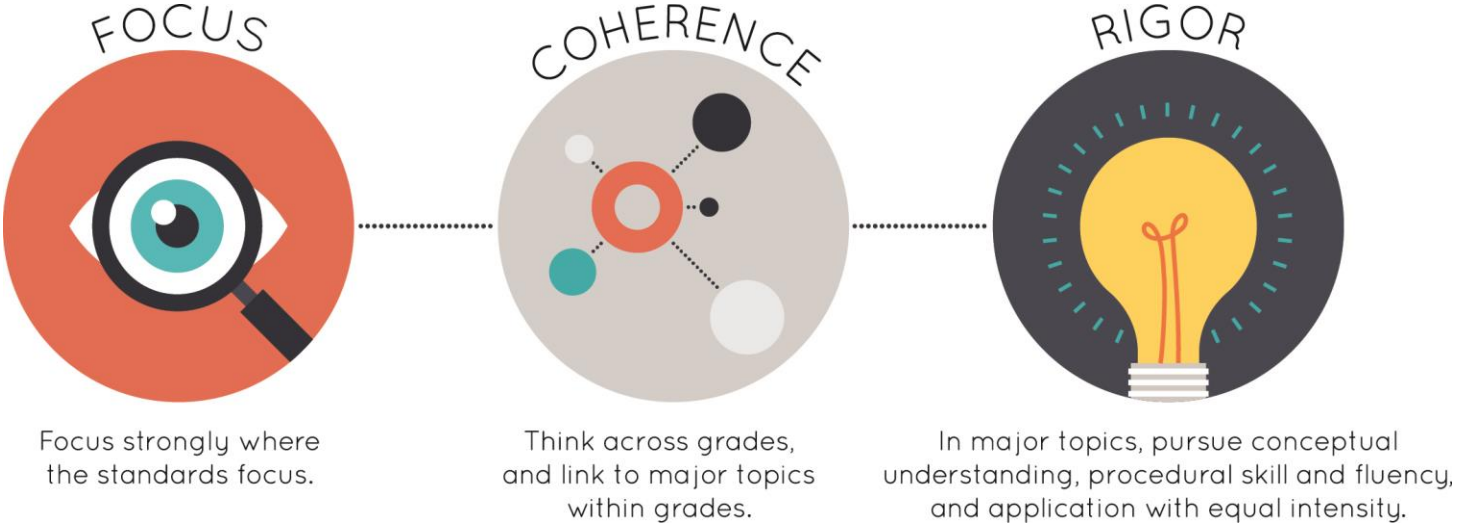
DEPARTMENT of EDUCATION
Louisiana Believes

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

FULL CURRICULUM
Instructional Materials

Qualified for Abbreviated Review[1]

Strong mathematics instruction contains the following elements:



Title: **Illustrative Mathematics**

Grade/Course: **K-5**

Publisher: **Kendall Hunt Publishing**

Copyright: **2021**

Overall Rating: **Tier 1, Exemplifies quality**

Tier 1, Tier 2, Tier 3 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. Quality of Assessments	
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)

[1] Abbreviated Reviews are conducted in K-12 ELA and K-12 Math for submissions that **Meet Expectations** for Gateways 1 and Gateway 2 through EdReports. Reviewers considered these reports as they reviewed materials for alignment to Louisiana state standards and quality Non-negotiable indicators. See the full EdReports review at https://www.edreports.org/reports/overview/kendall-hunts-illustrative-mathematics-2021.

Qualified for Abbreviated Review[1]

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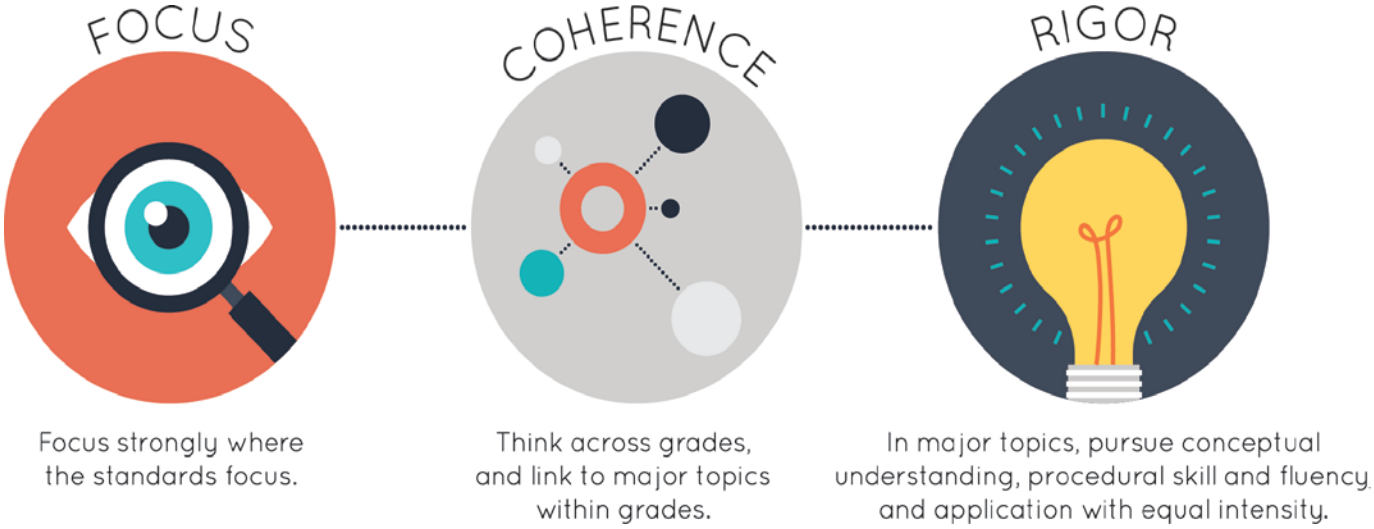

Title: **Illustrative Mathematics**

Grade/Course: **K**

Publisher: **Kendall Hunt Publishing**

Copyright: **2021**

Overall Rating: **Tier 1, Exemplifies quality**

Tier 1, Tier 2, Tier 3 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)	
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To evaluate instructional materials for alignment with the standards and determine tiered rating, begin with **Section I: Non-negotiable Criteria**.

- Review the **required**[2] 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.

[2] **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 Non-negotiable Criteria 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.			
Non-negotiable **1. FOCUS ON MAJOR WORK[3]:** Students and teachers using the materials as designed devote the large majority[4] of time to the major work of the grade/course. ☒ Yes ☐ No	**Required** **1a)** Materials devote the **majority** of class time to the major work of each grade/course.	**Yes**	Materials devote a large majority of time to the major work of the grade. Of the 122 instructional lessons, 91% of lessons are spent on major work of the grade. Specifically, 64% are spent on major standards, 27% are spent on a combination of major standards and supporting/additional standards, and 9% are spent on supporting or additional standards. The materials include 15 lessons that are labeled as optional. In addition, LSSM K.MD.C.4 is not addressed in the materials.
	Required **1b)** Instructional materials, including assessments, spend minimal time on content outside of the appropriate grade/course **during core math instruction**. Content beyond grade/course-level should be clearly labeled as optional.	**Yes**	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. All lessons address the Kindergarten LSSM without relying on prerequisite knowledge. Each unit/lesson establishes the foundation for subsequent lessons that follow. Within the assessments, guidance regarding remediation and diagnostic information is provided to help address misconceptions and inaccurate understanding. The assessments associated with the core

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

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			math instructional lessons focus on grade-level items and are not beyond the scope of LSSM for Grade K. Some of the lessons are labeled as optional, such as Unit 1, Lesson 17, because "it does not address any new mathematical content standards" but does provide "students with an opportunity to apply precursor skills of mathematical modeling" and Unit 4, Lesson 13, because "students apply what they've learned about story problems throughout the section to tell a story problem that includes an action and a question." In Unit 2, students answer how many questions, count out, and compare groups with 10. Students also write numbers to represent how many (LSSM K.CC.A1, K.CC.A.3, K.CC.A.4, K.CC.B.5, K.CC.C.6, K.CC.C.7). The Unit 2 End-of-Unit Assessment connects the aligned standard to the problem/question being asked with an explanation of expectations for students to demonstrate mastery of the standard. Additionally, the Assessment Teacher Guide provides guidance to address misunderstandings or struggles that students may face. For instance, in Unit 2 End-of-Unit Assessment, Problem 4, students circle the number that is more in part 1 and circle the number that is less in part 2 (LSSM K.CC.C.7). Guidance included in the Assessment Teacher Guide explains, "Students who answer this question incorrectly may understand that a quantity of 4 is less than a quantity of 6

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			and may not yet recognize the written numbers 4 and 6. Alternatively, they may still be learning the meaning of the words more and less." Statements and explanations providing diagnostic or remediation suggestions are provided for every question in every assessment.
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. Materials spiral skills within context using appropriate connections across the standards. Major work is developed prior to lessons that address supporting standards the majority of the time, and, when the supporting standards are addressed, the lessons reinforce major work of the grade by connecting back to major standards. In Units 1 and 2, students develop an understanding of several Counting and Cardinality (CC) standards as they begin to recognize numbers and quantities. By the end of Unit 1, students count up to ten objects which sets the foundation for the remaining units. In Unit 2, students build upon this learning as they answer how many questions, count out, compare groups within 10, and write numbers to represent how many. The counting and cardinality concepts and skills are reinforced in the remaining units. For example, in Unit 3, Lesson 4, students describe and compare shapes in the classroom and then sort shapes into

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			groups (supporting LSSM K.G.B.4, K.MD.B.3). During Activity 1, after students have sorted and analyzed the shapes, they count the shapes in each group, connecting LSSM K.MD.B.3 to major LSSM K.CC.A.1 and K.CC.B.5. In Activity 2, after students describe attributes of shapes as they sort shapes into categories, they write a number to show how many shapes are in the group and determine which group has more shapes, connecting supporting LSSM K.MD.B.3 to major LSSM K.CC.A.3 and K.CC.C.6. In Unit 7, Lesson 3, Activity 1, students create shapes out of pattern blocks (LSSM K.G.B.5), develop math questions about the shapes, and then create and solve story problems about the shapes they made (LSSM K.OA.A.1), connecting supporting LSSM K.G.B.5 to major LSSM K.OA.A.1 which is first developed in Units 4-6.
	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 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. Lessons encompass multiple clusters and domains within the unit and spiral back to these standards in subsequent units. For example, LSSM K.CC.A.1 is addressed in all eight units of the materials. The materials repeatedly address and review this standard, as well as connect the standard to various domains and clusters. Unit 6,

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			Lesson 11, connects Clusters A (Know number names and the count sequence) and B (Count to tell the number of objects) of the Counting and Cardinality (CC) domain and connects this domain to the Number and Operations in Base Ten (NBT) domain. During the lesson, students "use the 10 ones and some more ones structure of numbers 11–19 to help them count groups of up to 19 images." (LSSM K.NBT.A.1). In the Warm-Up, students extend the verbal count sequence to 90 and count on from a given number (LSSM K.CC.A.1, K.CC.A.2) to prepare for the lesson. In Activity 1, students use various methods of using the 10 ones and some ones structure to accurately count images in organized arrangements, such as count ten shapes and then count on from 10 to determine the total number of shapes (LSSM K.CC.B.5, K.NBT.A.1). Unit 2, Lesson 18 connects Clusters B (Count to tell the number of objects) and C (Compare numbers) of the Counting and Cardinality (CC) domain. During the lesson, students use cubes to find 1 more or 1 less than a number. Students work with a partner to build the number 8 and then take away 1 cube to find 1 less than 8 or add 1 cube to find 1 more than 8 (LSSM K.CC.B.4.C and LSSM K.CC.C.6). Unit 4, Lesson 17 connects the Counting and Cardinality (CC) and Operations and Algebraic Thinking (OA) domains. During the lesson, students use various methods of representing numerals

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			and then determining "one more" using a different color object to represent the amount they are counting on. For 4 + 1, students could represent 4 with red counters and 1 with yellow counters in order to count and identify that 4 + 1 = 5 (LSSM K.CC.B.5 and LSSM K.OA.A.1).
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 featuring high-quality conceptual problems and discussion questions.	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in the standards. Throughout the materials, students develop conceptual understanding through engaging in discussions about mathematical ideas, using multiple representations, visual models, and a variety of strategies to solve problems, and constructing explanations about mathematical ideas and concepts. Lesson activities include embedded discussion prompts and scaffolding questions to support students in developing conceptual understanding. In many units, students participate in centers that engage students in various methods of addressing the materials and standards in engaging ways. For example, Unit 5, Lesson 2 addresses LSSM K.OA.A.3 as students compose and decompose numbers up to 9 in more than one way. In the Warm-Up, students determine which pattern block combination doesn't belong with the others in order to emphasize the total number of pattern blocks in a design and the number of shapes within each group. In Activity 1, students create their

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			own patterns using 7 pattern blocks, including only green triangles and orange squares. The purpose of the activity is for students to compose a group of 7 objects and identify the parts and total in the design. Then, in Activity 2, students analyze Hans' pattern blocks that include 8 pattern blocks broken into 2 groups in various ways, and represent each design with an expression. Finally, in Activity 3, students choose a station where they interact with the standard (LSSM K.OA.A.3). While students develop their understanding of decomposing numbers in more than one way, they also encounter scenarios that require this use of their mathematical skills in different formats. This provides students a variety of ways to work on their understanding, address misconceptions, and allows the teacher to address issues given the setting that the struggles arise. In Unit 1, Lesson 7, Classroom Scavenger Hunt, students begin to develop conceptual understanding of the relationship between numbers and quantities and connect counting to cardinality (LSSM K.CC.B.4). During Warm-Up, Act It Out: How Can We Show It? students revisit a previous story involving three ducks and consider ways to act it out. The teacher offers suggestions of acting out the story with concrete objects such as cubes, fingers, or students, as well as representing the story with pictures. The

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			use of objects helps students grasp the concept of the relationship between numbers and quantities. Students share what they saw in the story about 3 little ducks, and the teacher observes to see the objects used by the students to represent the ducks. Then, in Activity 2, students engage in a scavenger hunt as they recognize and name small groups of objects in the classroom, specifically two to three objects in a group without counting. As students use number names to describe groups of objects, they relate quantity to physical objects.
	Required **3b)** ***Attention to Procedural Skill and Fluency:*** The materials are designed so that students **attain the fluencies and procedural skills** required by the content 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. The materials are designed in such a way that the required fluencies are acquired through a progression of learning over time and throughout the course of the materials. Lesson Warm-Ups, the first activity in each lesson, provides students with the opportunity to either prepare for the lesson or "strengthen their number sense or procedural fluency." For Warm-Ups that strengthen number sense or procedural fluency, students complete "mental arithmetic or reason numerically or algebraically." Instructional Routines used in the Warm-Ups also support students in building fluency, as in Number Talks which "encourage students to look for structure and use repeated reasoning to evaluate expressions and develop

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			computational fluency." In Unit 1, Section B, students focus on recognizing quantities as they recognize and name groups of 4 objects and images without counting, and then, in Section C, students answer "are there enough" questions as they work on the concept of one-to-one correspondence. This conceptual work prepares students for Section D where students count groups of objects up to 10 (LSSM K.CC.A.1, K.CC.B.5). Additionally, lessons throughout the remaining units incorporate LSSM K.CC.A.1 and K.CC.B.5, supporting students in developing fluency in counting. In Unit 2, students rely on familiar activity structures to build their counting skills and concepts. The unit lessons address the main objective of counting numbers from 1-10 with activities that continue to develop procedural skill and fluency. In Unit 2, Lesson 2 Warm-Up, Choral Count: Fingers and Numbers, students practice the verbal count sequence to 10 and show quantities with their fingers (LSSM K.CC.A.1). In Activity 1, Count, Rearrange, Count, students notice that the arrangement of a group of objects does not change the number of objects (LSSM K.CC.B.5b). In the Activity Synthesis 6, cubes are displayed and groups demonstrate counting the connecting cubes. In Unit 6, Lesson 3, students develop fluency with addition and subtraction within 5 as they find the number that makes 5 when added

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			to a given number. For example, students work in pairs and use a stack of cards with a number between 0 and 5. One student pulls a card from the stack, such as 3. The other student finds a card number that will make 5 when added together (LSSM K.OA.A.5). In the Warm-Up activity for Unit 7, Lesson 10, students find the value of the given expressions: 2 + 3, 5 + 0, and 4 + 1 (LSSM K.OA.A.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. The progression of the units includes opportunities within the lessons to apply conceptual understanding and procedural skills within the context of real-world problems. Students answer questions in pairs, small groups, and whole groups where they must justify and explain their reasoning. Prior to Unit 4, students build their counting skills and represent quantities in a group through various strategies. In Unit 4, students first develop their understanding of addition and subtraction in Section A and then represent and solve addition and subtraction story problems within 10 in Sections B and C (LSSM K.OA.A.2). Beyond Unit 4, students continue to work with addition and subtraction story problems in the remaining units. For example, in Unit 4, Lesson 6, students tell and act out addition and subtraction stories. Students first observe a picture and imagine a story, such as 3 kids jumping rope and 2 kids

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			waiting a turn or 5 kids jumping rope and 2 kids left to go play. They discuss how using numbers and symbols can represent the story, such as 5 - 2. In the next activity, students hear a story of students at recess and act out the story in groups, and then connect the story to an expression, such as 6 - 3. In Lesson 7, students use objects, such as counters, to demonstrate addition and subtraction in stories. In Activity 1, students represent the following story with counters: “There were 5 students playing basketball at recess, 2 of the students went inside to get some water.” Students then determine what each counter represents. In Activity 2, students continue to represent stories and relate the action in the stories to the action of adding and taking away counters. For example, students represent 7 kids playing tag on the field, create a story about what happens next, and then demonstrate the story with counters. Then in Lesson 8, students solve addition and subtraction word problems by retelling the story, finding the solution, and showing their thinking with counters, connecting cubes, and crayons. For example, in Activity 2, students solve the following problem: Noah had 5 crayons. Jada gave Noah 4 more crayons. How many crayons does Noah have now?” In Unit 4, Lesson 14, Activity 1, students apply their understanding of story problems and expressions using pictures. Students

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			create a story problem based on the image, share with a partner, then calculate the value of their created expressions using drawings or objects to represent their expressions. Activity 2 in this lesson expands upon this application where students choose the appropriate expression to represent a given story problem. Students use the expressions to explain what happened in the story problem given. For example, in Activity 1, students solve the following problem: "There were 10 people riding bikes in the park. Then 6 of the people stopped riding to have lunch. How many people are riding bikes now?" In Unit 8, Lesson 10, Activity 1, Story Problem Brainstorming, students develop ideas for story problems that they can write about their classroom, school, or community. Students use a clipboard with a blank piece of paper to make notes about mathematical ideas they see. This leads to Activity 2, Write Story Problems About Our school, as they develop a story problem about their school community.
	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 attend to the balance of rigor as intended by the standards. Lessons and activities support students in building conceptual understanding when students connect new representations and language to prior

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			learning. Activities support application when students apply their conceptual understanding and procedural fluency to the context of real-world situations. Warm-ups, practice problems, centers, and other built-in routines help students develop procedural skill and fluency over time. The materials focus on conceptual understanding in Unit 1 as students build an understanding of the relationship between numbers and quantities (LSSM K.CC.B.4). In Unit 1, Lessons 6-9, students recognize and name groups of up to 4 objects and images without counting. As the unit continues, students answer “are there enough” questions by counting objects and telling if the number of objects in a group is enough to share with each person in the group (LSSM K.CC.B.4a). In Unit 2, students use their understanding of numbers and quantities as they count to answer “how many” questions, count out, and compare groups within 10, attending to the conceptual understanding and procedural skill expectation of LSSM K.CC.B.5. Students also write a number to represent how many (LSSM K.CC.A.3). In Unit 3, Lesson 2, Activity 1, students combine conceptual understanding with procedural skills and fluency as they describe and identify shapes in their environment using the names of the shapes regardless of orientation or size (LSSM K.G.A.1, LSSM K.G.A.2). Unit 7, Lesson 5, integrates all

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			three components of rigor as students solve story problems about shapes. Students complete a Warm-Up activity with story problems (LSSM K.OA.A.2) and match the story problems to equations (LSSM K.OA.A.1).
Non-negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Aligned materials make meaningful and purposeful connections that promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. Materials address the practice standards in a way to enrich and strengthen the focus of the content standards instead of detracting from them. ☒ Yes ☐ No	**Required** **4a)** Materials attend to the **full meaning of the practice standards**. Each practice standard is connected to grade/course-level content in a meaningful way and is present throughout the year in assignments, activities, and/or problems.	**Yes**	Materials attend to the full meaning of each practice standard. Each practice standard is connected to grade-level content and is meaningfully present throughout the materials. The materials provide students with an opportunity to engage with the practice standards in each lesson. The materials support the students in the development of the practice standards while enriching the grade-level standards. Practice standards are presented, reviewed, and spiraled throughout the materials which allows students to develop and utilize the practices over time. For example, in Unit 2, Lesson 7, students use objects to represent actions of addition and subtraction in story problems (LSSM K.OA.A.1). Students reason abstractly and quantitatively (MP.2) in the Warm-Up as they use counters to represent objects and in Activity 1 as they use math tools to represent objects and actions in story problems. For example, students represent the story problems, such as "There were 3 students playing on the swing at recess. 1 more comes over to play on the swings." by moving the correct number of counters onto the mat to

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			represent addition and off the mat to represent subtraction. In Unit 6, Lesson 6, students represent numbers 11-19 with fingers and on a 10-frame (LSSM K.CC.B.5). The lesson begins with the students reviewing numbers between 5 and 10 to understand that the structure of the 5-frame helps students see when it's full that 5 is represented. Students use this experience to identify that when 5 fingers and 1 more is held up, then the number being represented is 6 (MP.7). In Activity 1, students recall the structure of 5 and some more as they represent numbers 11-19 and describe them as 10 and some more. In Unit 6, Lesson 3, students recognize that the number of objects in a group stays the same regardless of how they are counted (LSSM K.CC.B.4b). The purpose of this lesson is for students to notice and discuss that counting the same collection should yield the same result each time. Each student is given a bag of connecting cubes. Students count the cubes to see how many are in the bag. The teacher encourages students to count in different ways, such as organizing their blocks in a ten frame and using the "counting on" strategy. Students attend to precision (MP.6) as they show different ways to count the cubes accurately.
	Required **4b)** Materials provide sufficient opportunities for students to **construct viable arguments and critique the arguments of others** concerning key grade/course-level	**Yes**	Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others

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	mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the standards that explicitly set expectations for multi-step problems.		concerning key grade-level mathematics that is detailed in the content standards. Students examine sets of data, pictures, and/or work of others and provide arguments or critiques. The lessons and activities are structured with opportunities for students to engage in mathematical reasoning through discussion questions and prompts, to form viable arguments and critique the arguments of others, and to conduct error analyses. Which One Doesn't Belong? is a Warm-Up routine that is frequently utilized in the lessons and provides students the opportunity to discuss their thinking and provide reasoning. For example, in Unit 5, Lesson 2, Warm-Up, students analyze which set of pattern block collections doesn't belong with the rest of the samples. Students provide their reasoning and justification for which set doesn't belong based on what they observe and notice. The class shares and discusses their justifications for which sample set doesn't belong and provides their argument with justification. In Unit 7, Lesson 16, Activity 2, Add to or Change the Classroom Model, students create a model of the classroom to display for people that have never seen the classroom before. Describing their model to their peers and seeing other models helps students develop ideas for how to add to or change their model. In Unit 8, Lesson 11, Activity 2, Story Problem Gallery Walk, students engage in a Gallery

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			Walk to share how they represented their story problems and make connections between different representations from other students. As they walk around, students think about how each poster is the same as and different from their own poster and think of any ideas that may be added or changed about their poster. In Unit 8, Lesson 20 students decide if there are more or fewer than 10 objects in a group. In the first activity, students use what they know about 10 and what it looks like to estimate whether a group has more or less than 10 images. Students then count the images to see if they estimated correctly. Students count the objects in the group and discuss with their partner if the object count is more than 10 or fewer than 10 and explain their reasoning using the objects given.
	Required **4c)** Materials explicitly attend to the **specialized language** of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. Throughout each unit, the lessons and activities use precise mathematical language and encourage the use of the correct mathematical language when discussing skills, concepts, solutions, and strategies. Glossary entries are provided for each unit. These entries include the academic language necessary for the unit along with grade-appropriate definitions. Within the Mathematical Language Development and Access for English Learners section of the How to Use These Materials guide, Principal 3 calls for

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			cultivating conversations and states, "Conversations act as scaffolds for students developing mathematical language because they provide opportunities to simultaneously make meaning, communicate that meaning, and refine the way content understandings are communicated." Mathematical Language Routines (MLRs) are "instructional routines that provide structured but adaptable formats for amplifying, assessing, and developing students' language." The MLRs are embedded throughout the materials with explanations, and instructions for using the MLRs are provided in the How to Use These Materials guide. The MLRs include the following routines: Stronger and Clearer Each Time; Collect and Display; Clarify, Critique, Correct; Information Gap; Co-Craft Questions; Three Reads; Compare and Connect; and Discussion Supports. For example, MLR 4 Information Gap creates the need for students to communicate using precise language. During the routine, the teacher positions some students as holders of information that is needed by other students to accomplish a goal. Because there is an information gap, students orally share ideas and information to bridge the gap. Sentence Frames are also embedded throughout the activities and lessons that "support student language production by providing structure to communicate about a topic."

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Mathematical terminology is built within each lesson, and students answer questions throughout the lessons that reinforce and enhance their mathematical language. In addition, student sample responses include mathematical language to set the expectation for student use. For example, in Unit 2, Lesson 11, students create groups of images with more, fewer, or the same number of images as a provided group. In Activity 1, Draw Groups of Images, students first draw groups of images, and, then, work with a partner to draw more, fewer, and the same number of images as their partner. Students describe the groups of images using the terms more, fewer, and the same number. In Unit 3, Lesson 1, Activity 2, Shapes in a Picture, students describe and talk about shapes that they see in a picture. They use the terms circle and triangle. The teacher uses the game Backgammon as a concrete example of a game incorporating shapes. The game has black and red circular game pieces with triangles on the playing board. Students tell their partner about the different shapes they observe. During the Activity Synthesis, students describe the black and red game pieces. Noticing and describing shapes provides the students the opportunity to use mathematical terminology while describing the shapes. Unit 5, Lesson 11, Warm-Up, Activity Synthesis supports teachers in introducing and explaining proper mathematical

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			terminology as it is presented in the activities of the lesson. In the Warm-Up, the teacher points out that students are engaging with equations when they identify number sentences and multiple ways to make 10. The teacher and students continue to use the term equation in the activities that follow.
	4d) 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. The Standards for Mathematical Practices Chart included in the How to Use These Materials guide highlights lessons that "showcase certain Mathematical Practices." For example, in Unit 3, students utilize MP.4 in Lessons 2, 9, 14, and 15. In Unit 6, students utilize MP.5 in Lessons 11, 3, and 4. This section also connects many of the instructional routines to the practice standards. For example, as students engage in the Which One Doesn't Belong routine, students attend to precision (MP.6). As students engage in the How Many Do You See routine and subitize or use grouping strategies to describe images they see, they look for and make use of structure (MP.7). This section includes additional guidance for teachers in supporting students in their development of the practice standards such as "How you can use the Mathematical Practices Chart" and "Standards for Mathematical Student

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Facing Learning Targets." Guidance is also embedded throughout the Teacher's Edition. The Lesson Narrative often explains how students will utilize the practice standards in the lesson. For example, in Unit 1, Lesson 6, students look for small groups of objects. In Activity 2, students recognize and name quantities in picture books. The Activity Narrative states, "If students do not mention the groups of objects displayed on the page, ask them 'What things on the page remind you of things we have been doing in math class?' to encourage them to mathematize the situation (MP4). This prepares students to see and analyze quantities so that they can use mathematics to describe their world." Unit 2, Lesson 4, students compare groups of objects that are close in quantity. In the Warm-Up, students identify quantities with their fingers. The Activity Narrative states, "In this warm-up, students represent quantities with their fingers and work toward recognizing quantities presented on fingers without having to count. Students have an opportunity to notice and make use of structure because each hand has 5 fingers (MP7)." Then, in Activity 1, students identify groups of objects that have more. The activity begins with an Act it Out routine, and the Activity Narrative states, "Acting it out gives students an opportunity to make sense of a context (MP1)." In Unit 5, Lesson 2, Activity 2,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Han's Pattern Block Design, students observe 8 pattern blocks broken into 2 parts in multiple ways. The Activity Narrative states, "Students represent each pattern block design with an expression. When students write an expression to represent the pattern blocks they reason abstractly and quantitatively (MP2)."
Section II: Additional Alignment Criteria and Indicators 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 grade/course-level problems.		See EdReports for more information.
	Required **5b)** Materials **relate grade/course-level concepts explicitly to prior knowledge** from earlier grades and courses. The materials are designed so that prior knowledge is extended to accommodate the new knowledge, building to core instruction, on grade/course-level work. Lessons are appropriately **structured and scaffolded** to support student mastery.		
	Required **5c)** There is **variety** in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade/course-appropriate way, arguments and explanations, diagrams, mathematical models, etc.		
	5d) Support for **English Language Learners and other special populations** is provided. The language in which problems are posed is not an obstacle to understanding the content, and if it is, additional supports (suggestions for modifications, "vocabulary to preview", etc.,) are included.		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
6. QUALITY OF ASSESSMENTS: Materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the assessed grade-specific Louisiana Student Standards for Mathematics. ☐ Yes ☐ No	**Required** **6a)** Multiple **assessment opportunities** are embedded into content materials and measure student mastery of standards that reflect the balance of the standards as presented in materials.		
	Required **6b)** Assessment items include a **combination of tasks** that require students to demonstrate conceptual understanding, demonstrate procedural skill and fluency, and apply mathematical reasoning and modeling in real world context. Assessment items require students to produce answers and solutions, arguments, explanations, and models, in a grade/course-appropriate way.		
	6c) Scoring guidelines and rubrics align to standards, incorporate criteria that are specific, observable, and measurable, and provide sufficient guidance for interpreting student performance, misconceptions, and targeted support to engage in core instruction.		
	6d) Materials provide 2-3 **comprehensive assessments** (interims/benchmarks) that measure student learning up to the point of administration.		
7. ADDITIONAL INDICATORS OF QUALITY: Materials are well organized and provide teacher guidance for units and lessons. Materials provide timely supports to target specific skills/concepts to address students' unfinished learning in order to access grade-level work.	**Required** **7a)** The content can be **reasonably completed** within a regular school year and the pacing of content allows for maximum student understanding. The materials provide guidance about the amount of time a task might reasonably take.		
	Required **7b)** The materials are **easy to use and well organized** for students and teachers. Teacher editions are concise and easy to manage with clear connections between teacher resources. Guidance is provided for lesson planning and instructional delivery, lesson flow,		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
☐ Yes ☐ No	questions to help prompt student thinking, and expected student outcomes.		
	Required **7c)** Materials include unit and lesson **study tools for teachers**, including, but not limited to, an explanation of the mathematics of each unit and mathematical point of each lesson as it relates to the organizing concepts of the unit and discussion on student ways of thinking and anticipating a variety of student responses.		
	7d) Materials **identify prerequisite skills and concepts** for the major work of the grade/course, connected to the current on-grade/course-level work.	**Yes**	Materials identify prerequisite skills and concepts for the major work of the grade when applicable. Prerequisite skills, when applicable, can be found in Unit and Section Learning Goals, as well as the Lesson Narratives. The Unit 1 Learning Goals section states that "Students enter kindergarten with a range of counting experiences, concepts, and skills. This unit is designed to be accessible to all learners regardless of their prior experience. To that end, no counting is required for students to engage in the activities in the first three sections, though students may choose to count." Concepts and skills are spiraled throughout the materials and are frequently revisited. Later units reference concepts skills that Grade K students obtained in previous units that directly support the work of the unit. For example, the materials include a Full Unit Narrative for each unit. The Unit Narrative includes skills that students should have developed in previous units in order to be successful in the unit. For example, in Unit 7, the Unit Learning Goals section states, "In this unit,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			students explore solid shapes while reinforcing their knowledge of counting, number writing and comparison, and flat shapes. They compose figures with pattern blocks and continue to count up to 20 objects, write and compare numbers, and solve story problems" and "In an earlier unit, students investigated two-dimensional shapes. They named shapes (circle, triangle, rectangle, and square) and described the ways the shapes are different. Students used pattern blocks to build larger shapes and used positional words (above, below, next to, beside) along the way." This unit builds upon skills and concepts developed in Unit 3.
	7e) Materials provide guidance to help teachers **identify students** who need prerequisite work to engage successfully in core instruction, on-grade/course-level work.	**Yes**	Materials do not provide guidance to help teachers identify students who need prerequisite work to engage successfully in core instruction. All assessments focus on Grade K LSSM. Diagnostic tools or Pre-Assessments are not used prior to instruction. Specific guidance on how to identify or support students who need prerequisite work is not included.
	7f) Materials provide **targeted, aligned, prerequisite work** for the major work of the grade/course, directly connected to specific lessons and units in the curriculum.	**Yes**	Materials do not provide targeted, aligned, prerequisite work for the major work of the grade directly connected to specific lessons and units in the curriculum.
	7g) Materials provide **clear guidance and support** for teachers about the structures that allow students to appropriately address unfinished learning using prerequisite work.		See EdReports for more information.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
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**	**Final Justification/Comments**
I: Non-negotiable Criteria of Superior Quality[5]	1. Focus on Major Work	**Yes**	Materials devote a larger majority of time to the major work of the grade. Materials spend minimal time on content outside of the appropriate grade level.
	2. Consistent, Coherent Content	**Yes**	Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. Materials include problems and activities that connect two or more clusters in a domain 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 concepts, especially where called for explicitly in the standards. Materials are designed so that students attain the fluencies 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.

[5] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier 1 or Tier 2 rating.

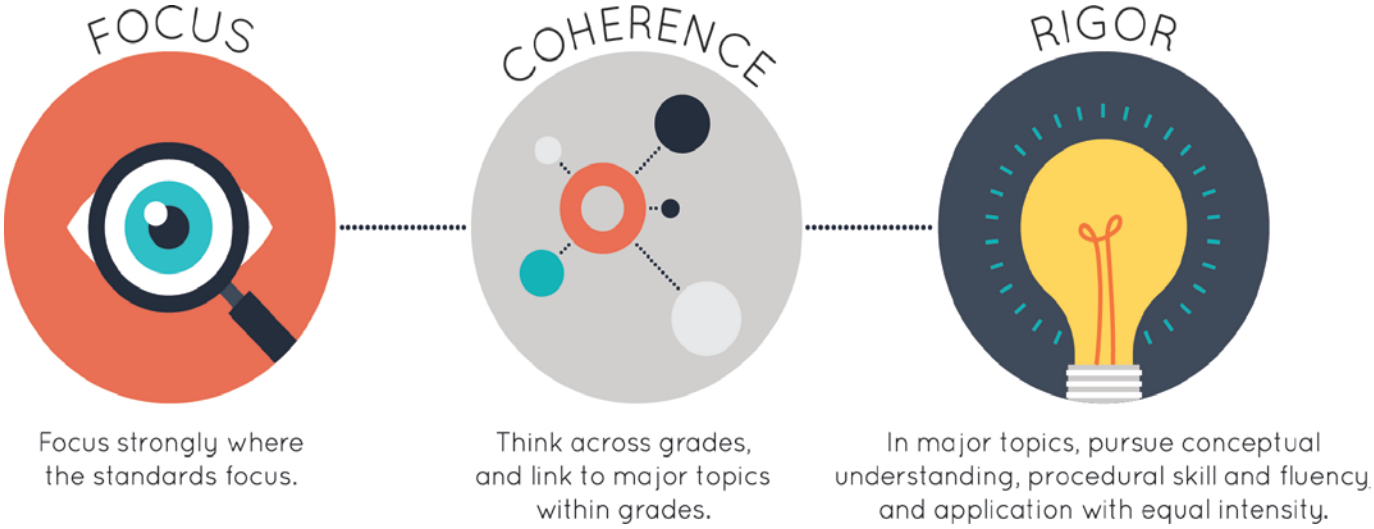
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	4. Focus and Coherence via Practice Standards	**Yes**	Materials attend to the full meaning of each practice standard. Each practice standard is connected to grade-level content and is meaningfully present throughout the materials. 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 explicitly attend to the specialized language of mathematics. Materials include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.
II: Additional Alignment Criteria and Indicators of Superior Quality[6]	5. Alignment Criteria for Standards for Mathematical Content		See EdReports for more information.
	6. Quality of Assessments		See EdReports for more information.
	7. Additional Indicators of Quality		Materials identify prerequisite skills and concepts for the major work of the grade. However, materials do not provide guidance to help teachers identify students who need prerequisite work to engage successfully in core instruction, on-grade-level work. Materials do not provide targeted, aligned, prerequisite work for the major work of the grade directly connected to specific lessons and units in the curriculum.

[6] Must score a "Yes" for all Additional Criteria of Superior Quality to receive a Tier 1 rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
FINAL DECISION FOR THIS MATERIAL: **Tier 1, Exemplifies quality**			

Qualified for Abbreviated Review[1]

Strong mathematics instruction contains the following elements:



Title: **Illustrative Mathematics**

Grade/Course: **1**

Publisher: **Kendall Hunt Publishing**

Copyright: **2021**

Overall Rating: **Tier 1, Exemplifies quality**

Tier 1, Tier 2, Tier 3 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. Quality of Assessments	
7. Indicators of Quality	

[1] Abbreviated Reviews are conducted in K-12 ELA and K-12 Math for submissions that **Meet Expectations** for Gateways 1 and Gateway 2 through EdReports. Reviewers considered these reports as they reviewed materials for alignment to Louisiana state standards and quality Non-negotiable indicators. See the full EdReports review https://www.edreports.org/reports/overview/kendall-hunts-illustrative-mathematics-2021.

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

- Review the **required**[2] 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.

[2] **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 Non-negotiable Criteria 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.			
Non-negotiable **1. FOCUS ON MAJOR WORK[3]:** Students and teachers using the materials as designed devote the large majority[4] of time to the major work of the grade/course. ☒ Yes ☐ No	**Required** **1a)** Materials devote the **majority** of class time to the major work of each grade/course.	**Yes**	Materials devote a large majority of time to the major work of the grade**.** Of the 139 instructional lessons, 94% are spent on major work of the grade. Specifically, 80% of lessons are spent on major standards, 14% of lessons are spent on a combination of major standards and supporting/additional standards, and 6% of lessons are spent on supporting or additional standards. The materials include 7 lessons labeled as optional. In addition, LSSM 1.MD.D.5 is not addressed in the materials.
	Required **1b)** Instructional materials, including assessments, spend minimal time on content outside of the appropriate grade/course **during core math instruction**. Content beyond grade/course-level should be clearly labeled as optional.	**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 in which they are introduced. The instructional lessons and assessments align with Louisiana Student Standards for Mathematics (LSSM) for Grade 1. Within the assessments, guidance regarding remediation and diagnostic information is provided to help address misconceptions and inaccurate understanding. The assessments associated with the core math instructional lessons focus on grade-level

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			items and are not beyond the scope of LSSM for Grade 1. Some of the lessons are labeled as optional, such as Unit 3, Lesson 28, because "it does not address any new mathematical content standards" but does provide "students with an opportunity to apply precursor skills of mathematical modeling" and Unit 4, Lesson 12 because "students may not need more practice developing fluency with adding or subtracting 10." The materials provide a checklist for observational assessments, called "Section Checkpoints," that align with Grade 1 LSSM. For example, in Unit 6, Section A Checkpoint tracks observational assessment focused on ordering objects by length and comparing the lengths of objects indirectly (LSSM 1.MD.A.1). The materials provide an Assessment Teacher Guide for each unit's End-of-Unit Assessment. All assessment items are aligned to at least one Grade 1 LSSM. For example, the Unit 2 Assessment Teacher Guide provides a sample solution to the prompt "Use the picture to find the value of 8-5. Show your thinking using drawings, numbers, and words," and aligns the item with LSSM 1.OA.C.5. All of the lessons in Units 3-5 focus on the major standards of the LSSM 1.OA and 1.NBT domains. In Unit 3, Lesson 8, students build on their work from Grade K focused on composing and decomposing teen numbers with ten ones and some more ones. Students develop an

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			understanding that 10 ones is equivalent to a unit called a ten. In the first activity, students count a collection of 16 objects and represent their count.
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. Materials spiral skills within context using appropriate connections across the standards. Major work is developed prior to lessons that address supporting standards the majority of the time, and, when the supporting standards are addressed, the lessons reinforce major work of the grade by connecting back to major standards. Connections between supporting and major content are evident in Units 1 and 2. For example, in Unit 1, Lesson 9, students collect information, or data, about their class and discuss how to organize it in a way that others will understand (LSSM 1.MD.C.4). In Activity 1, students learn how to conduct a survey and use connecting cubes to physically represent their votes. During the activity synthesis, students discuss how to organize the cubes so they can easily determine how many are in each category (LSSM 1.OA.C.5). LSSM 1.OA.C.5 is first developed in Lessons 1-7 and then reinforced with supporting work in Lesson 9. In Unit 2, Lesson 13, connects supporting LSSM 1.MD.C.4 to major LSSM 1.OA.A.1. In Activity 1, students determine

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			whether comparison statements about data are true or false and explain how they know. Students build on their work by asking and answering how many in all questions about data and their work by solving compare story problems (LSSM 1.MD.C.4, 1.OA.A.1). Students answer open-ended questions, such as "What questions might you ask about this data" when provided with a data chart about favorite art supplies. In Activity 2, students solve a word problem about Priya and Han and information about the data they collected from their class about their favorite art supplies. Students determine how many more students voted for crayons than paint and how many fewer students voted for markers than paint (LSSM 1.OA.A.1). LSSM 1.OA.A.1 is first developed in Lessons 1-12 and then reinforced with supporting work in Lesson 13.
	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. Lessons encompass multiple clusters and domains within the unit and spiral back to these standards in subsequent units. For example, Unit 3, Lesson 10, Activity 1 connects Clusters A (Represent and solve problems involving addition and subtraction and C (Add and subtract within 20). During the lesson, students

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			solve story problems involving addition and subtraction of teen numbers, such as 'Priya has a comic book collection. She gets 3 new comic books. Now she has 13 comic books. How many comic books did she have to start?" Students relate addition and subtraction, use double ten-frames, connecting cubes, and two-color counters to model numbers in the teens, and write equations about a given story problem (LSSM 1.OA.A.1, 1.OA.C.6). Unit 3, Lesson 19 connects Cluster B (Understand and apply properties of operations and the relationship between addition and subtraction) and Cluster C (Add and subtract within 20) of the Operations and Algebraic (OA) domain. In the lesson, students analyze three different methods for solving 7 + 8, two of which involve decomposing an addend to make a known fact. The third method involves adding 1 to make a known fact and then taking 1 away from the sum (LSSM 1.OA.B.3, 1.OA.C.6). Throughout this activity, students justify and explain the work of the given characters. For example, students solve the following problem: "Lin, Han, and Kiran are finding the sum of 8 + 7. Lin thinks about 8 + 2 + 5 to find the sum. Han thinks about 7 + 7 + 1 to find the sum. Kiran thinks about 8 + 8 − 1 to find the sum." Students explain how each student's method works and shares their thinking using objects, drawings, numbers, or words. Unit 5, Lesson 10

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			connects Operations and Algebraic Thinking (OA) and the Numbers and Operations in Base Ten (NBT) domains. During Activity 3, students use digit cards to solve various addition equations within 100 with an unknown, such as 80 = 3_ + 41 (LSSM 1.OA.D.8), by decomposing a 10 (LSSM 1.NBT.C.4).
Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ 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 featuring high-quality conceptual problems and discussion questions.	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in the standards. Throughout the materials, students develop conceptual understanding through engaging in discussions about mathematical ideas, using multiple representations, visual models, and a variety of strategies to solve problems, and constructing explanations about mathematical ideas and concepts. Lesson activities include embedded discussion prompts and scaffolding questions to support students in developing conceptual understanding. In many units, students participate in centers that engage students in various methods of addressing the materials and standards in engaging ways. For example, in Unit 1, Adding, Subtracting, and Working with Data, students spend a considerable amount of time relating counting to addition and subtraction (LSSM 1.OA.C.5). In Section A, Lessons 1-6, students count to add and subtract. In Lesson 4, Warm-Up, students add 1 to a number, then 2 to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			the same number mentally, including 6 + 1, 6 + 2, 8 + 1, and 8 + 2. Students then look at the expressions and discuss how they are the same and how they are different to determine that one adds one more while the other adds two more and the sums are one apart. Later in the lesson, students practice subtraction with a BINGO card and a 10-frame in a game called Five in a Row. Students respond to the prompt, "I have the number 8 and I want to subtract 2. How can I do it?" Students have the option to use the 10-frame to build a number then remove 2 from the number or solve mentally counting backwards or counting on (LSSM 1.OA.C.5). In Unit 3, Lesson 7, students compose teen numbers by making towers of ten blocks and single blocks in a row to represent ones (LSSM 1.NBT.B.2b). Students use ten frames and cubes to represent teen numbers. Students build conceptual understanding by making towers of ten and connecting their models to equations to represent the amount blocks, such as 10 + 4 = 14 blocks, and place value statements as such 1 ten and 4 ones. Students demonstrate conceptual understanding during the Cool Down activity where they show their thinking using words, numbers, and drawings to describe a model of ten cubes and five individual cubes. In Unit 5, Lesson 6, Activity 1, students determine the unknown addend in equations with sums

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			that are multiples of 10 (LSSM 1.NBT.4a). Students use connection cubes in towers of 10 and ten-frames as they work through the activity. Students first observe a picture of 4 ten-frames filled in with 10 red chips and 1 ten-frame with 5 chips along with the equation, 45 + ___ = 50. Students determine what number makes the equation true. Students complete additional problems, such as 63 + ___ = 70 and 42 + __ = 50, and answer the question, "What did you notice about the unknown quantity in each equation?" Students make sense of thinking about the missing ones that will make ten when added to the other ones.
	Required **3b)** ***Attention to Procedural Skill and Fluency:*** The materials are designed so that students **attain the fluencies and procedural skills** required by the content 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. The materials are designed in such a way that the required fluencies are acquired through a progression of learning over time and throughout the course of the materials. Lesson Warm-Ups, the first activity in each lesson, provides students with the opportunity to either prepare for the lesson or "strengthen their number sense or procedural fluency." For Warm-Ups that strengthen number sense or procedural fluency, students complete "mental arithmetic or reason numerically or algebraically." Instructional Routines used in the Warm-Ups also support students in building fluency, as in Number Talks which "encourage students to look

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			for structure and use repeated reasoning to evaluate expressions and develop computational fluency." In Grade 1, students are required to become fluent with adding and subtracting within 10 (LSSM 1.OA.C.6). The materials provide several opportunities for students to add and subtract within 10 as the standard is first addressed in Unit 1 and then incorporated into every unit thereafter in Warm-Ups or within instruction. For example, throughout Unit 1, students build fluency by adding and subtracting within 10 in ways that make sense to them. Unit 1, Lesson 5, students mentally solve expressions by adding or subtracting within 10. In Unit 3, Lesson 5, Warm-Up, students develop procedural fluency as they select numbers that make an equation true. Students continue to practice fluently adding and subtracting within ten in the remaining units. In Unit 6, Lesson 9, students count, read, and write numbers up to 120 (LSSM 1.NBT.A.1) in a measurement context. During the Warm-Up, students practice the fluency skill of choral counting from 90 to 120. Students identify patterns in the numbers counted through discussion prompts. During Activity 1, Measure Animal Lengths, students measure strips of tape representing animal lengths, such as a beaver or dog, between 95 and 120 centimeters using base-ten cubes (LSSM 1.MD.A.2). Students practice the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			procedural skill of measuring items and expressing the length as the whole number of length cubes. In Unit 7, Lesson 10, students "partition circles and rectangles into halves and fourths, and use precise language to describe the pieces as a half of or a fourth of the whole shape" (LSSM 1.G.A.3). During Activity 2, Card Sort: Shaded Pieces, students sort shaded circles and rectangles into groups that make sense to them and explain their choices. Students then use the same cards to sort into four categories, "a fourth or quarter is shaded," "a half is shaded," the whole shape is shaded," and "the whole shape is shaded," which match the procedural skill of describing the shares as quarters, fourths, and halves (LSSM 1.G.A.3). During the Cool Down, students partition a rectangle into fourths, color in one piece, and circle the phrase that matches what was represented.
	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. The materials provide engaging applications with ample practice in single and multi-step problems. The progression of the units includes opportunities within the lessons to apply conceptual understanding and procedural skills within the context of real-world problems. Students answer questions in pairs, small groups, and whole groups where they must justify and explain their reasoning. For example, in Unit 1, Lesson

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			11, students write and evaluate statements based on data provided in a visual representation (LSSM 1.MD.C.4). For example, in Activity 1, students observe data collected from a survey that Jada took of her classmates, which animal would make the best class pet. The data includes 6 tally marks for a turtle, 2 tally marks for a dog, and 12 tally marks for a rabbit. Students then determine whether statements are true or false, including the following: “There are 12 votes for rabbit.” “There are 18 votes all together.” “14 students voted for turtle or rabbit.” and “8 students voted for dog or turtle.” In Unit 2, students extend their learning from Grade K as they represent and solve new types of story problems within 10 using the relationship between addition and subtraction and deepen their understanding of the equal sign, and connect story problems to equations (LSSM 1.OA.A.1). For example, in Unit 2, Lesson 1, Warm-Up, students observe a real-world picture of a library and identify mathematical situations present in the picture. Students justify their thinking through class-wide discussion. During Activity 1, Story Problems about the Library, students solve real-world story problems with a partner using drawings, counting on or back, and writing equations or expressions, such as “5 books were on a shelf. Clare put 2 more books on the shelf. How many books are on the shelf now?

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Show your thinking using drawings, numbers, or words." In Unit 2, Lesson 10, students practice adding and subtracting within 10. In Activity 2, students engage in centers in which they choose from activities that offer practice telling and solving addition and subtraction story problems within 10, including Math Stories, Shake and Spill, and Capture Squares. Beginning in Unit 3, students add and subtract within 20. In Lesson 13, students solve Take From, Result Unknown and a Take From, Change Unknown story problems. For example, in Activity 1, students solve the following problem: "There are 15 students standing in the classroom. Some of the students sit down on the rug. There are still 5 students standing. How many students sat down on the rug? Show your thinking using drawings, numbers, or words." (LSSM 1.OA.A.2). Students extend this understanding in Lesson 20, A Trip to the Zoo, as they solve application problems with three addends (LSSM 1.OA.A.2). Students look at a picture of a reptile exhibit and solve the following prompt: "Jada went to the zoo with her family. They went to the reptile exhibit and saw 8 snakes, 7 iguanas, and 5 frogs." Students use drawings, numbers, or words to find the total number of reptiles that Jada's family saw. During the Cool Down section of the lesson, students answer a real-world problem using drawings, numbers,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			or words and write an equation to represent the problem.
	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 attend to the balance of rigor as intended by the standards. Lessons and activities support students in building conceptual understanding when students connect new representations and language to prior learning. Activities support application when students apply their conceptual understanding and procedural fluency to the context of real-world situations. Warm-ups, practice problems, centers, and other built-in routines help students develop procedural fluency over time. For example, in Unit 1, Lesson 2, integrates procedural skill and fluency and conceptual understanding. During the lesson, students write addition expressions within 10 (1.OA.C.6) and then find the sums by counting on from a number (LSSM 1.OA.C.5). Students match pairs of dots to expressions and then find the total. For example, students solve the equation 3 + 2 = ____. Students find the dot cards that match the equation and then count on from 3 two times to find the total. In Unit 7, Lesson 15 integrates procedural skill and fluency and conceptual understanding. During the lesson, students connect 30 minutes to telling the time at the half hour (LSSM

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			1.MD.B.3). Students learn that there are 30 minutes in half an hour by counting the intervals around an analog clock that represents the minutes. Some students can count by ones, but others may notice a pattern and count by 5 or 10 (LSSM 1.NBT.A.1). Unit 2, Lesson 7 integrates all components of rigor to build a deeper understanding as students apply conceptual strategies and procedural skill and fluency while solving real-world problems. During Activity 2, students apply their understanding of previously learned strategies for adding within 20 as they write and solve addition equations for real-world story problems. For example, students solve the following problem: "Tyler is playing Shake and Spill. During his first round, he spilled 4 red and 6 yellow counters." Students write two addition equations to show his combination of red and yellow counters and use drawings, numbers, or words to write equations of other combinations of red and yellow counters that Tyler could spill (LSSM 1.OA.1, 1.OA.C.6).
Non-negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Aligned materials make meaningful and purposeful connections that promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. Materials address the	**Required** **4a)** Materials attend to the **full meaning of the practice standards**. Each practice standard is connected to grade/course-level content in a meaningful way and is present throughout the year in assignments, activities, and/or problems.	**Yes**	Materials attend to the full meaning of each practice standard. Each practice standard is connected to grade-level content and is meaningfully present throughout the materials. The materials provide students with an opportunity to engage with the practice standards in each lesson. The materials support the students in the development of the practice

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
practice standards in a way to enrich and strengthen the focus of the content standards instead of detracting from them. ☒ Yes ☐ No			standards while enriching the grade-level standards. Practice standards are presented, reviewed, and spiraled throughout the materials which allows students to develop and utilize the practices over time. In Unit 2, Lesson 12, students make sense of a problem (MP.1) by completing "Three Reads" of a problem identifying "What the story was about?" "What are all the things we can count in this story?" and "What are different ways we can solve this problem?" with each read of the problem. In Unit 3, Lesson 2, Number Talk: 2 or 3 More, students share strategies to add 2 or 3 (LSSM 1.OA.C.5, 1.OA.C.6). Students notice and make use of structure (MP.7) as they discuss strategies to find the value of following problems mentally, 4 + 2, 5 + 2, 5 + 3, and 6 + 3. In Unit 3, Lesson 15, students solve story problems with three addends in a way that makes sense to them (MP.1). In each of the problems, two of the addends make a ten but are not next to each other. This structure encourages students to use the commutative and associative properties to make ten. For example, students solve the following problem: "7 blue birds fly in the sky. 8 brown birds sit in a tree. 3 baby birds sit in a nest. How many birds are there altogether?" (LSSM 1.OA.A.2, 1.OA.B.3). In Unit 4, Lesson 7, Activity 2: Who Do You Agree With? students look at a model of tens and ones and determine which answer matches the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			value of what is represented, even if the ones place value blocks appear before the tens place value blocks (LSSM 1.NBT.A.1, 1.NBT.B.2). Students critique the reasoning of others (MP.3) to decide who to agree with and explain their reasoning. In Unit 7 Lesson 3, students describe two-dimensional shapes, sort them, and explain how they sorted the shapes. In Activity 1, as students sort, they define attributes, name shapes, or discuss non-defining attributes. Students discuss with their partner what they notice about how their classmates sorted the shapes (MP.3) and are encouraged to use precise mathematical language and terminology (MP.6).
	Required **4b)** Materials provide sufficient opportunities for students to **construct viable arguments and critique the arguments of others** concerning key grade/course-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. Students examine sets of data, pictures, and/or work of others and provide arguments or critiques. The lessons and activities are structured with opportunities for students to engage in mathematical reasoning through discussion questions and prompts, to form viable arguments and critique the arguments of others, and to conduct error analyses. For example, In Unit 4, Lesson 6, students analyze another student's thinking about a representation of 48 cubes in towers of 10. When students explain that they disagree with

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Noah because a ten must include 10 ones, they show their understanding of a ten and the foundations of the base-ten system. In Unit 5, Lesson 7, Activity 1, A Ten or Not a Ten, students use place value reasoning to determine if they should compose a ten when adding a two-digit number by a one-digit number. The materials provide students with a frame to construct their argument through the prompt: "If Jada could make a new ten, circle 'Yes.' If Jada could not make a new ten, circle 'No.'" Students continue their arguments using additional prompts: "Explain how you know. Find the value. Write equations to show how you found the value of the sum." This activity provides a scaffolded approach to creating arguments. In Unit 6, Lesson 6, Measure Our Workbook, students measure the length of a workbook with paperclips (LSSM 1.MD.A.2) in Activity 1. Then in Activity 2, students analyze Andre's work. Andre's length is 5 paperclips with inconsistent spacing between the paper clips. Tyler's length is 7 paper clips lined up end-to-end. Clare's length is 9 paper clips in a crooked line. Students work with a partner to write statements to explain why they agree or disagree with each student's work. In Unit 8, Lesson 2, the Warm Up focuses on the relationship between addition and subtraction and the strategies students use to find sums and differences (LSSM 1.OA.C.6). Students

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			critique the work and arguments of peers through discussion questions, such as "Who can restate ___'s reasoning in a different way?" "Did anyone have the same strategy but would explain it differently?" "Did anyone approach the problem in a different way?" and "Does anyone want to add on to ___'s strategy?"
	Required **4c)** Materials explicitly attend to the **specialized language** of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. Throughout each unit, the lessons and activities use precise mathematical language and encourage the use of the correct mathematical language when discussing skills, concepts, solutions, and strategies. Glossary entries are provided for each unit. These entries include the academic language necessary for the unit along with grade-appropriate definitions. Within the Mathematical Language Development and Access for English Learners section of the How to Use These Materials guide, Principal 3 calls for cultivating conversations and states, "Conversations act as scaffolds for students developing mathematical language because they provide opportunities to simultaneously make meaning, communicate that meaning, and refine the way content understandings are communicated." Mathematical Language Routines (MLRs) are "instructional routines that provide structured but adaptable formats for amplifying, assessing, and developing students'

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			language." The MLRs are embedded throughout the materials with explanations, and instructions for using the MLRs are provided in the How to Use These Materials guide. The MLRs include the following routines: Stronger and Clearer Each Time; Collect and Display; Clarify, Critique, Correct; Information Gap; Co-Craft Questions; Three Reads; Compare and Connect; and Discussion Supports. For example, MLR 4 Information Gap creates the need for students to communicate using precise language. During the routine, the teacher positions some students as holders of information that is needed by other students to accomplish a goal. Because there is an information gap, students orally share ideas and information to bridge the gap. Sentence Frames are also embedded throughout the activities and lessons that "support student language production by providing structure to communicate about a topic." Mathematical terminology is built within each lesson, and students answer questions throughout the lessons that reinforce and enhance their mathematical language. In addition, student sample responses include mathematical language to set the expectation for student use. The MLR2: Collect and Display routine is utilized in Unit 4, Lesson 14, Activity 1 Synthesis when students are introduced to the terms greater than and less than. During Activity 1, students use connecting

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			cubes in towers of tens and single ones to make the numbers 35 and 52, and then in the Lesson Synthesis, students use their representations to explain their mathematical reasoning of which number is greater with a partner. The teacher collects and displays the language students use for their reasoning. The materials also provide sample words for the teachers to listen for to support students' language development, such as bigger, smaller, fewer, less than and sample responses such as "59 is more than 49 because 5 tens is more than 4 tens" and "93 is more than 9. 9 has no tens and 93 has 9 tens. 9 tens is more than 0 tens." As the Synthesis continues, students determine if any other words or phrases are important to include on the display so that additional language for comparing numbers is collected and displayed. In Unit 7, Lesson 9, students partition circles and rectangles into halves and fourths and then determine if the shapes are partitioned into equal pieces. During the lesson, students are introduced to the terms halves and fourths as they build circles and split them into halves and fourths. Along learning definitions of halves and fourths, students observe and identify examples and non-examples of halves and fourths.
	4d) 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			students' mathematical development. The Standards for Mathematical Practices Chart included in the How to Use These Materials guide highlights lessons that "showcase certain Mathematical Practices." For example, in Unit 3, students utilize MP.4 in Lessons 10, 26, and 28. In Unit 5, students utilize MP.5 in Lessons 6 and 9. This section also connects many of the instructional routines to the practice standards. For example, as students engage in the Which One Doesn't Belong routine, students attend to precision (MP.6). As students engage in the How Many Do You See routine and subitize or use grouping strategies to describe images they see, they look for and make use of structure (MP.7). This section includes additional guidance for teachers in supporting students in their development of the practice standards such as "How you can use the Mathematical Practices Chart" and "Standards for Mathematical Student Facing Learning Targets." Guidance is also embedded throughout the Teacher's Edition. The Lesson Narrative often explains how students will utilize the practice standards in the lesson. In Unit 2, Lesson 7, represent and solve Put Together/Take Apart, and Both Addends Unknown story problems. Students first engage in a How Many Do You See Warm-Up routine. The Activity Narrative states, "The purpose of this How Many Do You

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			See is for students to subitize or use grouping strategies to describe the images they see. The images in the warm up are built for students to further explore the commutative property, to which they were introduced in a prior lesson. When students see that addends can be added in any order, they discern number patterns or structure (MP7).” Then, in Activity 1, the Activity Narrative states, “During this activity, the teacher collects and displays different equations that students write for the first round. This includes equations where the total is before the equal sign. During the synthesis, students are encouraged to think about how an equation with the total before the equal sign relates back to the context of playing the game (MP2). In Unit 5, Lesson 12, students add 2 two-digit numbers by composing a ten. The Lesson Narrative states, “students practice explaining their methods for adding two-digit numbers based on place value and the properties of operations (MP3). In the first activity, students are invited to choose any method that makes sense to them to add within 100 and explain their method to their peers. In the second activity, students use what they have learned about place value and methods for adding to create expressions that meet different constraints. Throughout the lesson, monitor for ways students are reasoning

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			about place value and the structure of numbers (MP7)."
Section II: Additional Alignment Criteria and Indicators 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 grade/course-level problems.		See EdReports for more information.
	Required **5b)** Materials **relate grade/course-level concepts explicitly to prior knowledge** from earlier grades and courses. The materials are designed so that prior knowledge is extended to accommodate the new knowledge, building to core instruction, on grade/course-level work. Lessons are appropriately **structured and scaffolded** to support student mastery.		
	Required **5c)** There is **variety** in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade/course-appropriate way, arguments and explanations, diagrams, mathematical models, etc.		
	5d) Support for **English Language Learners and other special populations** is provided. The language in which problems are posed is not an obstacle to understanding the content, and if it is, additional supports (suggestions for modifications, "vocabulary to preview", etc.,) are included.		
6. QUALITY OF ASSESSMENTS: Materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the assessed grade-specific Louisiana	**Required** **6a)** Multiple **assessment opportunities** are embedded into content materials and measure student mastery of standards that reflect the balance of the standards as presented in materials.		
	Required **6b)** Assessment items include a **combination of tasks** that require students to demonstrate conceptual		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Student Standards for Mathematics. ☐ Yes ☐ No	understanding, demonstrate procedural skill and fluency, and apply mathematical reasoning and modeling in real world context. Assessment items require students to produce answers and solutions, arguments, explanations, and models, in a grade/course-appropriate way.		
	6c) Scoring guidelines and rubrics align to standards, incorporate criteria that are specific, observable, and measurable, and provide sufficient guidance for interpreting student performance, misconceptions, and targeted support to engage in core instruction.		
	6d) Materials provide 2-3 **comprehensive assessments** (interims/benchmarks) that measure student learning up to the point of administration.		
7. ADDITIONAL INDICATORS OF QUALITY: Materials are well organized and provide teacher guidance for units and lessons. Materials provide timely supports to target specific skills/concepts to address students' unfinished learning in order to access grade-level work. ☐ Yes ☐ No	**Required** **7a)** The content can be **reasonably completed** within a regular school year and the pacing of content allows for maximum student understanding. The materials provide guidance about the amount of time a task might reasonably take.		
	Required **7b)** The materials are **easy to use and well organized** for students and teachers. Teacher editions are concise and easy to manage with clear connections between teacher resources. Guidance is provided for lesson planning and instructional delivery, lesson flow, questions to help prompt student thinking, and expected student outcomes.		
	Required **7c)** Materials include unit and lesson **study tools for teachers**, including, but not limited to, an explanation of the mathematics of each unit and mathematical point of each lesson as it relates to the organizing concepts of the unit and discussion on student ways of thinking and anticipating a variety of student responses.		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	7d) Materials **identify prerequisite skills and concepts** for the major work of the grade/course, connected to the current on-grade/course-level work.	**Yes**	Materials identify prerequisite skills and concepts for the major work of the grade. Prerequisite skills can be found in Unit and Section Learning Goals, as well as the Lesson Narratives. The practice problems for Section A in each unit have several items designated as Pre-Unit assessment items. The pre-unit assessment items include the standard being addressed, noting the pre-requisite skills of the unit. For example, in Unit 1, Section A Practice Problems, Problem 1 addresses LSSM K.G.A.2, and Problems 2 and 3 address LSSM K.OA.A.1. According to the "A Typical IM Lesson," the Warm-Up section of the lesson includes an instructional routine that practices previously taught concepts or previews a new concept in the day's lesson. Each unit also includes a Unit Learning Goals section that describes the learning within the unit along with the skills and concepts that should have been developed prior to the unit. For example, the Learning Goals for Unit 2 states, "In this unit, students learn to solve new types of addition and subtraction story problems and relate the quantities in the stories to equations. In kindergarten, students solved a limited number of types of story problems within 10 (Add To/Take From, Result Unknown, and Put Together/Take Apart, Total Unknown, and Both Addends Unknown). They represented their thinking using objects, fingers, mental images, and drawings.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Students saw equations and may have used them to represent their thinking, but were not required to do so." Additionally, each lesson lists the standard(s) addressed in the lessons, as well as Building On standards, when applicable. For example, Unit 1, Lesson 7 addresses LSSM 1.MD.C.4, 1.OA.C.6, and 1.OA.C.6 and builds on LSSM K.CC.B.
	7e) Materials provide guidance to help teachers **identify students** who need prerequisite work to engage successfully in core instruction, on-grade/course-level work.	**Yes**	Materials provide guidance to help teachers identify students who need prerequisite work to engage successfully in core instruction, on-grade-level work. The Pre-Unit Practice problems included in Section A of each unit provide an assessment of prerequisite concepts and skills directly aligned to upcoming grade-level standards and content. Guidance instructs teachers to use these items to identify any gaps in learning and encourages teachers "to address those prerequisite skills while continuing to work through on-grade tasks and concepts of each unit."
	7f) Materials provide **targeted, aligned, prerequisite work** for the major work of the grade/course, directly connected to specific lessons and units in the curriculum.	**Yes**	Materials provide targeted, aligned, prerequisite work for the major work of the grade directly connected to specific lessons and units in the curriculum. After teachers analyze student results of the Pre-Unit Practice Problems that address prerequisite concepts and skills for the unit, they are encouraged to address prerequisite skills while continuing to work through on-grade tasks and concepts of each unit and "look for opportunities

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			within the upcoming unit where the target skill or concept could be addressed in context or with a center." For example, Unit 2, Section A Pre-Unit Practice Problem 1 and 2 address LSSM K.OA.A.2. If students struggle on these items, they are encouraged to engage in the Check It Off (k-1), Stage 1: Add within 10 Center during Unit 2, Lesson 3. During the center, students "take turns picking two number cards (0–5) to make and find the value of an addition expression" and "check off the number that represents the value of the sum (0–10) and then write the addition expression on the recording sheet" which addresses LSSM K.OA.A.2. Students are also encouraged to engage in Stage 2: Subtract within 10 of the same Center which also addresses LSSM K.OA.A.2. Additionally, the Pacing Guide and Dependency Diagram section, located within the Course Guide, includes Section Dependency Diagrams with "an arrow that indicates the prior section that contains content most directly designed to support or build toward the content in the current section." For example, Grade K, Unit 4, Section B, Represent and Solve Story Problems is designated as the prior section for Grade 1, Unit 2, Section A, Add and Subtract Within 10.
	7g) Materials provide **clear guidance and support** for teachers about the structures that allow students to appropriately address unfinished learning using prerequisite work.		See EdReports for more information.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
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**	**Final Justification/Comments**
I: Non-negotiable Criteria of Superior Quality[5]	1. Focus on Major Work	**Yes**	Materials devote a larger majority of time to the major work of the grade. Materials spend minimal time on content outside of the appropriate grade level.
	2. Consistent, Coherent Content	**Yes**	Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. Materials include problems and activities that connect two or more clusters in a domain 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 concepts, especially where called for explicitly in the standards. Materials are designed so that students attain the fluencies 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.

[5] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier 1 or Tier 2 rating.

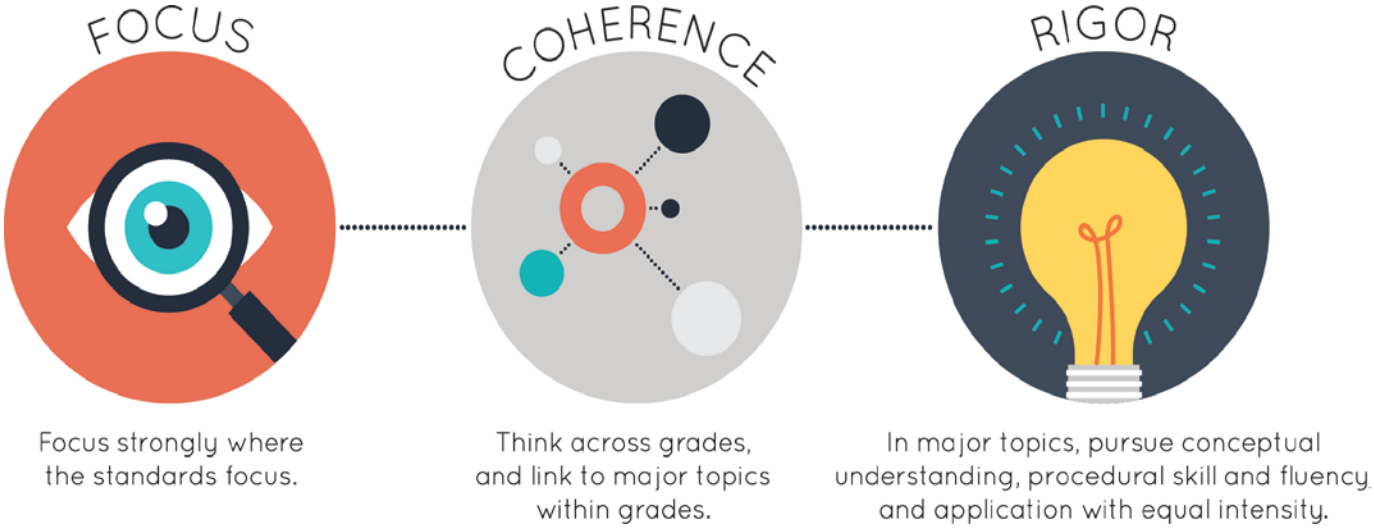
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	4. Focus and Coherence via Practice Standards	**Yes**	Materials attend to the full meaning of each practice standard. Each practice standard is connected to grade-level content and is meaningfully present throughout the materials. 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 explicitly attend to the specialized language of mathematics. Materials include teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.
II: Additional Alignment Criteria and Indicators of Superior Quality[6]	5. Alignment Criteria for Standards for Mathematical Content		See EdReports for more information.
	6. Quality of Assessments		See EdReports for more information.
	7. Additional Indicators of Quality		Materials identify prerequisite skills and concepts for the major work of the grade. Materials provide guidance to help teachers identify students who need prerequisite work to engage successfully in core instruction, on-grade-level work. However, materials do not provide targeted, aligned, prerequisite work for the major work of the grade directly connected to specific lessons and units in the curriculum.

[6] Must score a "Yes" for all Additional Criteria of Superior Quality to receive a Tier 1 rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
FINAL DECISION FOR THIS MATERIAL: **Tier 1, Exemplifies quality**			

Qualified for Abbreviated Review[1]

Strong mathematics instruction contains the following elements:



Title: **Illustrative Mathematics**

Grade/Course: **2**

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Overall Rating: **Tier 1, Exemplifies quality**

Tier 1, Tier 2, Tier 3 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. Quality of Assessments	
7. Indicators of Quality	

[1] Abbreviated Reviews are conducted in K-12 ELA and K-12 Math for submissions that **Meet Expectations** for Gateways 1 and Gateway 2 through EdReports. Reviewers considered these reports as they reviewed materials for alignment to Louisiana state standards and quality Non-negotiable indicators. See the full EdReports review https://www.edreports.org/reports/overview/kendall-hunts-illustrative-mathematics-2021.

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

- Review the **required**[2] 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.

[2] **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 Non-negotiable Criteria 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.			
Non-negotiable **1. FOCUS ON MAJOR WORK[3]:** Students and teachers using the materials as designed devote the large majority[4] of time to the major work of the grade/course. ☒ Yes ☐ No	**Required** **1a)** Materials devote the **majority** of class time to the major work of each grade/course.	**Yes**	Materials devote a majority of time to the major work of the grade. Of the 116 instructional lessons, 85% are spent on major work of the grade. Specifically, 67% of lessons are spent on major standards, 18% of lessons are spent on a combination of major standards and supporting/additional standards, and 15% of lessons are spent on supporting or additional standards. The materials include 30 lessons labeled as optional.
	Required **1b)** Instructional materials, including assessments, spend minimal time on content outside of the appropriate grade/course **during core math instruction**. Content beyond grade/course-level should be clearly labeled as optional.	**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 in which they are introduced. The instructional lessons and assessments align with Louisiana Student Standards for Mathematics (LSSM) for Grade 2. Within the assessments, guidance regarding remediation and diagnostic information is provided to help address misconceptions and inaccurate understanding. The assessments associated with the core math instructional lessons focus on grade-level items and are not beyond the scope of LSSM for Grade 2. Some of the lessons are

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

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			labeled as optional, such as Unit 1, Lesson 17, because “it is an opportunity for extra practice that not all classes may need” and Unit 2, Lesson 16 because “it does not address any new mathematical content standards” but does provide “students with an opportunity to apply precursor skills of mathematical modeling” and Unit 4, Lesson 12 because “students may not need more practice developing fluency with adding or subtracting 10.” In Unit 4, students learn about the structure of a number line and use it to represent numbers within 100 (LSSM 2.MD.B.6). Students also relate addition and subtraction to length and represent the operations on the number line (LSSM 2.NBT.B.5, LSSM 2.MD.B.6). In Unit 5, students extend place value understanding to three-digit numbers. In Unit 5, Lesson 10, students learn that when comparing three-digit numbers, it is helpful to start by comparing the value of the hundreds. In Activity 1, students answer “who has more?” and “how do you know?” in the following problem, “Mai has a value of 154 and Tyler has a value of 211.” Students use the comparison symbols, <, >, and =, to compare three-digit numbers (LSSM 2.NBT.A.4). Students engage in a summative End-of-Unit Assessment at the end of each unit that assesses the learning of all the unit goals. The assessment materials, both formative and summative,

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			are aligned to grade-level standards, and each problem on the assessment states the grade-level standard that is being addressed. For example, in Unit 7, Lesson 10, Cool Down, students use base ten blocks to solve one of the following expressions within 1,000 through adding by place: 495 + 305, 287 + 438, 599 + 112, and 232 + 648 (LSSM 2.NBT.B.7).
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. Materials spiral skills within context using appropriate connections across the standards. Major work is developed prior to lessons that address supporting standards the majority of the time, and, when the supporting standards are addressed, the lessons reinforce major work of the grade by connecting back to major standards. Students first develop an understanding of major LSSM 2.OA.B.2 in Unit 1, Lesson 1. During the lesson, students demonstrate methods of addition and subtraction as they draw cards and consider how they could add or subtract the numbers to create a value that matches one of the target numbers between 0 and 1. In Lesson 3, students apply the reasoning they used in previous lessons with addends that make 10. This understanding is reinforced in Lesson 13 as students make sense of and solve comparison problems using the structure of a bar

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			graph and equations (LSSM 2.MD.D.10). For example, in Activity 1, students use a bar graph to compare two quantities (LSSM 2.MD.D.10) and describe the methods they use to find the unknown difference, write some statements using more and fewer and then write equations to show how to find the difference (LSSM 2.OA.B.2). Students first develop an understanding of major LSSM 2.NBT.B.5 in Unit 3, Lesson 6. This concept is reinforced in Lesson 16 of the same unit as students create a line plot from data presented in a table. The table includes data with longer lengths and a greater difference between the shortest and longest lengths than the data used in previous lessons. Students make decisions about how to label the number line using what they have learned about the structure of line plots and how to represent and label measurement data (LSSM 2.MD.D.9). Then, students use the line plot they created and another line plot about plant heights to answer questions such as “What is the difference between the height of the tallest plant and the shortest plant? Write an equation to show how you know” (LSSM 2.NBT.B.5).

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	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. Lessons encompass multiple clusters and domains within the unit and spiral back to these standards in subsequent units. Unit 3, Lesson 3 connects Clusters A (Measure and estimate lengths in standard units) and B (Relate addition and subtraction to length) of the Measurement and Data (MD) domain. Students create a ruler with centimeter units in Activity 1. Students label each tick mark on the ruler and recognize that the length between each tick mark on their ruler is 1 centimeter. Students use base-ten blocks, scissors, and a ruler template to help them create their ruler. Students use the base-ten blocks to create the tick marks on the ruler template (LSSM 2.MD.B.6). In Activity 2, students use their ruler to measure the length of the given rectangles (LSSM 2.MD.A.1). Students can use centimeters cubes to check the accuracy of their measurements. Unit 9, Lesson 4 connects the Measurement and Data (MD) and Numbers and Operations in Base Ten (NBT) domains. Students measure the lengths of pencils to the nearest centimeter and record their data in a table (LSSM 2.MD.A.1). Students add and subtract to answer questions about the data in the table and share strategies for

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			how they found sums and differences (LSSM 2.NBT.B.5). Students answer the following questions: "How did you find the total length of the pencils?" "Which lengths were added first? Why?" and "Can you think of another way to find the sum?" Unit 6, Lesson 19, Activity 2, connects the Operations and Algebraic Thinking (OA) and Measurement and Data (MD) domains. During Activity 2 of the lesson, students work in groups of two using diagrams to help them understand and solve two-step word problems (LSSM 2.OA.A.1) involving money (LSSM 2.MD.C.8). Students solve problems such as, "Tyler has $45, Andre has $36, and Noah has $28. How much less money does Tyler have than Andre and Noah combined?"
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 featuring high-quality conceptual problems and discussion questions.	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in the standards. Throughout the materials, students develop conceptual understanding through engaging in discussions about mathematical ideas, using multiple representations, visual models, and a variety of strategies to solve problems, and constructing explanations about mathematical ideas and concepts. Lesson activities include embedded discussion prompts and scaffolding questions to support students in developing conceptual understanding. In many units, students participate in centers

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			that engage students in various methods of addressing the materials and standards in engaging ways. For example, in Unit 2, Lesson 7, students subtract a two-digit number from a two-digit number in a way that makes sense to them. Students build on their understanding of decomposing a ten when subtracting a one-digit number from a two-digit number to subtract two-digit numbers. In the first activity, students use a self-chosen method to subtract and compare their methods with a partner. In the activity Synthesis, students make connections across different methods and representations and consider which tools and representations work best for them (LSSM 2.NBT.B.9). In the second activity, students continue to build conceptual understanding as they use base-ten blocks to represent expressions and decompose a ten when subtracting by place. In Unit 5, Lesson 5, Activity 1, students write three-digit numbers as the sum of the value of each digit (LSSM 2.NBT.A.1, 2.NBT.A.3). Students first solve problems such as "Andre has 3 hundreds. Tyler has 5 tens. Mai has 7 ones. They want to represent the amount they have using an equation. Write the equation and the value." Then, using base-ten blocks, students write an expression to represent the sum of their values (300 + 50 + 10 = 350) and then write the total value as a three-digit number (350). Students use this new

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			learning to further develop this understanding by using base-ten blocks to write the correct value of a number when their sums are out of order such as 40 + 100 + 3 as 143. In Unit 8, Lesson 2, students separate objects into groups of 2 and identify numbers of objects that can be split into pairs with no leftovers and numbers of objects that can be split into pairs with "1 leftover." Students begin to reason about whether a group of objects is even or odd by using what they know about counting or adding by 2 (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 content 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. The materials are designed in such a way that the required fluencies are acquired through a progression of learning over time and throughout the course of the materials. Lesson Warm-Ups, the first activity in each lesson, provides students with the opportunity to either prepare for the lesson or "strengthen their number sense or procedural fluency." For Warm-Ups that strengthen number sense or procedural fluency, students complete "mental arithmetic or reason numerically or algebraically." Instructional Routines used in the Warm-Ups also support students in building fluency, as in Number Talks which "encourage students to look for structure and use repeated reasoning to evaluate expressions and develop

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			computational fluency." Lessons and activities provide several opportunities for students to fluently add and subtract within 20 using mental strategies (LSSM 2.OA.B.2). This skill is first introduced in the first four lessons of Unit 1 and is embedded as focus or supporting content of lessons in Units 2, 3, 8, and 9. This continuous practice allows students to develop their automaticity of single-digit sums and differences throughout the year. Warm-Up activities are provided within the daily lessons, providing students with an opportunity to strengthen their number sense or procedural skill and fluency. For example, Unit 1, Lesson 5, Warm-Up, students find the value of expressions mentally, such as 6 - 1 and 6 - 2, recalling the count back strategy introduced in Lesson 4. Additionally, during Stage 3 of the Capture Squares Center in Unit 6, students engage with addition within 20 to support maintenance of the fluency. In Unit 9, Lesson 1, students identify addition facts within 20 that they do not yet know from memory. First, students mentally solve addition facts within 20, such as 8 + 5. Then, students circle any sum that they do not know, write the equation on an index card, and use the cards as fluency practice for the duration of the unit. Lessons and activities provide several opportunities for students to add and subtract within 100 (LSSM 2.NBT.B.5). Students refine this

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			fluency in a progression of learning during various lessons in Units 2, 3, 4, 5, 6, 7, and 9. In Unit 2, students add and subtract within 100 using strategies based on place value, properties of operations, and the relationship between addition and subtraction (LSSM 2.NBT.B.5). In Unit 2, Lesson 9, students match expressions to base-ten diagrams. Each group uses a set of cards and matches each expression to a base-ten diagram. After students have found a match, they explain to their partner why they believe the expressions and the base ten diagrams go together. After students have found all of the matches, they choose one addition and one subtraction expression and find the value of each expression in a way that makes sense to them. In Unit 5, Lesson 7, Center Day, students engage in centers to practice addition and subtraction within 100, such as the Number Puzzle centers. Students practice this skill within Stage 4 as they use digit cards to make addition and subtraction equations true, working with sums and differences within 100.
	Required **3c)** ***Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with **engaging applications**, 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. The materials provide engaging applications with ample practice in single and multi-step problems. The progression of the units includes opportunities within the lessons to apply conceptual understanding and procedural skills within the context of real-world

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	those places in the content standards where expectations for multi-step and real-world problems are explicit.		problems. Students answer questions in pairs, small groups, and whole groups where they must justify and explain their reasoning. The materials provide several opportunities to solve problems in a relevant and meaningful way by selecting efficient strategies to use to solve real-world problems. In Unit 1, Section A, students build fluency with adding within 10 and subtracting within 20. In Section B, apply conceptual understanding and fluency skills as they represent and solve story problems within 20 through the content of picture and bar graphs that represent categorical data (LSSM 2.MD.D.10). In Lesson 8, students read and interpret a picture graph. In Activity 1, students observe a picture graph representing “Veggies Adults Love.” Students answer questions such as “How many adults like spinach?” “What is the total number of adults who like carrots or corn?” and “Write one fact you learned about the veggies adults love based on the data represented in the picture graph.” In Lesson 13, students use a bar graph to compare two quantities and describe the methods they use to find the unknown difference. Students observe a bar graph with no scale. Students draw the scales to answer the question of “how many more” (LSSM 2.MD.D.10). In Unit 2, Lesson 3, students interpret and solve story problems by adding or subtracting within 100 without composing or decomposing a

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			ten (LSSM 2.OA.A.1). In Activity 1, students solve the following problem: "Some students were waiting on the bus to go to the zoo. Then 34 more students go on. Now there are 55 students on the bus. How many students were on the bus at first?" In Activity 2, students solve word problems, describe methods based on place value, and have the option to use base-ten blocks and base-ten diagrams. For example, students solve: "58 students went to see the bears. 27 students went to see the lions. How many more students went to see the bears than the lions?" and "Some birds were in cages outside of the birdhouse. 34 birds were inside the birdhouse. In all, there were 88 birds. How many were in the cages outside?" (LSSM 2.OA.A.1). In Unit 4, Lesson 9, students deepen their understanding of subtraction as Taking From and as an Unknown Addend problem. For example, students solve the following problem: "Elena had a length of string that was much too long for her project. The string was 65 inches long. Elena cut off 33 inches. How long is the string now?" Students discuss the problem with their partner and then work independently to solve the problem (LSSM 2.MD.B.5). In Unit 6, Lesson 13 students solve Add to and Take From problems in the context of money. For example, students solve the following problem: "Lin and Diego went to the school store to get a few supplies. A table of supplies and the

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			cost for each item is shown. Lin has some coins- 2 quarters, 1 nickel, and 3 dimes." Students determine how much money Lin has and how much money Lin has left over after buying an eraser (LSSM 2.MD.C.8, 2.OA.A.1).
	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 attend to the balance of rigor as intended by the standards. Lessons and activities support students in building conceptual understanding when students connect new representations and language to prior learning. Activities support application when students apply their conceptual understanding and procedural fluency to the context of real-world situations. Warm-ups, practice problems, centers, and other built-in routines help students develop procedural fluency over time. For example, Unit 8, Lesson 12, integrates conceptual understanding and procedural skill and fluency as students partition rectangles to create rows and columns of equal size squares (LSSM 2.G.A.2). Students build a rectangle with 8 tiles arranged in 2 rows. Students answer the following questions: "How many rows of equal squares did you make?" and "How many columns did you make?" Students then write two equations to represent the total number of equal size squares. In Unit 2, students integrate strategies developed

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			to solve problems within 100 using place value to real-world story problems. Unit 2, Lesson 12 integrates procedural skill and fluency and application. During the lesson, students solve the following story problem: “Elena gathered 52 orange seeds. She gathered 39 more apple seeds than orange seeds. How many apple seeds did she gather?” To solve the problem, groups of two students use base-ten blocks and apply strategies based on place value as they draw a base-ten diagram to show a new ten to find the answer to the equation 52 + 39 (LSSM 2.NBT.B.5, 2.OA.A.1). Unit 4, Lesson 8 focuses on both procedural skill and fluency and conceptual understanding. In the lesson, students represent addition and subtraction equations, such as 15 +7 and 33 - 9, on a number line (LSSM 2.MD.B.6). Students consider where to begin and in which direction to draw their arrows in order to accurately represent the operation in the given equation. To solve 15 + 7, students understand that they start at 15 and move to the right 7 times. To solve 33 - 9, students understand that to subtract, they should start at 33 and move to the left of the number line 9 times. By solving problems such as 15 + 7 and 33 - 9 on a number line, students are also counting within 1,000 (LSSM 2.NBT.A.2).
Non-negotiable	**Required**	**Yes**	Materials attend to the full meaning of each practice standard. Each practice

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4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS: Aligned materials make meaningful and purposeful connections that promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. Materials address the practice standards in a way to enrich and strengthen the focus of the content standards instead of detracting from them. ☒ Yes ☐ No	**4a)** Materials attend to the **full meaning of the practice standards**. Each practice standard is connected to grade/course-level content in a meaningful way and is present throughout the year in assignments, activities, and/or problems.		standard is connected to grade-level content and is meaningfully present throughout the materials. The materials provide students with an opportunity to engage with the practice standards in each lesson. The materials support the students in the development of the practice standards while enriching the grade-level standards. Practice standards are presented, reviewed, and spiraled throughout the materials which allows students to develop and utilize the practices over time. In Unit 3, Lesson 9, students are introduced to foot as a length unit in the U.S. customary system. Students learn that a foot is longer than an inch and is the same length as 12 inches. Students use rulers that are 12 inches long to measure lengths in feet. Students measure lengths of tape that represent the realistic lengths of different types of fish (LSSM 2.MD.A.1). They measure each length to the nearest inch and to the nearest foot (LSSM 2.MD.A.2). Students look for and make use of structure (MP.7) as they discuss the differences in their measurements and relate differences to the size of the length units. In Unit 4, Lesson 10, students compare representations of methods based on place value and make connections across representations (MP.2). Throughout the lesson, students develop a variety of strategies through examples of student work. The first example shows a base-ten

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			drawing. Then students show that work on a number line. During the Activity Syntheses, students look for and make use of structure (MP.7) as they discuss how a number line helps them apply what they know about the structure of counting sequences to add and subtract. In Unit 7, Lesson 12, Activity 1, students use appropriate tools strategically (MP.5) as they subtract 7, 36, and 48 from 354. When finding the difference, they choose to count back or count on, or use base-ten blocks, number lines or equations (LSSM 2.NBT.B.7). In Unit 9, Lesson 5, students represent numbers in different ways. Students use base-ten blocks to create three-digit numbers. For example, a student shows 3 hundreds, 2 tens, and 4 ones. Students can also show the numbers 324 as 3 hundreds and 24 ones (LSSM 2.NBT.B.1). Students have the opportunity to use and connect concrete and abstract representations of three-digit numbers (MP.2).
	Required **4b)** Materials provide sufficient opportunities for students to **construct viable arguments and critique the arguments of others** concerning key grade/course-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. Students examine sets of data, pictures, and/or work of others and provide arguments or critiques. The lessons and activities are structured with opportunities for students to engage in mathematical reasoning through discussion questions

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			and prompts, to form viable arguments and critique the arguments of others, and to conduct error analyses. For example, in Unit 1, Lesson 9, students write true statements to show what they can learn about the data in a bar graph and match their peers' statements to the graph they think they came from and explain how they know using the features of the graph. In Unit 2, Lesson 7, students subtract two-digit numbers from two-digit numbers. Students build on their understanding of decomposing a ten when subtracting a one-digit number from a two-digit number to subtract a two-digit number. For example, students find the difference of 46 - 28 and share their method and solution with their partner. Students compare techniques when discussing how they found the difference, including using diagrams and equations. In Unit 5, Lesson 13, students analyze mistakes in ordering numbers. Students analyze a problem about Kiran and Andre. Kiran and Andre put a list of three-digit numbers in order from least to greatest. Andre disagreed with Kiran's number order and used a number line to justify his reasoning. Students analyze Kiran and Andre's work to answer the question "Who do you agree with? Why?" In Unit 7, Lesson 14, students analyze expressions to determine if a unit will be decomposed before subtracting. In Activity 1, students observe the way Tyler and Clare subtract by place

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			value to find the value of 244 - 67. Both students show decomposing a ten and a hundred to subtract, and they both show the same difference. Tyler decomposed a hundred first, then a ten. Clare decomposed a ten first, then a hundred. Students observe both students' diagrams and answer the following questions, "What is the same about Tyler and Clare's diagram? What is different?" and "What do Tyler and Clare's diagrams look like after the last step?" What is the same about these diagrams? What is different?"
	Required **4c)** Materials explicitly attend to the **specialized language** of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. Throughout each unit, the lessons and activities use precise mathematical language and encourage the use of the correct mathematical language when discussing skills, concepts, solutions, and strategies. Glossary entries are provided for each unit. These entries include the academic language necessary for the unit along with grade-appropriate definitions. Within the Mathematical Language Development and Access for English Learners section of the How to Use These Materials guide, Principal 3 calls for cultivating conversations and states, "Conversations act as scaffolds for students developing mathematical language because they provide opportunities to simultaneously make meaning, communicate that meaning, and refine the way content understandings are

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			communicated." Mathematical Language Routines (MLRs) are "instructional routines that provide structured but adaptable formats for amplifying, assessing, and developing students' language." The MLRs are embedded throughout the materials with explanations, and instructions for using the MLRs are provided in the How to Use These Materials guide. The MLRs include the following routines: Stronger and Clearer Each Time; Collect and Display; Clarify, Critique, Correct; Information Gap; Co-Craft Questions; Three Reads; Compare and Connect; and Discussion Supports. For example, MLR 4 Information Gap creates the need for students to communicate using precise language. During the routine, the teacher positions some students as holders of information that is needed by other students to accomplish a goal. Because there is an information gap, students orally share ideas and information to bridge the gap. Sentence Frames are also embedded throughout the activities and lessons that "support student language production by providing structure to communicate about a topic." Mathematical terminology is built within each lesson, and students answer questions throughout the lessons that reinforce and enhance their mathematical language. In addition, student sample responses include mathematical language to set the expectation for student use. In

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			Unit 3, Lesson 8, Activity Synthesis, students use inch tiles to measure and record classroom items that are about an inch long. Students do not record measurements of the half inch but instead, discuss the reasoning they use to decide which whole number to use. Students answer the Lesson Synthesis question "How can we describe the length of the ___ when its end doesn't line up with one of the inch marks on the ruler?" The materials include sample responses that encourage the use of the new mathematical term, inches, such as "If it is close to 3 inches, I can write about 3 inches." In Unit 8, Lesson 7, students learn that an array is an arrangement of objects into rows with an equal number of objects in each row. Throughout the lesson, the materials provide teacher directives that include the word array. For example, the teacher is directed to say "the red counters are arranged in rows, but it is not an array. How can we rearrange the counters to make an array?" and "How can we describe this array of 6 counters?" Students create arrays with counters to understand the meaning of the term. Students also describe the number of rows in an array, the number of objects in each row, and the total number of objects.
	4d) 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. The

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Standards for Mathematical Practices Chart included in the How to Use These Materials guide highlights lessons that "showcase certain Mathematical Practices." For example, in Unit 3, students utilize MP.4 in Lessons 10, 26, and 28. In Unit 5, students utilize MP.5 in Lessons 6 and 9. This section also connects many of the instructional routines to the practice standards. For example, as students engage in the Which One Doesn't Belong routine, students attend to precision (MP.6). As students engage in the How Many Do You See routine and subitize or use grouping strategies to describe images they see, they look for and make use of structure (MP.7). This section includes additional guidance for teachers in supporting students in their development of the practice standards such as "How you can use the Mathematical Practices Chart" and "Standards for Mathematical Student Facing Learning Targets." Guidance is also embedded throughout the Teacher's Edition. The Lesson Narrative often explains how students will utilize the practice standards in the lesson. In Unit 1, Lesson 7, Activity 2, students represent data in an organized way. The Activity Narrative states, "Students should have access to tools that may help them represent the data (for example, extra copies of the pictures from Activity 1, scissors, glue or tape, markers, or

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			stickers). Throughout the activity, they make their own decisions about what to use to represent the data and reflect on their choices (MP5). The activity can serve as a formative assessment to see what students already know about representing data. During the lesson synthesis, students see different representations and discuss the similarities and differences of each." In Unit 7, Lesson 15, students subtract 2 three-digit numbers using place value strategies. The Lesson Narrative states that "students subtract 2 three-digit numbers that require decomposing a hundred and a ten when subtracting by place. They connect the use of base-ten blocks or diagrams to written methods that use numbers and equations. Throughout the lesson, students interpret and share methods that use words and equations to show subtracting by place (MP2, MP7). However, students should be encouraged to attend to the numbers in expressions and may use base-ten blocks, base-ten diagrams, and any other representations that make sense to them."
Section II: Additional Alignment Criteria and Indicators 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	**Required** **5a)** Materials provide all students **extensive work** with grade/course-level problems.		See EdReports for more information.
	Required **5b)** Materials **relate grade/course-level concepts explicitly to prior knowledge** from earlier grades and		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
grades/courses by staying consistent with the progressions in the Standards. ☐ Yes ☐ No	courses. The materials are designed so that prior knowledge is extended to accommodate the new knowledge, building to core instruction, on grade/course-level work. Lessons are appropriately **structured and scaffolded** to support student mastery.		
	Required **5c)** There is **variety** in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade/course-appropriate way, arguments and explanations, diagrams, mathematical models, etc.		
	5d) Support for **English Language Learners and other special populations** is provided. The language in which problems are posed is not an obstacle to understanding the content, and if it is, additional supports (suggestions for modifications, "vocabulary to preview", etc.,) are included.		
6. QUALITY OF ASSESSMENTS: Materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the assessed grade-specific Louisiana Student Standards for Mathematics. ☐ Yes ☐ No	**Required** **6a)** Multiple **assessment opportunities** are embedded into content materials and measure student mastery of standards that reflect the balance of the standards as presented in materials.		
	Required **6b)** Assessment items include a **combination of tasks** that require students to demonstrate conceptual understanding, demonstrate procedural skill and fluency, and apply mathematical reasoning and modeling in real world context. Assessment items require students to produce answers and solutions, arguments, explanations, and models, in a grade/course-appropriate way.		
	6c) Scoring guidelines and rubrics align to standards, incorporate criteria that are specific, observable, and measurable, and provide sufficient guidance for		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	interpreting student performance, misconceptions, and targeted support to engage in core instruction.		
	6d) Materials provide 2-3 **comprehensive assessments** (interims/benchmarks) that measure student learning up to the point of administration.		
7. ADDITIONAL INDICATORS OF QUALITY: Materials are well organized and provide teacher guidance for units and lessons. Materials provide timely supports to target specific skills/concepts to address students' unfinished learning in order to access grade-level work. ☐ Yes ☐ No	**Required** **7a)** The content can be **reasonably completed** within a regular school year and the pacing of content allows for maximum student understanding. The materials provide guidance about the amount of time a task might reasonably take.		
	Required **7b)** The materials are **easy to use and well organized** for students and teachers. Teacher editions are concise and easy to manage with clear connections between teacher resources. Guidance is provided for lesson planning and instructional delivery, lesson flow, questions to help prompt student thinking, and expected student outcomes.		
	Required **7c)** Materials include unit and lesson **study tools for teachers**, including, but not limited to, an explanation of the mathematics of each unit and mathematical point of each lesson as it relates to the organizing concepts of the unit and discussion on student ways of thinking and anticipating a variety of student responses.		
	7d) Materials **identify prerequisite skills and concepts** for the major work of the grade/course, connected to the current on-grade/course-level work.	**Yes**	Materials identify prerequisite skills and concepts for the major work of the grade. Prerequisite skills can be found in Unit and Section Learning Goals, as well as the Lesson Narratives. The practice problems for Section A in each unit have several items designated as Pre-Unit assessment items. The pre-unit assessment items include the standard being addressed,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			noting the pre-requisite skills of the unit. For example, in Unit 1, Section A Practice Problems, Problems 1-3 addresses LSSM 1.MD.C.4. According to the "A Typical IM Lesson," the Warm Up section of the lesson includes an instructional routine that practices previously taught concepts or previews a new concept in the day's lesson. Each unit also includes a Unit Learning Goals section that describes the learning within the unit along with the skills and concepts that should have been developed prior to the unit. For example, the Learning Goals for Unit 2 states, "In this unit, students begin the year-long work to develop fluency with sums and differences within 20, building on concepts of addition and subtraction from Grade 1. They learn new ways to represent and solve problems involving addition, subtraction, and categorical data. In Grade 1, students added and subtracted within 20 using strategies based on properties of addition and place value. They developed fluency with sums and differences within 10. Students also gained experience in collecting, organizing, and representing categorical data." Additionally, each lesson lists the standard(s) addressed in the lessons, as well as Building On standards, when applicable. For example, Unit 1, Lesson 7 addresses LSSM 2.MD.D.10 and builds on LSSM 1.MD.C.4.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	7e) Materials provide guidance to help teachers **identify students** who need prerequisite work to engage successfully in core instruction, on-grade/course-level work.	**Yes**	Materials provide guidance to help teachers identify students who need prerequisite work to engage successfully in core instruction, on-grade-level work. The Pre-Unit Practice problems included in Section A of each unit provide an assessment of prerequisite concepts and skills directly aligned to upcoming grade-level standards and content. Guidance instructs teachers to use these items to identify any gaps in learning and encourages teachers "to address those prerequisite skills while continuing to work through on-grade tasks and concepts of each unit."
	7f) Materials provide **targeted, aligned, prerequisite work** for the major work of the grade/course, directly connected to specific lessons and units in the curriculum.	**Yes**	Materials provide targeted, aligned, prerequisite work for the major work of the grade directly connected to specific lessons and units in the curriculum. After teachers analyze student results of the Pre-Unit Practice Problems that address prerequisite concepts and skills for the unit, they are encouraged to address prerequisite skills while continuing to work through on-grade tasks and concepts of each unit and "look for opportunities within the upcoming unit where the target skill or concept could be addressed in context or with a center." For example, Unit 1, Section A Practice Problems, Problems 1-3 addresses LSSM 1.MD.C.4. If students struggle on these items, they are encouraged to engage in the Sort and Display (1-3), Stage 1: Any Way Center during Unit 1, Section B, Lessons 7-11.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			During the center, students "sort 10–20 objects into two or three categories and then show how they sorted." Objects include items such as pattern blocks, connecting cubes, counters, and books. The center addresses LSSM 1.MD.C.4. Additionally, the Pacing Guide and Dependency Diagram section, located within the Course Guide, includes Section Dependency Diagrams with "an arrow that indicates the prior section that contains content most directly designed to support or build toward the content in the current section." For example, Grade 1, Unit 3, Section C, Add Within 20 is designated as the prior section for Grade 2, Unit 1, Section A, Add and Subtract Within 20.
	7g) Materials provide **clear guidance and support** for teachers about the structures that allow students to appropriately address unfinished learning using prerequisite work.		See EdReports for more information.

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	Final Justification/Comments
I: Non-negotiable Criteria of Superior Quality[5]	1. Focus on Major Work	**Yes**	Materials devote a larger majority of time to the major work of the grade. Materials spend minimal time on content outside of the appropriate grade level.

[5] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier 1 or Tier 2 rating.

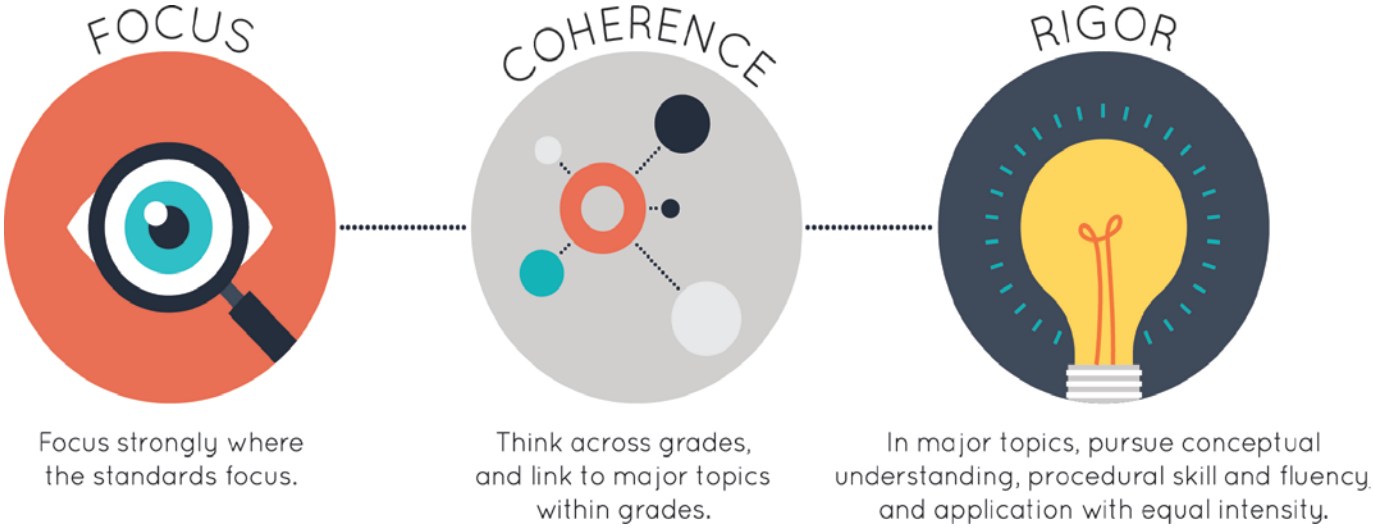
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	2. Consistent, Coherent Content	**Yes**	Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. Materials include problems 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 concepts, especially where called for explicitly in the standards. Materials are designed so that students attain the fluencies 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 attend to the full meaning of each practice standard. Each practice standard is connected to grade-level content and is meaningfully present throughout the materials. 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 explicitly attend to the specialized language of mathematics. Materials include teacher-directed

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			materials that explain the role of the practice standards in the classroom and in students' mathematical development.
II: Additional Alignment Criteria and Indicators of Superior Quality[6]	5. Alignment Criteria for Standards for Mathematical Content		See EdReports for more information.
	6. Quality of Assessments		See EdReports for more information.
	7. Additional Indicators of Quality		Materials identify prerequisite skills and concepts for the major work of the grade. Materials provide guidance to help teachers identify students who need prerequisite work to engage successfully in core instruction, on-grade-level work. However, materials do not provide targeted, aligned, prerequisite work for the major work of the grade directly connected to specific lessons and units in the curriculum.
FINAL DECISION FOR THIS MATERIAL: **Tier 1, Exemplifies quality**			

[6] Must score a "Yes" for all Additional Criteria of Superior Quality to receive a Tier 1 rating.

Qualified for Abbreviated Review[1]

Strong mathematics instruction contains the following elements:



Title: **Illustrative Mathematics**

Grade/Course: **3**

Publisher: **Kendall Hunt Publishing**

Copyright: **2021**

Overall Rating: **Tier 1, Exemplifies quality**

Tier 1, Tier 2, Tier 3 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. Quality of Assessments	
7. Indicators of Quality	

[1] Abbreviated Reviews are conducted in K-12 ELA and K-12 Math for submissions that **Meet Expectations** for Gateways 1 and Gateway 2 through EdReports. Reviewers considered these reports as they reviewed materials for alignment to Louisiana state standards and quality Non-negotiable indicators. See the full EdReports review https://www.edreports.org/reports/overview/kendall-hunts-illustrative-mathematics-2021.

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

- Review the **required**[2] 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.

[2] **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 Non-negotiable Criteria 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.			
Non-negotiable **1. FOCUS ON MAJOR WORK[3]:** Students and teachers using the materials as designed devote the large majority[4] of time to the major work of the grade/course. ☒ Yes ☐ No	**Required** **1a)** Materials devote the **majority** of class time to the major work of each grade/course.	**Yes**	Materials devote a large majority of time to the major work of the grade. Of the 133 instructional lessons, 72% of lessons are spent on major work of the grade. Specifically, 53% of lessons are spent on major standards alone, 19% are spent on a combination of major and supporting/additional standards, and 28% are spent on supporting/additional standards. The materials include 10 lessons that are labeled as optional or suggested to omit. In addition, LSSM 3.MD.E.9 is not addressed in the materials.
	Required **1b)** Instructional materials, including assessments, spend minimal time on content outside of the appropriate grade/course **during core math instruction**. Content beyond grade/course-level should be clearly labeled as optional.	**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 in which they are introduced. Some of the lessons are labeled as optional, such as Unit 2, Lesson 11, because "students take a deeper look at the relationship between multiplication and area," and Unit 3, Lesson 21 because "it does not address any new mathematical content standards." The Louisiana Teacher Implementation Guide for Grade 3 includes guidance on lessons

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			that address content outside of the grade level. For example, the guide suggests omitting Unit 2, Lessons 12-15, and Unit 8, Lesson 4 because the lessons address LSSM 4.MD.D.8. In addition, the guide suggests omitting Practice Problems and Assessment items that also address this Grade 4 standard. Time spent on content below the grade level is used for scaffolding purposes. For example, Unit 1, Lessons 1 and 2 focus on the LSSM 2.MD.D cluster which is outside of the grade level. However, these lessons prepare students for LSSM 3.MD.B.3 and help students develop their understanding of multiplication and understanding equal size groups through the use of bar graphs and picture graphs. Students transition from using single scaled graphs in Lesson 1 and 2 to scaled graphs beginning in Lesson 3 to support student development with arrays and repeated addition as they build towards LSSM 3.MD.B.3. All other lessons across the topics are related to grade-level work and align to the LSSM for Grade 3. The assessments associated with the core math instructional lessons focus on grade-level items and are not beyond the scope of LSSM for Grade 3. For example, in Unit 3, Lesson 3, students fluently subtract with 1,000 using the standard algorithm based on place value, properties of operations, and the relationship between addition and subtraction (3.NBT.A.2).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Non-negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**Required** **2a)** Materials connect **supporting content to major content** in meaningful ways so that focus and coherence are enhanced throughout the year.	**Yes**	Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. Materials spiral skills within context using appropriate connections across the standards. Major work is developed prior to lessons that address supporting standards the majority of the time, and, when the supporting standards are addressed, the lessons reinforce major work of the grade by connecting back to major standards. In Unit 1, Section B, students represent and solve problems involving equal groups and develop an understanding of multiplication as equal groups (LSSM 3.OA.A). Specifically, students generate multiplication expressions in Lesson 11, and represent and solve multiplication problems in Lesson 12 (major LSSM 3.OA.A.3). This major work is then reinforced in Lesson 21 as students first examine diagrams that have equal groups which represent seating charts for different games and then create a scaled bar graph to represent the number of players that can play each game in their seating solution, connecting major LSSM 3.OA.A.3 to supporting LSSM 3.MD.B.3. In Unit 5, students develop an understanding of fractions as numbers, generate equivalent fractions, and compare fractions by representing fractions on diagrams and numbers lines (major LSSM 3.NF.A.2, 3.NF.A.3). This major work is

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			reinforced in Unit 6, Lessons 1-3 as students generate and represent measurement data by measuring lengths in halves and fourths of an inch (supporting LSSM 3.MD.B.4). For example, students generate measurement data by measuring objects that do not have a whole number of inches by partitioning a ruler to show halves of inches in Lesson 1 and to show quarters of inches in Lesson 2, connecting supporting LSSM 3.MD.B.4 to major LSSM 3.NF.A.2. In Lesson 3, students apply their understanding of fraction equivalence to read measurements marked with both halves and fourths of an inch as they learn that lengths can be named in more than one way, connecting supporting LSSM 3.MD.B.4 to major LSSM 3.NF.A.3c. For example, students understand the equivalence of 3 1/2, 3 2/4, 7/2, and 14/4 inches in the Activity 1 Synthesis
	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. For example, Unit 1, Lesson 9 connects the Operations and Algebraic Thinking (OA) and Measurement and Data (MD) domains. In the lesson, students learn how multiplication problems can be represented as equal groups (LSSM 3.OA.A.1) as they connect multiplication and equal groups to scaled graphs (LSSM

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			3.MD.B.3). For example, students observe a scaled graph representing the number of different signs Elena saw on the way home with each square symbol representing two signs. Students connect what they know about scaled graphs and equal groups to determine the number of speed limit signs seen by Elena. Unit 1, Lesson 19 connects Clusters A (Represent and solve problems involving multiplication and division), and C (Multiply and divide within 100) of the Operations and Algebraic Thinking (OA) domain. During the lesson, students represent an array situation using an equation with a symbol for the unknown number and solve. For example, students solve the following problem: “There are 7 rows. Each row has 5 crayons. How many crayons are there?” Students then show or explain their reasoning and represent the situation with an array and an equation (LSSM 3.OA.A.3, 3.OA.C.7). Unit 5, Lessons 1 and 2 connect the Number and Operations - Fractions (NF) and Geometry (G) domains. In Lesson 1, students partition rectangles into 6 or 8 equal parts by folding and then describe those parts as sixths or eighths. By the end of the lesson, students develop an understanding of the fractions 1/2, 1/3, 1/4, 1/6, and 1/8 that are used to represent the parts of a whole that have been partitioned. This understanding is further developed in Lesson 2 as students continue to partition shapes into equal parts by drawing lines

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			and then express each equal-size part as a unit fraction (LSSM 3.NF.A.1, 3.G.A.2).
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 featuring high-quality conceptual problems and discussion questions.	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in the standards. Throughout the materials, students develop conceptual understanding through engaging in discussions about mathematical ideas, using multiple representations, visual models, and a variety of strategies to solve problems, and constructing explanations about mathematical ideas and concepts. Lesson activities include embedded discussion prompts and scaffolding questions to support students in developing conceptual understanding. In Unit 2, Section A, students develop area concepts. For example, in Lesson 2, Warm-Up, students compare four shapes that have been partitioned and examine the features of the shapes and the partitions to determine which one doesn't belong. The intention of the Warm-Up is to "elicit observations about tiled squares" such as "A is the only one without a shaded square" and "is the only one that doesn't show tiling of multiple squares" or "C is the only one that is not made up of small squares." Students then discuss different attributes used to compare the images. During Activity 1, students explore area by making shapes out of square tiles and ordering the shapes from smallest to largest. By the end of the activity, students

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			learn that they can count the squares to determine the amount of space a shape covers and that each tile has one square unit of area, such a shape covered by 12 tiles has an area of 12 square units. Then, in Activity 2, students cover figures completely with square tiles and use the number of tiles to describe the area of the figure. The teacher asks questions such as, "How did you tile each figure?" and "Why was it important to not leave any gaps as you tiled your figures?" (LSSM 3.MD.C.5a, 3.MD.C.5b). In Unit 5, students develop fraction concepts using a variety of visual models, such as folded paper, fraction strips, number lines, and tape diagrams (LSSM 3.NF.A). For example, after students develop an understanding of unit fractions and non-unit fractions, they extend their understanding of fraction equivalence using area diagrams and fraction strips in Lesson 10. In Activity 1, students observe six diagrams to determine "For which shapes is the shaded portion 1/2 of the shape?" Students determine that shape A is 1/2 because "it's partitioned into four parts and 2 parts are shaded, but one half of the whole square is shaded." The teacher then asks, "How can there be more than one way of shading a shape to show 1/2?" and "How can the shaded portion in each show 1/2 when the squares have been partitioned into a different number of equal parts?" Students determine that the shaded part

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			is the same size and the same amount of the square is shaded. Students determine that 1/2 and 2/4 are the same size, and then learn the term equivalent fractions. Then, in Activity 2, students use fraction strips to find as many equivalent fractions for 1/2, 2/3, 6/6, and 3/4 and then discuss why they are equivalent (LSSM 3.NF.A.3a, 3.NF.A.3b).
	Required **3b)** ***Attention to Procedural Skill and Fluency:*** The materials are designed so that students **attain the fluencies and procedural skills** required by the content 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. The materials are designed in such a way that the required fluencies are acquired through a progression of learning over time and throughout the course of the materials. Lesson Warm-Ups, the first activity in each lesson, provides students with the opportunity to either prepare for the lesson or "strengthen their number sense or procedural fluency." For Warm-Ups that strengthen number sense or procedural fluency, students complete "mental arithmetic or reason numerically or algebraically." Instructional Routines used in the Warm-Ups also support students in building fluency, as in Number Talks which "encourage students to look for structure and use repeated reasoning to evaluate expressions and develop computational fluency." For example, some of the Number Talks support students' understanding of addition and subtraction within 100 (LSSM 3.NBT.A.2), such as the Number Talk Warm-Up in Unit

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			1, Lesson 5. Students discover that the product of 4 x 2 increases the same way as skip counting 2 + 2 + 2 + 2. In Unit 3, Sections A and B, students work with a variety of algorithms to add and subtract within 1,000 (LSSM 3.NBT.A.2). Section A focuses on adding within 1,000. Students revisit place value strategies and then progress to more abstract addition strategies. For example, in Lesson 4, students "use their knowledge of base-ten representations and place value to make sense of two addition algorithms" that show partial sums differently. For both examples, place value blocks are used alongside the algorithm. Students practice using either algorithm to solve problems such as 475 + 231 and 136 + 389. Students explore another algorithm in Lesson 5 and then use the algorithm of their choice during the lesson Cool-Down as they solve 365 + 182. In Lesson 6, students consider the different strategies and algorithms used for addition within 1,000 to help decide which to use in order to develop fluency. In Section A: Practice Problems, students practice adding within 1,000 using algorithms and strategies of their choice in problems such as 372 + 165 and 456 + 231. The same lesson structure is used for subtraction within 1,000 in Section B of the unit, supporting students with the fluency expectation of LSSM 3.NBT.A.2). Units 1-4 include multiple lessons that focus on multiplication in

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			order to support students in attaining multiplication and division fluency within 100 (LSSM 3.OA.C.7). In Units 1 and 2, students work toward fluency in multiplying by 2, 5, and 10. Some of the Number Talk Warm-Ups help students build fluency with equal groups and multiplication expressions, such as the Warm-Up in Unit 1, Lesson 15. Students find the value of expressions mentally and then determine the pattern in the sequence 1 × 10, 2 × 10, 3 × 10, 4 × 10. Students discover that the products increase in the same way as in skip-counting by 10. Students continue building fluency with multiplication in Unit 3, and then "use the relationship between multiplication and division, place value understanding, and the properties of operations to multiply and divide whole numbers within 100" in Unit 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 students spend sufficient time working with engaging applications. Lessons and activities that address application standards include contextual problems. Throughout the materials, students first develop conceptual understanding and procedural skills and fluency and then have the opportunity to apply skills and concepts in word problems. For example, in Unit 1, Lesson 12 students represent and solve word problems involving equal groups. In Activity 2, students solve word problems, such as "Jada has 5 bags. Each

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			bag has 10 earrings. How many earrings does Jada have?" Students show their thinking using diagrams, symbols, or other representations (LSSM 3.OA.A.3). In Unit 3, Lesson 17, students solve multi-step word problems using the four operations and determine if their answers make sense. First, students read the following word problem: "There are 212 beads in a plastic bag. Then, 98 of the beads are used to make a necklace. Finally, 308 beads are placed in the bag. Priya makes an estimate that there are about 400 beads in the bag now. Does Priya's estimate make sense? Explain your reasoning." Then students estimate the answers for two multi-step word problems involving beads and discuss the importance of estimating answers. Finally, students solve word problems for the exact answer and think about how estimating helps them decide if an answer makes sense, as in the Activity 2 problem, "Noah starts a project on Monday and uses 624 beads. On Tuesday he uses 132 more beads. Finally, on Wednesday he finishes the project by using 48 more beads. How many beads did Noah use on his art project?" (LSSM 3.OA.D.8). Students continue working on LSSM 3.OA.D.8 in Lessons 18 and 19. In Lesson 19, students first match tape diagrams to situations and then match equations with a letter for the unknown quantity to the situations, such as n + 10 + 10 = 124. Students then solve a problem

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			by writing an equation to represent the situation using a letter for the unknown quantity, solve the problem, explain or show their reasoning, and then explain how they know their answer makes sense. The problem states, “Kiran is setting up a game of mancala. He has a jar of 104 stones. From the jar, he takes 3 stones for each of the 6 pits on his side of the board. How many stones are in the jar now?”
	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. Lessons provide opportunities for students to demonstrate procedural fluency and conceptual understanding in the context of application to real-world situations. The materials attend to the balance of rigor as intended by the standards. For example, Unit 1 integrates conceptual understanding and application as students develop a deep understanding of strategies used to interpret and represent data on scaled picture graphs and scaled bar graphs, and then move to the concept of multiplication. For example, in Lesson 15, students solve a problem to find the missing part by writing a multiplication equation and applying their understanding of equal groups and how it relates to multiplication. The problem states, “There are 15 plates. Han placed 5 plates on each table. How many tables have plates on them?” Students write the equation in part a and the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			solution in part b (LSSM 3.OA.A.3). In Unit 4, Lesson 1, Activity 1, students represent and solve "how many groups?" problems. Students represent various arrangements of apples and show their thinking using different representations (LSSM 3.OA.A.2, 3.OA.A.3). Students build conceptual understanding of multiplication as it relates to division and apply that knowledge as they solve "how many groups?" application problems. All three components of rigor are integrated in Unit 6, Lesson 11 as students use various strategies and representations to solve problems involving elapsed time that include unknown start times, end times, and duration, such as "Jada had a dance class on Saturday. It started at 10:30 a.m. and ended at 11:48 a.m. How long was her dance class?" (LSSM 3.MD.A.1a-c).
Non-negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Aligned materials make meaningful and purposeful connections that promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. Materials address the practice standards in a way to enrich and strengthen the focus of the content standards instead of detracting from them.	**Required** **4a)** Materials attend to the **full meaning of the practice standards**. Each practice standard is connected to grade/course-level content in a meaningful way and is present throughout the year in assignments, activities, and/or problems.	**Yes**	Materials attend to the full meaning of each practice standard. Each practice standard is connected to grade-level content and is meaningfully present throughout the materials. The materials provide students with an opportunity to engage with the practice standards in each lesson. The materials support the students in the development of the practice standards while enriching the grade-level standards. In Unit 3, Lesson 19, students represent and solve two-step word problems (LSSM 3.OA.D.8). During the lesson, students match tape diagrams, equations, and descriptions of the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
☒ Yes ☐ No			situations and then explain the connection among the different representations (MP.4). In addition, students reason quantitatively and abstractly as they relate the quantities and relationships to the equations and tape diagrams that represent them (MP.2). In Unit 7, Lesson 4, students analyze attributes of quadrilaterals including a rhombus, rectangle, and square (LSSM 3.G.A.1). During the Warm-Up, students use language precisely (MP.6) as they compare four shapes. During Activity 1, students identify attributes that make a quadrilateral a rectangle, a rhombus, or a square by studying examples and non-examples. Students look for and make use of structure (MP.7) as they look for features that each set has in common.
	Required **4b)** Materials provide sufficient opportunities for students to **construct viable arguments and critique the arguments of others** concerning key grade/course-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. The materials provide opportunities for students to discuss and justify their thinking and reasoning for the strategies they used to solve problems. For example, in Unit 4, Lesson 7, students use the relationship between multiplication and division to write equations and solve problems. During Activity 1, students create drawings of equal groups, then get a drawing created by another student, and write a division situation to match it.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Students then pass their paper to another student who uses the drawing of equal groups and the situation to write a multiplication equation. Finally, students write a division equation to match the other representations. As students look through each other's work, they add to the representation and defend different points of view. In Unit 6, Lesson 10, students solve problems involving elapsed time which allows for multiple strategies to be used to solve the problems. Throughout the lesson, the teacher asks several questions to stimulate students' thought processes and encourages math discourse between students. Students critique each other's work and argue mathematical points while demonstrating their computational process. During the Activity Synthesis, students share their reasoning and strategies used after solving the following problem: "Elena arrived at the bus stop at 3:45 p.m. She also waited 24 minutes for her bus to arrive. What time did the bus arrive?" In Unit 6, Lesson 13, Activity Synthesis, students discuss, "What kinds of questions were the most useful to ask?" "Were there any questions you weren't sure how to answer?" and "How did you represent your reasoning once you realized you needed to add or subtract?" Students critique and discuss the questions that the teacher asks them to guide them through the problem to analyze how well the questions assisted

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			them with their mathematical thought process.
	Required **4c)** Materials explicitly attend to the **specialized language** of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. Throughout each unit, the lessons and activities use precise mathematical language and encourage the use of the correct mathematical language when discussing skills, concepts, solutions, and strategies. Glossary entries are provided for each unit. These entries include the academic language necessary for the unit along with grade-appropriate definitions. Within the Mathematical Language Development and Access for English Learners section of the How to Use These Materials guide, Principal 3 calls for cultivating conversations and states, "Conversations act as scaffolds for students developing mathematical language because they provide opportunities to simultaneously make meaning, communicate that meaning, and refine the way content understandings are communicated." Mathematical Language Routines (MLRs) are "instructional routines that provide structured but adaptable formats for amplifying, assessing, and developing students' language." The MLRs are embedded throughout the materials with explanations, and instructions for using the MLRs are provided in the How to Use These Materials guide. The MLRs include the following routines: Stronger and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Clearer Each Time; Collect and Display; Clarify, Critique, Correct; Information Gap; Co-Craft Questions; Three Reads; Compare and Connect; and Discussion Supports. For example, MLR 4 Information Gap creates the need for students to communicate using precise language. During the routine the teacher positions some students as holders of information that is needed by other students to accomplish a goal. Because there is an information gap, students orally share ideas and information to bridge the gap. Sentence Frames are also embedded throughout the activities and lessons that "support student language production by providing structure to communicate about a topic." Mathematical terminology is built within each lesson, and students answer questions throughout the lessons that reinforce and enhance their mathematical language. In addition, student sample responses include mathematical language to set the expectation for student use. For example, in Unit 3, Lesson 16, Activity 1, students engage in MLR8 Discussion Supports. Students are provided the problem, "Diego is thinking of a number. When you round Diego's number to the nearest ten, the answer is 40." Students first have quiet thinking time, then work with a partner, and then share their thinking with the class. Sample student responses are provided such as, "38 rounds to 40 so it could be his number."

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			During the Activity Synthesis, the teacher asks, "What patterns did you see in the numbers?" Sample student responses are provided such as "I see they each start with a 5 in the ones place below it because it's halfway to the nearest ten, and the numbers end with a 4 in the ones place because that is closer to the next ten." In Unit 3 Lesson 1, Activity 1, students engage in the Warm-Up Activity, Which One Doesn't Belong? Students compare numbers represented in different ways which provides the teacher an "opportunity to hear how students use terminology and talk about characteristics of the items in comparison to one another." During the Activity Synthesis, students explain the meaning of any terminology they used in discussion, such as place value, hundreds, tens, ones, sum, or base-ten diagram.
	4d) 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. The Standards for Mathematical Practices Chart included in the How to Use These Materials guide highlights lessons that "showcase certain Mathematical Practices." For example, in Unit 3, students utilize MP.1 in Lessons 13, 19, and 20. In Unit 7, students utilize MP.4 in Lessons 13 and 15. This section also connects many of the instructional routines to the practice standards. For

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			example, as students engage in the Which One Doesn't Belong routine, students attend to precision (MP.6). As students engage in the How Many Do You See routine and subitize or use grouping strategies to describe images they see, they look for, and make use of structure (MP.7). This section includes additional guidance for teachers in supporting students in their development of the practice standards such as "How you can use the Mathematical Practices Chart" and "Standards for Mathematical Student Facing Learning Targets." Guidance is also embedded throughout the Teacher's Edition. The Lesson Narrative often explains how students will utilize the practice standards in the lesson. For example, in Unit 7, Lesson 4, students consider the geometric attributes a quadrilateral has to be a rhombus, rectangle, or square. The Lesson Narrative states, "students analyze examples and non-examples of rectangles, rhombuses, and squares in order to identify their defining attributes" and "as they discern and describe features that define these quadrilaterals, students practice looking for structure (MP.7) and communicating with precision (MP.6). Teacher guidance is also provided throughout the lessons and activities. For example, in Unit 1, Lesson 16, students describe arrays and arrange objects into arrays. During the Warm-Up, students notice and wonder about an egg

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			carton with two rows of six eggs. Teacher guidance states, "When students notice the arrangement of the eggs, they look for and make use of structure (MP.7)." Later in the lesson, during Activity 1, students describe an array as "an arrangement of objects into rows with an equal number of objects in each row and into columns with an equal number in each column." Teacher guidance states, "When students decide whether or not they agree with Noah about seeing equal groups in the array and explain their reasoning, they construct a viable argument and critique the reasoning of others (MP.3)." In Unit 2, Lesson 7, Activity 3, students find objects they can measure with the standard area units they have learned about in the lesson. Teacher guidance states, "When students recognize the mathematical features of familiar real-world objects and use those features to solve problems, they model with mathematics (MP.4)."
Section II: Additional Alignment Criteria and Indicators 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.	**Required** **5a)** Materials provide all students **extensive work** with grade/course-level problems.		See EdReports for more information.
	Required **5b)** Materials **relate grade/course-level concepts explicitly to prior knowledge** from earlier grades and courses. The materials are designed so that prior knowledge is extended to accommodate the new knowledge, building to core instruction, on		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
☐ Yes ☐ No	grade/course-level work. Lessons are appropriately **structured and scaffolded** to support student mastery.		
	Required **5c)** There is **variety** in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade/course-appropriate way, arguments and explanations, diagrams, mathematical models, etc.		
	5d) Support for **English Language Learners and other special populations** is provided. The language in which problems are posed is not an obstacle to understanding the content, and if it is, additional supports (suggestions for modifications, "vocabulary to preview", etc.,) are included.		
6. QUALITY OF ASSESSMENTS: Materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the assessed grade-specific Louisiana Student Standards for Mathematics. ☐ Yes ☐ No	**Required** **6a)** Multiple **assessment opportunities** are embedded into content materials and measure student mastery of standards that reflect the balance of the standards as presented in materials.		
	Required **6b)** Assessment items include a **combination of tasks** that require students to demonstrate conceptual understanding, demonstrate procedural skill and fluency, and apply mathematical reasoning and modeling in real world context. Assessment items require students to produce answers and solutions, arguments, explanations, and models, in a grade/course-appropriate way.		
	6c) Scoring guidelines and rubrics align to standards, incorporate criteria that are specific, observable, and measurable, and provide sufficient guidance for interpreting student performance, misconceptions, and targeted support to engage in core instruction.		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	6d) Materials provide 2-3 **comprehensive assessments** (interims/benchmarks) that measure student learning up to the point of administration.		
7. ADDITIONAL INDICATORS OF QUALITY: Materials are well organized and provide teacher guidance for units and lessons. Materials provide timely supports to target specific skills/concepts to address students' unfinished learning in order to access grade-level work. ☐ Yes ☐ No	**Required** **7a)** The content can be **reasonably completed** within a regular school year and the pacing of content allows for maximum student understanding. The materials provide guidance about the amount of time a task might reasonably take.		
	Required **7b)** The materials are **easy to use and well organized** for students and teachers. Teacher editions are concise and easy to manage with clear connections between teacher resources. Guidance is provided for lesson planning and instructional delivery, lesson flow, questions to help prompt student thinking, and expected student outcomes.		
	Required **7c)** Materials include unit and lesson **study tools for teachers**, including, but not limited to, an explanation of the mathematics of each unit and mathematical point of each lesson as it relates to the organizing concepts of the unit and discussion on student ways of thinking and anticipating a variety of student responses.		
	7d) Materials **identify prerequisite skills and concepts** for the major work of the grade/course, connected to the current on-grade/course-level work.	**Yes**	Materials identify prerequisite skills and concepts for the major work of the grade. Prerequisite skills can be found in Unit and Section Learning Goals, as well as the Lesson Narratives. The practice problems for Section A in each unit have several items designated as pre-unit assessment items. The pre-unit assessment items include the standard being addressed, noting the pre-requisite skills of the unit. For example, in Unit 1, Section A Practice

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Problems, Problems 1-3 assess LSSM 2.MD.D.10, Problem 4 assesses LSSM 2.NBT.B.5, and Problem 5 assesses LSSM 2.OA.C.4. According to the "A Typical IM Lesson," the Warm-Up section of the lesson includes an instructional routine that practices previously taught concepts or previews a new concept in the day's lesson. Each unit also includes a Unit Learning Goals section that describes the learning within the unit along with the skills and concepts that should have been developed prior to the unit. For example, the Unit Learning Goals for Unit 2 states, "In grade 2, students explored attributes of shapes, such as number of sides, number of vertices, and lengths of sides. They measured and compared lengths. In this unit, students make sense of another attribute of shapes: a measure of how much a shape covers." Additionally, each lesson lists the standard(s) addressed in the lessons, as well as Building On standards, when applicable. For example, Unit 1, Lesson 13 addresses LSSM 3.MD.B and builds on LSSM 2.NBT.B.5. The Warm-Up focuses on LSSM 2.NBT.B.5 in order to connect previously learned concepts to the day's lesson that focuses on LSSM 3.MD.B.
	7e) Materials provide guidance to help teachers **identify students** who need prerequisite work to engage successfully in core instruction, on-grade/course-level work.	**Yes**	Materials provide guidance to help teachers identify students who need prerequisite work to engage successfully in core instruction, on-grade-level work. The Pre-Unit Practice problems included in

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Section A of each unit provide an assessment of prerequisite concepts and skills directly aligned to upcoming grade-level standards and content. Guidance instructs teachers to use these items to identify any gaps in learning and encourages teachers "to address those prerequisite skills while continuing to work through on-grade tasks and concepts of each unit."
	7f) Materials provide **targeted, aligned, prerequisite work** for the major work of the grade/course, directly connected to specific lessons and units in the curriculum.	**Yes**	Materials provide targeted, aligned, prerequisite work for the major work of the grade directly connected to specific lessons and units in the curriculum. After teachers analyze student results of the Pre-Unit Practice Problems that address prerequisite concepts and skills for the unit, they are encouraged to address prerequisite skills while continuing to work through on-grade tasks and concepts of each unit and "look for opportunities within the upcoming unit where the target skill or concept could be addressed in context or with a center." For example, in Unit 1, Section A Practice Problems, Problems 1-3 assess LSSM 2.MD.D.10. If students struggle with these items, they are encouraged to engage in the Sort and Display (1-3), Stage 2: Picture or Bar Graphs Center during Unit 1, Section A, Lessons 1-4. During the center, students "sort 20-30 objects into three categories and make a picture or bar graph that shows how they sorted" which addresses LSSM 2.MD.D.10. Additionally, Problem 4

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			of the Pre-Unit Practice problems assesses LSSM 2.NBT.B.5. If students struggle with this item, they are encouraged to engage in the Five in a Row: Addition and Subtraction (1-2), Stage 6: Add within 100 with Composing Center during Unit 1, Section A, Lessons 5-9. During the center, students use paper clips and counters to add numbers addressing LSSM 1.NBT.C.4 and 2.NBT.B.5. Additionally, the Pacing Guide and Dependency Diagram section, located within the Course Guide, includes Section Dependency Diagrams with "an arrow that indicates the prior section that contains content most directly designed to support or build toward the content in the current section." For example, Grade 2, Unit 3, Section B, Customary Measurement is designated as the prior section for Grade 3, Unit 2, Section A, Concepts of Area Measurement.
	7g) Materials provide **clear guidance and support** for teachers about the structures that allow students to appropriately address unfinished learning using prerequisite work.		See EdReports for more information.

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	Final Justification/Comments
	1. Focus on Major Work	**Yes**	Materials devote a large majority of time to the major work of the grade. Materials spend minimal time on content outside of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
I: Non-negotiable Criteria of Superior Quality[5]			the appropriate grade level. 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**	The 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 serve to connect two or more clusters in a domain in a grade, in cases where these connections are natural and important.
	3. Rigor and Balance	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by featuring high-quality conceptual problems and discussion questions. The materials are designed so that students attain the fluencies and procedural skills required by the content standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. 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.

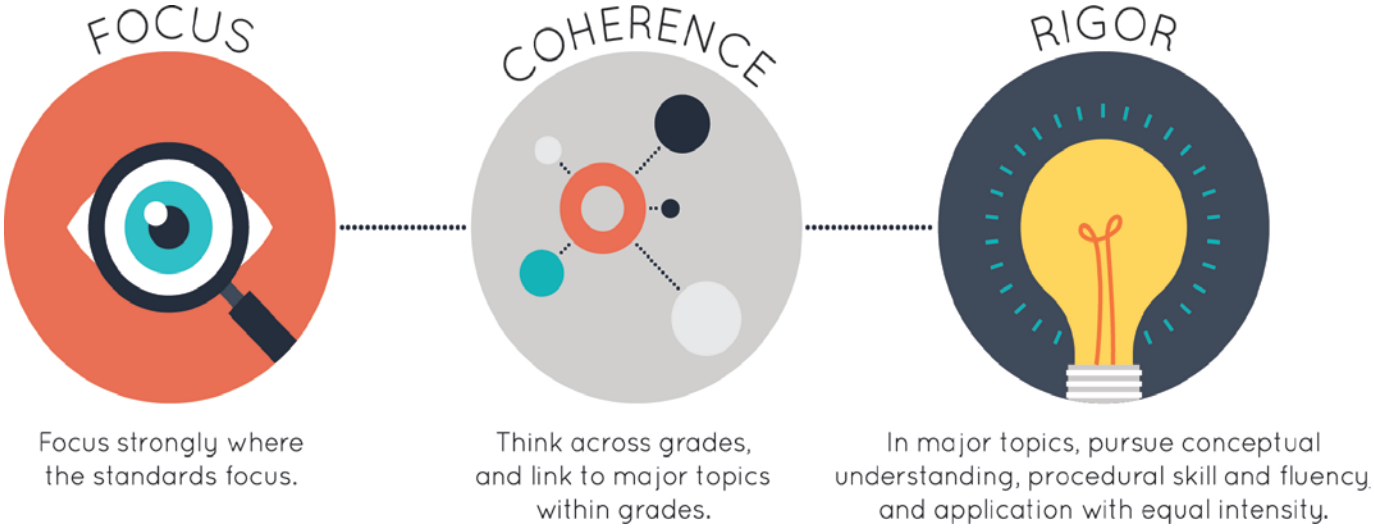
[5] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier 1 or Tier 2 rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	4. Focus and Coherence via Practice Standards	**Yes**	Materials attend to the full meaning of the practice standards. Materials provide sufficient opportunities for students to construct viable arguments of others concerning key grade-level mathematics that is detailed in the content standards. Materials explicitly attend to the specialized language of mathematics. There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.
II: Additional Alignment Criteria and Indicators of Superior Quality[6]	5. Alignment Criteria for Standards for Mathematical Content		See EdReports for more information.
	6. Quality of Assessments		See EdReports for more information.
	7. Additional Indicators of Quality		Materials identify prerequisite skills and concepts for the major work of the grade, connected to the current on-grade level work. Materials provide guidance to help teachers identify students who need prerequisite work to engage successfully in core instruction, on-grade level work. Materials provide targeted, aligned, prerequisite work for the major work of the grade, directly connected to specific lessons and units in the curriculum.
FINAL DECISION FOR THIS MATERIAL: **Tier 1, Exemplifies quality**			

[6] Must score a "Yes" for all Additional Criteria of Superior Quality to receive a Tier 1 rating.

Qualified for Abbreviated Review[1]

Strong mathematics instruction contains the following elements:



Title: **Illustrative Mathematics**

Grade/Course: **4**

Publisher: **Kendall Hunt Publishing**

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Overall Rating: **Tier 1, Exemplifies quality**

Tier 1, Tier 2, Tier 3 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. Quality of Assessments	
7. Indicators of Quality	

[1] Abbreviated Reviews are conducted in K-12 ELA and K-12 Math for submissions that **Meet Expectations** for Gateways 1 and Gateway 2 through EdReports. Reviewers considered these reports as they reviewed materials for alignment to Louisiana state standards and quality Non-negotiable indicators. See the full EdReports review https://www.edreports.org/reports/overview/kendall-hunts-illustrative-mathematics-2021.

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

- Review the **required**[2] 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.

[2] **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 Non-negotiable Criteria 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.			
Non-negotiable **1. FOCUS ON MAJOR WORK[3]:** Students and teachers using the materials as designed devote the large majority[4] of time to the major work of the grade/course. ☒ Yes ☐ No	**Required** **1a)** Materials devote the **majority** of class time to the major work of each grade/course.	**Yes**	Materials devote a large majority of time to the major work of the grade. Of the 141 instructional lessons, 79% of instructional lessons are spent on major work of the grade. Specifically, 61% of lessons are spent on major standards alone, 18% are spent on a combination of major and supporting/additional standards, and 21% are spent on supporting/additional standards. The materials include 12 lessons that are labeled as optional.
	Required **1b)** Instructional materials, including assessments, spend minimal time on content outside of the appropriate grade/course **during core math instruction**. Content beyond grade/course-level should be clearly labeled as optional.	**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 in which they are introduced. Some of the lessons are labeled as optional, such as Unit 4, Lesson 23 because "it does not address any new mathematical content standards," Although students are provided the option to move beyond the LSSM 4.NBT.A in this lesson, the End-of-Unit Assessment for Unit 4 aligns to the grade-level expectation of the standards as evident in Problem 7. In the problem, students choose all true statements about a number and round it to a given place

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			value which states, “Select all true statements. A. 287,164 rounded to the nearest hundred-thousand is 200,000. B. 287,164 rounded to the nearest ten-thousand is 290,000. C. 287,164 rounded to the nearest thousand is 287,000. D. 287,164 rounded to the nearest hundred is 287,100. E. 287,164 rounded to the nearest ten is 287,170.” (LSSM 4.NBT.A.3). In Unit 1, students focus on factors and multiples (LSSM 4.OA.B). Within this unit, Lesson 4 is listed as optional so that students who need additional practice have the opportunity to review strategies for finding products they don’t know. The End-of-Unit Assessment does not require students to have engaged in this lesson nor does it assess the Grade 3 standard aligned with the lesson; rather, the assessment focuses on LSSM 4.OA.B. All lessons not labeled optional across the topics and assessment items are aligned to grade-level work and aligned to the Louisiana Student Standards for Mathematics (LSSM) for Grade 4. The assessments associated with the core math instructional lessons focus on grade-level items and are not beyond the scope of LSSM for Grade 4. The Louisiana Teacher Implementation Guide for Grade 4 instructs teachers to include Grade 3, Module 2, Lessons 12-15, and Module 8, Lesson 4 to ensure coverage of LSSM 4.MD.D.8.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Non-negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**Required** **2a)** Materials connect **supporting content to major content** in meaningful ways so that focus and coherence are enhanced throughout the year.	**Yes**	Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. Materials spiral skills within context using appropriate connections across the standards. Major work is developed prior to lessons that address supporting standards the majority of the time, and, when the supporting standards are addressed, the lessons reinforce major work of the grade by connecting back to major standards. For example, in Unit 3, students deepen their understanding of composing and decomposing fractions and engage with operations on fractions in Lessons 1-12 (LSSM 4.NF.B.3, 4.NF.B.4, 4.NF.C.5). Students then apply this understanding in the context of measurement and data in Lessons 13 and 14 (LSSM 4.MD.B.4). Lesson 13 focuses on fractional measurements on line plots. Students analyze and then organize a set of fractions of a unit, such as ½, ⅛, on a line plot and interpret the data. Students also add and subtract fractions to answer questions about the data presented in line plots. This understanding continues to be reinforced and built upon in Lesson 14 as students use the measurement data given on line plots to solve problems involving addition and subtraction of fractions and mixed numbers (LSSM 4.MD.B.4, 4.NF.B.3c, 4.NF.F.3d). In Unit 5, Section A, students compare two quantities in terms

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			of multiplication and solve multiplicative comparison problems in Lessons 1-4 (LSSM 4.OA.A.1, 4.OA.A.2). In Lessons 5 and 6, students extend this understanding of multiplicative comparison situations to problems in context (4.OA.A.3). In Section B, this understanding is reinforced as students expand what they know about multiplicative comparison to convert measurements within the same system. In Lesson 7, students solve measurement problems while using their understanding of multiplicative comparison in problems (LSSM 4.MD.A.1, 4.OA.A.2). For example, students observe a chart that shows Priya's measurements of various items in both meters and centimeters. Students find and correct her conversion errors and explain their reasoning. During the Section B Checkpoint, students solve questions such as, "How many ounces are there in 5 pounds?" "Select the longest measurement. A. 200,000 cm B. 400 m C. 3 km D. 60 cm." Then, in Lesson 17, Activity 2 connects supporting LSSM 4.MD.3 to major LSSM 4.OA.A.2. Students consolidate their learning from previous lessons to solve problems about length measurements in a mathematical context.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	Required **2b)** Materials include problems and activities that serve to connect two or more **clusters in a domain**, or two or more **domains in a grade/course**, in cases where these connections are natural and important.	**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 5, Multiplicative Comparison and Measurement, Lesson 15, Activity 1 connects the Number and Operations - Fractions (NF), Operations and Algebraic Thinking (OA) and Measurement and Data (MD) domains. During the lesson, students apply their understanding of multiplicative comparison (LSSM 4.OA.A.2) and unit conversion to solve multi-step problems involving distances and lengths (LSSM 4.MD.A.1). Students analyze length measurements in a chart, perform multiplication, and convert distances involving fractional (LSSM 4.NF.B.4c) amounts to compare. Activity 1 includes a data table that shows the distances a frisbee was thrown by four out of six students. Some of the distances include yards, some include feet, and some include fractional amounts. Students learn that “Elena’s frisbee went 3 times as far as Clare’s did” and “Andre’s frisbee went 4 times as far as Tyler’s did.” Students determine the missing distances and then find the top three throwers. In Unit 8, Properties of Two-dimensional Shapes, Lesson 3, Activity 1 connects the Geometry (G) and Measurement and Data (MD) domains. During the activity, students analyze the sides and angles of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			quadrilaterals with attention to the presence of parallel and perpendicular lines. Students use shape cards and sort quadrilaterals based on specific attributes (LSSM 4.G.A, 4.MD.C). Unit 9, Lesson 1 connects Clusters B (Build fractions from unit fractions by applying and extending previous understandings) and C (Understand decimal notation for fractions, and compare decimal fractions) of the Number and Operations - Fractions (NF) domain. During the lesson, students represent and solve problems with fraction operations as they multiply fractions and whole numbers and add and subtract fractions, including mixed numbers (LSSM 4.NF.B.3, 4.NF.B.4, 4.NF.B.5). Specifically, in Activity 3, students use four fractions, 5/12, 8/12, 3/12, and 2/12, to make the value 1 while adhering to the following three conditions: "Use addition, subtraction, or both; Use all four fractions; Use each fraction only one time."
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 featuring high-quality conceptual problems and discussion questions.	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in the standards. Throughout the materials, students develop conceptual understanding through engaging in discussions about mathematical ideas, using multiple representations, visual models, and a variety of strategies to solve problems, and constructing explanations about mathematical ideas and concepts.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
☒ Yes ☐ No			Lesson activities include embedded discussion prompts and scaffolding questions to support students in developing conceptual understanding. At the start of Module 1, students explore conceptual understanding of multiples and factors as called for by the standards (LSSM 4.OA.B.3). In Lesson 1, they apply understanding of tiling and area of rectangles from Grade 3 to understand the idea of multiples. During Activity 2 of this lesson, students discuss why 28 square units is not a possible area for a rectangle with a width of 3 square units. Then, in Lesson 1 Cool Down, students continue to demonstrate their conceptual understanding of multiples when responding to: “If a rectangle is 6 tiles wide, what could be its area? Name 3 possibilities. Explain or show your reasoning.” In Unit 2, Fraction Equivalence and Comparison, Lesson 7, Warm-up, students develop conceptual understanding as they apply prior knowledge of equivalence and strategies for comparing fractions. In the activity, students decide if given fractions are equivalent and explain their reasoning (LSSM 4.NF.A.1). In Unit 4, Section B, students deepen place value understanding of whole numbers of hundred thousands. Students explore place-value relationships as they work with base-ten blocks and place value charts, demonstrating “ten times as

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			many" (LSSM 4.NBT.A). In Unit 7, Lesson 1, students make connections and learn the foundational skills for understanding geometric figures. In the Warm-Up, students use formal and informal geometric language, such as lines, points, straight, and curved, which will be used in an upcoming task. In Activity 1, students describe images on the card for their partner to draw. After the first round, students compare the given and drawn images and determine which parts were accurate, which were off, how the description could be improved, and which words were useful. As students attempt to produce more accurate drawings, they begin to understand that more precise language is needed to describe geometric images. In Lesson 2, Activity 1, students engage in a card sort with cards that contain illustrations, definitions, and descriptions of points, lines, rays, and segments to extend their understanding of the listed geometric figure (LSSM 4.G.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 content 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. The materials are designed in such a way that the required fluencies are acquired through a progression of learning over time and throughout the course of the materials. Lesson Warm-Ups, the first activity in each lesson, provides students with the opportunity to either prepare for the lesson or "strengthen their number sense

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			or procedural fluency." For Warm-Ups that strengthen number sense or procedural fluency, students complete "mental arithmetic or reason numerically or algebraically." Instructional Routines used in the Warm-Ups also support students in building fluency, as in Number Talks which "encourage students to look for structure and use repeated reasoning to evaluate expressions and develop computational fluency." For example, In Unit 2, Fraction Equivalence and Comparison, Lesson 10, Activity 1, Elena's Way, students connect previous work of using visual representations to generate equivalent fractions to a numerical process. In Activity 1, students multiply both the numerator and denominator by the same factor to form equivalent fractions (LSSM 4.NF.A.1). In Grade 4, students are expected to fluently add and subtract within 1,000,000 (LSSM 4.NBT.B.4). In Unit 4, Lesson 10, Warm-Up, Number Talk, students reason about numbers beyond 1,000. Mentally finding the value of the given expressions in this instructional routine prepares students for adding and subtracting larger numbers using the standard algorithm. Students extend understanding and practice of estimating a reasonable answer for 42,050-3,790 later in Unit 4, Lesson 18, Warm-Up. In Lesson 20 of the same unit, students engage in a Warm-Up where they analyze an example of subtraction

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			using the standard algorithm and expanded form. Flexibly thinking about sums and differences comes to the forefront as students continue to engage with LSSM 4.NBT.B.4 in Unit 4, Lesson 22, Warm-Up as students decide whether the provided equations are true or false and explain why, such as 7,000 + 3,000 = 10,000 and 7,180 + 3.920 = 10,000. Then, in Activity 1, students perform multi-digit addition and subtraction problems. In Unit 6, Lesson 5, Products Beyond 100, Warm-Up Number Talk: A Number Times Some Multiple of 10, students find the value of each of the following expressions mentally: 8 x 30, 5 x 30, 10 x 30, and 15 x 30. Students are encouraged to use the distributive property and factor decomposition as a method of mental problem solving. This prepares students for the lesson as they multiply up to four-digit numbers by one-digit numbers and multiply two two-digit numbers by deconstructing factors (LSSM 4.NBT.B.5). In Unit 8, Properties of Two-dimensional Shapes, Lesson 5, Number Talk, students think about place values and rely on the structure of multi-digit numbers to mentally add multiple addends. This activity uses strategies to help students develop fluency in adding multi-digit numbers (LSSM 4.NBT.B.5) as students prepare to reason about the perimeter and angles in line-symmetric figures.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	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. Lessons and activities that address application standards include contextual problems. Throughout the materials, students first develop conceptual understanding and procedural skills and fluency and then have the opportunity to apply skills and concepts in word problems. For example, in Unit 3, Lesson 10, students apply their understanding of adding and subtracting fractions and equivalent fractions to solve problems in context (LSSM 4.NF.B.3d). In Activity 1, students solve the following problem: “A pitcher contains 3 cups of watermelon juice. How many cups will be left in the pitcher if we pour each of the following amounts from the full amount? a. 1/4 cup b. 5/4 cups c. 1 1/4 cups d. 2 2/4 cups.” In Unit 5, Multiplicative Comparison and Measurement, Lesson 10, Activity 2, students solve multi-step problems using metric units of measurement and multiplicative comparison. Students apply their knowledge of liters and milliliters and multiplicative reasoning to solve a problem about water bottles of different sizes. Students solve the following problem: “Here are six water bottles and four clues about the amount of water they each hold. One bottle holds 350 mL. A bottle in size B holds 5 times as much water as the bottle that holds 1L. The

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			largest bottle holds 20 times the amount of water in the smallest bottle. One bottle holds 1,500 mL, which is 3 times as much water as a bottle in size E. Use the clues to find out the amount of water, in mL, that each bottle size holds. Be prepared to explain or show your reasoning." (LSSM 4.MD.A.2, 4.OA.A.2, 4.OA.A.3). Then in Unit 5, Lesson 13, students solve multi-step problems that involve multiplicative comparison and measurement in whole numbers and fractions (LSSM 4.MD.A.2, 4.OA.A.3). In Activity 2, students engage in an Info Gap activity in which they compare lengths of time given in different units and solve the following problem: "On a school day, Noah usually spends 40 minutes on his morning routine and 75 minutes on his sports practice. Which one takes more time: 1. Noah's morning routine or his bedtime routine? 2. Noah's sports practice or his homework and reading time?" Students first determine what information is missing, ask questions to find out the missing information, and solve the problem.
	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. Lessons provide opportunities for students to demonstrate procedural fluency and conceptual understanding in the context of application to real-world situations. The materials attend to the balance of rigor as intended by the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			standards. In Unit 2, Fraction Equivalence and Comparison Lesson 2, Cool-down, students demonstrate conceptual understanding by creating visual representations of non-unit fractions in the following problem: “Use a blank diagram to create a representation for each fraction. Both blank diagrams represent the same quantity. 1. 5/8 2. 9/8.” Bar models broken into two wholes are provided for each problem (LSMM 4.NF.A.1). Unit 4, Lesson 6 focuses on conceptual understanding as students build upon previous knowledge of base-ten structure to develop a sense of the magnitude of 10,000. Within Activity 1, students work with concrete manipulatives as they name and build two-, three- and four-digit numbers (LSSM 4.NBT.A.1). In Unit 9, Lesson 3, Stories with Fractions, the Cool Down integrates both procedural skill and fluency and application as students solve the following problem: “There were 7 cups of milk before Mai made breakfast. Now there are 2 2/8 cups of milk. How much milk did Mai use for breakfast?” (LSSM 4.NF.B.3.c, 4.NF.B.3.d). For this situation, students are focused on the application of their skill and knowledge of fraction operations. Unit 7, Lesson 13 integrates all three components of rigor as students use tools to find angle measurements and develop a deeper understanding that angles are additive (LSSM 4.MD.C.7). During the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			lesson, students find unknown angle measurements by composing and decomposing known measurements. In the Cool Down, students find the angle measurement of problem three by adding 60 and 30 resulting in a 90 degree angle.
Non-negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Aligned materials make meaningful and purposeful connections that promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. Materials address the practice standards in a way to enrich and strengthen the focus of the content standards instead of detracting from them. ☒ Yes ☐ No	**Required** **4a)** Materials attend to the **full meaning of the practice standards**. Each practice standard is connected to grade/course-level content in a meaningful way and is present throughout the year in assignments, activities, and/or problems.	**Yes**	Materials attend to the full meaning of each practice standard. Each practice standard is connected to grade-level content and is meaningfully present throughout the materials. The materials provide students with an opportunity to engage with the practice standards in each lesson. The materials support the students in the development of the practice standards while enriching the grade-level standards. For example, in Unit 3, Lesson 6, Problems with Equal Groups of Fractions Warm-Up, the students look for and make use of structure (MP.7) as they consider how fractions are decomposed into various factors and multiplied in parts. Students determine if each numerical statement is true or false and explain the reason they chose their answer (LSSM 4.NF.B.4b). In Unit 5, Multiplicative Comparison and Measurement, Lesson 15, Activity 2, students reason abstractly and quantitatively (MP.2) when they convert feet and inches and solve a logic puzzle. Students use clues to determine the length of four objects and reason about the heights of the towers and who built them in the following problem: “While on

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			an outing, a group of friends had a stone-stacking contest to see who could build the tallest stone tower. Andre's stone tower is 3 times as tall as Diego's, but Diego didn't build the shortest tower. The tallest tower is 4 feet and 2 inches tall and belongs to Tyler. One person built a tower that is 39 inches tall. Tyler's tower is 5 times as tall as the shortest tower. 1. How tall is each person's stone tower? Be prepared to explain or show your reasoning. 2. Elena came along and built a tower that is 5 times as tall as Diego's tower. Is Elena's tower more than 6 feet? Show your reasoning."
	Required **4b)** Materials provide sufficient opportunities for students to **construct viable arguments and critique the arguments of others** concerning key grade/course-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. The materials provide opportunities for students to discuss and justify their thinking and reasoning for the strategies they used to solve problems. For example, in Unit 2, Fraction Equivalence and Comparison, Lesson 10, Cool Down, students construct viable arguments as they determine if two fractions are equivalent in the following problem, "Diego wrote 11/5 and 55/10 as equivalent fractions. Are those fractions equivalent? Explain or show how you know. Use a number line, if it helps." The materials provide opportunities for students to discuss their thinking and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			reasoning for the strategies they used to solve problems, as seen in Unit 3, Lesson 6, Activity 2. Students solve the following problem: “The bakery that sells banana bread also sells fresh milkshakes. Each serving uses 1/10 liter of milk. Here are five descriptions of the milkshakes sold in a week and five expressions that represent the liters of milk used. Match each description to an expression that represents it.” In groups of two, students write and display the expression they believe represents the situation on a poster, discuss with others why they chose the expression, and then partner with a student from a different group to explain why they made a different choice. The teacher asks several probing questions to guide the class discussion, such as “Does anyone wish to revise their thinking about the expression they selected? Can you explain why you think that a different expression is a better choice now?” In Unit 7, Angles and Measurement, Lesson 3, students practice constructing an argument for how they know that two lines are parallel as they engage in identifying and drawing parallel and intersecting lines. Also within this unit, students discuss and justify their decision in Lesson 6, Activity 2 as they complete the following task: “Record your ordered angles. Explain or show how you decided which angle was the smallest and which was the largest.”

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	Required **4c)** Materials explicitly attend to the **specialized language** of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. Throughout each unit, the lessons and activities use precise mathematical language and encourage the use of the correct mathematical language when discussing skills, concepts, solutions, and strategies. Glossary entries are provided for each unit. These entries include the academic language necessary for the unit along with grade-appropriate definitions. Within the Mathematical Language Development and Access for English Learners section of the How to Use These Materials guide, Principal 3 calls for cultivating conversations and states, "Conversations act as scaffolds for students developing mathematical language because they provide opportunities to simultaneously make meaning, communicate that meaning, and refine the way content understandings are communicated." Mathematical Language Routines (MLRs) are "instructional routines that provide structured but adaptable formats for amplifying, assessing, and developing students' language." The MLRs are embedded throughout the materials with explanations, and instructions for using the MLRs are provided in the How to Use These Materials guide. The MLRs include the following routines: Stronger and Clearer Each Time; Collect and Display; Clarify, Critique, Correct; Information Gap;

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Co-Craft Questions; Three Reads; Compare and Connect; and Discussion Supports. For example, MLR 4 Information Gap creates the need for students to communicate using precise language. During the routine the teacher positions some students as holders of information that is needed by other students to accomplish a goal. Because there is an information gap, students orally share ideas and information to bridge the gap. Sentence Frames are also embedded throughout the activities and lessons that "support student language production by providing structure to communicate about a topic." Mathematical terminology is built within each lesson, and students answer questions throughout the lessons that reinforce and enhance their mathematical language. In addition, student sample responses include mathematical language to set the expectation for student use. For example, in Unit 2, Fraction Equivalence and Comparison, Lesson 9, Warm-Up, students use accuracy and precision to describe strategies for finding the values in multiplication expressions. Students use doubling and halving strategies as they explain how they know the values, such as "10 x 12 = 120. Twelve is twice 6, so 10 x 12 is twice 10 x 6 or 2 x 60." In Unit 6, Lesson 4, Warm-up, Which One Doesn't Belong: Stacked Squares, students closely examine and compare representations of patterns. Students use precise

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			mathematical terminology to discuss the strategies that were used to arrive at their solution and to explain their understanding of the concept. Sample responses are provided such as, “B is the only pattern that doesn’t increase by 2 each time, doesn’t have a 4 or 6 as a value, and doesn’t include only even numbers.” In Unit 5, Lesson 6, students represent and solve multiplicative comparison problems involving multiples of 10. During the Activity 1 Synthesis, the teacher asks, “How did you know that the equation could be represented as a comparison involving ten times as many?” A sample student response is provided which states, “I knew that when we multiply a number by 10, the product will be ten times the value. I also know that division is the inverse of multiplication, so I looked for equations that were multiplying or dividing by 10 or had ten as a quotient.”
	4d) 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. The Standards for Mathematical Practices Chart included in the How to Use These Materials guide highlights lessons that “showcase certain Mathematical Practices.” For example, in Unit 3, students utilize MP.7 in Lessons 5, 10, 11, 12, and 17. In Unit 7, students utilize MP.3 in Lessons 3 and 6. This section also

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			connects many of the instructional routines to the practice standards. For example, as students engage in the Which One Doesn't Belong routine, students attend to precision (MP.6). As students engage in the How Many Do You See routine and subitize or use grouping strategies to describe images they see, they look for and make use of structure (MP.7). This section includes additional guidance for teachers in supporting students in their development of the practice standards such as "How you can use the Mathematical Practices Chart" and "Standards for Mathematical Student Facing Learning Targets." Guidance is also embedded throughout the Teacher's Edition. The Lesson Narrative often explains how students will utilize the practice standards in the lesson. For example, in Unit 3, Lesson 1, Equal Groups of Unit Fractions, students interpret and relate descriptions, drawings, and multiplication expressions that represent equal groups of unit fractions. In Activity 2, teacher guidance states, "students interpret situations involving equal groups of a fractional amount and to connect such situations to multiplication of a whole number by a fraction (MP.2)." In Unit 6, Lesson 1: Patterns that Grow, students analyze, describe, and extend visual patterns in which one or more shapes grow by a rule. Teacher guidance in the Lesson Narrative states, "students

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			describe not only the rule of the pattern (that is, how the number of objects is changing), but also any features of the patterns that are not explicit in the rule. They also extend patterns and make predictions by looking for and making use of structure (MP.7), rather than by drawing or writing out each step along the way." In Unit 7, Lesson 4, students practice identifying parallel and intersecting lines and drawing them. In Activity 1, students find line segments, parallel lines, and intersecting lines on a map and then in the alphabet. Teacher guidance states, "In both contexts, they encounter marks that may appear to be segments, but are not actually perfectly straight, or pairs of lines that appear to be parallel, but are not exactly so. Students have the opportunity to attend to precision when analyzing the given images (MP.6)." In Activity 2, students look for parallel and intersecting lines in their own environment and record them in a drawing. Teacher guidance states, "When students recognize mathematical features of objects in their classroom and design a logo with intersecting and parallel line segments they model with mathematics (MP4)."
Section II: Additional Alignment Criteria and Indicators of Superior Quality			
5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:	**Required** **5a)** Materials provide all students **extensive work** with grade/course-level problems.		See EdReports for more information.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
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** **5b)** Materials **relate grade/course-level concepts explicitly to prior knowledge** from earlier grades and courses. The materials are designed so that prior knowledge is extended to accommodate the new knowledge, building to core instruction, on grade/course-level work. Lessons are appropriately **structured and scaffolded** to support student mastery.		
	Required **5c)** There is **variety** in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade/course-appropriate way, arguments and explanations, diagrams, mathematical models, etc.		
	5d) Support for **English Language Learners and other special populations** is provided. The language in which problems are posed is not an obstacle to understanding the content, and if it is, additional supports (suggestions for modifications, "vocabulary to preview", etc.,) are included.		
6. QUALITY OF ASSESSMENTS: Materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the assessed grade-specific Louisiana Student Standards for Mathematics. ☐ Yes ☐ No	**Required** **6a)** Multiple **assessment opportunities** are embedded into content materials and measure student mastery of standards that reflect the balance of the standards as presented in materials.		
	Required **6b)** Assessment items include a **combination of tasks** that require students to demonstrate conceptual understanding, demonstrate procedural skill and fluency, and apply mathematical reasoning and modeling in real world context. Assessment items require students to produce answers and solutions, arguments, explanations, and models, in a grade/course-appropriate way.		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	6c) Scoring guidelines and rubrics align to standards, incorporate criteria that are specific, observable, and measurable, and provide sufficient guidance for interpreting student performance, misconceptions, and targeted support to engage in core instruction.		
	6d) Materials provide 2-3 **comprehensive assessments** (interims/benchmarks) that measure student learning up to the point of administration.		
7. ADDITIONAL INDICATORS OF QUALITY: Materials are well organized and provide teacher guidance for units and lessons. Materials provide timely supports to target specific skills/concepts to address students' unfinished learning in order to access grade-level work. ☐ Yes ☐ No	**Required** **7a)** The content can be **reasonably completed** within a regular school year and the pacing of content allows for maximum student understanding. The materials provide guidance about the amount of time a task might reasonably take.		
	Required **7b)** The materials are **easy to use and well organized** for students and teachers. Teacher editions are concise and easy to manage with clear connections between teacher resources. Guidance is provided for lesson planning and instructional delivery, lesson flow, questions to help prompt student thinking, and expected student outcomes.		
	Required **7c)** Materials include unit and lesson **study tools for teachers**, including, but not limited to, an explanation of the mathematics of each unit and mathematical point of each lesson as it relates to the organizing concepts of the unit and discussion on student ways of thinking and anticipating a variety of student responses.		
	7d) Materials **identify prerequisite skills and concepts** for the major work of the grade/course, connected to the current on-grade/course-level work.	**Yes**	Materials identify prerequisite skills and concepts for the major work of the grade. Prerequisite skills can be found in Unit and Section Learning Goals, as well as the Lesson Narratives. The practice problems for Section A in each unit have several

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			items designated as pre-unit assessment items. The pre-unit assessment items include the standard being addressed, noting the pre-requisite skills of the unit. For example, in Unit 1, Section A Practice Problems, Problem 1 addresses LSSM 3.MD.C.7a, and Problem 2 addresses LSSM 3.MD.C.7. According to the "A Typical IM Lesson," the Warm-Up section of the lesson includes an instructional routine that practices previously taught concepts or previews a new concept in the day's lesson. Each unit also includes a Unit Learning Goals section that describes the learning within the unit along with the skills and concepts that should have been developed prior to the unit. For example, the Unit Learning Goal for Unit 2 states, "In this unit, students extend their prior understanding of equivalent fractions and comparison of fractions. In grade 3, students partitioned shapes into parts with equal area and expressed the area of each part as a unit fraction. They learned that any unit fraction 1/b results from a whole partitioned into b equal parts. They used unit fractions to build non-unit fractions, including fractions greater than 1, and represent them on fraction strips and tape diagrams. The denominators of these fractions were limited to 2, 3, 4, 6, and 8. Students also worked with fractions on a number line, establishing the idea of fractions as numbers and equivalent fractions as the same point on the number

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			line." Additionally, each lesson lists the standard(s) addressed in the lessons, as well as Building On standards, when applicable. For example, Unit 2, Lesson 7 addresses LSSM 4.NF.A.1 and builds on LSSM 3.NF.A.3b.
	7e) Materials provide guidance to help teachers **identify students** who need prerequisite work to engage successfully in core instruction, on-grade/course-level work.	**Yes**	Materials provide guidance to help teachers identify students who need prerequisite work to engage successfully in core instruction, on-grade-level work. The Pre-Unit Practice problems included in Section A of each unit provide an assessment of prerequisite concepts and skills directly aligned to upcoming grade-level standards and content. Guidance instructs teachers to use these items to identify any gaps in learning and encourages teachers "to address those prerequisite skills while continuing to work through on-grade tasks and concepts of each unit."
	7f) Materials provide **targeted, aligned, prerequisite work** for the major work of the grade/course, directly connected to specific lessons and units in the curriculum.	**Yes**	Materials provide targeted, aligned, prerequisite work for the major work of the grade directly connected to specific lessons and units in the curriculum. After teachers analyze student results of the Pre-Unit Practice Problems that address prerequisite concepts and skills for the unit, they are encouraged to address prerequisite skills while continuing to work through on-grade tasks and concepts of each unit and "look for opportunities within the upcoming unit where the target skill or concept could be addressed in context or with a center." For example,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Unit 2, Section A Practice Problems 1 and 2 address LSSM 3.NF.A.1, Problem 2 addresses LSSM 3.NF.A.2a, and Problem 3 addresses LSSM 3.NF.A.3b. If students struggle with these items, they are encouraged to engage in the Mystery Number (1-4), Stage 3, Fractions with Denominators 2, 3, 4, 6 Center during Unit 2, Section A, Lessons 1-3. During the center, students "choose a mystery fraction (with a denominator of 2, 3, 4, or 6) from the game board. Students give clues based on the given vocabulary" which addresses LSSM 3.NF.A. Students are also encouraged to engage in Number Line Scoot (2-3), Stage 3, Halves, Thirds, Fourths, Sixths, and Eighths Center during Unit 2, Section A, Lessons 4-6. During the center, students "take turns rolling a number cube and using the number as a numerator in a fraction with a denominator of 2, 3, 4, 6, or 8. Students move their centimeter cube that interval on one of the shared number lines. Each time a cube lands exactly on the last tick mark of one of the number lines, the player who moved it keeps the cube and puts a new cube on zero on that number line. The first player to collect five cubes wins" which addresses LSSM 3.NF.A.2b. Additionally, the Pacing Guide and Dependency Diagram section, located within the Course Guide, includes Section Dependency Diagrams with "an arrow that indicates the prior section that contains

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			content most directly designed to support or build toward the content in the current section." For example, Grade 3, Unit 5, Section B, Fractions on the Number Line is designated as the prior section for Grade 4, Unit 2, Section A, Size and Location of Fractions.
	7g) Materials provide **clear guidance and support** for teachers about the structures that allow students to appropriately address unfinished learning using prerequisite work.		See EdReports for more information.

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	Final Justification/Comments
I: Non-negotiable Criteria of Superior Quality[5]	1. Focus on Major Work	**Yes**	Materials devote a large majority of time to the major work of the grade. 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 in which they are introduced.
	2. Consistent, Coherent Content	**Yes**	The 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 serve to connect two or more clusters in a domain

[5] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier 1 or Tier 2 rating.

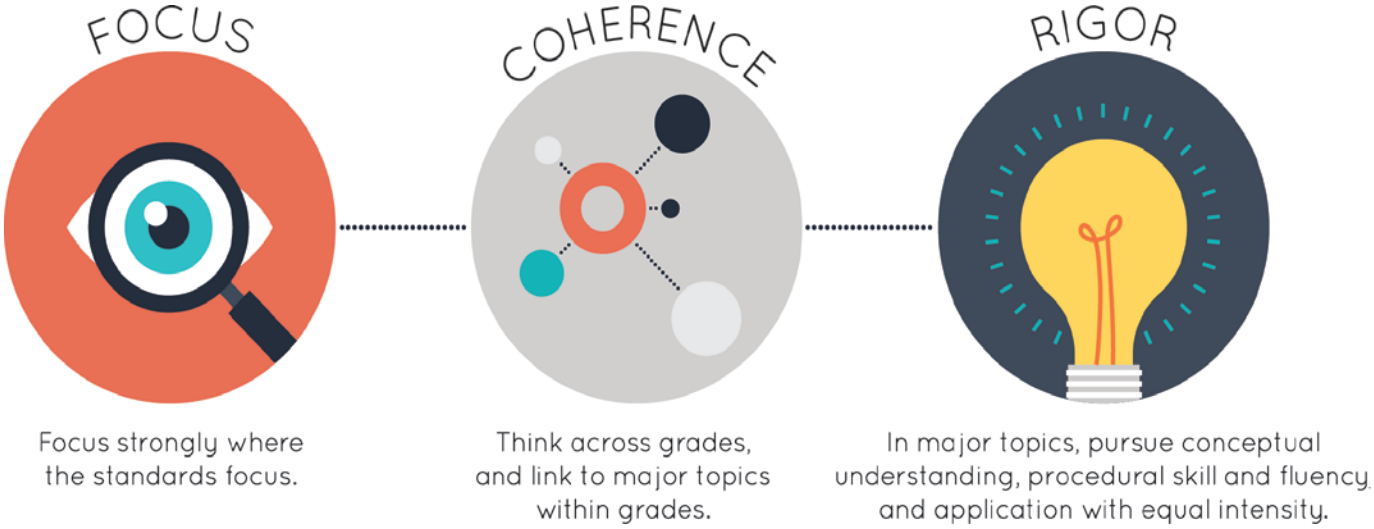
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			in a grade, in cases where these connections are natural and important.
	3. Rigor and Balance	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by featuring high-quality conceptual problems and discussion questions. The materials are designed so that students attain the fluencies and procedural skills required by the content standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. 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 attend to the full meaning of the practice standards. Materials provide sufficient opportunities for students to construct viable arguments of others concerning key grade-level mathematics that is detailed in the content standards. Materials explicitly attend to the specialized language of mathematics. There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
II: Additional Alignment Criteria and Indicators of Superior Quality[6]	5. Alignment Criteria for Standards for Mathematical Content		See EdReports for more information.
	6. Quality of Assessments		See EdReports for more information.
	7. Additional Indicators of Quality		Materials identify prerequisite skills and concepts for the major work of the grade, connected to the current on-grade level work. Materials provide guidance to help teachers identify students who need prerequisite work to engage successfully in core instruction, on-grade level work. Materials provide targeted, aligned, prerequisite work for the major work of the grade, directly connected to specific lessons and units in the curriculum.
FINAL DECISION FOR THIS MATERIAL: **Tier 1, Exemplifies quality**			

[6] Must score a "Yes" for all Additional Criteria of Superior Quality to receive a Tier 1 rating.

Qualified for Abbreviated Review[1]

Strong mathematics instruction contains the following elements:



Title: **Illustrative Mathematics**

Grade/Course: **5**

Publisher: **Kendall Hunt Publishing**

Copyright: **2021**

Overall Rating: **Tier 1, Exemplifies quality**

Tier 1, Tier 2, Tier 3 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. Quality of Assessments	
7. Indicators of Quality	

[1] Abbreviated Reviews are conducted in K-12 ELA and K-12 Math for submissions that **Meet Expectations** for Gateways 1 and Gateway 2 through EdReports. Reviewers considered these reports as they reviewed materials for alignment to Louisiana state standards and quality Non-negotiable indicators. See the full EdReports review https://www.edreports.org/reports/overview/kendall-hunts-illustrative-mathematics-2021.

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

- Review the **required**[2] 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.

[2] **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 Non-negotiable Criteria 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.			
Non-negotiable **1. FOCUS ON MAJOR WORK[3]:** Students and teachers using the materials as designed devote the large majority[4] of time to the major work of the grade/course. ☒ Yes ☐ No	**Required** **1a)** Materials devote the **majority** of class time to the major work of each grade/course.	**Yes**	Materials devote a large majority of time to the major work of the grade. Of the 135 instructional lessons, 90% of instructional lessons are spent on major work of the grade. Specifically, 73% of lessons are spent on major standards alone, 17% are spent on a combination of major and supporting/additional standards, and 10% are spent on supporting/additional standards. The materials include 13 lessons that are labeled as optional.
	Required **1b)** Instructional materials, including assessments, spend minimal time on content outside of the appropriate grade/course **during core math instruction**. Content beyond grade/course-level should be clearly labeled as optional.	**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 in which they are introduced. Some of the lessons are labeled as optional, such as Unit 6, Lesson 21, because "it does not address any new mathematical content standards" and Unit 8, Lesson 9 because "it requires conversions between different measurement systems." All lessons across the topics and assessment items are aligned to grade level work and aligned to the Louisiana Student Standards for Mathematics (LSSM) for Grade 5. The assessments associated with the core

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			math instructional lessons focus on grade-level items and are not beyond the scope of LSSM for Grade 5. For example, Unit 7, Shapes and the Coordinate Plane, Lessons 2 and 3 address LSSM 5.G.A.1 as students graph points on the coordinate plane to solve real-world and mathematical problems. In Lesson 2, Points on the Coordinate Grid, Activity 2: Plot and Label Points, students write ordered pairs of numbers to represent points in the coordinate plane and plot points with given coordinates. Students "1. List the coordinates for each point. 2. Plot points D, E, and F on the same grid." In Lesson 3, Plot More Points, Cool-down, Missing Coordinate, students solve the following problem: "Here is a grid with some points labeled. Plot and label the points (3,0), (0,2), and (3,2). Explain or show your reasoning." In assessment materials, assessment components do not make students/teachers responsible for any topic before the grade in which they are introduced. On Unit 1 End-of-Unit Assessment, Problem 5 provides a labeled illustration and asks students to, "Find the volume of the prism. Explain or show your reasoning." (5.MD.C.5.c). In Unit 3, Multiplying and Dividing Fractions, End-of-Unit Assessment, Problem 6, students solve the following problem: "An apple weighs ½ pound. Diego cuts the apple into 4 equal pieces. How many pounds does each piece of the apple weigh? Explain

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			your reasoning." (LSSM 5.NF.7). Additionally, the Unit 8 Assessment serves as an End-of-Course Assessment and includes problems from the entire grade level.
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. Materials spiral skills within context using appropriate connections across the standards. Major work is developed prior to lessons that address supporting standards the majority of the time, and, when the supporting standards are addressed, the lessons reinforce major work of the grade by connecting back to major standards. Considering that Grade 5 only has two supporting standards, LSSM 5.MD.A.1 and 5.MD.B.2, the materials embed scaffolds to those supporting standards. This is evident in Unit 1, Lesson 7, Activity 1, What are the Units? The supporting standard of LSSM 5.MD.A.1 requires conversion among different-sized standard measurement units which is scaffolded during Lesson 1 as students explore various objects and consider which cubic unit would be best to use - cubic centimeter, cubic inch, or cubic foot (LSSM 5.MD.C.4). Later, Unit 6, Lesson 4, Metric Conversion and Division by Powers of 10, connects supporting work of LSSM 5.MD.A.1 with the major work of LSSM 5.NBT.A.2. In the lesson, students engage

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			in Activity 1, Long Jump, Javelin Throw, and Shot Put where they convert measurements in centimeters into meters, noticing patterns in the numbers of zeros when dividing by powers of ten. Later in Unit 6, Lesson 14, Activity 1, Student Work Time connects the supporting work of LSSM 5.MD.B.2 to the major work of LSSM 5.NF.A.1. Students make a line plot and then analyze the data to solve problems using operations with fractions. LSSM 5.NF.A.1 is first developed in Lessons 8-13 and then reinforced in Lesson 14.
	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. For example, Unit 1, Lesson 9 connects the Measurement and Data (MD) and Operations and Algebraic Thinking (OA) domain. In Activity 1, students begin by finding the volume of figures composed of two non-overlapping right rectangular prisms by adding the volumes of the parts (LSSM 5.MD.C.5c). Then, in Activity 2, students represent expressions as decompositions of a figure made of two non-overlapping right rectangular prisms (LSSM 5.OA.A.2). Students observe a figure composed of unit cubes and determine an expression that represents the volume of the figure, such as “(5 x 8 x 6) +(5 x 4 x 9).” Students interpret parentheses in the expression while

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			representing the volume of the figure as length times width times height. In Unit 2, Lesson 6, The Race Activity connects the Number and Operations - Fractions (NF) and the Operations and Algebraic Thinking (OA) domains. During the activity, students read word problems that represent multiplication or division and create a diagram that represents the situation (LSSM 5.NF.B.3) and then choose the numerical expression that represents the situation to solve the problem (LSSM 5.OA.A.2). Unit 7, Shapes of the Coordinate Plane, Lesson 13 connects the Operations and Algebraic Thinking (OA) and Geometry (G) domains. Students plot points that represent the length and width of different rectangles with a given perimeter or area in order to visualize and quantify the relationships. For example, in Activity 1, students complete the following task: "1. Jada drew a rectangle with a perimeter of 12 centimeters. What could the length and width of Jada's rectangle be? Use the table to record your answer. 2. Plot the length and width of each rectangle on the coordinate grid. 3. If Jada drew a square, how long and wide was it? 4. If Jada's rectangle was 2.5 cm long, how wide was it? Plot this point on the coordinate grid. 5. If Jada's rectangle was 3.25 cm long, how wide was it? Plot this point on the coordinate grid."
Non-negotiable **3. RIGOR AND BALANCE:**	**Required**	**Yes**	Materials develop conceptual understanding of key mathematical

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
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	**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 featuring high-quality conceptual problems and discussion questions.		concepts, especially where called for explicitly in the standards. Throughout the materials, students develop conceptual understanding through engaging in discussions about mathematical ideas, using multiple representations, visual models, and a variety of strategies to solve problems, and constructing explanations about mathematical ideas and concepts. Lesson activities include embedded discussion prompts and scaffolding questions to support students in developing conceptual understanding. In Unit 1, conceptual understanding is the focus of Lessons 1 and 2 which addresses LSSM 5.MD.C.3. In Lesson 1 Activity 1, Build Objects With Cubes, students explore attributes of volume while comparing their objects to those of their peers, and engage in discourse, critiquing one another's reasoning. Activity 2 of the same lesson provides an opportunity for students to build solid objects and recognize that the shape and orientation of the object does not matter when comparing volumes. Lesson 2 continues with activities of building objects while encouraging students to discuss how they count those objects. Students consider which objects are most challenging when determining volume and why they are most challenging. In Unit 3, Multiplying and Dividing Fractions, Lesson 4, students develop conceptual understanding as they practice constructing a model to develop

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			an understanding of the concept of multiplying two fractions (LSSM 5.NF.B.4b). In the Warm-Up activity, students mentally find the product of two unit fractions. This conceptual understanding prepares students for the lesson since they will make sense of a unit fraction multiplied by a non-unit fraction. In Unit 8, Putting It All Together, Lesson 10, Activity 1, Student Work Time and Activity Synthesis, students develop conceptual understanding as they practice adding fractions with unlike denominators and reason about how the size of the numerators and denominators impact the value of a fraction (LSSM 5.NF.A.1). In the Warm-Up activity, students demonstrate strategies for adding fractions with unlike denominators which support students' development of fluency in adding and subtracting fractions with unlike denominators. In Activity 1, students play Greatest Sum with a partner in which they use a spinner to create fractions and find the sum. The Activity Synthesis states, "What strategies were helpful as you played Greatest Sum?" Sample student responses include, "I tried to make fractions that have a larger numerator than denominator so they would be greater than one. I tried to make sure the ones and twos were in the denominator and put bigger numbers in the numerator. Students also respond to, "How did you add your fractions?" The provided sample

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			response states, “My denominators were 1, 2, 3, and 4 so I used 12 as a common denominator for all of them.”
	Required **3b)** ***Attention to Procedural Skill and Fluency:*** The materials are designed so that students **attain the fluencies and procedural skills** required by the content 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. The materials are designed in such a way that the required fluencies are acquired through a progression of learning over time and throughout the course of the materials. Lesson Warm-Ups, the first activity in each lesson, provides students with the opportunity to either prepare for the lesson or “strengthen their number sense or procedural fluency.” For Warm-Ups that strengthen number sense or procedural fluency, students complete “mental arithmetic or reason numerically or algebraically.” Instructional Routines used in the Warm-Ups also support students in building fluency, as in Number Talks which “encourage students to look for structure and use repeated reasoning to evaluate expressions and develop computational fluency.” For example, in Unit 1, Lesson 3, Warm-Up Launch, students find the value of the following expressions mentally: 6 x 4, 3 x 2 x 4, 3 x 2 x 5, and 3 x 2 x 6. The activity prepares students for the lesson in which they practice building and determining the volume of rectangular prisms (LSSM 5.MD.C.4). In Activity 2, students determine the volume of prisms that are completely packed with unit cubes. Then,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			in Unit 6, students engage in a Card Sort activity and practice evaluating expressions with parentheses and brackets as they interpret expressions of volumes of given rectangular prisms (LSSM 5.OA.A.1). The materials continue to provide opportunities with this specific fluency as students decompose rectangular prisms to create expressions in Lesson 10. The progression for LSSM 5.OA.A.1 is evident in Unit 5, Lesson 18 in the Warm-Up activity as students demonstrate their knowledge of the associative property of multiplication. Students decide if the following is true or false: 30 x 2 x 10=6 x 10 and 30 x 2 x 10 = 20 x 3 x 10. Throughout Unit 3, students extend multiplication and division of whole numbers to multiply fractions by fractions and divide a whole number and a unit fraction (LSSM 5.NF.B.4, 5.NF.B.7). In Lesson 4, students multiply unit fractions mentally. For example, students solve 1/2 x 1/2 and 1/3 x 1/2. Students build fluency and develop skills to multiply non-unit fractions by non-unit fractions in Lesson 7, such as 3/8 x 2/5. Students continue progressing with multiplying fractions to include improper fractions. For example, in Lesson 8, students multiply 2/3 x 13/5. Students continue to build fluency and procedural skill in multiplying and dividing fractions throughout Unit 3 as LSSM 5.NF.B is addressed. In Unit 8, Section A, students demonstrate procedural skill and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			fluency of LSSM 5.NBT.B.5 as they practice using the standard algorithm to find increasingly larger products in Lessons 1-3 and then practice division skills in Lessons 4 and 5 (LSSM 5.NBT.B.6).
	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. Lessons and activities that address application standards include contextual problems. Throughout the materials, students first develop conceptual understanding and procedural skills and fluency and then have the opportunity to apply skills and concepts in word problems. In Unit 1, Lesson 9, students use the knowledge from the previous lessons to find the volume of figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts (LSSM 5.MD.C.5c). This type of application is repeated in Lesson 10 as students extend the skill by finding multiple ways to decompose given figures and calculate the volume. In Lesson 11, Activity 2, students solve word problems about volume with given figures. As part of the Cool Down for the same lesson, students apply their work with problem solving and volume to a real-world situation about a preschool sandbox. In Unit 2, Lesson 3, students write and interpret division expressions and equations that represent equal sharing situations. They explain the relationships

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			between the dividend and the numerator and divisor and the denominator. They solve multi-step problems in order to be able to explain the different relationships (LSSM 5.NF.B.3). In Unit 3, Lesson 8, students solve problems by calculating the areas in context. In Activity 2, More Flags, students examine calculations with measurements of the Colombian flag. Students observe information about a flag and determine what question a student is answering based on the information provided. For example, in Activity 2, students solve the following task regarding a replica of the flag of Columbia: "It is 3 1/2 inches wide and 5 1/4 inches long. The yellow stripe is 1/2 of the width of the flag and the blue and red stripes are each 1/4 of the width. 1) 1/4 x 3 1/2 = 7/8. What is the question? 2: 1/2 x 3 1/2 = 7/4 and 7/4 x 21/4 = 147/16. The answer is 147/16 square inches. What is the question?" Students apply conceptual understanding and procedural skills to solve real-world problems involving multiplication of fractions and mixed numbers (LSSM 5.NF.B.6).
	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. Lessons provide opportunities for students to demonstrate procedural fluency and conceptual understanding in the context of application to real-world situations. The materials attend to the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			balance of rigor as intended by the standards. For example, in Unit 1, students draw on their prior knowledge of areas of rectangles to visualize the volume of a three-dimensional figure. In Lesson 1, students explore the concept of volume as they build objects with cubes in Activity 1, emphasizing conceptual understanding (LSSM 5.MD.C.3). In Lesson 4, students apply their understanding of multiplication concepts to find the volume of rectangular prisms (LSSM 5.MD.C.5a). Students also practice fluency of multiplication and properties of multiplication as they calculate volume by writing expressions for the volume of rectangular prisms as evident in Lesson 6 (LSSM 5.MD.C.5b). Unit 3, Lesson 17 integrates all three components of rigor. During Number Talk: Multiply and Divide, students solve multiplication and division problems with fractions with an emphasis on making sense of the problems and the operations needed to solve them (LSSM 5.NF.B.4, 5.NF.B.7). In Activity 2, Multiplication or Division, students solve a variety of problems with complex numbers. These problems encourage students to use their understanding of how to multiply fractions or divide with a whole number and a unit fraction. The Lesson Synthesis focuses on why students chose multiplication or division to solve the problems, providing opportunities for students to demonstrate procedural fluency and conceptual

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			understanding in the context of application to real-world situations. In Unit 5, students extend their understanding of decimal fractions and apply properties of operations of whole numbers with decimal fractions. Conceptual understanding is encouraged with the use of number lines while students compare decimal fractions to the thousandths. Students build procedural skill and fluency as they practice adding and subtracting decimals using the standard algorithm (LSSM 5.NBT.B.7). In Unit 8, students consolidate and solidify their understanding of various concepts and skills related to major work of the grade. They also continue to work toward fluency goals of the grade.
Non-negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Aligned materials make meaningful and purposeful connections that promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. Materials address the practice standards in a way to enrich and strengthen the focus of the content standards instead of detracting from them. ☒ Yes ☐ No	**Required** **4a)** Materials attend to the **full meaning of the practice standards**. Each practice standard is connected to grade/course-level content in a meaningful way and is present throughout the year in assignments, activities, and/or problems.	**Yes**	Materials attend to the full meaning of each practice standard. Each practice standard is connected to grade-level content and is meaningfully present throughout the materials. The materials provide students with an opportunity to engage with the practice standards in each lesson. The materials support the students in the development of the practice standards while enriching the grade-level standards. For example, in Unit 1, Lesson 9, students determine how to decompose a solid figure composed of two rectangular prisms to match a given expression (LSSM 5.MD.C.5c, 5.OA.A.2). In doing so, students reason abstractly (MP.2) and look for and make use of structure (MP.7).

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			After practicing this in Activity 2, students explain which part of a given figure is represented by the provided expression, 3 x 7 x 9 cubic inches, in the Lesson Synthesis. Unit 7, Lesson 10, students generate two patterns and observe the relationships between their corresponding terms (LSSM 5.OA.B.3). Students think abstractly as they determine rules for given patterns and express the relationship between patterns using equations (MP.2). In Unit 8, Lesson 8, students solve problems involving volume. In Activity 1, students reason abstractly and quantitatively (MP.2) as they apply what they know about multiplication and division as they find out how many bags of sand it takes to fill a wagon and then find the cost and weight of the sand (LSSM 5.MD.C.5). In Activity 2, students make sense of problems by reasoning about multiplication and division as they fill the wagon with boxes of sand. Given certain constraints, such as the boxes do not fill the wagon completely, they persevere in finding the solution (MP.1).
	Required **4b)** Materials provide sufficient opportunities for students to **construct viable arguments and critique the arguments of others** concerning key grade/course-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. The materials provide opportunities for students to discuss and justify their thinking and reasoning for the strategies they used to solve problems. From the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			beginning of the year, students engage with MP.3. In Lesson 1, Activity 1, students discuss and justify their decisions to build objects with cubes while also critiquing a peer's reasoning for recognizing that objects with the same volume take up the same amount of space even if they look differently (i.e., longer or wider). During the Warm-Up of Unit 1, Lesson 4, students use the structure of a rectangular prism to think about a reasonable estimate and share a mathematical claim with their peers. Later in Lesson 7, students discuss and defend different points of view as students consider how the size of an object impacts the unit used to measure the volume of that object. The activity does not have mathematically correct or incorrect answers, so it lends students the opportunity to engage in productive discourse. In Unit 3, Lesson 12, Activity 2, Priya's Work, students examine an error to recognize the relationship between the number of pieces the fraction is being divided into and the size of the resulting pieces. Students examine Priya's incorrect explanation and revise her explanation. In Unit 5, Lesson 2, the Warm-up Launch displays a diagram and asks "What is an estimate that's too high?" "Too low?" and "About right?" Throughout the lesson, the teacher asks several questions to stimulate students' thought processes and encourage mathematical discourse. In Unit 8, Lesson 5, Activity 1, students

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			construct an argument and critique the reasoning of others as they defend a strategy to solve a division problem. Students compare their strategy with Elena's and reason about the similarities and differences using their understanding of place value.
	Required **4c)** Materials explicitly attend to the **specialized language** of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. Throughout each unit, the lessons and activities use precise mathematical language and encourage the use of the correct mathematical language when discussing skills, concepts, solutions, and strategies. Glossary entries are provided for each unit. These entries include the academic language necessary for the unit along with grade-appropriate definitions. Within the Mathematical Language Development and Access for English Learners section of the How to Use These Materials guide, Principal 3 calls for cultivating conversations and states, “Conversations act as scaffolds for students developing mathematical language because they provide opportunities to simultaneously make meaning, communicate that meaning, and refine the way content understandings are communicated.” Mathematical Language Routines (MLRs) are “instructional routines that provide structured but adaptable formats for amplifying, assessing, and developing students’ language.” The MLRs are embedded

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			throughout the materials with explanations, and instructions for using the MLRs are provided in the How to Use These Materials guide. The MLRs include the following routines: Stronger and Clearer Each Time; Collect and Display; Clarify, Critique, Correct; Information Gap; Co-Craft Questions; Three Reads; Compare and Connect; and Discussion Supports. For example, MLR 4 Information Gap creates the need for students to communicate using precise language. During the routine the teacher positions some students as holders of information that is needed by other students to accomplish a goal. Because there is an information gap, students orally share ideas and information to bridge the gap. Sentence Frames are also embedded throughout the activities and lessons that "support student language production by providing structure to communicate about a topic." Mathematical terminology is built within each lesson, and students answer questions throughout the lessons that reinforce and enhance their mathematical language. In addition, student sample responses include mathematical language to set the expectation for student use. For example, Unit 1, Lesson 2, Warm-Up allows the use of informal language to describe the structure and orientation of the objects; however, a note to the teacher within the Teacher Guide states that later in the lesson, during the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			synthesis of Activity 2, students will use language precisely and connect the informal language to more formal math vocabulary. After the activity, the teacher asks, “What language did your partner use that was most helpful for you to understand the prism they wanted you to build?” and “How did you describe your prism to your partner?” The teacher is also guided to update a classroom display by adding or removing language, diagrams, and annotations to mirror the appropriate mathematical terminology. The teacher then asks, “How can we describe this prism using language from our display?” Later, in Lesson 5, during the Lesson Synthesis, the teacher asks, “What language can we add to our poster to explain how to find the volume of a prism when we can’t see the cubes?” A sample student response is provided which states, “We can multiply the area of the base and the height or the length, width and height.” In Unit 3, Lesson 17, Activity 1, Info Gap: Tiles, students are given either a problem or a data card. Students read their cards to determine and request information needed to solve problems. Students make sense of problems by determining necessary information and then asking for information they need to solve it. This exchange lasts several rounds and allows students the opportunity to refine their language and ask increasingly

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			more precise questions until they get the needed information.
	4d) 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. The Standards for Mathematical Practices Chart included in the How to Use These Materials guide highlights lessons that "showcase certain Mathematical Practices." For example, in Unit 4, students utilize MP.4 in Lessons 16 and 18–21. In Unit 7, students utilize MP.7 in Lessons 3–5, 9, 12, and 13. This section also connects many of the instructional routines to the practice standards. For example, as students engage in the Which One Doesn't Belong routine, students attend to precision (MP.6). As students engage in the How Many Do You See routine and subitize or use grouping strategies to describe images they see, they look for and make use of structure (MP.7). This section includes additional guidance for teachers in supporting students in their development of the practice standards such as "How you can use the Mathematical Practices Chart" and "Standards for Mathematical Student Facing Learning Targets." Guidance is also embedded throughout the Teacher's Edition. The Lesson Narrative often explains how students will utilize the practice standards in the lesson. For example, Unit 1, Lesson 9, the Lesson

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Narrative notes the use of MP.2 and MP.7 as students find the volume of figures composed of two non-overlapping right rectangular prisms by adding the volume of the non-overlapping parts. Guidance states that students "apply the volume formulas, make connections between expressions and the way the figures can be decomposed. Given an expression and a solid figure composed of two rectangular prisms, students determine how to decompose the figure to match the given expression (MP.2, MP.7). The very next lesson continues to call out those two practice standards in the teacher notes while also providing the opportunity for critiquing peers' reasoning (MP.3) as students use what they know about volume, geometric figures, and the properties of operations to justify the equivalence of expressions. Teachers have multiple opportunities to support students in the development of the practices as teacher guidance is also provided throughout the lessons and activities. For example, in Unit 3, Lesson 3, Activity 1, students notice the structure in a series of diagrams and the expressions that represent them. Teacher guidance states, "Students see how the diagram represents the multiplication expression and how the diagram helps find the value of the expression (MP.7)" and "Through repeated reasoning, they also begin to see how to find the value of a product using

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			any two unit fractions (MP.8).” In Unit 7, Lesson 9, Activity 1, teacher notes state that “students generate two different patterns, given two different rules, and recognize relationships between corresponding terms (MP.7)” and “when students find and explain patterns related to the rules and relationships, they look for and express regularity in repeated reasoning (MP8).”
Section II: Additional Alignment Criteria and Indicators 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 grade/course-level problems.		See EdReports for more information.
	Required **5b)** Materials **relate grade/course-level concepts explicitly to prior knowledge** from earlier grades and courses. The materials are designed so that prior knowledge is extended to accommodate the new knowledge, building to core instruction, on grade/course-level work. Lessons are appropriately **structured and scaffolded** to support student mastery.		
	Required **5c)** There is **variety** in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade/course-appropriate way, arguments and explanations, diagrams, mathematical models, etc.		
	5d) Support for **English Language Learners and other special populations** is provided. The language in which problems are posed is not an obstacle to understanding the content, and if it is, additional supports (suggestions for modifications, “vocabulary to preview”, etc.,) are included.		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
6. QUALITY OF ASSESSMENTS: Materials offer assessment opportunities that genuinely measure progress and elicit direct, observable evidence of the degree to which students can independently demonstrate the assessed grade-specific Louisiana Student Standards for Mathematics. ☐ Yes ☐ No	**Required** **6a)** Multiple **assessment opportunities** are embedded into content materials and measure student mastery of standards that reflect the balance of the standards as presented in materials.		
	Required **6b)** Assessment items include a **combination of tasks** that require students to demonstrate conceptual understanding, demonstrate procedural skill and fluency, and apply mathematical reasoning and modeling in real world context. Assessment items require students to produce answers and solutions, arguments, explanations, and models, in a grade/course-appropriate way.		
	6c) Scoring guidelines and rubrics align to standards, incorporate criteria that are specific, observable, and measurable, and provide sufficient guidance for interpreting student performance, misconceptions, and targeted support to engage in core instruction.		
	6d) Materials provide 2-3 **comprehensive assessments** (interims/benchmarks) that measure student learning up to the point of administration.		
7. ADDITIONAL INDICATORS OF QUALITY: Materials are well organized and provide teacher guidance for units and lessons. Materials provide timely supports to target specific skills/concepts to address students' unfinished learning in order to access grade-level work.	**Required** **7a)** The content can be **reasonably completed** within a regular school year and the pacing of content allows for maximum student understanding. The materials provide guidance about the amount of time a task might reasonably take.		
	Required **7b)** The materials are **easy to use and well organized** for students and teachers. Teacher editions are concise and easy to manage with clear connections between teacher resources. Guidance is provided for lesson planning and instructional delivery, lesson flow,		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
☐ Yes ☐ No	questions to help prompt student thinking, and expected student outcomes.		
	Required **7c)** Materials include unit and lesson **study tools for teachers**, including, but not limited to, an explanation of the mathematics of each unit and mathematical point of each lesson as it relates to the organizing concepts of the unit and discussion on student ways of thinking and anticipating a variety of student responses.		
	7d) Materials **identify prerequisite skills and concepts** for the major work of the grade/course, connected to the current on-grade/course-level work.	**Yes**	Materials identify prerequisite skills and concepts for the major work of the grade. The materials identify prerequisite skills when applicable. Prerequisite skills can be found in Unit and Section Learning Goals, as well as the Lesson Narratives. The practice problems for Section A in each unit have several items designated as pre-unit assessment items. The pre-unit assessment items include the standard being addressed, noting the pre-requisite skills of the unit. For example, in Unit 2, Section A Practice Problems, Problem 1 assesses LSSM 3.NFA.2b, Problem 2 assesses LSSM 3.NF.A.1, Problem 3 assesses LSSM 4.NF.B.4b, Problem 4 assesses LSSM 4.NF.B.4c, and Problem 5 assesses LSSM 3.OA.A.2 and 4.OA.A.2. According to the "A Typical IM Lesson," the Warm Up section of the lesson includes an instructional routine that practices previously taught concepts or previews a new concept in the day's lesson. Each unit also includes a Unit Learning Goals section that describes the learning within the unit along with the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			skills and concepts that should have been developed prior to the unit. For example, the Unit Learning Goals for Unit 2 states, "In this unit, students learn to interpret a fraction as a quotient and extend their understanding of multiplication of a whole number and a fraction. In grade 3, students made sense of multiplication and division of whole numbers in terms of equal-size groups. In grade 4, they used multiplication to represent equal-sized groups with a fractional amount in each group and to express comparison." Additionally, each lesson lists the standard(s) addressed in the lessons, as well as Building On standards, when applicable. For example, Unit 2, Lesson 1 addresses LSSM 5.NF.B.3, while building on LSSM 3.NF.A.1 and 3.OA.A.2.
	7e) Materials provide guidance to help teachers **identify students** who need prerequisite work to engage successfully in core instruction, on-grade/course-level work.	**Yes**	Materials provide guidance to help teachers identify students who need prerequisite work to engage successfully in core instruction, on-grade-level work. The Pre-Unit Practice problems included in Section A of each unit provide an assessment of prerequisite concepts and skills directly aligned to upcoming grade-level standards and content. Guidance instructs teachers to use these items to identify any gaps in learning and encourages teachers "to address those prerequisite skills while continuing to work through on-grade tasks and concepts of each unit."

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	7f) Materials provide **targeted, aligned, prerequisite work** for the major work of the grade/course, directly connected to specific lessons and units in the curriculum.	**Yes**	Materials provide targeted, aligned, prerequisite work for the major work of the grade directly connected to specific lessons and units in the curriculum. After teachers analyze student results of the Pre-Unit Practice Problems that address prerequisite concepts and skills for the unit, they are encouraged to address prerequisite skills while continuing to work through on-grade tasks and concepts of each unit and "look for opportunities within the upcoming unit where the target skill or concept could be addressed in context or with a center." For example, in Unit 2, Section A Practice Problems, Problem 3 assesses LSSM 4.NF.B.4b and Problem 4 assesses LSSM 4.NF.B.4c. If students struggle with these items, they are encouraged to engage in the Rolling for Fractions (3-5), Stage 2: Multiplying a Fraction by a Whole Number center during Unit 2, Section A, Lessons 1 and 2. During the center, "students roll 3 number cubes to generate a multiplication expression with a whole number and a fraction and compare the value of the expression to 1 in order to determine how many points are earned" which addresses LSSM 4.NF.B.4. Additionally, the Pacing Guide and Dependency Diagram section, located within the Course Guide, includes Section Dependency Diagrams with "an arrow that indicates the prior section that contains content most directly designed to support or build toward the content in the current

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			section." For example, Grade 4, Unit 3, Section A, Equal Groups of Fractions is designated as the prior section for Grade 5, Unit 3, Section A, Fraction Multiplication.
	7g) Materials provide **clear guidance and support** for teachers about the structures that allow students to appropriately address unfinished learning using prerequisite work.		See EdReports for more information.

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	Final Justification/Comments
I: Non-negotiable Criteria of Superior Quality[5]	1. Focus on Major Work	**Yes**	Materials devote a large majority of time to the major work of the grade. 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 in which they are introduced.
	2. Consistent, Coherent Content	**Yes**	The 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 serve to connect two or more clusters in a domain in a grade, in cases where these connections are natural and important.

[5] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier 1 or Tier 2 rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	3. Rigor and Balance	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by featuring high-quality conceptual problems and discussion questions. The materials are designed so that students attain the fluencies and procedural skills required by the content standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. 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 attend to the full meaning of the practice standards. Materials provide sufficient opportunities for students to construct viable arguments of others concerning key grade-level mathematics that is detailed in the content standards. Materials explicitly attend to the specialized language of mathematics. There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.
II: Additional Alignment Criteria and Indicators of Superior Quality[6]	5. Alignment Criteria for Standards for Mathematical Content		See EdReports for more information.

[6] Must score a "Yes" for all Additional Criteria of Superior Quality to receive a Tier 1 rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	6. Quality of Assessments		See EdReports for more information.
	7. Additional Indicators of Quality		Materials identify prerequisite skills and concepts for the major work of the grade, connected to the current on-grade level work. Materials provide guidance to help teachers identify students who need prerequisite work to engage successfully in core instruction, on-grade level work. Materials provide targeted, aligned, prerequisite work for the major work of the grade, directly connected to specific lessons and units in the curriculum.
FINAL DECISION FOR THIS MATERIAL: **Tier 1, 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 2021-2022 Teacher Leader Advisors are selected from across the state and represent the following parishes and school systems: Acadia, Ascension, Baton Rouge Diocese, Beauregard, Bossier, Calcasieu, Central Community, City of Monroe, Desoto, East Baton Rouge, East Feliciana, Evangeline, Franklin, Iberia, Jefferson, Lafayette, Lafourche, Lincoln, Livingston, Louisiana Tech University, Louisiana Virtual Charter Academy, Orleans, Ouachita, Rapides, Regina Coeli Child Development Center, Richland, Special School District, St. Charles, St. John, St. Landry, St. Martin, St. Mary, St. Tammany, Tangipahoa, Terrebonne, University View Academy, Vermillion, West Baton Rouge, and West Feliciana. 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.