connect to Family discusses the use of the following Math Vocabulary: "array," "factor," "multiplication equation," "multiply," and "product." In Unit 2, Lesson 8, the Lesson Overview states, "There is no new vocabulary. Review the following key terms. 'Array' is a set of objects arranged in equal rows and columns. 'Factor' is a number that is multiplied." Students complete graphic organizers throughout the materials to gain a deeper understanding of mathematical terms, as well. In Unit 3, Lesson 19, Session 1, Additional Practice, students complete a graphic organizer for the term scaled graphs. Four terms are provided, "picture graph," "bar graph," "key," and "scale." Students first write a definition in their own words and then provide an example for each term.

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. ☒ Yes ☐ No	**Required** **7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	Yes	Students are asked to produce answers and to demonstrate understanding in a variety of ways. For example, Unit 4, Lesson 20, Session 2 begins with modeling fractions explaining to students that "The model below shows ⅓ of a square. Draw to show the whole square. Then shade to show ⅔." Session 2 finishes with "How can you use a shaded model to name a fraction?" In Unit 2, Lesson 9, Session 3, Question 3 asks, "Raymond can type 40 words each minute. How many words can he type in 8 minutes?" Students circle the correct answer. Students must also answer, "Gina chose B as the correct answer. How did she get that answer?" In Unit 4, Lesson 22, Session 2, Develop, students respond to problems in multiple ways when working with equivalent fractions. There are problems where students provide solutions with explanations and use models and number lines to show equivalent fractions. In Unit 3, Lesson 12, Understand Area, Session 1, Explore problem, students draw and label a rectangle in order to model how to find the area of a rug. Students then determine and explain different ways of measuring area. In the Additional Practice section, students create a graphic organizer for the term "square unit." Students write the definition in their own words, draw an illustration, and then provide examples and non-examples. In Session 3, students find the area of three different shapes by

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			counting units. Students then draw square units on a dot grid and then find the area. In Unit 5, Lesson 29, Mass, Session 3, Develop, students find the mass of an orange and apple together. Students are encouraged to choose a strategy to find the solution, including base-ten blocks, a pan balance, a number line, and an equation. In the Connect It section of the same session, students answer 6 problems that require solutions, equations, and explanations. For example, a few of the questions include, "How do you decide which operation to use to solve this problem? Write an equation for the problem. What is the mass of the orange and apple together? Explain how you could use estimates to know that your answer makes sense? [and] Look back at your Try It, strategies by classmates, and PIcture It. Which models or strategies do you like best for solving problems about mass? Explain."
	Required **7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	Yes	Materials provide separate teacher materials that support and reward teacher study. The Teacher's Guide is the main resource for embedded instructional support during each session and includes several sections including ample annotations and suggestions on how to present the content in the student edition and in the ancillary materials. Every unit begins with coherence among the grade levels. For example, coherence guidance provided for Unit 2, Lesson 4 (Understand

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			the Meaning of Multiplication) shows that the lesson connects to Grade 2, Lesson 31 (Adding Using Arrays), and Lesson 32 (Even and Odd Numbers). It extends to show the teacher where it connects in fourth grade, specifically Lessons 6 (Understand Multiplication as a Comparison) and 23 (Understand Fraction Multiplication). In the Lesson Overview, located at the start of every lesson, the teacher is provided with a pacing guide and a small group instruction guide. The Math Background, located at the beginning of each unit in the Teacher's Guide, shows the flow of the standards and models taught within a unit, provides teaching insight about models, and connects the models to both prior knowledge and future learning. The "Connect to Prior Knowledge" portion gives clear entry points for each session while engaging students mathematically with prerequisite content. In "Support Partner Discussion." educator prompts are featured to help students engage in meaningful peer discourse. The "Common Misconception" portion identifies misconceptions that lead to errors in understanding, which can then be addressed in a whole-class discussion as students are prompted to explain their reasoning. "Support Whole Class Discussion" prompts are a series of related discourse questions that highlight the mathematical ideas of the lesson. "Monitor and Confirm" ensures that

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			students have made sense of learning goals. "Sentence Starters" and "Discourse Questions" enable teachers to support and facilitate whole-class discussions with mathematical discourse questions as students share their thinking. Unit 3, Lesson 17, "Small Group Differentiation" includes activities to reteach, reinforce and extend such as "Reteach-Solve One-Step Addition and Subtraction Word Problems (Grade 2), Multiply and Divide to Solve One-Step Word Problems); Reinforce-Solve Word Problems, Writing Equations; and Extend-Race Training)." In Unit 2, Math in Action, Session 1, the notes include "Study an Example Problem and Solution" and "Problem Solving Checklist" which provide narrations for the teacher on how to present the content from the student edition to students. In the "Deepen Understanding - Connecting Arrays and Multiplication" section, the "Ask," "Listen For," and "Generalize" sections also assist the teacher. In the digital Teacher Toolbox, several tabs lead to teacher support for the instructional process such as Program Implementation, Classroom Resources (in English and Spanish), and Assessment Practice. Reinforcement and extension activities in the Teacher Toolbox, Program Implementation tab, include "Digital Math Tools - Support Videos." This section includes support videos for the following:

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			counters and connecting cubes, base ten introduction, base ten: add and subtract, number line, multiplication models, perimeter and area, fraction models: add and subtract, and fraction models: compare and multiply. Then, in "Classroom Resources," there is guidance for teachers to support the delivery of the content, as well as information on student responses for each section of the lesson.
	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	Materials include support for English Language Learners and other special populations. Support is thoughtful and helps students meet the state's standards. Each unit begins with the "Connect Language Development to Mathematics" section that provides a differentiated instruction chart with examples of what English learners can do based on their English language proficiency levels in connection with the LSSM that are addressed in the unit. This chart provides guidance at three levels of differentiation that identifies specific strategies (e.g., Speaking/Writing, Reading/Writing) that directly connect to lesson sessions and activities. Teachers use language expectations to help differentiate instruction. Each lesson also has a "Connect to Family, Community, and Language Development" section that includes a chart similar to that at the beginning of the unit that is based on lesson objectives. For example, in the "Program Implementation,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Implementation Support" section the following resources are included: A Multilingual Glossary, A Bilingual Glossary, WIDA PRIME V2 Correlation, and Try-Discuss-Connect Routine Resources. Specific strategies are used to target additional student supports that promote their engagement in lesson activities. For example, prerequisite lessons are identified and include specific supports needed for ELLs. "Develop Language" includes "Why (rationale for the suggestions)" and "How (strategies and guidance on how to engage students)" sections that include explanations to use as needed. "Discuss It" provides support for all students to engage in mathematical discourse. Differentiated Instruction is included and includes activities for intervention, on-level, and challenge. The activities in the "Math Center" provide multiple levels of content and the lessons and those lessons in "Math in Action" build background in a variety of contexts to ensure access for all.
	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 underlying design of the materials distinguishes between problems and exercises. Each unit is broken into lessons and lessons are broken into sessions that contain guided instruction and additional practice. Students learn new mathematics and then apply what they have learned to build mastery as they work through the exercises. Each problem or exercise has a purpose and includes several pages of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			practice. In the "Try It" section, the teacher first provides guidance, then students demonstrate their understanding in a variety of ways. Students solve problems to learn new mathematics in the "Explore" session with the ideas further developed in "Develop" sessions and where students solve problems in the "Try It" and "Connect It" sections. During the "Refine" session, students can apply their learning. For example, in Unit 1, Lesson 3, Session 2, "Develop" begins with the following problem: "Catalina records the weather for 365 days. It is sunny for 186 days. How many days are not sunny?" During "Develop," students attempt the problem and then compare and discuss with a partner. Session 2 concludes with Additional Practice. A sample problem from Additional Practice is "Find 252 - 236. Show your work." Additional Practice is expected to be completed independently. In another example, Unit 4, Lesson 25, Session 1 begins with the following "Explore" problem: "Erica and Ethan have same-sized glasses. Erica's glass is 4/6 full of juice. Ethan's glass is ⅚ full of juice. Compare 4/6 and ⅚ using <,>, or =. Who has more juice?" Students are allowed to use manipulatives to help solve the problem. Students then compare answers with a partner. In this session's "Additional Practice," students are expected to independently solve the following problem: "Kim and Armen each buy same-

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			sized sandwiches. Kim ate 6/8 of her sandwich. Armen ate ⅝ of his sandwich. Compare 6/8 and ⅝ using <, >< or =. Who ate more?" In Unit 2, Lesson 10, Session 1, "Explore," students explore the meaning of "division" by modeling division problems using pictures and equations. In Session 2, "Develop," they can practice this skill by drawing pictures, writing equations, and using area models. Then, in Session 3, "Refine," students solve word problems where they can then apply their knowledge in the "Apply It" section.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Yes**	Lessons are appropriately structured and scaffolded to support student mastery. Each lesson is broken into sessions that are written in a way to scaffold learning. For example, every multi-day lesson opens with an Explore session to help students connect to prior learning and use what they already know to bridge to the new learning. The Develop session(s) gives students multiple opportunities using various modalities to develop their thinking about new concepts. The Refine session gives additional time for students to deepen their understanding of the concepts and skills by comparing and discussing different answers and strategies to fluency and application problems they work on independently and discuss in pairs. The scaffolding is seen across sessions within a lesson. For example, in Unit 2, Lesson 6, Session 1 begins with "Explore Multiplying 3, 4, and 6" followed

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			by Session 2, "Develop Multiplying by 3" and Sessions 3 and 4 "Develop Multiplying by 4, and then 6," then Session 5 finishes with "Refining 3, 4, and 6." In another example, Unit 5, Lesson 27, Session 1 begins with "Explore Working with Time" followed by Session 2 "Develop Time to the Nearest Minute" and Sessions 3 and 4 "Develop finding the end and start times in word problems." The lesson concludes with Session 5, "Refine Understanding of Time." The sequence of lessons in each topic is designed to move from concrete and pictorial representation towards abstract work with numbers. Each unit includes a Unit Flow and Progressions Video to highlight the work of the unit and how it fits in the progression of mathematics across grade levels. Each lesson has a consistent structure that builds towards independence. In addition, the lessons build upon each other as follows in Unit 3: Lesson 14: Understand Area, Lesson 15: Multiply to Find Area, Lesson 16: Add Areas, Lesson 17: Solve One-Step Word Problems Using Multiplication and Division, Lesson 18: Solve Two-Step Word Problems Using The Four Operations, and Lesson 19: Scaled Graphs.
	7f) Materials support the uses of technology as called for in the Standards.	Yes	Grade 3 LSSM do not contain standards that call for materials that support the use of technology. However, interactive tools, virtual manipulatives/objects, and dynamic mathematics software are used in ways to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			engage students. The "Student Digital Experience" offers online access to the print version of the Student Worktext via the Bookshelf, along with Digital Math Tools, Interactive Learning Games, Interactive Practice, and Family Resources. The Bookshelf houses the digital edition of the Student Worktext, and students have the ability to highlight, take notes, have the pages read aloud, as well as use a calculator and multilingual glossary. Interactive Learning games are used to engage students in gameplay while building fluency skills. Interactive tutorials are available with animated lessons assigned as part of personalized instructional plans for the student. The tutorials include integrative technology and digital math manipulatives that represent concrete manipulatives to engage students in the Mathematical Practices. Digital Math Tools used throughout the program include the following: Counters, Connecting Cubes, Base Ten Blocks Tool, Number Line Tool, Multiplication Models Tool, Perimeter and Area Tool, and Fraction Models Tool.

FINAL EVALUATION

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

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

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

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

Section	Criteria	Yes/No	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
I: Non-negotiable Criteria of Superior Quality[4]	1. Focus on Major Work	**Yes**	Materials devote the majority of time to the major work of the grade. In the materials, 114 out of 141, or 81%, instructional days are devoted to major work of the grade as outlined by the Louisiana Student Standards for Math. Materials spend minimal time on content outside of the appropriate grade. In assessment materials, assessment components do not make students and teachers responsible for any topics before the grade in which they are introduced.
	2. Consistent, Coherent Content	**Yes**	Materials connect supporting content to major content in meaningful ways, so that focus and coherence are enhanced throughout the year. Materials include problems and activities that connect two or more clusters in a domain and two or more domains in the grade level where these connections are natural and important.
	3. Rigor and Balance	**Yes**	Materials develop a conceptual understanding of key mathematical concepts. Materials are designed so that students attain the fluency and procedural skills required by the Standards. Materials are designed so that students spend sufficient time working with engaging applications. It is evident in the materials that the three aspects of rigor are not always treated together and are not always treated separately.
	4. Focus and Coherence via Practice Standards	**Yes**	Materials address the practice standards in

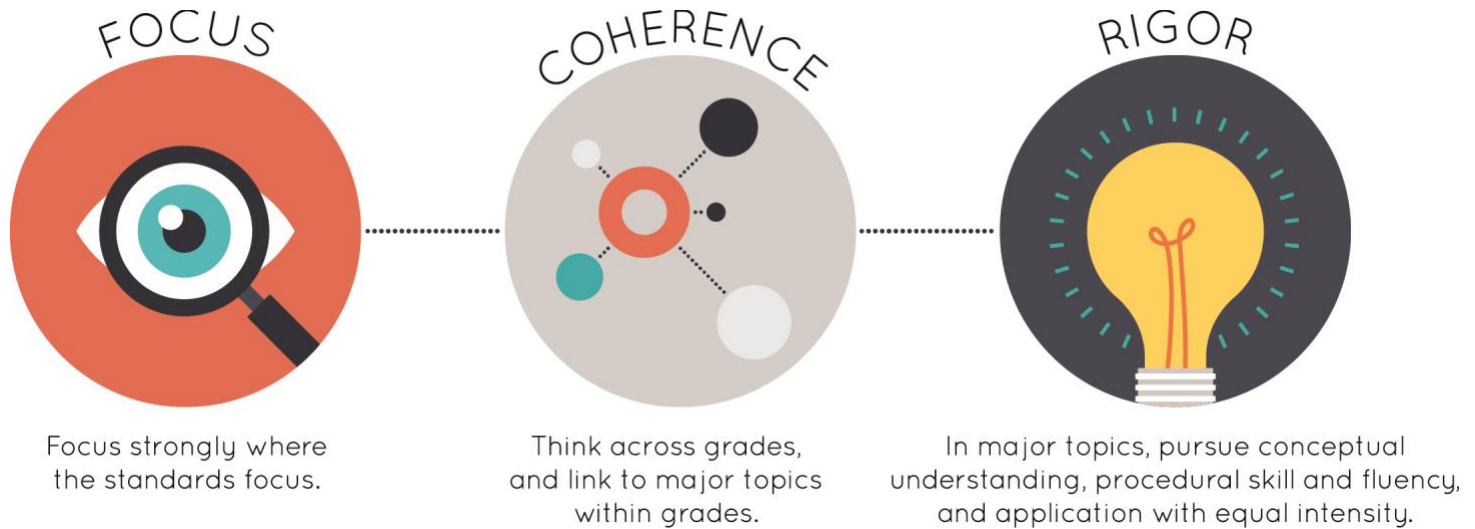[4] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier I or Tier II rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			such a way to enrich the content standards of the grade/course.
II: Additional Criteria of Superior Quality[5]	5. Alignment Criteria for Standards for Mathematical Content	Yes	Materials provide all students with extensive work with course-level problems. Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.
	6. Alignment Criteria for Standards for Mathematical Practice	Yes	Materials attend to the full meaning of each practice standard and provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards. Teacher-directed materials explain the role of the practice standards in the classroom and in students' mathematical development. Materials also explicitly attend to the specialized language of mathematics.
	7. Indicators of Quality	Yes	Students are asked to produce answers and to show their knowledge in a variety of ways. Separate teacher materials support and reward teacher study. Materials include support for English Language Learners and other special populations. The underlying design of the materials distinguishes between problems and exercises. Lessons are appropriately structured and scaffolded to support student mastery; and while not required in

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Grade 4 the materials support the use of technology.
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**			

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

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:

FOCUS

Focus strongly where the standards focus.

COHERENCE

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

RIGOR

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

Title: **Ready Classroom Math**

Grade/Course: **4**

Publisher: **Curriculum Associates, LLC**

Copyright: **2020**

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

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

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

To evaluate instructional materials for alignment with the standards and determine tiered rating, begin with **Section I: Non-negotiable Criteria**.

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

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

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

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

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

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

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Section I: Non-negotiable Criteria of Superior Quality **Materials must meet all of the Non-negotiable Criteria 1-4 in order for the review to continue to Section II.**			
Non-negotiable **1. FOCUS ON MAJOR WORK[2]:** Students and teachers using the materials as designed devote the large majority[3] of time to the major work of the grade/course. ☒ Yes ☐ No	**Required** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	Yes	Materials devote the majority of time to the major work of the grade. For example, 77% total instructional days are devoted to the major work as outlined by the Louisiana Student Standards for Math (LSSM). More specifically, 57% days address the major standards alone while 20% address a combination of major and supporting and additional standards. Approximately 23% of instructional days address the supporting and additional standards. The major work for Grade 4 which focuses on Operations and Algebraic Thinking (OA), Number and Operations in Base Ten (NBT), and Number and Operations - Fractions (NF) is addressed throughout Units 1 through 4. One example of major work is shown in Unit 1, Lesson 4 (LSSM 4.NBT.B.4, 4.NBT.A.3), "Adding Whole Numbers," where students learn to use the standard algorithm to add four-digit numbers to four-digit numbers. Another example is found in Unit 2, Lesson 7 (LSSM 4.OA.A.1, 4.OA.A.2), "Multiplication and Division in Word Problems," where students use multiplication and division to solve word problems that represent real-world situations. Lessons aligning to LSSM

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[2] For more on the major work of the grade, see Focus by Grade Level.
[3] The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			4.MD.D.8 were not found.
	Required **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit 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	Materials spend minimal time on content outside of the appropriate grade level. In assessment materials, the components do not make students and teachers responsible for any topics before the grade in which they are introduced. The assessment components include lesson quizzes, mid-unit assessments, and unit assessments. Each item directly correlates to the LSSM for Grade 4. Unit 1 begins with whole numbers and provides a lesson and assessment components that align with the standards in the Numbers and Operations in Base Ten domain. In Unit 2, Operations, the lesson and assessment components align to the standards from the Operations and Algebraic Thinking domain. The curriculum progresses through multi-digit operations and measurement (Measurement and Data domain), fractions, decimals, and measurement (Numbers and Operations-Fractions domain), and geometry and measurement (Geometry and Measurement and Data domains) all of which align to the LSSM for Grade 4.
Non-negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards.	**Required** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.	Yes	Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. In Unit 2, Lesson 6, Session 3, students must solve the following problem: "Sergio found 4 pennies on the ground. His sister said she

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
☒ Yes ☐ No			found 2 times as many pennies. Sergio figured out his sister found 6 pennies. What did he do wrong?" This problem connects supporting LSSM 4.MD.A.2 (use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money) to major LSSM 4.OA.A.2 (multiply or divide to solve word problems involving multiplicative comparison). Supporting LSSM 4.MD.A.2 is also connected to major LSSM 4.OA.A.3 (solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted and problems that use a letter for unknown quantities as seen in Unit 2, Lesson 10 and in Unit 4, Lesson 28. In Lesson 10, Session 2, students develop strategies for writing an equation that represents multi-step word problems. For example, students are to solve the following problem: "Garrett is paid $4 for each hour he babysits. Mrs. Becker pays him for 5 hours of babysitting. On the way home, Garrett spends $9 on a book and $6 on a puzzle. Write an equation to find how much money Garrett has left from the money Mrs. Becker pays him." In Lesson 28, Session 1, students solve multi-step problems involving time and money as in the following problem: "Shing does chores for 1 hour 15 minutes on Wednesday and 25 minutes on Thursday. Shing spends a

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			total of 115 minutes doing chores on Wednesday, Thursday, and Friday. How many minutes does he spend doing chores on Friday?" In Unit 4, Lesson 22, supporting LSSM 4.MD.B.4 (make a line plot to display a data set of measurements in fractions of a unit) is connected to major LSSM 4.NF.B.3c (add and subtract mixed numbers with like denominators) and to 4.NF.B.3d (solve word problems involving addition and subtraction of fractions). Throughout Session 3, students develop strategies for solving additional word problems involving fractional data shown on a line plot.
	Required **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	Yes	Materials include problems and activities that connect two or more clusters in a domain and two or more domains in the grade level where these connections are natural and important. For example, in Unit 2, Lesson 10, the Operations and Algebraic Thinking (OA) and Number and Operations in Base Ten (NBT) domains connect through activities that involve solving multi-step word problems using equations. In Session 3, students complete the following problem: "Ms. Dennison packs up the books in her classroom for the summer. Each box holds 9 books. She has 24 Math books and 27 science books to pack in boxes. Write and solve an equation to determine how many boxes Ms. Dennison needs for her books." Students are to explore different ways to use equations and models to solve the

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			multi-step word problem. Students must divide to find the answer and then must interpret the meaning of the remainder in order to make sense of the solution to the problem (LSSM 4.OA.A.3, 4.NBT.B.6). In Unit 3, Lesson 16, the Numbers and Operations in Base Ten (NBT) and Measurement and Data (MD) domains are connected. In the first two sessions, students first find perimeter by adding side lengths and then extend upon this understanding by using the formula 2l+2w to find the perimeter. In the third session, students find the length of a rectangle given the area and width. In Session 4, students solve word problems involving perimeter and area (LSSM 4.MD.A.3, 4.NBT.B.5, 4.NBT.B6). In Unit 4, Lesson 29, the Measurement and Data (MD), Operations and Algebraic Thinking (OA), the Numbers and Operations in Base Ten (NBT), and the Numbers and Operations-Fractions (NF) domains connect. In the lesson, students solve word problems that involve length, liquid volume, mass, and weight (LSSM 4.MD.A.2), convert larger units of measure into smaller units (LSSM 4.MD.A.1), and write and solve equations in order to solve measurement word problems (LSSM 4.OA.A.2, 4.OA.A.3). In solving the variety of measurement word problems, students engage in all 4 operations as expected for LSSM 4.NBT.B.4, 4.NBT.B.5, and 4.NBT.B.6. The materials also connect clusters within the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			same domain. For example, in Unit 2, Lesson 9 Clusters B (Gain familiarity with factors and multiples) and C (Generalize and analyze patterns) of the Operations in Algebraic Thinking (OA) domains connect. Students build upon their understanding of patterns within factors and multiples of numbers (LSSM 4.OA.B.4) to develop rules for generating or extending a number pattern (4.OA.C.5). For example, in Session 1, the first problem asks students to find the next two numbers of a pattern: 5, 10, 15, 20, 25. Students make sense of the problems by building upon the idea that numbers 5, 10, 15, 20, and 25 make up a number pattern and use the relationship between the numbers to help identify the next two numbers.
Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	**Required** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	Yes	Materials develop a conceptual understanding of key mathematical concepts. The materials address conceptual understanding and assess them at a rigorous level of conceptual development. Unit 1, Lesson 1 objectives include: "Use a place value chart to understand the value of each digit in a number; Demonstrate how moving from one place-value position to the next greatest position changes the value of a digit by a multiple of ten; Show that any number can be represented in different ways; Use the standard form, word form, and expanded form to read and write multi-digit whole numbers" addressing conceptual understanding as intended by

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			LSSM 4.NBT.A.1 (recognize that in a multi-digit whole number less than or equal to 1,000,000, a digit in one place represents ten times what it represents in the place to its right) and LSSM 4.NBT.A.2 (read and write multi-digit whole numbers less than or equal to 1,000,000 using base-ten numerals, number names, and expanded form). These concepts are built within the Explore, Develop, and Refine sections of the lesson. In Session 1, students explore place value by understanding that each digit has a specific value which is determined by its place value position. Students extend this understanding to reading and writing greater numbers, using the standard form, word form, and expanded form. In Session 2, students use place value charts to compare greater numbers and write the numbers in expanded form, understanding the place value of each digit. Finally, in Session 3, students demonstrate their understanding of place value by solving word problems that involve place value concepts. Examples include the following: "Emma wrote thirty-six thousand, forty-two as 3,642. Explain what she did wrong. Then write the number correctly;" "Write 55,555 in expanded form. How does the value of each 5 compare to the value of the 5 to its right?" In Unit 4, Lesson 17 aligns to LSSM 4.NF.A.1 (explain why a fraction a/b is equivalent to a fraction (n × a)/(n × b) by using visual fraction models,

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			with attention to how the number and size of the parts differ even though the two fractions themselves are the same size; use this principle to recognize and generate equivalent fractions). In the lesson, students utilize visual fraction models to explain why fraction a/b is equivalent to another fraction. Students develop an understanding that the models are the same size and have the same amount shaded, but have different sized parts, different numbers of parts, and different numbers of parts shaded. For example, in the "Model It" section, students look at three different models, one with 1/3 shaded, another with 2/6 shaded, and another with 4/12 shaded. Students compare the models and explain that each model has 2 times as many equal parts and 2 times as many shaded parts as the model before. This concept is used to explain that multiplying the numerator and denominator by the same number will result in equivalent fractions. In Unit 4, Lesson 23, the objectives include: "Multiply a unit fraction (the numerator of 1) by a whole number, and Multiply a fraction with a numerator greater than 1 by a whole number." These objectives align to conceptual understanding standards 3.NF.B.4a (understand a fraction a/b as a multiple of 1/b) and 3.NF.B.4b (understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number).

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			The conceptual development in the lesson provides a foundation for understanding what it means to multiply a fraction by a whole number. The lesson begins with a model showing 1/3 four times. Students see that 4 copies of 1/3 are equal to 4/3. This concept is extended in the following example within the refine section: "How are 4 x 2/6 the same as and 8 x 1/6 the same? Use a model or words to show how you know." Students explain that 4 x 2/6 is the same as adding 2/6 four times which equals 8/6 and that 8 x 1/6 is the same as adding 1/6 eight times, which is also 8/6.
	Required **3b) *Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	Yes	Materials are designed so that students attain the fluency and procedural skills as required by the standards. Practice problems along with "Fluency and Skills Practice" sheets from the Teacher Toolbox support the attainment of procedural skills and fluencies as expected of the standards. In Grade 4, students are expected to fluently add and subtract multi-digit whole numbers with sums less than or equal to 1,000,000 using the standard algorithm (LSSM 4.NBT.B.4). In Unit 1, Lessons 3 and 4 address this standard. Students are provided multiple opportunities to practice addition and subtraction using multi-digit numbers. In Lesson 4, at the conclusion of Session 2, students complete the Fluency and Skills Practice sheet "Using Strategies to Add." At the conclusion of Session 3, students complete the Fluency and Skills Practice sheet, "Using the Standard

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			Algorithm to Add Greater Numbers." This same approach is utilized in Lesson 5. At the conclusion of Session 2, students complete the Fluency and Skills Practice sheet, "Using Strategies to Subtract." At the conclusion of Session 3, students complete the Fluency Skills and Practice sheet, "Using the Standard Algorithm to Subtract Greater Numbers." An example of a problem aligning to the standard is evidenced in Lesson 5, Session 3 as students solve the following: "Find the difference 68,408 - 41,923. Use the standard algorithm to subtract. Then use addition to check whether your answer is correct." Students continue to practice adding and subtracting multi-digit numbers in Lesson 28, "Problems About Time and Money" and in Lesson 29, "Problems about Length, Liquid Volume, Mass and Weight" to further support the fluency expectations of LSSM 4.NBT.B.4. Students have the opportunity to attain other procedural skills and fluency expectations throughout the materials. For example, in Unit 4, Lesson 26 addresses LSSM 4.NF.C.6 (use decimal notation for fractions with denominators 10 or 100). The questions have students create equivalent fractions and decimals with tenths or hundredths. Fluency and Skills Practice sheets are utilized throughout the lesson, such as "Decimals and Fractions" in Session 2 where students write a decimal equivalent to each fraction and mixed

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			numbers, and in "Writing Decimals as Equivalent Fractions" where students write a fraction equivalent to each decimal. The problems within the lesson and on the Fluency and Skills Practice sheets refine the standard at a procedural level. In Unit 5, Lesson 31 addresses LSSM 4.MD.C.6 (measure angles in whole-number degrees using a protractor. Sketch angles of specified measure). For example, in Session 2, students use a protractor to measure angles. Additional practice is provided on the Fluency and Skills Practice sheet, "Using a Protractor," in which students measure marked angles of a given shape and write the measurements.
	Required **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	Yes	Materials are designed so that 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, afford opportunities for practice, and engage students in problem-solving. In Unit 4, Lesson 24 addresses LSSM 4.NF.B.4c (solve word problems involving multiplication of a fraction by a whole number) at an application level. For example, Session 3 includes the following problem: "Brittany practices hitting softballs for 2/3 of an hour each day for three days. For how many hours does she practice hitting softballs?" In order to solve the problem, students apply conceptual understanding

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			and procedural skill and fluency of multiplying a fraction by a whole number. Students also engage in a multi-step contextual problem, applying the same skill and concept as they solve the following problem: "Morgan buys 6 tomatoes, each that weighs 1/4 of a pound. Russ buys 14 tomatoes, each that weighs 1/8 of a pound. Who buys tomatoes that weigh more? Show your work." In Unit 3, Lesson 16 addresses LSSM 4.MD.A.3 (apply the area and perimeter formulas for rectangles in real-world and mathematical problems) at an application level. In Session 3, Problem 6 states, "Melissa has enough paint to cover an area of 250 square feet. She wants to paint two walls. The rectangular wall is 9 feet high and 20 feet wide. The square wall has a height of 9 feet. Does Melissa have enough paint to cover the area of both walls? Show your work." In order to solve this multi-step problem, students have to apply what they know about "area" in order to find a solution. In Unit 4, Lesson 22 addresses LSSM 4.MD.B.4 (make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots). In the "Develop" section of Session 3, students apply what they have learned about line plots, and the addition and subtraction of fractions by engaging in the following

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			problem: "Sophia is making a border for a quilt. She wants to use leftover strips of fabric. She measures the length of each strip and records the information in a line plot. Sophia puts together the five strips of fabric that are the same length. What is the total length of the five strips of fabric."
	Required **3d) *Balance:*** The three aspects of rigor are not always treated together and are not always treated separately.	Yes	The three aspects of rigor are not always treated together and are not always treated separately. Conceptual understanding is often developed and assessed before progressing to procedural skill and fluency and application throughout the materials and reflects the balance of rigor within the standards. For example, the Teacher Toolbox provides "Fluency and Skills Practice" sheets. The "Explore" and "Develop" sections of the lesson allow for conceptual development and application and are addressed through practice problems for the lesson, as well as explicitly at the end of each unit. The materials address the three aspects of rigor separately and together depending on the standard being addressed. For example, in Unit 1, Lesson 5 addresses LSSM 4.NBT.A.3. This standard has a rigor component of conceptual understanding. The "Explore" and "Develop" sections of the lesson provide for the use of models to build and develop conceptual understanding. In Session 2, the Teacher Toolbox provides Fluency and Skills Practice sheets for subtracting multi-digit

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			numbers with or without regrouping using the strategies taught. In Sessions 2 and 4, students have an opportunity to apply this skill through real-life word problems. In Unit 2, Lesson 13, students use multiplication to convert measurements (LSSM 4.MA.A.1) and address the standard at a conceptual level through the use of tables, diagrams, addition equations, and multiplication equations. The materials address this standard again in Lesson 29, but at a procedural skill and fluency level. Students apply the procedural skill of converting measurements as they solve contextual word problems about length, liquid volume, mass, and weight. Lessons 19 and 20 of Unit 4 address 4.NF.B.3 (Understand a fraction a/b with a > 1 as a sum of fractions 1/b). The students gain conceptual knowledge, as well as fluency and application, as they progress through the lessons. In Lesson 19, students develop a conceptual understanding of adding and subtracting fractions as joining and separating parts referring to the same whole. Students use fraction models, such as bar models and number lines, to add and subtract fractions with like denominators. At the start of Lesson 20, students continue to build conceptual understanding as they decompose fractions into sums of fractions with the same denominator. By the end of the lesson, students apply the procedural skill of adding and subtracting fractions with

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			like denominators in contextual word problems.
Non-negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☒ Yes　　☐ No	**Required** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	Yes	Materials address the practice standards in such a way to enrich the content standards of the grade. The Math Practices (MP) are included in the lesson overview found at the beginning of each lesson. MP.1 through MP.6 are integrated into each lesson through a "Try-Discuss-Connect" instructional routine. Also featured within the routine, is student engagement with MP.7 and MP.8 as they find patterns, use relationships, and construct general methods. The lessons specify additional practices that are addressed during the lesson and highlight which ones are particularly emphasized in the lesson. For example, in Unit 1, Lesson 2, Session 2, students are asked to reason using the place value charts to compare numbers as evidenced in the "Deepen Understanding" section (MP.8 Look for and express regularity in repeated reasoning). Utilizing this practice standard supports students in developing an understanding of LSSM 4.NBT.A.2 (comparing whole numbers based on their position in the place value chart). Another example is found in Lesson 11, Session 3, "Deepen Understanding," as students use MP.4, "Model with mathematics." In this activity, students discuss why it is important to use an "area model" over an array of base ten blocks to multiply greater numbers, enriching LSSM 4.NBT.B.5 (multiply up to a four-digit

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			number by a 1 digit whole number and explain using models). In Unit 5, Lesson 33, Session 2, "Deepen Understanding," students use MP.5, "Use appropriate tools strategically." Students decide which tools help determine parallel and perpendicular lines. They discuss the reasoning for the tool chosen and use them to classify two-dimensional shapes in support of LSSM 4.G.A.2 (classify two-dimensional shapes).
Section II: Additional Criteria of Superior Quality			
5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	**Required** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.	Yes	Materials provide extensive work with grade-level problems focused on the Grade 4 math standards. Each lesson consists of 3-5 sessions that also offer additional practice. The materials provide students the opportunity to work with problems in a variety of formats to help integrate and extend concepts and skills. Learning objectives are listed in the Lesson Overview and align with the LSSM for Grade 4. For example, in Unit 2, Lesson 9, the objectives are: "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." The learning objectives and their content align with LSSM 4.OA.C.5 and 4.OA.B.4. In each session, students are to work through a variety of grade-level problems as they develop concepts and skills. At the end of each session, students complete an exit ticket and have additional practice with

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			more grade-level problems. Some sessions offer "Fluency and Skills Practice" sheets as an opportunity for students to develop fluency skills aligned to the procedural and fluency expectations of the LSSM for Grade 4. For example, in Unit 4, Lesson 27, there are four sessions. The problems presented are aligned with LSSM 4.NF.C.7 (compare two decimals to hundredths by reasoning about their size). Students engage in a number of grade-level problems within each session and in the "Additional Practice" section. Fluency Skills and Practice sheets are also available in Sessions 2 and 3. One example of a grade-level problem found in Session 3, "Additional Practice" states: "Lucas buys 0.6 of a pound of fish and 0.85 of a pound of shrimp to make a stew. 1. Shade the model for 0.6 and 0.85. 2. Write a symbol to compare decimals 0.6 and 0.85. 3. Does Lucas buy more fish or more shrimp? Use equivalent fractions to explain your answer."
	Required **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	Yes	Materials relate grade-level concepts explicitly to prior knowledge from earlier grades and courses. The materials include resources in the Teacher's Guide that explain the prior learning that should have taken place during the previous grade levels. At the beginning of each unit, a chart is provided that shows which lessons the unit is building on from the previous year and which lessons the unit is preparing students for in the next year. For

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			example, the chart in Unit 3 connects Grade 3, Lessons 8, 9, and 12 (LSSM 3.OA.B.5, 3.NBT.A.3, 3.OA.A.4, 3.OA.C.7) to Grade 4, Unit 3, Lesson 11 (LSSM 4.NBT.B.5). The Unit Overview then progresses to the Unit Background which identifies the prior knowledge students should have before beginning the unit. Prior knowledge information shared in Unit 3 states: "Students will build on their preliminary understandings of multiplication and division. They should: be familiar with rectangular arrays and area models to represent multiplication; be familiar with properties of operations; use their understanding of place value and basic facts to multiply one-digit numbers by multiples of 10, and understand division as a number of equal groups or the number of items in each group." The connection to prior knowledge continues in the Lesson Overview. For example in Unit 3, Lesson 11 the prerequisite skills for this lesson are identified: "Recall basic multiplication facts. Know the properties of operations. Understand place value. Understand and use arrays and area models." Each Lesson Overview also provides specific guidance on how the lesson builds on prior learning and connects to future learning in the Learning Progression section. For example, the Lesson Progression for Unit 2, Lesson 6, found in the Lesson Overview states, "In Grade 3 students learned about

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			multiplication in terms of equal groups, arrays, and area. In this lesson, students extend the idea of multiplication to include multiplicative comparison. For example, students learn to recognize that the multiplication equation 7 X 3=21 means both '21 is 3 times as many as 7' and '21 is 7 times as many as 3.' Students also learn to recognize that a statement such as '16 is 8 times as many as 2' can be represented by the two equations 2 X 8=16 and 8 X 2=16. This lesson introduces an important new way of thinking about multiplication equations. It helps students understand using a multiplication sign in place of the word "times" when representing a comparison situation. In the next lesson, students will focus on solving word problems that involve multiplicative comparisons." (LSSM 4.OA.A.1). Additionally, sessions in Explore incorporate explicit connections to previous learning. Most lessons do this by presenting a problem situation followed by questions that guide students to access prior knowledge related to the current lesson. Many times, this knowledge is from previous grades and prepares students for the current content or helps them connect what they have previously learned to the current content. For example, in Unit 2, Lesson 7, Session 1, students draw on their knowledge of multiplication as a comparison (times as many) and basic multiplication facts to prepare them for

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			solving a multiplicative comparison word problem. In the lesson, students share models to explore how to solve a multiplicative comparison word problem. Accessing this prior knowledge supports students in solving multiplicative comparison word problems using bar models and equations with an unknown (LSSM 4.OA.A.2).
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	Yes	Materials include learning objectives that are visibly shaped by LSSM cluster headings and standards. In Unit 3, Lesson 14 includes the following learning objectives: "Divide up to three-digit dividends by one-digit divisors with remainders; Use rectangular arrays and area models to divide; Use the relationship between multiplication and division to estimate and find a quotient; and, Use place-value understanding and properties of operations to divide." These objectives connect to the Cluster B domain (Use place value understanding and properties of operations to perform multi-digit arithmetic) of the Numbers and Operations of Base Ten (NBT). More specifically, these objectives reflect the language and intent of LSSM 4.NBT.B.6 (find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by

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			using equations, rectangular arrays, and/or area models). In Unit 2, Lesson 10, the following are the learning objectives: "Use equations with a letter standing for the unknown to represent multi-step word problems and solve these equations; Interpret the remainder in a division word problem; and, Use estimation strategies to check that an answer is reasonable." These objectives connect to the Cluster A domain (Use the four operations with whole numbers to solve problems) of the Operations and Algebraic Thinking (OA). Specifically, the objectives reflect the language and intent of LSSM 4.OA.A.3 (Solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted). In Unit 2, Lesson 11, are the following objectives: "Multiply whole numbers of up to four digits by one-digit whole numbers; Use arrays, area models, and partial products to multiply; and Use estimation to determine whether answers are reasonable." These objectives reflect the language and intent of LSSM 4.NBT.B.5 (Multiply a whole number of up to four digits by a one-digit whole number and multiply two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. ☒ Yes ☐ No	**Required** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	Yes	Materials attend to the full meaning of each practice standard. Every lesson integrates MP.1 (Make sense of problems and persevere in solving them), MP.2 (Reason abstractly and quantitatively), MP.3 (Construct viable arguments and critique the reasoning of others), MP.4 (Model with mathematics), MP.5 (Use appropriate tools strategically), and MP.6 (Attend to precision) through the "Try-Discuss-Connect" routine. In the "Try It" section, the teacher integrates language routines, such as Three Reads, to help students make sense of the problems presented (MP.1). During Three Reads, problems are read three times, first by the teacher, then a student volunteer, and finally with a partner. Students begin by sharing a word or phrase that describes the context of the problem as the teacher guides them to attend to the precision of mathematical language and communication (MP.6). Then they are to focus on understanding what is being asked and how they can rephrase the question. Lastly, students identify important information and make sense of the quantities and discuss relationships between the quantities where they reason abstractly (MP.2). Students continue to work individually to represent and explain their thinking about problems as they model quantities and relationships (MP.4). Students have access to a variety of tools and manipulatives to represent the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			problem (MP.5). The routine then moves to the "Discuss It" section focused on MP.2, MP.3, and MP.6. In the "Discuss It" section, students explain and justify their strategies and solutions. Partners listen to and critique each other's reasoning (MP.3). During this time, the teacher shares sentence starters and questions for discussion that guide students to attend to greater precision in their communication, language, and vocabulary (MP.6). Students share their thinking with the class, as well as the different approaches of strategies, as they reason abstractly and quantitatively (MP.2). The teacher prompts students to understand other students' explanations through restating and rephrasing (MP.3). Students reason abstractly and quantitatively as they find similarities, differences, and connections among the strategies they have discussed. (MP.2). The "Connect It" section focuses on MP.2, MP.4, and MP.5. Students work independently to further strengthen the connections between the strategies discussed. Students think through the problems connecting the quantitative, concrete approaches to more abstract understanding (MP.2). Students apply what they have learned throughout the lesson to new problems. Students determine which strategy they feel is appropriate to model and solve (MP.4). Students choose from a variety of mathematical tools (MP.5). This routine is

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			evident throughout each of the lessons. For example, in Unit 5, Lesson 30, Session 1, the initial problem states, "Traci tries to teach her younger sister how to draw a rectangle. Traci tells her, Draw a shape with four straight sides. Traci's sister draws the shape shown. The drawing of the shape includes 4 straight sides but is not a rectangle. How can Traci make her directions more clear?" In the "Try It" section, the teacher engages the students in a language routine in order to make sense of the problem (MP.1), then the students attempt to solve the problem. In the "Discuss It" section, students ask a partner, "Do you agree with me? Why or Why not?" (MP.3). The teacher encourages the use of the terms "sides'' and "angles'' as the students talk to each other (MP.6). In the "Connect It" section, students reason about what they know about rectangles to determine a way to make Traci's directions more clear (MP.2). In addition to the mathematical practices that are integrated into the "Try It," "Discuss It," and "Connect It" routines, the Lesson Overview lists other math practices that are emphasized in the lesson such as in Unit 3, where Lesson 15 emphasizes the use of MP.1, MP.5, MP.7 (Look for and make use of structure), and MP.8 (Look for and express regularity in repeated reasoning). In Session 2, students utilize MP.7 in the "Model It" section. Students deepen their understanding by considering

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			how place value concepts are used to compute the partial quotients. In Unit 2, Lesson 10, "Model It" section of the instructional routine, students use the bar model to write equations for the problem (MP.4). When discussing the bar model, teachers prompt students to think about the length of the boxes in each bar and the amounts they represent (MP.6).
	Required **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	Yes	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. Every lesson integrates MP.3 (Construct viable arguments and critique the reasoning of others). Use of MP.3 is evidenced in the "Discuss It" section of the "Try It-Discuss It-Connect It" routines. Questions appear throughout each lesson in the Student Worktext to engage students in explaining their thinking and critiquing the reasoning of others. Students construct arguments as they engage in partner talk during the "Discuss It" section of the lesson and during whole-class discussions. For example, in Unit 1, Lesson 3, Session 2, the session begins with the following problem: "Last year Tanaka's Toys spent $117,290 developing a new video game. Mia rounds the amount spent to the nearest ten thousand. Jon rounds the amount spent to the nearest thousand. What amounts do Mia and Jon each round to?" Students work through

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			this problem and then compare answers. During "Discuss It," students are prompted to ask, "Can you explain that again?" and tell their partner "I do not understand how…" In Unit 2, Lesson 7, Session 1, students begin with the following problem: "Hannah scored 3 goals last season. She scored 4 times as many goals this season. How many goals does Hannah score this season?" Once students have answered the question, they move to the "Discuss It" routine. "Ask your partner: Do you agree with me? Why or why not? Tell your partner: I agree with you about…" These questions support the use of MP.3 and are provided consistently throughout the lessons. In Unit 2, Lesson 9, the "Discuss It" section, students ask their partner: "Do you agree with me? Why or why not?" In Unit 2, Lesson 6, the "Discuss It" section asks students: "How do you and your partner think that a bar model shows how to compare two numbers?" "I think a bar model helps me understand multiplication as a comparison because…"
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	Yes	Materials include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. Every lesson integrates MP. 1 through MP.6 through the "Try-Discuss-Connect" routine as described in detail in the Teacher's Guide. In addition to the integrated mathematical practices, the math practices that are emphasized in the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			lesson are listed in the Lesson Overview. The "Deepen Understanding" section explains the emphasized mathematical practice(s) and supports teachers in engaging students more deeply in practice standards connected to the concepts of the lesson. This is built into each lesson. For example, in Unit 4, Lesson 18, Session 2, "Deepen Understanding," "Common Denominators," teacher support for utilizing MP.7 to help students solve the problem is provided. It is suggested that the teacher prompts the students to recognize that rewriting one of the fractions makes it easier to compare the two fractions. Guiding questions and Listen Fors are provided for the teacher as well, along with a generalizing question and statement that brings the idea together and helps students understand that finding equivalent fractions with the same denominators helps to compare numerators and tell which fraction is greater. In Unit 3, Lesson 13, Session 2, "Deepen Understanding," "Diagram Models of Pounds and Ounces," teacher support for utilizing MP.4 is provided. The section states, "When discussing the diagram of pounds and ounces, prompt students to recall the bar models used in an earlier lesson about multiplication as a comparison. Students will show that 21 is 7 times as many as 3 with two bars of different lengths, one above the other, lined up along their left sides. The top bar

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			shows the value 3. The bottom bar showing 21 can be divided into 7 equal parts, each showing the value 3." In Unit 1, Lesson 5, Session 3, "Deepen Understanding," "Standard Algorithm for Subtraction," the following guidance is provided: "When discussing subtraction with the standard algorithm, prompt students to consider how to verbalize their thinking as they work through the problem. Having students explain their solution and the solution process is an important part of creating their understanding of subtraction. Convincing themselves that their solution is correct is also a necessary part of the process." One of the questions and Listen Fors provided states, "Ask, How can you explain how to use the subtraction algorithm to your partner? How can you explain what regrouping means? Listen for, Students should give an accurate and complete explanation of the steps used in the standard algorithm for subtraction and indicate a conceptual understanding of regrouping" (MP.3).
	6d) Materials explicitly attend to the specialized language of mathematics.	Yes	Materials explicitly attend to the specialized language of mathematics. The Lesson Overview identifies and defines the vocabulary that will be addressed and used in the lesson. For example, in Unit 3, Lesson 16, Lesson Vocabulary include the terms "formula," "area," and "perimeter." Within the lesson, students are encouraged to use the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			mathematical vocabulary words as they discuss concepts. For example, in Session 1, students are encouraged to use the terms "perimeter," "width," and "length" as they discuss their solution. The materials also include "Connect to Family" letters to send home. The same math vocabulary that is identified in the Lesson Overview is also discussed in the family letter to support the use of the mathematical terminology both in and out of the classroom. For example, in Unit 2, Lesson 8, the "Connect to Family" letter discusses the use of the following Math vocabulary terms: "factor pair," "composite number," and "multiples." In addition, "Build Your Vocabulary" activities occur at the beginning of the unit to provide opportunities for students to review previously taught mathematical terms. For example, at the beginning of Unit 2, the Math Vocabulary section instructs students to, "Label each item with a review word. Then work with your partner to clarify." The "Academic Vocabulary" portion of the same activity instructs students to, "Put a check next to the academic words you know. Then use the words to complete the sentences." Students also complete graphic organizers throughout the materials to gain a deeper understanding of mathematical terms. For example, in Unit 5, Lesson 34, Session 1, students complete a graphic organizer for the phrase, "line of symmetry." Students

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			explain the definition in their own words, create an illustration to represent the phrase and provide examples and nonexamples.
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. ☒ Yes ☐ No	**Required** **7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	Yes	Students are asked to produce answers and demonstrate understanding in a variety of ways. For example, in Unit 4, Lesson 18, Session 2, students begin by creating a model to compare fractions. The lesson progresses to more abstract thought, requiring the "greater than," "less than," or "equal to" signs to compare. Session 2 culminates with Question 7, asking, "Can two fractions with the same numerator and different denominators be equal? Use words and numbers to explain." (LSSM 4.NF.A.2). Another example, found on the Unit 1 Assessment, Question 1, has students "Write two different ways to expand and show 402,637. Write your answers in the blank." (LSSM 4.NBT.A.2). Question 3 provides a place value chart with the following question, "How does the value of the 8 in the ten thousands place compare to the value of the 8 to its right?" (LSSM 4.NBT.A.1). Question 5 states, "Find the difference of 441,902 and 312,684. Record your answer on the grid. Then fill in the bubbles." (LSSM 4.NBT.B.4). In the "Try It" section within the "Explore" and "Develop" sessions, the "Math Toolkit" provides a list of manipulatives and tools for students to choose as they develop strategies for the "Try It" problem. For

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			example, in the Student Worktext Unit 4, Lesson 1, Session 2, the "Try It" section, students are to read and try to solve the problem: "A grasshopper weighs 2/100 of an ounce. A beetle weighs 8/10 of an ounce. Which weighs more? (LSSM 4.NF.A.2). In the "Math Toolkit," students choose from the following optional strategies to solve the problem: number lines, hundredths grids, tenths grids, index cards, and fraction models. Another example is evidenced in the Student Worktext Unit 4, Lesson 21, Session 2, "Try It" section which states, "Read and try to solve the problem: Markers come in boxes of 8. For an art project, one group of students uses 1 5/8 boxes of markers, and another group uses 1 6/8 boxes. How many boxes of markers do the two groups use altogether?" (LSSM 4.NF.B.3). The "Math Toolkit" provides the following optional strategies to help students solve the problem: fraction circles, fraction tiles, number lines, index cards, and fraction models.
	Required **7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among	Yes	Materials provide separate teacher materials that support and reward teacher study. Every unit begins with a coherence chart that shows the connections between previous and future grade levels. The chart shows which lessons the students are building upon and for which they are preparing. For example, in the Unit 2 coherence chart, Lesson 6 (Understand Multiplication as a Comparison) builds

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	students.		upon Grade 2, Lesson 31 (Add Using Arrays), Grade 3, Lesson 4 (Understand the Meaning of Multiplication), and Grade 3 Lesson 17 (Solve One-Step Word Problems Using Multiplication and Division). The chart also conveys how the lesson will prepare students for Grade 5, Lesson 21 (Understanding Multiplication as Scaling) and Grade 5, Lesson 22 (Multiply Fractions in Word Problems). The Teacher's Guide is the main resource for embedded instructional support during each session and includes several sections. In the Lesson Overview, the teacher is provided with a pacing guide and a small group instruction guide. The Math Background, located at the beginning of each unit in the Teacher's Guide, shows the flow of the standards and models taught within a unit, provides teaching insight about models, and connects the models to both prior knowledge and future learning. The "Connect to Prior Knowledge" portion gives clear entry points for each session while engaging students mathematically with prerequisite content. In "Support Partner Discussion," educator prompts are featured to help students engage in meaningful peer discourse. The "Common Misconception" portion identifies misconceptions that lead to errors in understanding, which can then be addressed in a whole-class discussion as students are prompted to explain their reasoning. "Support Whole Class

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Discussion" prompts are a series of related discourse questions that highlight the mathematical ideas of the lesson. "Monitor and Confirm" ensures that students have made sense of learning goals. "Sentence Starters" and "Discourse Questions" enable teachers to support and facilitate whole-class discussions with mathematical discourse questions as students share their thinking. Reinforcement and extension activities are also provided in the Teacher Toolbox. For example, in Unit 3, Lesson 16, "Small Group Differentiation" activities to reinforce and extend the lesson are outlined. Suggestions to help reinforce include the following activities and worksheets: Use Perimeter and Area Vocabulary, Perimeter, and Area Problems. Options are provided for students on-level and below-level. Extension suggestions include the following activity/worksheet: Designing a Yard.
	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	Materials include support for English Language Learners and other special populations. Support is thoughtful and helps students meet the state's standards. The beginning of each lesson in the Teacher's Guide includes a "Language Development" section that includes a "Differentiated Instruction" chart for English Language Learners to plan and prepare for specific activities in every session. The chart provides teachers with examples of what English Learners should

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			be able to do based on their English language proficiency levels in connection with the LSSM addressed in the unit. Teachers use language expectations to help differentiate instruction for English Learners. For example, in Unit 5, Lesson 30, the Differentiated Instruction chart for ELL prepares teachers for the Session 1, "Connect It" section. The chart provides content-specific guidance for the different language proficiency levels so that teachers can address language needs throughout the lesson and provide strategic scaffolds for different language domains. More specifically, in Unit 2, Lesson 6, varying levels are provided, including Levels 1-3 for Listening/Speaking, 2-4 for Speaking/Writing, and 3-5 Reading/Writing. These types of suggestions are provided throughout the materials. For example, Listening/Speaking suggestions for Session 1, "Model It" states, "Read Model it Problem 5 using gestures and voice emphasis as needed. Ask: What symbols can you draw to represent 3 times as many as 5? Ask students to work with partners to draw a picture that represents the problem." The teacher is also provided questions to ask and sentence frames to use as the students draw.
	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,	Yes	The underlying design of the materials distinguishes between problems and exercises. The instructional design of the materials primarily includes instructional

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	students apply what they have already learned to build mastery. Each problem or exercise has a purpose.		lessons during the "Explore" and "Develop" sections. These sessions use a student-centered approach for students to learn new mathematics, explore multiple approaches and strategies, and engage in mathematical discourse about the problems. Questions in the Student Worktext and Teacher's Guide ask students to think critically about the models, representations, and concepts within the lesson. By exploring the problems and new mathematical skills and concepts of the lesson using the "Try-Discuss-Connect" routine, students develop a deeper understanding of the mathematics involved. During "Apply It," students are given the opportunity to apply newly learned math and strategies to the problems. The "Additional Practice" portions of the "Explore" and "Develop" sessions provide purposeful practice and reinforce understanding. The additional practice activities in "Explore" are centered on vocabulary as students use a graphic organizer to help them develop and solidify concepts. Students are expected to complete the additional practice activities at the end of each session independently. For example, in Unit 5, Lesson 33, Session 2, "Try It" section, students sort shapes into the following three categories: parallel sides, perpendicular sides, and parallel and perpendicular sides. The students then discuss their decisions with a partner.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Activities in the session prepare them to apply the newly learned math in the Additional Practice section, "Practice Sorting Shapes Based on Sides," as students sort shapes on their own.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	Yes	Lessons are appropriately structured and scaffolded to support student mastery. Each lesson is broken into sessions that are written in a way to scaffold learning. For example, every multi-day lesson opens with an Explore session to help students connect to prior learning and use what they already know to bridge to the new learning. The Develop session(s) gives students multiple opportunities using various modalities to develop their thinking about new concepts. The Refine session gives additional time for students to deepen their understanding of the concepts and skills by comparing and discussing different answers and strategies to fluency and application problems they work on independently and discuss in pairs. The scaffolding is seen across sessions within a lesson. For example, Unit 4, Lesson 20, Adding and Subtracting Fractions, begins with "Exploring Adding and Subtracting Fractions," and "Preparing for Adding and Subtracting Fractions" followed by Session 2, "Develop Adding Fractions" and Session 3, "Develop Subtracting Fractions." The lesson ends with Session 4, "Develop Decomposing Fractions," and Session 5, "Refine Adding and Subtracting Fractions." Another

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			example of the scaffolding is evidenced in Unit 1, Lesson 5, "Subtract Whole Numbers." Session 1 begins with "Explore Subtracting Whole Numbers" followed by Session 2, "Develop Using Strategies to Subtract," Session 3, "Develop Using the Standard Algorithm to Subtract Greater Numbers," and finally Session 4, "Refines Subtracting Whole Numbers." Additionally, the materials support teachers in anticipating student misconceptions and selecting and sequencing student solutions, so the content is accessible to all learners. For example, in the Teacher's Guide, Lesson 24, Select and Sequence Student Solutions section states, "One possible order for whole-class discussion: physical models of parts that show combining tenths; drawings or number lines showing repeated addition of tenths; addition equations showing repeated addition of tenths; and multiplication equations showing tenths multiplied by a whole number." The Ask/Listen section instructs teachers to: "Ask-How do (student name)'s and (student name)'s models show 1 serving of crackers? How do (student name)'s and (student name)'s models show 3 servings of crackers?" and to "Listen for-One serving is 3/10. Three servings is 3/10+3/10+3/10 or 3 groups of 3/10, which is 9/10*3/10 + 3/10 + 3/10 is the same as 3 X 3/10". (4.NF.B.4: Apply and extend previous understanding of multiplication to multiply a fraction by a

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			whole number.)
	7f) Materials support the uses of technology as called for in the Standards.	Yes	Grade 4 LSSM do not contain standards that call for materials that support the use of technology. However, the "Student Digital Experience" offers online access to the print version of the Student Worktext via the Bookshelf, along with Digital Math Tools, Interactive Learning Games, Interactive Practice, and Family Resources. The Bookshelf houses the digital edition of the Student Worktext, and students have the ability to highlight, take notes, have pages read aloud, as well as use a calculator and multilingual glossary. Interactive Learning games are used to engage students in gameplay while building fluency skills. Teachers also have access to the Teacher Toolbox that includes implementation resources, tutorial videos, digital math tools, lesson slides, fluency and skill practice sheets, center activities, enrichment activities, assessment resources, and unit flow and progression videos.

FINAL EVALUATION

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

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

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

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

Section	Criteria	Yes/No	
I: Non-negotiable Criteria of Superior Quality[4]	1. Focus on Major Work	Yes	Materials devote the majority of time to the major work of the grade. For example,

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[4] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier I or Tier II rating.

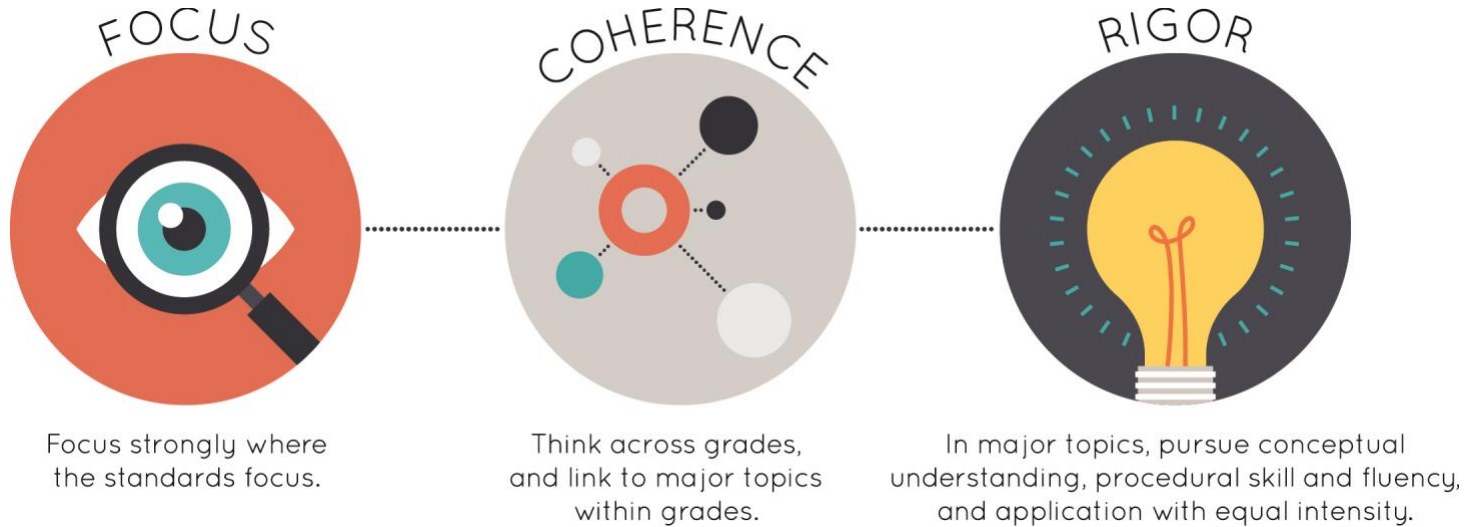| CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			108 of 140 (77%) total instructional days are devoted to the major work as outlined by the Louisiana Student Standards for Math (LSSM). In addition, minimal time is spent on content outside of the appropriate grade level. In assessment materials, the components do not make students and teachers responsible for any topics before the grade in which they are introduced.
	2. Consistent, Coherent Content	Yes	Materials connect supporting content to major content in meaningful ways, so that focus and coherence are enhanced throughout the year. Materials include problems and activities that connect two or more clusters in a domain and two or more domains in the grade level where these connections are natural and important.
	3. Rigor and Balance	Yes	Materials develop a conceptual understanding of key mathematical concepts. Materials are designed so that students attain the fluency and procedural skills required by the Standards. Materials are designed so that students spend sufficient time working with engaging applications. It is evident in the materials that the three aspects of rigor are not always treated together and are not always treated separately.
	4. Focus and Coherence via Practice Standards	Yes	Materials address the practice standards in such a way to enrich the content standards of the grade/course.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
II: Additional Criteria of Superior Quality[5]	5. Alignment Criteria for Standards for Mathematical Content	Yes	Materials provide all students with extensive course-level problems. Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. Materials include learning objectives that are visibly shaped by LSSM cluster headings and standards.
	6. Alignment Criteria for Standards for Mathematical Practice	Yes	Materials attend to the full meaning of each practice standard and provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards. Teacher-directed materials explain the role of the practice standards in the classroom and in students' mathematical development. Materials also explicitly attend to the specialized language of mathematics.
	7. Indicators of Quality	Yes	Students are asked to produce answers and to show their knowledge in a variety of ways. Separate teacher materials support and reward teacher study. Materials include support for English Language Learners and other special populations. The underlying design of the materials distinguishes between problems and exercises. Lessons are appropriately structured and scaffolded to support student mastery; and while not required in Grade 4 the materials support the use of technology.

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

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

Instructional Materials Evaluation Tool for Alignment in

Mathematics Grades K – 12 (IMET)

FULL CURRICULUM
Instructional Materials

Strong mathematics instruction contains the following elements:

FOCUS

Focus strongly where
the standards focus.

COHERENCE

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

RIGOR

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

Title: **Ready Classroom Math**   Grade/Course: **5**

Publisher: **Curriculum Associates, LLC**   Copyright: **2020**

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

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

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

To evaluate instructional materials for alignment with the standards and determine tiered rating, begin with **Section I: Non-negotiable Criteria**.

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

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

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

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

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

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

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Section I: Non-negotiable Criteria of Superior Quality **Materials must meet all of the Non-negotiable Criteria 1-4 in order for the review to continue to Section II.**			
Non-negotiable **1. FOCUS ON MAJOR WORK[2]:** Students and teachers using the materials as designed devote the large majority[3] of time to the major work of the grade/course. ☒ Yes ☐ No	**Required** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	Yes	Materials devote the majority of time on the major work of the grade. For example, 79% of total instructional days are devoted to the major work as outlined by the Louisiana Student Standards for Math (LSSM). More specifically, 64% of instructional days address the major standards alone, while 15% address a combination of major and supporting/additional standards. Approximately 21% of instructional days address the supporting and additional standards. The major work of Grade 5 focuses on Numbers and Operations in Base Ten (NBT) and Numbers and Operations-Fractions (NF) which are addressed in Units 1-3. An example of major work is evidenced in Unit 1, Lesson 4, Multiplying Multi-Digit Numbers, where students pay attention to the place value of the digits as they multiply (LSSM 5.NBT.B.5). In Unit 2, Lesson 12 Add Fractions, students add fractions with unlike denominators using visual models and equivalent fractions and solve word problems involving the addition of fractions (LSSM 5.NF.A.1, 5.NF.A.2). Another example is evidenced in Unit 3, Lesson 15, Multiplying a Decimal by a

[2] For more on the major work of the grade, see Focus by Grade Level.
[3] The materials should devote at least 65% and up to approximately 85% of class time to the major work of the grade with Grades K–2 nearer the upper end of that range, i.e., 85%.

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			Whole Number, where students use fractional models that represent decimal parts of a whole to multiply by a whole number (LSSM 5.NBT.B.7).
	Required **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit 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	Materials spend minimal time on content outside of the appropriate grade level. In assessment materials, assessment components do not make students/teachers responsible for any topics before the grade level in which they are introduced. The materials progress through whole number operations, decimal and fraction operations, measurement, data, geometry, and algebraic thinking, all of which align to the Louisiana Student Standards for Mathematics (LSSM) for grade 5. The assessment components include lesson quizzes, mid-unit assessments, and unit assessments. Each item on these assessments directly correlates to the LSSM for Grade 5. For example, on the Mid-Unit Assessment for Unit 2, students write numbers with decimals to the thousandths in standard form, express the relationship between two decimal numbers using a number sentence, complete power of 10 equations, determine equivalent expressions for a number in decimal form, and correctly round a number with a thousandths place value (LSSM 5.NBT.A.1, 5.NBT.A.2, 5.NBT.A.3a, 5.NBT.A.3b, 5.NBT.A.4). On the Unit 3 Assessment, students solve multiplication of mixed numerals and

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			fractions to find real-life solutions to word problems, divide a whole number into fractional parts on a number line, multiply decimals using partial products, and complete a table using fractional parts (LSSM 5.NF.B.3, 5.NF.B.4b, 5.NF.B.6, 5.NF.B.7, 5.NF.B.7b, 5.NF.B.7c).
Non-negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**Required** **2a)** Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year.	Yes	Materials connect supporting content to major content in meaningful ways, so that focus and coherence are enhanced throughout the year. Grade 5 has two supporting standards, LSSM 5.MD.A.1 (Convert among different sized standard measurement units within a given measurement system and use these conversions in solving multi-step, real-world problems) and LSSM 5.MD.B.2 (Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots). Unit 5, Lesson 25 connects supporting LSSM 5.MD.A.1 to major LSSM 5.NBT.A.2 (Explain and apply patterns in the number of zeros of the product when multiplying a number by powers of 10. Explain and apply patterns in the values of the digits in the product or the quotient, when a decimal is multiplied or divided by a power of 10.) In Unit 5, Lesson 25, Session 2, Additional Practice. Question 6 states, "The pattern in the table shows that the number of centimeters is always 100 times the number of meters. Fill in the missing

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			number of meters." Another example is evidenced in Unit 5, Lesson 27. Lesson 27 connects supporting LSSM 5.MD.B.2 to major LSSM 5.NF.A.2 (Solve word problems involving addition and subtraction of fractions), LSSM 5.NF.B.6 (Solve real-world problems involving multiplication of fractions and mixed numbers) and LSSM 5.NF.B.7 (Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions). In Unit 5, Lesson 27, Session 3, Additional Practice, question 3 states "If Miguel uses 2 of each strip length that he has to make a line, how long would the line be?" In Unit 2, Lesson 8, Session 4, supporting LSSM 5.OA.A.1 (Use parentheses or brackets in numerical expressions, and evaluate expressions with these symbols.) is connected to major LSSM 5.NBT.A.3 (Read, write, and compare decimals to thousandths), as students simplify an expression with parentheses to find if the expression is equivalent to a number with a decimal. Students demonstrate their understanding of place value while also writing and interpreting numerical expressions. Another example, Unit 4, Lesson 27, Session 3, connects the supporting cluster 5.MD.B (Represent and interpret data) to major LSSM 5.NF.A.2 (Solve word problems involving addition and subtraction of fractions with unlike denominators), as students solve word

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			problems based on data presented in a line plot with fractional values. Apply It, problem 7 asks students, "What is the difference between the weights of the lightest and heaviest shells Renaldo collected?"
	Required **2b)** Materials include problems and activities that serve to connect two or more clusters in a domain, or two or more domains in a grade/course, in cases where these connections are natural and important.	Yes	Materials include problems and activities that connect two or more clusters in a domain and/or two or more domains in the grade level where these connections are natural and important. Unit 1, Math in Action connects clusters 5.MD.C (Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition) and 5.NBT.B (Perform operations with multi-digit whole numbers and with decimals to hundredths). For example, in Unit 1, Math in Action, Session 1, a question states, "Sweet T is helping design a small goldfish tank to be built for the fair. The pool will be shaped like the diagram. The two ends are the same depth. The middle section is deeper. What should the dimensions of the pool be? What should the volume be?" Unit 4, Math in Action, connects the Geometry (G) and Measurement and Data (MD) domains, as students solved real world problems involving measurement conversions, using data in line plots, and classifying quadrilaterals. Unit 2 Review connects the Numbers and Operations in Base Ten (NBT) and the Number and Operations--Fractions (NF) domains. Question 1 states "Which number is

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			equivalent to 0.15 x 10?" Question 6 states "It snowed 5 ½ inches in January and 4 ⅞ inches in February. How many more inches did it snow in January than February?" Unit 5, Lesson 33, Session 3 connects the Operations and Algebraic Thinking (OA) and Geometry (G) domains. More specifically, the lesson connects 5.OA.B (Analyze patterns and relationships) and LSSM 5.G.A (Graph points on the coordinate plane to solve real-world and mathematical problems), as students graph points on a coordinate grid and then analyze the patterns of the graph plots. Problem 8 presents two patterns to which students write ordered pairs made of corresponding terms in the patterns and then plot the points on a coordinate grid. Additionally, Unit 5, Math in Action, includes activities that connect the Measurement and Data (MD) and Geometry (G) domains, as students solve area and perimeter problems involving shapes with specific properties on the coordinate grid.
Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application.	**Required** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	Yes	Materials develop conceptual understanding of key mathematical concepts. Lessons are designed to support students in exploration and developing conceptual understanding of grade-level mathematics. For example, Unit 3, Lesson 19 has the following objectives: use visual fraction models to represent a fraction as division, solve word problems involving division of whole numbers in which the

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☒ Yes ☐ No			quotient is a fraction or a mixed number, understand a fraction as a way to represent division where the numerator is divided by the denominator. This aligns to the conceptual understanding component of LSSM 5.NF.B.4 (Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction). Unit 3, Lesson 19, Session 3 has the following question "Landon said that ⅔ x ⅙=⅚. Tell how Landon had found his product and then explain how to find the correct product." Unit 5, Lesson 31 has the following objectives: recognize the coordinate plane as a two dimensional space determined by the intersection of the horizontal and vertical number line, identify the x- and y-coordinates of a point on the coordinate plane, plot a point on the coordinate plane given its x- and y-coordinates. The objectives align to LSSM 5.G.A.1 (Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates). Unit 5, Lesson 31, Session 2 has the following question: "Points A, B, and C are graphed or plotted, in the coordinate plane below. Use the graph to write the ordered pair for each point." Students develop conceptual understanding in Unit 2, Lesson 6, Session 1, Explore, Problem 1 which states, "Look

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			at the place value models for whole numbers. Write the missing factor in each equation to show how ones, tens, hundreds, and thousands are related." Equations include, "1,000 = __x100, 100 = __ x10, and 10= __ x 1." Students use pictures of place value blocks and decimal grids to show how place values are related (LSSM 5.NBT.A.1: Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.) Another example is evidenced in Unit 3, Lesson 18, Session 2, Develop, Try It which states, "Jared, Monica, and Heather have 5 hallways to decorate for the student council. If they share the work equally how much will each student decorate?" Students use pictures or number lines to solve problems involving fractions or mixed numbers (LSSM 5.NF.B.3: Interpret a fraction as division of the numerator by the denominator (a/b=a/b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem).
	Required **3b) *Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year	Yes	Materials are designed so that students attain the fluency and procedural skills required by the Standards. Grade 5 students are expected to fluently work through problems throughout using the

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	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.		Fluency and Skills Practice sheets. LSSM 5.NBT.A.2 states, "Explain and apply patterns in the number of zeros of the product when multiplying a number by powers of 10, explain and apply patterns in the values of the digits in the product or the quotient, when a decimal is multiplied or divided by a power of 10, and use whole-number exponents to denote powers of 10." Unit 2, Lesson 7, Session 2, Additional Practice, students engage in 6 problems in which they write the missing power of 10 in exponential form and 6 problems in which they complete the equations involving exponents to find each product. Students can also complete the Fluency & Skills Practice sheet which provides additional practice of working with powers of 10 in multiplication and division problems. LSSM 5.NF.B.7 states, "Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions." Unit 3, Lesson 23 assesses this standard at a procedural skill level. An example can be found in an item on the Lesson 23 Quiz which states, "Which model represents ¼ divided by 6? Choose all that apply." Students have opportunities to develop procedural skills and fluency for cluster 5.NBT.B (Perform operations with multi-digit whole numbers and with decimals to hundredths). For example, in Unit 3, Lesson 15, Session 3, Refine, Apply It, Problem 3 states, "What is

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			the product of 2 and 0.73? Kendall chose (B) as the correct answer. How did she get that answer?" Students analyze the solution and identify the error in a procedural problem. The materials also include an online game platform with interactive games for students to build procedural skills and fluency. For example, Grade 5 students can play the game "Match" which allows them to strengthen skills in the area of computation (LSSM 5.NBT.B.5, Fluently multiply multi-digit whole numbers using the standard algorithm; and LSSM 5.NBT.B.6, Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models). In this game, students solve addition, subtraction, multiplication, or division problems and find a card that has a matching solution.
	Required **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to	Yes	Materials are designed so that students spend sufficient time working with engaging applications. LSSM 5.MD.C.5 (Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume) is assessed at an application level. Unit 1, Lesson 2, Session 2, Apply It includes the assessment item,

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	those places in the content Standards where expectations for multi-step and real-world problems are explicit.		"Mr. Wong finds the volume of a box by filling it with 1 foot unit cubes, as shown below. What is the volume of Mr. Wong's box? Show your work" Another standard with the application component of rigor is LSSM 5.NF.A.2 (Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem). Unit 2, Lesson 12, Session 2, Apply it, includes the problem, "Hank practices ⅝ of the words on his spelling list on Monday. He practices another ¼ of his list on Tuesday. What fraction of his spelling list has Hank practiced so far? Show your work." Another example in Unit 2 is evidenced in the End of Unit Assessment. Problem 5 states, "Jake buys 1 ½ yards of cloth. He uses ⅔ yard for a craft project. How much cloth, in yards, does Jake have left? Show your work." Another example is evidence in Unit 2, End of Unit, Unit Review. The Performance Task states, "You have a movie theater gift card worth $40, so you invite a friend to go to the movies with you. Your friend challenges you to spend the exact value of the gift card. Find at least one way to do so by choosing from the items listed below." A table is provided listing things for purchase and their prices. "After you complete the task, choose one of the following questions to answer. What strategies did you use? If a strategy did not

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			work, what did you do? How did you use equations to solve this problem?" In this task, students perform mathematical operations on decimal numbers. Students analyze the information provided in a table, develop a plan to solve the problem, and continually evaluate their progress in order to plan their next step (LSSM 5.NBT.B.7: Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used).
	Required **3d)** *Balance:* The three aspects of rigor are not always treated together and are not always treated separately.	Yes	It is evident in the materials that the three aspects of rigor are not always treated together and are not always treated separately. The materials provide a balance of the three aspects of rigor. Conceptual understanding is developed and assessed before progressing to procedural skill and fluency and application. For example, in Unit 1, Lesson 3, Session 1, students use what they know about finding the volume of a rectangular prism represented by a unit cube model. Students share strategies in order to recognize repeated reasoning that builds the foundation for volume calculations using a formula. In Session 2, students transition from concrete and visual strategies to finding volume using volume formulas as they answer the problem,

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			"Gareth has a rectangular pencil cup on his desk. The cup is 3 inches long, 2 inches wide, and 5 inches high. What is the volume of the pencil cup?" The lesson progresses to Session 4 as students answer the following question, "The rectangular prism shown below has a volume of 42 cubic meters. What is the length of the prism? Show your work." (LSSM 5.MD.C.5). Another example, in Unit 2, Lesson 14, Session 2, Develop combines conceptual understanding, procedural skill, and application. Students solve word problems involving addition and subtraction of fractions, mixed numbers, and decimals (LSSM 5.NF.A.2). In Unit 3, Lesson 15, Session 2, Develop students develop conceptual understanding for multiplying decimals. Try It states, "Padma bought 3 pounds of grapes. Each pound of grapes costs $2.75. How much money did Padma spend on grapes?" Students model the numbers to develop strategies for multiplying decimals to hundredths by a whole number. Students then progress to using partial products to multiply a decimal by a whole number (LSSM 5.NBT.B.7). In Unit 1, Lesson 4, Session 3, Fluency and Skills Practice, students use procedural skill and fluency when multiplying multi-digit whole numbers using the standard algorithm. There are 15 multi-digit whole number multiplication problems, including, "580 x 30;" "1,236 x 55;" and "2,409 x 23"(LSSM 5.NBT.B.5). In

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			Unit 3, Lesson 22, Session 4, Refine, students engage in application problems. Problem 7 states, "Lily paints 3 trees for a wall mural. The middle tree is 2 ½ ft tall. The tree on the left is ¾ as tall as the middle tree. The tree on the right is 1 ¾ times as tall as the middle tree. How tall is each tree? Show your work." (LSSM 5.NF.B.6). Students engage in the application type problems only after developing conceptual understanding and procedural skills and fluency.
Non-negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☒ Yes ☐ No	**Required** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	Yes	Materials address the practice standards in such a way to enrich the content standards of the grade. Mathematical Practices (MP) are taught in connection with the Math standards. MP.1-MP.6 are integrated into every lesson through the Try-Discuss-Connect routine. The Lesson Overview specifies additional practices that are addressed during the lesson and highlights which ones are particularly emphasized in the lesson. For example in Unit 2, Lesson 10, Session 2, Deepen Understanding, students explore different ways to understand adding decimals (LSSM 5.NBT.B.7). Students can use base-ten blocks, base-ten grid paper, decimal grids, number lines, and place value charts (MP.5, use appropriate tools strategically). Another example is evidenced in Unit 3, Lesson 18, Session 2, Develop; students reason abstractly and quantitatively (MP.2) as they solve the problem, "Jared, Monica, and Heather have 5 hallways to decorate

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			for the student council. If they share the work equally, how much will each student decorate?" Students discuss situations where they would want to show a quotient as a mixed number and situations where they would want to show it as a whole number and a remainder. (LSSM 5.NF.B.3). In Unit 4, Lesson 26, Session 2, students use precise language (MP.6) when converting between hours and minutes and understanding minutes as a fraction of an hour. Connect It, Problem 2 states, "Look at Picture It. You can convert minutes to hours before you multiply. What part of an hour is 40 minutes? How do you know?" (LSSM 5.MD.A.1). Students engage with MP.7 and MP.8 throughout the materials as evidenced in sections, such as Deepen Understanding. For example, in Unit 2, Lesson 12, students look for structure (MP.7) as they add fractions with like denominators. Using an equation model to add 1/2 and 4/5, students recognize that the product of the denominators is always an option for finding a common denominator as they develop the understanding that if you multiply one of the denominators by the other denominator the product is a multiple of both denominators.
Section II: Additional Criteria of Superior Quality			

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5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT: Materials foster focus and coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☒ Yes ☐ No	**Required** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their specific responsibility is for the current year.	Yes	Materials provide all students extensive work with course-level problems. Materials focus on Grade 5 Math standards. Each lesson in the curriculum is broken into 3-5 sessions with options for additional practice. The materials provide students the opportunity to work with problems in a variety of formats to integrate and extend concepts and skills. Learning Objectives are listed at the start of every lesson in the Lesson Overview and align to the LSSM for grade 5. The materials provide a Lesson Overview which includes prerequisite skills and the Lesson Progression. For example, Unit 2, Lesson 8 Overview states the prerequisite skills as "relate tenths and hundredths to decimals, read and write whole numbers, and read and write expanded forms for whole numbers". In Grade 5, Unit 2, Lesson 8 students apply their knowledge of decimal place value to read and write decimals to thousandths place in standard form, word form, and expanded form. Units consist of lessons, which are designed to last between three and five days. Within each lesson, days are broken into Explore, Develop, and Refine sessions. Develop and Refine sessions have ample practice problems for students to understand and apply concepts, and Develop sessions also include Fluency and Skills Practice pages. Each unit, also, includes a Math in Action lesson, which provides further work with grade-level problems over 2 days. In

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			addition, each lesson includes math center activities and enrichment activities, which both provide more work with grade level concepts. For example, Unit 2, Lesson 12, Add Fractions focuses on LSSM 5.NF.A. In Session 1, Explore, students work on adding and subtracting fractions with unlike denominators. "Emiliano needs 1/2 of a stick of butter to make cornbread. He also needs 1/4 stick of butter to make apple muffins. What fraction of a stick of butter does he need in all?" In Session 2, Develop, students explore strategies for adding fractions with unlike denominators, which is extended to adding with mixed numbers in Session 3. In Session 4, Refine, students use multiple strategies for adding mixed numbers and fractions with unlike denominators.
	Required **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	Yes	Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials have resources in the teacher's guide that points out the prior learning that should have taken place in the previous grade levels. At the beginning of each unit, a section is geared to identifying the learning from the previous year. For example, Unit 1 begins with connecting Grade 3, Lesson 9 and Grade 4, Lessons 11 and 12 (LSSM 3.NBT.A.3, 4.NBT.B.5) to Grade 5, Unit 1, Lesson 4 (LSSM 5.NBT.B.5). The Unit Overview then progresses to the Unit Background. In the Unit Background, prior knowledge a

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			student should have before beginning the unit is identified. Continuing in Unit 1, the curriculum identifies the prior knowledge as, "Students will build on their prior knowledge understandings of area, multiplication, and division." The connection to prior knowledge continues into the Lesson Overview. For example, Unit 1, Lesson 4 identifies the prerequisite skills for this lesson as, "understand place value, recall basic math facts, multiply two digit numbers by two digit number, use an area model to multiply, and understand regrouping." Another example is evidenced in Unit 3. Unit 3 begins with connecting Grade 3, Lesson 30, Grade 4, Lessons 33, and Grade 5, Lesson 28 (LSSM 3.G.A.1, 4.G.A.2, and 5.G.B.3) to Grade 5, Unit 5, Lesson 29 (LSSM 5.G.B.4). In Unit 4, the materials identify the prior knowledge as, "Students will build on various understanding of measurements, data, and geometric shapes." In Unit 4, Lesson 29 identifies the prerequisite skills for this lesson as, "recognize parallel and perpendicular lines; recognize right, acute, and obtuse angles; recognize the triangles that can be classified based on their length of sides; sort two-dimensional figures based on the kinds of sides they have and on the kinds of angles they have; and understand how a Venn diagram and a tree diagram show category-subcategory relationships." In Small Group Differentiation, Prepare, there is a link to

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			Prerequisite Lessons. For example, in Unit 2, Lesson 12, Lesson Overview, Small Group Differentiation, Prepare, Ready Prerequisite Lessons include Grade 4, Lesson 17-Understand Equivalent Fractions; Lesson 20-Add and Subtract Fractions; and Lesson 21-Add and Subtract Mixed Numbers. The Family Letter also contains information on the learning progressions for students.
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	**Yes**	Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards. The instructional materials identify Learning Objectives in each Lesson Overview, and Learning Targets are provided for students in the Student Workbook. For example, Unit 1, Lesson 5 has the following as learning objectives: "divide three- and four-digit dividends by two-digit divisors, use the relationship between multiplication and division to estimate quotients, divide multi-digit whole numbers using area models and strategies such as place-value understanding, properties of operations, estimating quotients, and finding partial quotients." These objectives connect to LSSM cluster heading B in Numbers and Operations of Base Ten (Perform operations with multi digit whole numbers and with decimals to hundredths) and reflect the language and intent of LSSM 5.NBT.B.6 (Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit

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			divisors, using strategies based on place value, the properties of operations, subtracting multiples of the divisor, and/or the relationship between multiplication and division. Illustrate and/or explain the calculation by using equations, rectangular arrays, area models, or other strategies based on place value.) For example, in Unit 1, Lesson 5, Quiz, students must solve the following problem: "A jewelry shop makes and sells pearl necklaces. Each necklace has 16 pearls. Mr. Allyn completed the division problem below, but the partial quotients and quotient were accidentally erased. Fill in the blanks to complete the problem." Unit 5, Lesson 31 includes the following lesson objectives: "recognize the coordinate plane as a two-dimensional space as determined by the intersection of a horizontal line and a vertical number line, identify the x- and y- coordinates as a point on the coordinate plane, and plot a point on the coordinate plane given its x- and y- coordinates." These objectives connect to the LSSM cluster 5.G.A (graph points on the coordinate plane to solve real-world and mathematical problems) and aligns to the language and intent of LSSM 5.G.A.1 (Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates). Unit 5,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Lesson 31, Session 3, problem 2 states, "Irvin wrote the ordered pair (4,3) for the location of Point J in the coordinate plane at the right. Explain Irvin's error." Another example, in Student Workbook, Unit 2, Lesson 6, Sessions 1-3, the Learning Target states, "Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left." This learning target aligns with LSSM Cluster 5.NBT.A (Understand the place value system).
6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE: Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. ☒ Yes ☐ No	**Required** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	Yes	Materials attend to the full meaning of each practice standard. Every lesson integrates MP.1 (Make sense of problems and persevere in solving them), MP.2 (Reason abstractly and quantitatively), MP.3 (Construct viable arguments and critique the reasoning of others), MP.4 (Model with mathematics), MP.5 (Use appropriate tools strategically), and MP.6 (Attend to precision) through the Try-Discuss-Connect routine. This routine begins with Try It. In the Try It section, the teacher integrates language routines, such as Three Reads, to help students make sense of the problems presented (MP.1). During Three Reads, problems are read three times, first by the teacher, then a student volunteer, and third in partners. Students begin by sharing a word or phrase that describes the context of the problem as the teacher guides them and attends to precision of mathematical

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			language and communication (MP.6). Then they focus on understanding of what is being asked and how they can rephrase the question. Lastly students identify important information, and make sense of the quantities and discuss relationships between the quantities and reason abstractly (MP.2). Students continue to work individually to represent and explain their thinking about problems as they model quantities and relationships (MP.4). Students have access to a variety of tools and manipulatives to represent the problem (MP.5). The routine then moves to Discuss It. Discuss It focuses on MP.2, MP.3, and MP.6. In Discuss It, students explain and justify their strategies and solutions. Partners listen to and respectfully critique each other's reasoning (MP.3). During this time, the teacher shares sentence starters and questions for discussion, as they guide students to attend to greater precision (MP.6) in their communication, language, and vocabulary. Discuss It continues as students share their thinking with the class. Students share their different approaches or review of Worktext strategies, as they reason abstractly and quantitatively (MP.2). The teacher prompts students to understand other student explanations through restating and rephrasing (MP.3). All students reason abstractly and quantitatively as they find similarities, differences, and connections among the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			strategies they have discussed (MP. 2). Connect It focuses on MP.2, MP.4, and MP.5. Students work independently to further strengthen the connections between the discussed strategies. Students think through the problems connecting the quantitative, concrete approaches to more abstract understanding (MP.2). Connect It continues as students apply what they have learned throughout to new problems. Students must determine which strategy they feel is appropriate, and then model and solve the problem (MP.4). Students may also choose from a variety of mathematical tools (MP.5). For example, in Unit 2, Lesson 10, Session 1, Try It the problem states, "Sabrina and Christy are running in a relay. Sabrina runs 100 meters in 13.6 seconds. Christy runs the same distance in 12.2 seconds. What is their total time?" Students then Discuss It- "How did I get started? I started by..." Students then Connect It- "Look Back. Look for understanding of adding decimals by place value regardless of the strategy the student used." In addition to those mathematical practices, the lessons emphasize other practices. An example of MP.1 is found in Unit 1, Lesson 5 , Session 4, Refine, Try It which states, "A grocery store only sells eggs by the dozen. There are 12 eggs in 1 dozen. If there are 1,248 eggs in stock, how many dozens of eggs are there?" (LSSM 5.NBT.B.6). Teacher

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			guidance states, "Make Sense of the Problem to support students in making sense of the problem, have them discuss the meaning of in stock. Ask: How many eggs are in stock at the store? How many eggs are in a dozen? What is the problem asking you to find?" An example of MP.2 is evidenced in Unit 1, Lesson 3, Session 2, Model It, and Picture It which states, "Gareth has a rectangular pencil cup on his desk. The cup is 3 inches long, 2 inches wide, and 5 inches high. What is the volume of the pencil cup?" (LSSM 5.MD.C.5.a). Deepen Understanding states, "Associative Property, MP.2 Reason abstractly and quantitatively. When discussing the volume formula V = l x w x h, prompt students to consider using volume to represent the associative property of multiplication. Ask, 'How does each order for multiplying show a different way of thinking of the unit cube model as equal layers of cubes?' Listen for: (3 x 2) x 5 = 6 x 5 shows thinking of the model as 5 layers of 6 cubes, and 3 x (2 x 5) = 3 x 10 shows thinking of it as 3 layers of 10 cubes." In Unit 1, Lesson 2, Session 1, students choose tools strategically (MP.5) to solve, "Carl filled the clear box shown below with unit cubes to find its volume. The unit cubes Carl used all have side lengths of 1 foot. What is the volume of the box?" A box made up of three columns and two rows of unit blocks is shown. Additionally, Performance tasks are built

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			into the units and also emphasize the Mathematical Practices.
	Required **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	Yes	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. Every lesson integrates MP.3 (Construct viable arguments and critique the reasoning of others) in the Discuss It section of the Try-Discuss-Connect routine. For example, in Unit 1, Lesson 3, Session 1, the session begins with, "Becky uses 1-inch cubes to create a model for a small paper gift bag she is making. Her model is a rectangular prism. What is the volume of Becky's model?" Students work through this problem and then compare answers. During the Discuss It, the materials prompts students to ask, "Do you agree with me? Why or why not?" and to tell their partner "I agree with you about…because..." In Unit 4, Lesson 26, Session 2 students begin with the following problem: "Casey is making an exercise plan. She plans to walk a trail near her home 20 times each month. It takes 40 minutes to take the trail. If Casey keeps the same pace, how many hours will she spend walking the trail each month?" Once students have answered the question, they move it to the Discuss It routine. "Ask your partner: How did you get started? Tell your partner: I started by…" Another example,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			in Unit 1, Math In Action, Try Another Approach, students make estimates to determine how many worms will be needed to start a worm farm to recycle kitchen scraps. After students solve the problem, students Reflect on "Make an Argument: Why did you choose the numbers you did for your estimates?" In Unit 4, Lesson 27, Session 4, Refine, Problem 7 states, "Jordan looks at the line plot above. He says the difference between the most common capacity and the least common capacity is ¼ gallon. He says he knows the difference without subtracting. Explain Jordan's mistake. Then find the actual difference between the measurements." Students also have opportunities to analyze the mathematical arguments of others. For example, in Unit 3, Lesson 19, the Math Center Activity, Fraction Area Models, students work with partners to solve multiplication problems by shading factors in an area model. The materials include the following guidance, "Tell how to shade it on the model. If your partner agrees, shade and label the model. Your partner reads the second factor and tells how to shade it on the model. If you agree, your partner shades and labels the model. Work separately to find the product. If you and your partner agree, write the product on the Recording sheet. If you and your partner do not agree, work together to find the correct product." (LSSM 5.NF.B.4a).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**Yes**	Materials include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. Every lesson integrates MP.1 through MP.6 through the Try-Discuss-Connect routine In addition to those Mathematical Practices, the lessons emphasize other practices. The Deepen Understanding section explains the emphasized mathematical practice(s) and supports teachers in engaging students more deeply in practice standards connected to the concepts of the lesson. This area is built into each lesson. For example, Unit 1, Lesson 5, Session 3, Deepen Understanding focuses on MP.7 (look for and make use of structure). This section focuses on dividing multi-digit numbers. It prompts the students to consider the reasoning used to build the model. Another example is evidenced in Unit 3, Lesson 22, Session 2. The accompanied Deepen Understanding section focuses on MP.4 (Model with mathematics) as students develop the skill of multiplying fractions in word problems. The guidance states, "When discussing the equation model, prompt students to consider how when people talk about modeling a problem they tend to think of methods such as acting it out or drawing a picture. Point out that writing an equation is also a way to model a problem." The "Ask/Listen For" section provides critical thinking questions to engage students in

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			discussions about the topic using the highlighted Practice Standard. For example, in the Teacher's Guide, Unit 3, Lesson 15, Session 2, Deepen Understanding: Partial Products Model emphasizes MP.7 and tells teachers, "when discussing the partial products model, prompt students to consider how the model makes use of the decimal expanded form and properties of operations. Write the expanded form for 2.75 on the board. Then, use the distributive property to multiply each part by 3. You may ask volunteers to write the steps. 3 X 2.75= 3 X (2 + 0.7 + 0.05) = (3 X 2) + (3 X 0.7) + (3 X 0.05) = 6 + 2.1 + 0.15 Ask How do the factor pairs in the second row relate to the partial products model on the Student Worktext page? Listen for Each pair of factors in parentheses is equivalent to one of the pairs of factors next to the partial products. 3 X 2 = 3 ones X 2 ones, 3 X 0.7 = 3 ones X 7 tenths, and 3 X 0.05 = 3 ones X 5 hundredths. Have students confirm that the sum 6 + 2.1 + 0.15 is 825 hundredths as shown on the Student Worktext page. [8.25 = 825 hundredths]" (LSSM 5.NBT.B.7). Another example is evidenced in Unit 3, Lesson 17, Session 2. The Deepen Understanding: Equation Models emphasizes MP.8 and tells teachers that "when discussing the equations in Model It, prompt students to see how the same basic fact can be used to solve a variety of division equations. Ask

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			What basic multiplication and division facts are related to the equations 9 X ? tenths = 27 tenths and 2.7 ÷ 9 = k? Listen for 9 X 3 = 27 and 27 ÷ 9 = 3. Ask How are the numbers 27 and 3 in the basic division fact 27 ÷ 9 = 3 related to the numbers 2.7 and 0.3 in the equation 2.7 ÷ 9 = 0.3? Listen for 27 is ten times 2.7, and 3 is ten times 0.3. Generalize Could you use 27 ÷ 9 = 3 to solve other equations, such as 0.27 ÷ 9 = m and 270 ÷ 9 = n? Have students explain their reasoning. Listen for understanding that in any situation where you have a group of 27 of one unit, you can divide the group of 27 into 9 equal groups of 3 of that unit. 0.27 = 27 hundredths and 270 = 27 tens, so 0.27 ÷ 9 = 0.03 and 270 ÷ 9 = 30" *(LSSM 5.NBT.B.7).*
	6d) Materials explicitly attend to the specialized language of mathematics.	Yes	Materials explicitly attend to the specialized language of mathematics. The materials use mathematical terminology. The Lesson Overview identifies the vocabulary that will be addressed and used in the lesson. For example, the Unit 3, Lesson 16, Lesson Vocabulary is "decimal," "estimate," "factor," "place value," and "product.' For example, in Unit 5, Lesson 31, Session 2 the student materials include a vocabulary box with the following: "coordinate plane- a two-dimensional space formed by two perpendicular number lines called axes; ordered pair- a pair of numbers (x,y), that describes the location of a point in the coordinate plane, where the x-coordinate gives the point's

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			horizontal distance from the origin, and the y-coordinate gives the point's vertical distance from the origin; numerator- the number above the line in a fraction that tells the number of equal parts that are being described." Build Your Vocabulary is provided at the beginning of each unit to support students in learning and using precise language and terminology. For example, in Unit 3, Beginning of Unit, Build Your Vocabulary, there are review vocabulary words, "estimate," "decimal," "fraction," and "round." The teacher's guide provides suggestions for teachers to use with students to build math vocabulary using this page. It states, "Display, point to, and read each review word aloud. Have students repeat chorally." The page contains a table for students to complete. Students have to compare two of the words at a time (round and estimate, fraction and decimal). They must answer "How are they similar? How are they different?" and provide an example. The teacher's guide states, "Have students share their work in a whole class setting. If students struggle to verbalize their thinking, provide the following sentence frames as they compare and contrast round and estimate. Round and estimate are similar because they both _____. Round and estimate are different because round _____, but estimate _____." The materials also provide a Connect to Family letter that can

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			be sent home. The same Math vocabulary that is identified in the Lesson Overview is also discussed in the connect to family page. For example, Unit 2, Lesson 8, Connect to Family discusses the use of the following Math Vocabulary: "expanded form," "decimal," "hundredths," "mixed number," "tenths," and "thousandths."
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. ☒ Yes ☐ No	**Required** **7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	Yes	In the materials, students are asked to produce answers and show their knowledge in a variety of ways. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, and mathematical models. Students are asked to justify their solutions with a partner and participate in discussions with Discuss It and Pair/Share prompts. Students respond to different problem types in the Refine section of the lessons, including short answer explanations, multiple choice, fill in the blank, and drawings. For example, in Unit 3, Lesson 15, Session 3, Refine, students respond to problems in multiple ways when multiplying decimals by whole numbers. There are problems where students provide solutions with explanations, multiple choice items, and an area model diagram. For example, Problem 4 is a multiple choice question that asks, "Which product has a value of 16.68?" Another example, Problem 5 is a fill in the blank problem that asks, "Willa downloads 5 songs. Three of the song files

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			are each 2.75 megabytes. Two song files are each 3.8 megabytes. How many megabytes does Willa download in all?" In Unit 4, Lesson 25, Session 3, Additional Practice students "Use the relationship between pounds and ounces to complete the table." The lesson progresses, "How many meters are equivalent to 247 centimeters? Show your work" Session 3 culminates with question 7 which states, "When converting between two measurement units, how can you tell which operation to use?" Assessment items also include problems that have students provide answers in a variety of ways. For example, on the Unit 1 Assessment, Question 4 states, "Which expressions are equivalent to 368 x 51. Choose all the correct answers." Students shade in the bubbles next to each correct answer. Question 5 states, "Write and solve an equation that can be used to find the volume of the solid in cubic centimeters." Question 6 states, "What is the product. Record your answer in the grid. Then fill in the bubbles."
	Required **7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion	Yes	Materials provide separate teacher materials that support and reward teacher study. Every Unit begins with coherence amongst the grade levels. For example, in Unit 2's coherence, Unit 2, Lesson 6 Understand Decimal Value connects to Grade 4 Lessons 1, 25, and 26. It extends to show the teacher where it connects in Grade 6, Lessons 8 and 9. In the Lesson

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	of desired mathematical behaviors being elicited among students.		Overview, the teacher is provided with a pacing guide, and a small group instruction guide. For example, Unit 3, Lesson 17 Small Group Differentiation outlines what activities to reinforce and extend. (Reinforce-Cover Up Division; Extend-Building Projects). Materials contain a teacher's edition with ample and useful annotations and suggestions on how to present the content in the student edition and in the ancillary materials. For example, the Program Implementation tab includes a "Digital Math Tools - Support Videos" section. This section includes support videos for counters and connecting cubes, base ten introduction, base ten: add and subtract, number line, multiplication models, perimeter and area, fraction models: add and subtract, and fraction models: compare and multiply. In Classroom Resources, guidance for teachers supports the delivery of the content, as well as information on student responses for each section of the lesson. Support Partner Discussion features educator prompts to help students engage in meaningful peer discourse. Common Misconception identifies misconceptions that lead to errors in understanding, which can then be addressed in whole-class discussion as students are prompted to explain their reasoning. Support Whole Class Discussion prompts are a series of related discourse questions that highlight the mathematical ideas of the lesson.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Monitor and Confirm is a way to ensure that students have made sense of learning goals. Sentence Starters and Discourse Questions enable teachers to support and facilitate whole-class discussions with mathematical discourse questions as students share their thinking. Reinforcement and extension activities are provided in the Teacher Toolbox. For example, in Unit 4, Lesson 25, Session 3, Develop, the teacher notes include annotations that describe the Purpose, Connect to Prior Knowledge, Develop Language, Make Sense of the Problem, Try It, Discuss it, Model It & Solve It, Connect It, Apply It, and a Close: Exit Ticket to assist the teachers in presenting the material to the students. Additionally, a Deepen Understanding box that supports teachers in helping students develop MP.2.
	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**	Materials include support for English Learners and other special populations. Support is thoughtful and helps those students meet the same standards as all other students. The Implementation Support Section located in the Program Implementation, includes the following resources: A Multilingual Glossary, A Bilingual Glossary, WIDA PRIME V2 Correlation, and Try-Discuss-Connect Routine Resources. In Classroom Resources, Teachers Edition, Language Development is identified for each lesson. This differentiated instruction chart provides guidance for teachers at three

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			levels of differentiation that identifies specific strategies (e.g., Speaking/Writing, Reading/Writing) directly connected to lesson sessions and activities. During sessions, specific strategies target additional supports for students to support engagement in lesson activities. For example, Prerequisite lessons are identified for most lessons and include specific supports for ELs. Develop Language includes Why (rationale for the suggestions) and How (strategies and guidance on how to engage students) sections, along with explanations as needed. Discuss It provides supports for all students to engage in mathematical discourse. Differentiated Instruction is included for most lessons and includes activities for intervention, on-level, and challenge. Math Center activities provide multiple levels of content. Math in Action lessons build background in a variety of contexts to ensure access for all. Each Unit begins with a Connect Language Development to Mathematics. This section provides a chart. The chart provides teachers with examples of what English learners can do based on their English language proficiency levels in connection with the LSSM addressed in the Unit. Teachers use the language expectations to help differentiate instruction. Each lesson has a Connect to Family, Community, and Language Development section. This section has a chart similar to the one at

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			the beginning of the unit. This chart is based on the lesson's objectives. For Example, Unit 2, Lesson 6, EL students who are on levels 1-3 should be able to do the following: After reading Model It problems 1-2, the teacher points out the word relationships. The teacher and the EL student discuss what this word means. The students work with partners to discuss whole number place values and decimal place values. EL students are provided a sentence frame to help guide their discussion. In Unit 3, Lesson 23, EL students who are on levels 2-4 should be able to do the following: "Read Model It Problem 1 with students. The students are to point at the 1 lb and ¼ pound in the model. Students are to show how they can divide ¼ into 3 equal parts. Students will work with partners to talk about the models. EL students will be provided sentence frames to help with the discussion."
	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 underlying design of the materials distinguishes between problems and exercises. Lessons are structured to have purposeful practice where students apply what they have learned. The instructional design of the materials primarily includes instructional lessons during the Explore and Develop sections. These sessions use a student-centered approach for students to learn new mathematics, explore multiple approaches and strategies and engage in mathematical discourse about the

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			problems. Questions in the Student Worktext and Teacher's Guide ask students to think critically about the models, representations and concepts within the lesson. By exploring the problems and new mathematical skills and concepts of the lesson using the Try-Discuss-Connect routine, students develop a deeper understanding of the mathematics. During Apply It, students are given the opportunity to apply the newly learned math and strategies new problems. The Additional Practice portions of the Explore and Develop sessions provide purposeful practice and reinforce understanding. The Explore Additional Practice activities are centered on vocabulary as students use a graphic organizer to help develop and solidify concepts. Students complete the Additional Practice activities at the end of each session independently as they apply the newly learned math. For example, Unit 2, Lesson 9, Session 4 concludes with "Refine Comparing and Rounding Decimals." This session concludes Lesson 9. Students through these problems independently. Another example is evidenced in Unit 5, Lesson 33, Session 2. In the Try It section, students compare the number of points in Level 2 to the number of points in Level 1. The students then discuss their decisions with their partners. Then the students practice comparing two numerical patterns on their own in the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			section called "Practice Comparing Two Numerical Patterns." Each problem or exercise has a purpose and is designed to ensure students understand and make connections through rich tasks and meaningful practice.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	Yes	Lessons are appropriately structured and scaffolded to support student mastery. Each lesson is broken into sessions. Those sessions are written in a way to scaffold learning. The sessions within a lesson follow the sequence of Explore, Develop, and Refine. Within a session, there is a sequence of Start, followed by Try It, Model It, or Apply It; Discuss; Connect; and Close. Start is designed to build fluency or connect to prior knowledge. Try It is designed to give students an opportunity to explore the concept on their own. Model It is designed to allow students the opportunity to explore the concept through manipulatives or drawings. Apply It is designed to give students an opportunity to practice the skill on their own. Discuss It is designed to allow students to talk to other students about the concept and compare what they did with each other. Connect It is designed to help students connect the concept to real-life. Close is designed to solidify the learning for the day and to check for understanding through the use of an exit ticket. The scaffolding is seen across sessions within a lesson. For example, Unit 3, Lesson 20 is titled "Multiply Fractions to

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			Find Area." Session 1 begins with "Explore Multiplying Fractions to Find Area." "Develop Multiplying Unit Fractions to Find Area" is Session 2. Session 3 is "Develop Tiling Rectangles to Find Area." Session 4 moves into "Refine Multiplying Fractions to Find Area." Another example of the scaffolding is found in Unit 1, Lesson 5 "Divide Multi-Digit Numbers." Session 1 begins with "Explore Dividing Multi Digit Numbers." "Develop Estimating Quotients" is Session 2. Session 3 has students "Develop Using Estimation and Area Models to Divide." Session 4 "Develop Using Area Models and Partial Quotients." "Refine Dividing Multi Digit Numbers" is Session 5. Each lesson also includes a Differentiated Instruction Teacher Toolbox that includes Reteach (Tools for Instruction), Reinforce (Math Center Activities), and Extend (Enrichment Activities). For example, the Unit 1, Lesson 1, information found after the Lesson 1 Quiz states: Reteach- "Children who require additional support for prerequisite or on-level skills will benefit from activities that provide targeted skills instruction." Reinforce- "Children who require additional practice to reinforce concepts and skills and deepen understanding will benefit from small group collaborative games and activities." This is available in three versions: on-level, below-level, and above-level. Extend- "Children who have achieved proficiency with concepts and

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			skills are ready for additional challenges will benefit from group collaborative games and activities to extend understanding."
	7f) Materials support the uses of technology as called for in the Standards.	Yes	Although the 5th grade LSSM do not have any standards that specifically call for technology, materials support the use of technology. Materials integrate technology such as interactive tools, virtual manipulatives/objects, and/or dynamic mathematics software in ways that engage students. The materials include Interactive Tutorials with most lessons that are animated interactive lessons assigned to students in their personalized instructional plan. The Student Digital Experience offers online access to the print version of the Student Worktext via the Bookshelf, along with Digital Math Tools, Interactive Learning Games, Interactive Practice, and Family Resources. The Bookshelf houses the digital edition of the Student Worktext, and students have the ability to highlight, take notes, have the pages read aloud, as well as use a calculator and multilingual glossary. The Interactive Learning games engage students in gameplay while building fluency skills. Teachers also have access to the Teacher Toolbox that includes implementation resources, tutorial videos, digital math tools, lesson slides, fluency and skill practice sheets, center activities, enrichment activities, assessment resources, and unit flow and progression videos. Also, Digital Math

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			Tools are provided to use throughout the program. Tools available include Counters, Connecting Cubes, Base Ten Blocks Tool, Number Line Tool, Multiplication Models Tool, Perimeter and Area Tool, and Fraction Models Tool. In general, tools are representative of concrete manipulatives.

FINAL EVALUATION

Tier 1 ratings receive a "Yes" for all Non-negotiable Criteria and a "Yes" for each of the Additional Criteria of Superior Quality.
Tier 2 ratings receive a "Yes" for all Non-negotiable Criteria, but at least one "No" for the Additional Criteria of Superior Quality.
Tier 3 ratings receive a "No" for at least one of the Non-negotiable Criteria.

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

Section	Criteria	Yes/No	
I: Non-negotiable Criteria of Superior Quality[4]	1. Focus on Major Work	Yes	Materials devote the majority of time on the major work of the grade. Materials spend minimal time on content outside of the appropriate grade. In assessment materials, assessment components do not make students/teachers responsible for any topics before the grade in which they are introduced.
	2. Consistent, Coherent Content	Yes	Materials connect supporting content to major content in meaningful ways, so that focus and coherence are enhanced throughout the year. Materials include problems and activities that connect two or more clusters in a domain and/or two or more domains in the grade level where these connections are natural and important.
	3. Rigor and Balance	Yes	Materials develop conceptual understanding of key mathematical

[4] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier I or Tier II rating.

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			concepts. Materials are designed so that students attain the fluency and procedural skills required by the Standards. Materials are designed so that students spend sufficient time working with engaging applications. It is evident in the materials that the three aspects of rigor are not always treated together and are not always treated separately.
	4. Focus and Coherence via Practice Standards	Yes	Materials address the practice standards in such a way to enrich the content standards of the grade/course.
II: Additional Criteria of Superior Quality[5]	5. Alignment Criteria for Standards for Mathematical Content	Yes	Materials provide all students extensive work with course-level problems. Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.
	6. Alignment Criteria for Standards for Mathematical Practice	Yes	Materials attend to the full meaning of each practice standard. 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. Materials include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development. Materials explicitly attend to the specialized language of mathematics.

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
7. Indicators of Quality		Yes	In the materials, students are asked to produce answers and to show their knowledge in a variety of ways. Materials provide separate teacher materials that support and reward teacher study. Materials include support for English Language Learners and other special populations. The underlying design of the materials distinguishes between problems and exercises. Lessons are appropriately structured and scaffolded to support student mastery. Materials support the use of technology.
FINAL DECISION FOR THIS MATERIAL: **Tier I, Exemplifies quality**			

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

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

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

The 2019-2020 Teacher Leader Advisors are selected from across the state and represent the following parishes and school systems: Ascension, Beauregard, Bossier, Caddo, Calcasieu, Caldwell, City of Monroe, Desoto, East Baton Rouge, Einstein Charter Schools, Iberia, Jefferson, Jefferson Davis, KIPP New Orleans, Lafayette, Lafourche, Lincoln, Livingston, LSU Lab School, Orleans, Orleans/Lusher Charter School, Ouachita, Plaquemines, Pointe Coupee, Rapides, Richland, RSD Choice Foundation, St. John the Baptist, St. Charles, St. James, St. Landry, St. Mary, St. Tammany, Tangipahoa, Vermillion, Vernon, West Baton Rouge, West Feliciana, and Zachary. This review represents the work of current classroom teachers with experience in grades K-5.

Appendix I.

Publisher Response

The publisher had no response.

Appendix II.

Public Comments

There were no public comments submitted.