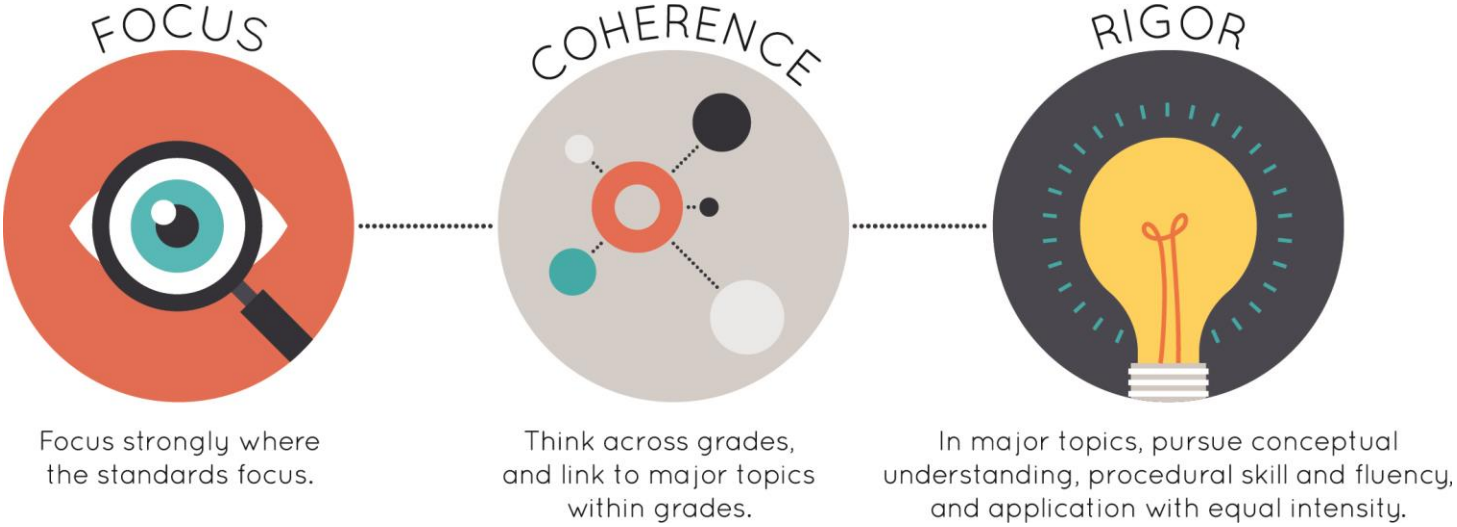
Instructional Materials Evaluation Tool for Alignment in Mathematics Grades K – 12 (IMET)

FULL CURRICULUM
Instructional Materials

Qualified for Abbreviated Review[1]

Strong mathematics instruction contains the following elements:



Title: **Illustrative Mathematics**

Grade/Course: **K-5**

Publisher: **Imagine Learning LLC**

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/imagine-learning-illustrative-mathematics-k-5-math-2021.

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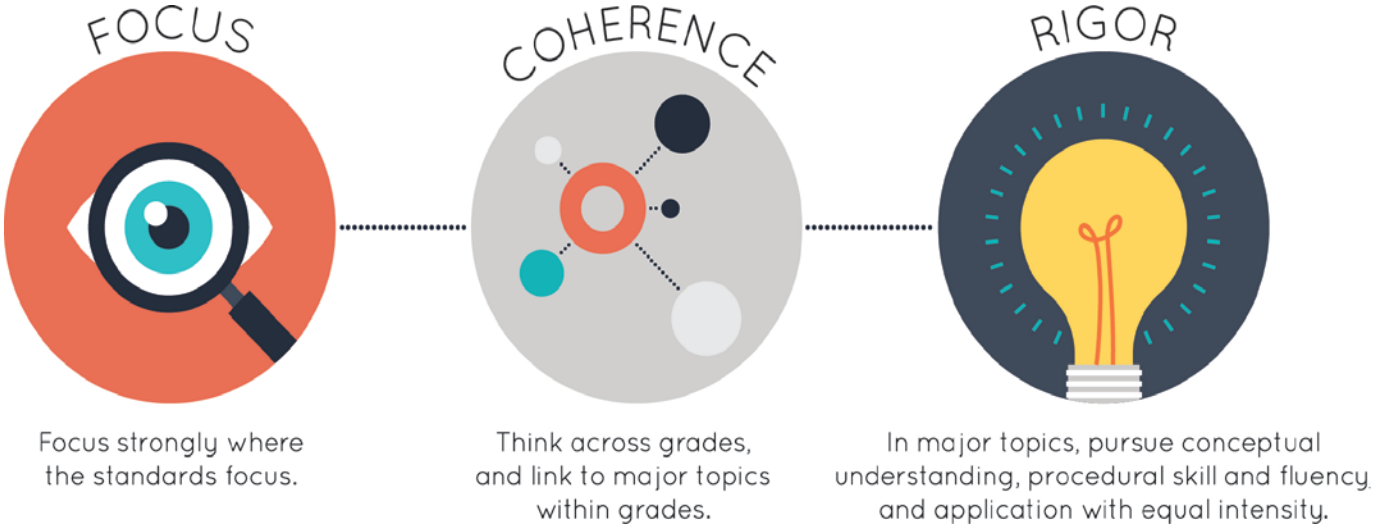

Title: **Illustrative Mathematics**

Grade/Course: **K**

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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 124 instructional lessons, 90% of lessons are spent on major work of the grade. Specifically, 71% of lessons are spent on major standards, 19% of lessons are spent on a combination of major standards and supporting/additional standards, and 10% of lessons are spent on supporting or additional standards. The materials include 13 lessons 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 level. In assessment materials, assessment components do not make students/teachers responsible for any topics before the grade in which they are introduced. All lessons across units are related to grade-level work and align to the Louisiana Standards for Mathematics (LSSM) for Grade K. Assessments associated with the instructional material access on grade-level standards. For example, in Unit 4, students develop their understanding of addition and subtraction as they represent and solve story problems (LSSM K.OA.A.2). In Section A of

[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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			Unit 4 (Lessons 1-5), students understand addition as putting together two groups and counting the total number of objects and subtracting as taking away a number of objects from a group and counting what remains (LSSM K.CC.B.5). In Lesson 5, students use objects to show the action of addition. Students use counters to show 3 + 4. They start with 3 counters then add 4 more counters and count the total number of counters (LSSM K.OA.A.1) and then write the total in the box (LSSM K.CC.A.3). In Section B of Unit 4, students represent and solve story problems within 10 (LSSM K.OA.A.2). The type of problems in this section are limited to add to, result unknown, and take from, result unknown. In Lesson 8 of Unit 4, students show what happens in a story problem and solve it, such as: “8 birds were splashing in the fountain. 3 birds flew away.” Students use the counters to show 8 birds and then take away 3 counters to show that 3 birds flew away (LSSM K.OA.A.2). The Unit 4 End-of-Unit Assessment assesses grade-level content. On problem 4, students match each picture with the expression it shows, such as 5 + 3 and the picture that shows 8 blocks (LSSM K.OA.A.1). On problem 5, students write the value of each expression. Students draw in the box to show 3 + 2 and then write the total in the blank (LSSM K.CC.A.3). Unit 5, Make and Break Apart 10, begins with Section A, Making and Breaking Apart Numbers to 9,

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			leading into Section C, Make and Break Apart 10. Lesson 10 introduces students to the 10-frame, whereas in previous lessons students used 5-frames. Lesson 11 focuses on equations that show 10. The Warm-Up activities provide a variety of pictorial and numerical equations which make 10. The 11.1 activity provides a combination of 10 with red and yellow counters next to several equations. Students choose the equation that matches the counters in the 10-frame. Problem 5 includes 8 red dots and 2 yellow dots in a 10-frame. Students choose 10 = 8 + 2 as the correct match. Activity 11.2 switches to fingers. Students observe two sets of hands with some fingers colored red and the rest blue. They think about what is different about the hands. Both sets of hands represent 8 + 2, one set with 8 red fingers and 2 blue. The other hand shows 8 blue fingers and 2 red. These lessons focus on representing addition with objects and fingers as putting together (LSSM K.OA.A.1).
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. Major work is developed prior to lessons that address supporting standards and, when supporting standards are addressed, the lessons reinforce major work of the grade by connecting back to the major standards. The supporting content is to classify objects and count the number of

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			objects in categories (LSSM K.M.B), work with money (LSSM K.MD.C), and analyze, compare, create, and compose shapes (LSSM K.G.B). The materials connect these supporting standards to the major content of the grade. For example, in Unit 3, Lesson 5 students identify, describe, and compare circles and triangles. Students analyze two groups of objects: one with triangles and the other with circles. Students discuss with their partner what they notice about each group (LSSM K.G.B.4). As the lesson goes on, students begin to sort objects into two groups: objects that appear to be a triangle and objects that are not. As the lesson closes, students work with a partner to figure out how many objects are in each collection by counting the objects (LSSM K.CC.B.5) and then writing the total number of objects in each collection (LSSM K.CC.A.3), reinforcing major work of the grade that is developed in Unit 2. In Unit 7, Solid Shapes All Around Us, students identify, describe, analyze, compare, and compose two- and three-dimensional shapes. Counting, addition, and subtraction concepts (K.CC, K.OA), previously developed in Units 4 and 5, are revisited in the geometric contexts as students count and compare numbers and solve story problems involving shapes (LSSM K.G.B.4, K.G.B.5, K.G.B.6). In Lessons 1-3, students reinforce number concepts while working with pattern blocks. For example, in

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			Lesson 3, students put pattern blocks together to make a shape and answer questions such as, “How many squares did you use?” and “Did [you] use more triangles or rhombuses?” (LSSM K.G.B.6).
	Required **2b)** Materials include problems and activities that serve to connect two or more **clusters in a domain**, or two or more **domains in a grade/course**, in cases where these connections are natural and important.	**Yes**	Materials 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 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 6, Lesson 9 connects the Number and Operations in Base Ten (NBT) and Operations and Algebraic Thinking (OA) domains. During the lesson, students connect their understanding of numbers 11-19 as ten ones and some more ones to expressions (10 + __) (LSSM K.NBT.A.1a). Students then match equations to 10-frame representations of teen numbers (LSSM K.OA.A.1). For example, students use a 10-frame with 9 extra counters. Students match the 10-frame model to the correct equation, 10 + 9 = 19. By using 10-frames, students gain an understanding that numbers are composed of ten ones and some extra

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			ones (LSSM K.NBT.A.1a). Unit 8, Lesson 2 connects the Counting and Cardinality (CC) and Number and Operations in Base Ten (NBT) domains. During the Warm-Up, students observe 15 dots, ten of which are in a 10-frame and answer the questions "How many do you see?" and "How do you see them?" The Warm-Up continues with 13 and 19 (LSSM K.NBT.A.1). In Activity 1, students count up to 20 objects in collections and then use drawings, numbers, and words to describe what they counted (LSSM K.CC.A.3, K.CC.B.4, K.CC.B.5). Students who organized their collections are asked to share how and why they chose to organize the collections to deepen their understanding of place value. Lesson 3 integrates the Counting and Cardinality (CC) and Operations and Algebraic Thinking (OA) domains through story problems. Students use their knowledge of the counting process to solve add to, result unknown, and take from, result unknown story problems. In Activity 1, students use connecting cubes and 10-frame mats to solve story problems about people on a bus, such as "There were 7 people on the bus. Then 1 more person got on the bus. How many people are on the bus now?" Students show their thinking using objects, drawings, numbers, or words to solve for 8. Students then solve: "There were 10 people on the bus. Then 1 person got off the bus. How many people are on the bus

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			now?" Students show their thinking using objects, drawings, numbers, or words to solve for 9 (LSSM K.CC.A.2, K.CC.B.4.c, K.OA.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. For example, in Unit 1, students develop an understanding of numbers and quantities by working towards counting up to ten and answering "how many of ___ are there?" questions by the end of the unit (LSSM K.CC.A.1, K.CC.B.4). Students use a variety of objects such as connecting cubes, pattern blocks, counters, 5-frames, and geoblocks as they progress from recognizing quantities to counting collections of objects. Students also engage in several routines such as Notice and Wonder, Act it Out, How Many Do You See, and Questions About Us to develop and demonstrate conceptual understanding. In Unit 5, Lesson 12, students compose and decompose 10 in multiple ways and find the number that makes 10 when added to a given number (LSSM K.OA.A.4). In the lesson, students

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			complete an activity called “Shake, Spill, and Arrange 10.” In groups of two, students take turns shaking and spilling 10 counters. Students then arrange the counters in 10 frames with 5 yellow counters and 5 red counters. Students use their counters to show equations, such as 10 = 8 + 2 using either 8 red counters and 2 yellow counters or 2 red counters and 8 yellow counters. Students continue building 10 with their red and yellow counters. In Unit 7, Solid Shapes All Around Us, Lesson 10, students correctly name shapes (LSSM K.G.A.2) and build shapes from clay (LSSM K.G.B.5). Students begin by using clay to build a shape that looks like a ball and identifying if it is flat or solid. Then they identify it as a sphere. Then they pick up an object that looks like a can and make it out of clay, repeating the same process as they did with the sphere. They repeat this process with a cube and cone. In the second part of the lesson, students work with partners to find geoblocks according to their description clues or attributes. In Unit 8, Lesson 15, students use two cards and find the sum or difference of each expression on the card. Students then compare the amounts to which is more. For example, two students are given a set of cards with the following expressions: 2 + 0 = __ and 4 + 1 = __. Students find the sum of each expression and determine which amount is the greatest (LSSM K.CC.C.6).

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	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 provide sufficient supports and opportunities to help students attain the required fluencies of the grade. In Kindergarten, students build fluency with adding and subtracting within 5 (LSSM K.OA.A.5). The lessons and activities provide several opportunities for students to add and subtract within 5. In Unit 6, Lesson 3, students develop fluency with addition and subtraction within 5 as they find the number that makes 5 when added 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). Warm-Up activities are provided within the materials and provide students the opportunity to strengthen their number sense or procedural skill and fluency. 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). In Unit 2, Lesson 12 students write numbers from 0 to 20 (LSSM K.CC.A.3). Students connect quantities to written and spoken numbers. For example, students find the bag that has the given number of objects, such as 8. Students sort through the bags to see which bag has the correct number of

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			objects. As the lesson progresses, students choose a bag, count the number of objects in the bag, and write the total number. In Unit 4, Lesson 1, students count the total number of pattern blocks in their bag, determine the number of pattern blocks included, and write a number to record the total (LSSM K.CC.B.5). In Unit 8, Putting it All Together, Lesson 7, students Warm-Up with building fluency of adding and subtracting within 5 (LSSM K.AO.A.5). Students subitize dots in different formations and explain how many they see and how they see them. Later in the lesson students write numbers and draw pictures to represent different things in their school (LSSM K.CC.A.3).
	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. LSSM K.OA.A.2 is the only application standard for Kindergarten. In Unit 5, Lesson 5, students recognize whether a story problem is an addition problem or a subtraction problem. Students show their thinking by using drawings, numbers, words, or objects. For example, students solve the following problem: “Elena was shopping at the market with her grandfather. Elena chose 4 mangoes. Her grandfather chose 2 pineapples. How many pieces of fruit did they choose?” Students decide whether to add or subtract to find how many pieces of fruit were chosen. Students apply their addition/subtraction strategy of drawing a

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			picture and taking away or adding items as necessary (LSSM K.OA.A.2). In Unit 4, Lesson 9, students interpret how a drawing represents a story problem and solve a Take From, Result Unknown story problem. For example, the teacher reads the following problem to the students: "There were 4 markers at school. Elena brought 3 more markers to school. How many markers are at school now?" Students use connecting cubes to represent the problem and solve it. Students can also represent the problem by drawing a picture to represent the 4 markers that were at school and then the 3 markers Elena brought to school (LSSM K.OA.A.2). In Unit 4, Lesson 7, students use objects to act out story problems. In Lesson 8, students represent and solve story problems (LSSM K.OA.A.2). Students read questionless story problems that they discuss with a partner. They come up with questions they could ask about the story. Later students read story problems and show their thinking with objects, drawings, numbers, or words.
	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. A majority of the standards for Kindergarten focus on conceptual understanding. The materials focus on conceptual understanding in Unit 1 as students build an understanding of the relationship between numbers and

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			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 2, Lesson 6, students use the terms more, fewer, and same to describe groups by exploring bags of materials and then determine the statement that matches or correctly describes the materials in the bag, such as “In this bag there are more red cubes than blue cubes.” Next students use cube towers and when given the signal, they find a partner to compare towers with using more, fewer, or same (LSSM K.CC.C.6). 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 practice standards are included in the section overview of each unit and in the teacher notes of each lesson. For example, 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. In Unit 4, Lesson 2, Warm-Up, the teacher asks students which season they prefer, winter or summer, and records student responses by placing circles in a 5-frame. Students then determine how many

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			students like winter better by counting (LSSM K.CC.B.5). Students use the structure of the 5-frame cards to determine how many students made each choice (MP.7). In Unit 7, Lesson 10, students write equations to show numbers 11-19 (LSSM K.NBT.A.1). Because students have only composed and decomposed numbers 11-19 as ten ones and some more ones throughout the unit, they express regularity in repeated reasoning (MP.8) by using 10 + __ to solve the problems.
	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. Opportunities to construct viable arguments and critique the arguments of others are embedded in the lessons and activities. For example, in Unit 2, Lesson 17, students build cube towers to match each number from 1–10. In this activity, students put cube towers and numbers in order in a way that makes sense to them. Students may order the towers first and then match the numbers to the towers, match the numbers first and then match the towers to the numbers, or they may order the towers and the numbers separately. Students then discuss their ordering strategy with their partner. In Unit 8, Lesson 20 students decide if there are more or fewer than 10 objects in a

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			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. In Unit 3, students form and discuss an opinion about two of three bears that are similar. Because more than one correct answer exists, the discussion leads to the critiquing and reasoning of others. Students build upon each other's thinking and opinions until the teacher discloses there are multiple reasons why each of the bears could be excluded. In Unit 6, students Warm-Up by looking at dot cards. They are asked "How many do you see?" and "How do you see them?" Students share the different ways they see the number of dots.
	Required **4c)** Materials explicitly attend to the **specialized language** of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. The materials encourage the use of accurate mathematical terminology. The materials include Warm-Up Routines intended to elicit student discussion and support the development of student thinking and precision with mathematical language, such as Notice and Wonder, Number Talk, Questions About Us, and What Do You Know About ___? For example, teacher

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			guidance states that What Do You Know About ___? routine "elicits students' ideas of numbers, place value, operations, and groupings through visuals of quantity, expressions, and other representations." Math Language Routines (MLRs) provide additional supports that can be used as "an embedded structure of a lesson activity in which all students engage, or as a suggested optional support specifically for English Learners. For example, MLR8 Discussion Supports include strategies the teacher can use to support mathematical discourse, such as "Revoice student ideas to demonstrate mathematical language use by restating a statement as a question" and "Demonstrate use of disciplinary language functions such as detailing steps, describing and justifying reasoning, and questioning strategies." The materials include a glossary of terms used in each lesson. The vocabulary section in the units also provides guidance to teachers on how to use the vocabulary cards in the lesson. Teachers can project the vocabulary cards as slides and discuss the terms with students. Teachers can also print the cards out and post them around the classroom to encourage students to use the correct terminology throughout the unit. Sample student responses are provided throughout the materials, setting the expectation for students to use mathematical language in their discussions and responses. For example, in

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			Unit 5, Lesson 11, students learn about the term equation. During the Warm-Up activity, students engage in a Notice and Wonder routine intended to "elicit the idea that expressions and equations can be used to represent different compositions and decompositions of 10." Sample student responses include "There are pictures and expressions." "They are all ten." and "Each expression has different numbers." Then, in the Warm-Up Synthesis, the teacher writes out 10 = 7 + 3 and introduces the term equation. This activity prepares students for the next activity in which they match equations to 10-frames. In Unit 7, students identify, describe, analyze, compare, and compose two- and three-dimensional shapes. The unit includes the terms cone, cube, and cylinder. In Lesson 10, students identify and describe solid shapes. In Activity 1, students use clay to make a shape that looks like a ball. Students then determine if the shape is flat or solid and explain why. The teacher then identifies the shape as a sphere. The same activity structure is used for the cylinder, cube, and cone. In Activity 2, students describe shapes in their own language and provide clues so that their partner can identify the solid shapes provided.
	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
			instructional material includes a Standards Overview section that lists the content standards and mathematical practice standards addressed in each lesson. The Teacher Guide for each Unit includes guidance on the practices used within the activities. The Teacher Notes section of each lesson also lists the practice standards used and how the practice standards are used within the lesson. In Unit 4, Lesson 17, students add 0 and 1. During Activity 2, students observe Diego and Mai's recorded addition expressions and their values. The expression includes numbers added to 0 and 1. The Teacher Notes state, "The purpose of this activity is to notice the pattern that when 0 is added to a number, the number stays the same and the pattern that when 1 is added to a number, the total is the next number in the count sequence, or 1 more (MP7)." In Unit 1, Lesson 6, students look for small groups of objects. In Activity 2, students recognize and name quantities in picture books. The Teacher Notes state, "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."

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
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 Student Standards for Mathematics.	**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		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
☐ Yes ☐ No	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 when applicable. The materials state 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." 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, "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" (LSSM K.CC.A.3, LSSM K.CC.B.5, LSSM K.G.B.4, and LSSM K.CC.C.7). This unit builds upon skills and concepts developed in Unit 3 where they investigated two-dimensional shapes, named and described shapes, used pattern blocks to build larger shapes and used positional words along the way.
	7e) Materials provide guidance to help teachers **identify students** who need prerequisite work to engage	**No**	Materials do not provide guidance to help teachers identify students who need

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	successfully in core instruction, on-grade/course-level work.		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. However, the Full Unit Narrative for Unit 1 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."
	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.	**No**	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. While the materials provide Adaptation Packs that address unfinished learning for Grades 1-5, an Adaptation Pack is not included for Grade K.
	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**	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

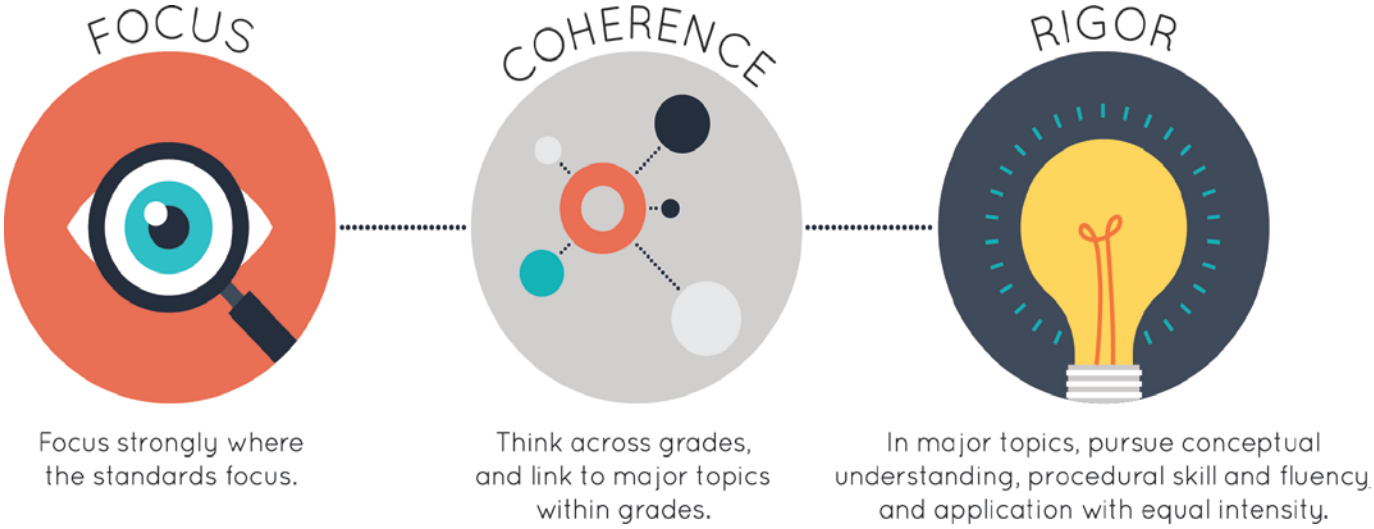
[5] Must score a "Yes" for all Non-negotiable Criteria to receive a Tier 1 or Tier 2 rating.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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.
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: **1**

Publisher: **Imagine Learning LLC**

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 at https://www.edreports.org/reports/overview/imagine-learning-illustrative-mathematics-k-5-math-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, 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. All lessons across units are related to grade-level work and align to the Louisiana Standards for Mathematics (LSSM) for Grade 1. Assessments associated with the instructional material access on grade-level standards. Optional lessons are clearly marked within the instructional material, such as Unit 1, Lesson 15. Unit 4 develops students' understanding of the structure of numbers

[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
			in base ten, providing students the opportunity to see that the two digits of a two-digit number represent the number of tens and ones. Section A, Lessons 1-5 of Unit 4 focuses on adding and subtracting multiples of 10 (LSSM 1.NBT.C.6) and representing the base-ten structure of multiples of 10 up to 90 using towers of 10, drawings, numbers, or words. In Section C, Lessons 14-18 of Unit 4, students compare 2 two-digit numbers based on the values of the tens and ones digits, recording the results of comparisons with the symbols >, =, and < (LSSM 1.NBT.B.3). In Lesson 15 of Unit 4, the first activity introduces students to the < and > symbols. Students observe that the larger open space of the symbol faces the greater value. Students relate each symbol to the language “greater than” or “less than” (LSSM 1.NBT.B.3). The End-of-Unit Assessment addresses the following standards addressed in Unit 4: LSSM 1.NBT.A.1, LSSM 1.NBT.C.6, LSSM 1.NBT.B.2, LSSM 1.NBT.C.4, LSSM 1.NBT.B.3, LSSM 1.NBT.C.5. For example, on Problem 1 of the Assessment, students write the number that matches each representation, such as 4 ones and 3 tens represents 43, 5 + 40 represents 45, and 5 tens and 11 ones represent 61 (LSSM 1.NBT.B.2). On Problem 4, students select the number that is greater: 29 or 41 (LSSM NBT.B.3), and, on Problem 3, students find the number that makes the equation true:

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			87 + 10 = ____, 45 + ___ = 75, and 60 - 20 =____ (LSSM 1.NBT.C.4, 1.NBT.C.6, 1.NBT.C.5). In Unit 5, Section C, Checkpoint, students find the value of two-digit numbers within 100 and represent their addition method on paper in ways others will understand (LSSM 1.NBT.C.4). On the Unit 5 End-of-Unit Assessment, students solve 23 + 48 and show their thinking using drawings, numbers, or words (LSSM 1.NBT.C.4). In Unit 3, Adding and Subtracting Within 20, the materials offer 12 digital Cool Downs the teacher can assign to students to check for understanding. The Lesson 5 Cool Down includes two subtraction problems 9 - 6 and 10 - 3 (LSSM 1.OA.C.6). Students solve the problems and show their work. The End-of-Unit Assessment for Unit 3 includes seven problems, some of which contain more than one problem to solve. The second part includes two addition sentences with missing addends 6 + __ = 20 and 10 + __ = 16 (LSSM 1.OA.D.8 & 1.OA.C.6).
Non-negotiable **2. CONSISTENT, COHERENT CONTENT** Each course's instructional materials are coherent and consistent with the content in the Standards. ☒ Yes ☐ No	**Required** **2a)** Materials connect **supporting content to major content** in meaningful ways so that focus and coherence are enhanced throughout the year.	**Yes**	Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. Major work is developed prior to lessons that address supporting standards and, when supporting standards are addressed, the lessons reinforce major work of the grade by connecting back to the major standards. The supporting content of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Grade 1 is to represent and interpret data (LSSM 1.MD.C) and work with money (LSSM 1.MD.D). The materials connect these supporting standards to the major content of Grade 1. 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 students determine 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). 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			supporting work in Lesson 13. While the materials connect supporting work to major work of the grade, the materials do not address LSSM 1.MD.D.5, Determine the value of a collection of coins up to 50 cents (Pennies, nickels, dimes, and quarters in isolation; not to include a combination of different coins).
	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 6, Lesson 9 connects the Number and Operations in Base Ten (NBT) and Measurement and Data (MD) domains. In the lesson, students count groups of between 95 and 120 length units and represent the count using representations of tens and ones (LSSM 1.NBT.A.1). Each group measures a strip of tape using base-ten cubes (LSSM 1.MD.A.2). They determine how to count the cubes and create a representation. 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			(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 8, Putting it All Together, Section A connects Cluster C (Add and subtract within 20) and D (Work with addition and subtraction equations) of the Operations and Algebraic Thinking (OA) domain. In Lesson 2, students work to find the missing number in an equation to make it true (LSSM 1.OA.D.8). They also share how they solved to find the missing number (LSSM 1.OA.C.6). In Unit 2, Addition and Subtraction Story Problems, Section A, students solve add to and take from story problems. Lesson 4 connects Cluster A (Represent and solve problems involving addition and subtraction) and D (Work with addition and subtraction equations) of the Operations and Algebraic (OA) domain. During the lesson, students solve true or false equations, like 10 = 10, 4 + 6 = 10, 2 + 7 = 10 (LSSM 1.OA.D.7). Later students solve addition and subtraction story problems, such as “Mai has 5 graphic novels. She checks out 4 more. How many graphic novels does

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			she have?" (LSSM 1.OA.A.1). Unit 5, Section C, Lesson 10 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 equations 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. 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, students use the Warm-Up activity to add 1 to a number, then 2 to the same number mentally, including 6 + 1, 6 + 2, 8 + 1, 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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 2, students start developing their understanding of subtraction as an unknown addend problem during a Center called “What’s Behind my Back?” In this center, students take turns breaking a tower of ten connecting cubes into two parts and hiding one part behind their back. The other partner first writes an addition equation with a blank box for the missing number, such as 4 + _ = 10, and then solves for the missing part. Students apply the knowledge learned in the Center to further develop their conceptual understanding of LSSM 1.OA.B.4 at the end of Unit 2 as they match equations to a given story problem and then write equations for a given story problem. In Unit 3, Lesson 3, students identify expressions that are equal. For example, students decide if 4 + 3 = 3 + 4 (LSSM 1.OA.B.3). Students use connecting cubes to determine if 4 + 3 is the same amount as 3 + 4. Students also determine if 2 + 6 is equal to 4 + 2 using the connecting cubes

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			and discuss their reasoning with their partner.
	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 provide sufficient support and opportunities to help students attain the required fluencies of the grade. Fluency standards are highlighted within the materials so that sufficient supports and opportunities are provided for practice to help students meet these expectations. 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. Students continue to practice fluently adding and subtracting within ten in the remaining units. In Unit 5, Lesson 6, students add one-digit and two-digit numbers. During the Warm-Up, students mentally find the value of two one-digit numbers by first making a ten. The activity provides fluency practice for students in addition to preparing students for making a ten when adding within 20. In Unit 3, students continue to build their fluency with adding and subtracting by developing

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			their fluency with addition and subtraction to 20. For example, students use the relationship between addition and subtraction to develop fluency when adding and subtracting within 20 (LSSM 1.OA.C.6). In Unit 8, Lesson 2, students use the relationship between addition and subtraction to fluently add and subtract within 10 (LSSM 1.OA.C.6). Students use different color connecting cubes to create an equation that represents the connecting cubes, such as 4 blue cubes and 3 tan cubes. In Unit 6, Length Measurements within 120 Units, Lessons 5-11, students express the length of an object as a whole number by laying out shorter objects end to end understanding that the length measurement is the number of same-size objects with no gaps or overlaps (LSSM 1.MD.A.2). In Lesson 6, students use paper clips to measure. In the Warm-Up, students estimate the length of their desks using cubes to measure. Students practice measuring objects with paper clips and comparing answers with peers.
	Required **3c) *Attention to Applications:*** Materials are designed so that teachers and students spend sufficient time working with **engaging applications**, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to	**Yes**	Materials are designed so that students spend sufficient time working with engaging applications. LSSM 1.OA.A.1, LSSM 1.OA.A.2, and LSSM 1.MD.C.4 are the only application standards for Grade 1. In Unit 1, Lesson 12 students answer questions about data using two different representations, tally marks and numbers. The different representations provide

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	those places in the content standards where expectations for multi-step and real-world problems are explicit.		students with different entry points into solving Put Together problems based on data. Students discuss how different representations can be helpful in different ways to answer questions about categorical data (LSSM 1.MD.C.4). Unit 2 focuses on students using pictures, numbers, and words to solve Add to/Take From, Change Unknown, Put Together/Take Apart, Unknowns in All Positions, and Compare and Difference Unknown story problems using the relationship between addition and subtraction. Throughout the unit, students build on their conceptual understanding and procedural skill and fluency of the relationship between addition and subtraction within 10 developed in Unit 1 as they apply the previous learning to real-world story problems. For example, in Unit 2, Lesson 9, students apply their knowledge of the relationship between addition and subtraction within 20 to solve the following real-world story problem: “Han has 8 pets. 5 of his pets are lizards. The rest of his pets are snakes. How many snakes does Han have?” (LSSM 1.OA.A.1). In Unit 3, Lesson 15, students solve story problems with three addends, two of which make ten, by engaging in strategies that make sense to them (LSSM 1.OA.A.2). Students solve problems such as, “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?”

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Students show their thinking using objects, drawings, numbers, or words and write an equation to 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. The materials attend to the balance of rigor as intended by the standards. For example, in Unit 7, Lesson 15 LSSM 1.MD.B.3 (procedural and conceptual) and LSSM 1.NBT.A.1 (procedural and conceptual) are addressed. In this lesson, students connect 30 minutes to telling the time at the half hour (LSSM 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 for students to build a deeper understanding of conceptual strategies and procedural skill and fluency. During Activity 2, students apply their understanding of previously learned strategies for adding within 20 (LSSM 1.OA.C.6) when writing and solving addition equations for real-world story problems based on a game students play in Activity 1 such as: “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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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). In Unit 1, Lesson 2, LSSM 1.OA.C.6 (procedural and conceptual) and LSSM 1.OA.C.5 (conceptual) are addressed. In this lesson, students write addition expressions within 10 (LSSM 1.OA.C.6) and then find the sums by counting on from a number (LSSM 1.OA.C.5). 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.
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 practice standards are included in the section overview of each unit and in the teacher notes of each lesson. For example, in Unit 3, Lesson 15, students solve a story problem with three addends in which two of the addends make 10 (LSSM 1.OA.A.2). Students add 7 + 8 + 3 to find how many birds there are altogether. Students first read the problem carefully to identify quantities before they start on the problem (MP.1) and then choose to use appropriate tools such as counters and a double 10-frame strategically to help them solve the problem (MP.5). In Unit 4, Lesson 8, students interpret three

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			different base-ten representations including base-ten diagrams, ___ tens ___ ones, and addition expressions that represent the value of each digit (LSSM 1.NBT.B.2). During the Warm-Up, Estimation Exploration, students look for and make use of structure (MP.7) as they make estimates based on the number of tens they see and mentally organize the ones into groups of ten. In Activity 8.2, Card Sort: Base-ten Representations, students reason abstractly and quantitatively (MP.2) and look for and make use of structure (MP.7) as they observe three cards and determine which two representations show the same two-digit number and which representation doesn't belong. For example, students observe a model of base-ten blocks that show 4 tens and 1 one, the equation 40 + 1, and the unit form 1 ten 4 ones and determine. Some of the cards within the activity represent the ones to the left of the tens so that students focus on the units and the meaning of any digits.
	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. Opportunities to construct viable arguments and critique the arguments of others are embedded in the lessons and activities. For example, in Unit 5, Lesson 3, students add two-digit numbers using

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			methods of their choice and write equations to match their thinking. Students find the value of 23 + 74 using a method of their choice and then discuss their method with a partner. Students interpret and compare different methods for finding the value of the same sums. Students also practice explaining their own methods and listening to the methods of their peers. In Unit 7, Lesson 11, Activity 2, students use diagrams and words to critique and justify their reasoning of agreeing or disagreeing with the work of Priya and Han in the following problem: “Priya says, ‘I want half of the roti because halves are bigger than fourths.’ Han says, ‘I want a fourth of the roti because fourths are bigger than halves because 4 is bigger than 2.” In Unit 2, Lesson 3, students make sense of an Add To, Change Unknown story problem, and identify the answer within an equation. Students read the following word problem: “Andre checked out some books from the library. Mai gives him more books. Now he has 9 books.” Students then observe Lin’s interpretation of the problem which includes a drawing and equation to represent the problem. Lin draws 3 sticks and then counts on from 3 by drawing 6 more sticks. Lin then goes on to say that 3+ 6 = 9 and boxes in the final answer as 9. Students determine if Lin’s equation is correct and show their thinking using drawings, numbers, or

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			words. Students identify that even though Mai's equation has the correct numbers she identified the wrong number as the solution to the problem.
	Required **4c)** Materials explicitly attend to the **specialized language** of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. The materials encourage the use of accurate mathematical terminology. The materials include Warm-Up Routines intended to elicit student discussion and support the development of student thinking and precision with mathematical language, such as Notice and Wonder, Number Talk, Questions About Us, and What Do You Know About ___? For example, teacher guidance states that What Do You Know About ___? routine "elicits students' ideas of numbers, place value, operations, and groupings through visuals of quantity, expressions, and other representations." Math Language Routines (MLRs) provide additional supports that can be used as "an embedded structure of a lesson activity in which all students engage, or as a suggested optional support specifically for English Learners. For example, MLR8 Discussion Supports include strategies the teacher can use to support mathematical discourse, such as "Revoice student ideas to demonstrate mathematical language use by restating a statement as a question" and "Demonstrate use of disciplinary language functions such as detailing steps, describing and justifying reasoning, and questioning strategies."

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			The materials include a glossary of terms used in each lesson. The vocabulary section in the units also provides guidance to teachers on how to use the vocabulary cards in the lesson. Teachers can project the vocabulary cards as slides and discuss the terms with students. Teachers can also print the cards out and post them around the classroom to encourage students to use the correct terminology throughout the unit. Sample student responses are provided throughout the materials, setting the expectation for students to use mathematical language in their discussions and responses. For example, terms used in Unit 7 include fourths, halves, and o'clock. In Unit 7, Lesson 10, students are introduced to the language of a half of and a fourth of a shape. Students apply the language of halves and fourths, or quarters, to partition each shape. Students describe "how much" of each shape is shaded to elicit a variety of responses that include half, fourth, or quarter, including the phrases "of the square" or "of the circle." 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. The detailed instructional routine for MLR2 is linked to the Lesson Narrative. During Activity 1, students use connecting cubes in towers of tens and single ones to make the numbers 35 and 52, and then in the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Lesson Synthesis, students use their representations to explain their mathematical reasoning of which number is greater with a partner (LSSM NBT.B.3). The teacher circulates, listens, and collects the language students use for their reasoning. Those words are recorded on a visual display and updated throughout the lesson. 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.
	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 instructional material includes a Standards Overview section that lists the content standards and mathematical practice standards addressed in each lesson. The Teacher Guide for each Unit includes guidance on the practices used within the activities. The Teacher Notes section of each lesson also lists the practice standards used and how the practice

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			standards are used within the lesson. For example, in Unit 6, Lesson 5, students critique the reasoning of others (MP.3). During the lesson, students determine the length of images using connecting cubes. They make statements such as "The grasshopper is five cubes long." The teacher notes for the activity state, "Some students may disagree on how to measure with their partner based on where they start and end the measurement, which is the focus of the activity synthesis. When students disagree with each other and explain how they decided to measure each image, they critique the reasoning of others (MP3)." In Unit 2, Lesson 15, Warm-Up, students compare four equations. The teacher notes state that the activity "gives students a reason to use language precisely (MP.6). It gives the teacher an opportunity to hear how students use terminology and talk about characteristics of the items in comparison to one another. During the synthesis, ask students to explain the meaning of the equal sign in their reasoning."
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	**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		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
consistent with the progressions in the Standards. ☐ Yes ☐ No	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. The materials include Adaptation Packs that are used to support students in accessing grade-level mathematics by addressing unfinished learning. Grade 1 includes 3 Adaptation Packs for the first three units of the materials. The Adaptation Packs list the prerequisite

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			standards needed to access grade-level content. For example, the 1.1 Adaptation Pack lists LSSM K.OA.A.2, K.OA.A.5, and K.MD.B.3 as prerequisite standards needed for students to access grade-level content in the unit which addresses LSSM 1.OA.C.5, 1.OA.C.6, and 1.MD.C.4. Each unit provides a Learning Progressions video that details how the content of a unit builds upon prior knowledge. Each unit also includes a Full Unit Narrative 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 Narrative for Unit 1 begins by stating that students "deepen their understanding of addition and subtraction within 10 (LSSM 1.OA.C.6), and extend what they know about organizing objects into categories and representing the quantities (1.MD.C.4). In Kindergarten, students solved addition and subtraction word problems within 10 using objects and drawings. They learned about Put-Together, Result-Unknown problems and worked toward fluency with sums and differences within 5. The activities in this unit reinforce these understandings and initiate the year-long work of developing fluency with sums and differences within 10. Some problems involve finding sums greater than 10, a skill to be honed throughout the course and with the support of tools such as connecting

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			cubes." Additionally, each lesson lists the standard(s) addressed in the lesson, as well as Building On standards, when applicable. For example, Unit 3, Lesson 1 addresses LSSM 1.NBT.A.1, 1.NBT.B.2.a, 1.NBT.B.2.b, 1.OA.A.1, 1.OA.B.4, 1.OA.C.5, 1.OA.C.6, 1.OA.D.7, and 1.OA.D.8 and builds on LSSM K.NBT.A.1. The materials also include Pre-Unit Practice problems within Section A Practice Problems which target concepts and skills that are prerequisite to the unit. Each problem indicates the standard addressed.
	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. Section A of each unit includes a set of Pre-Unit Practice Problems to assess prerequisite concepts and skills for the unit. The materials provide guidance on how to use the Pre-Unit Practice Problems to accelerate learning of prior grade-level concepts. Students complete the problems before the unit or during the first lesson of Section A. Teachers examine student work to determine which students need additional support with prerequisite skills. Each instructional task is accompanied by commentary about expected student responses and opportunities to advance student thinking so that teachers can adjust their instruction depending on what students are doing in response to the task. Often

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			there are suggested questions to help teachers better understand students' thinking.
	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. Each unit includes a set of Pre-Unit Practice Problems to address prerequisite concepts and skills for the unit. The Pre-Unit practice includes a teacher note guide that lists the solution to the problem, the prerequisite standard that is addressed, and how many points each problem represents. In addition, guidance suggests that the teacher use the recommended centers as activities outside of core instruction time. For example, for the 1.1 Pre-Unit Practice Problems, if students need additional support for item 1 which addresses LSSM K.CC.B.5, guidance suggests using Counting Collections, Stage 1, Grab and Count, Stage 1, and Bingo, Stage 4 throughout the unit. In addition, the Adaptation Packs include guidance on how to incorporate target, aligned, prerequisite work into the current grade-level lessons. Teacher guidance suggests that they read the current grade-level unit standards and prior-grade connections, gather information on the prior grade content students may know, such as administering the Pre-Unit Practice Problems, and teach the add-in lessons provided in the Adaptation Pack. For

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			example, guidance within the Adaptation Pack for Unit 1 suggests adding in the following lessons prior to Section A if students do not show fluency with addition and subtraction within 5: Kindergarten, Unit 8, Section C, Lesson 15.
	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**	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

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

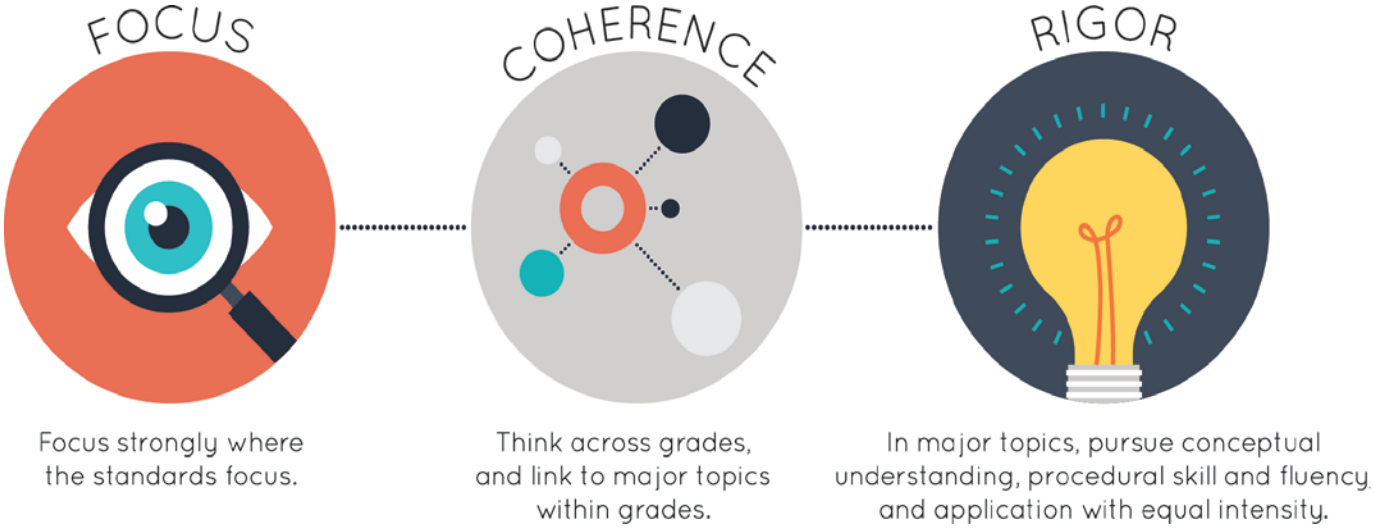
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			these connections are natural and important.
	3. Rigor and Balance	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in the standards. 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 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. 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**			

Qualified for Abbreviated Review[1]

Strong mathematics instruction contains the following elements:



Title: **Illustrative Mathematics**

Grade/Course: **2**

Publisher: **Imagine Learning LLC**

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 at https://www.edreports.org/reports/overview/imagine-learning-illustrative-mathematics-k-5-math-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. All lessons across units are related to grade-level work and align to the Louisiana Standards for Mathematics (LSSM) for Grade 2. At times, materials review content from prior grade levels, but the review is used to connect previous learning to grade-level learning and does not take away from the focus of the on grade-level coursework. Assessments associated with the instructional material assess grade-level standards. For example, in Unit 3, students measure and estimate

[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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			lengths in standard units and solve measurement story problems within 100. In Unit 3, Lesson 9, students are introduced to the 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. They use the length of 12 inch rulers as a tool to measure lengths in feet by iterating the length of a ruler, or, more precisely, the length of 12 inches shown on the ruler (LSSM 2.MD.A.1). Students also measure lengths of tape that represent realistic lengths of different types of fish. They measure each length to the nearest inch and to the nearest foot (LSSM 2.MD.A.2). The Unit 3, Section B Checkpoint assesses student understanding of Lessons 8-13 (LSSM 2.MD.A.1, 2.MD.A.2, 2.MD.A.3, 2.MD.B.5). For example, students answer questions such as “Find the length of a rectangle with an inch ruler” (LSSM 2.MD.A.1) and “A tomato plant was 8 inches tall at the beginning of the spring. By the end of summer, it grew 34 more inches. How tall was the plant by the end of the summer?” (LSSM 2.MD.B.5). Unit 5 lessons and assessment address Grade 2 LSSM to the full extent without going beyond the scope of this grade level. For instance, Unit 5, Lessons 1-7 encompass Section A and focus on the clusters of 2.NBT.A and 2.NBT.B (understanding and using place value without moving beyond hundreds). When students work in Unit 6,

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			Section B, Halves, Thirds, and Fourths, the materials align to the expectations of LSSM 2.G.A.3, not moving beyond circles and rectangles or equal shares of two, three, and four. Unit 7 lessons and assessment also address grade-level standards without going beyond the scope of the Grade 2 LSSM. Materials maintain the integrity of LSSM 2.NBT.B.6 as students add up to four two-digit numbers. The materials also maintain the integrity of LSSM 2.NBT.B.7 as students add within 1,000 using concrete models or drawings as seen in problems 5, 6, and 7 of the 2.7 End-of-Unit 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. Major work is developed prior to lessons that address supporting standards and, when supporting standards are addressed, the lessons reinforce major work of the grade by connecting back to the major standards. The supporting content of Grade 2 is to work with equal groups of objects to gain foundations for multiplication (LSSM 2.OA.C), work with time and money (LSSM 2.MD.C), and to represent and interpret data (LSSM 2.MD.D). The materials connect these supporting standards to the major content of Grade 2. Students first develop an understanding of major LSSM 2.OA.B.2 in Unit 1, Lesson 1. During the lesson,

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			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 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

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			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). Unit 6, Lessons 15-19 offer connections of supporting and major content as students explore the value of money. For instance, in Lesson 15, students skip count by 5s and 10s as they count dime and nickel collections (LSSM 2.MD.C.8) connecting to major LSSM 2.NBT.A.2 which was first developed in Units 1, 2, 4, and 5. In the following lesson, students continue to solve problems with various coin collections (LSSM 2.MD.C.8) while emphasis is placed on adding collections within 100 cents, connecting to major LSSM 2.NBT.B.5. Additionally, in Unit 8, Section A, Lessons 4 and 5, students represent even numbers (supporting LSSM 2.OA.C.3) as the sum of two equal addends (major LSSM 2.OA.B.2). This connection continues in Section B of Unit 8 as students find the total number of objects in rectangular arrays (supporting LSSM 2.OA.C.4) while representing that total number of objects as a sum of equal addends (major LSSM 2.OA.B.2).
	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 4, Lesson 4 connects the Number and Operations in Base Ten (NBT) and Measurement and

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			Data (MD) domains. In the lesson, students compare two numbers and justify their comparison based on the location of each number on the number line. Students represent numbers by placing counters as points on the number line (LSSM 2.MD.B.6). In the next activity of the lesson, students roll the dice with their partner two times and find the sum of the two numbers they rolled (LSSM 2.NBT.B.5). For example, Partner A rolls 3 + 7 and Partner B rolls 8 + 5. Students compare their sum with their partner's sum to see which sum is greater based on the placement on the number line. Unit 3, Lesson 6 connects the Measurement and Data (MD) and Operations and Algebraic Thinking (OA) domains. During the lesson, students interpret and solve comparison problems involving length, such as "Lin's pet lizard is 62 cm long. It is 19 cm shorter than Jada's. How long is Jada's pet Lizard?" Students look for an unknown that is the greater length and must add the two known values (LSSM 2.MD.B.5, 2.OA.A.1). After reading the other story problems, students consider which pet is longer or shorter and choose tape diagrams to match the lengths in the problem. Unit 5 connects clusters of the Number and Base Ten domain along with the Measurement and Data (MD) domain. While the focus of Lessons 1-6 falls in the 2.NBT.A cluster of understanding place value, as students progress through Unit

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			5, a strong connection to the Measurement and Data (MD) domain is made as students engage in locating and comparing numbers on a number line (LSSM 2.MD.B.6, 2.NBT.A.4). Then, Lesson 10 connects clusters A (Understand place value) and B (Use place value understanding and properties of operations to add and subtract) of the Number and Operations in Base Ten (NBT) domain. Students use their understanding of place value to compare two-digit numbers. Students find the value of two different quantities using place value blocks (LSSM 2.NBT.B.8) to compare the numbers (LSSM 2.NBT.A.4). In Unit 8, Lessons 4, 5, and 7-10, students fluently add and subtract within 20 (LSSM 2.OA.B.2) while working with equal groups of objects to gain foundations for multiplication (2.OA.C), connecting Clusters A and B of the Operations and Algebraic Thinking (OA) domain.
Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application.	**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. For example, in Unit 2, Lesson 7, students

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☒ Yes ☐ No			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 3, Lesson 4, students build on their experiences with centimeters to estimate lengths in centimeters (LSSM 2.MD.A.3) and measure lengths with a centimeter ruler. In Activity 1, students estimate the length of objects in the classroom. In this activity, students estimate the length of a notebook and then discuss their estimation with a partner. Then, students use a centimeter ruler to measure the actual length of the notebook and discuss if their estimation was too low, too high, or about right. Lessons and activities within Unit 5 adhere to the expectation of conceptual understanding as called for by the standards as students extend place value understanding to three-digit

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			numbers, exploring hundred as a unit. In Lesson 1, students explore how 10 tens make 100 (LSSM 2.NBT.A.1a) and deepen that understanding of 100 as a unit in Lesson 2. Throughout Unit 5, Section A, the materials call for students to work with concrete manipulatives, place value blocks, and relate their understanding of bundling tens to make 100 in various sentence frames, such as 2 hundreds = _____ tens.
	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 provide sufficient support and opportunities to help students attain the required fluencies of the grade. 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, in Unit 3, Lesson 10, Warm-Up, students discuss with their partner if each expression is true or false and explain

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			why. For example, students discuss if 12 - 2 = 10 - 0. Then tell why or why not. Students subtract both expressions to figure out if the values are equal (LSSM 2.OA.B.2). Additionally, during Stage 3 of the Capture Squares Center in Unit 6, students engage with addition within 20 to support maintenance of the fluency. Lessons and activities provide several opportunities for students to add and subtract within 100 (LSSM 2.NBT.B.5). Students have the opportunity to refine this 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 (LSSM 2.NBT.B.5). 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

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			this skill within Stage 4 as they use digit cards to make addition and subtraction equations true, working with sums and differences within 100 (LSSM 2.NBT.B.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. LSSM 2.OA.A.1, LSSM 2.MD.B.5, LSSM 2.MD.C.8, and LSSM 2.MD.D.10 are the only application standards for Grade 2. In Unit 1, Lesson 14, students use their understanding of bar graphs to make sense of tape diagrams in Activity 1. Students physically create a tape diagram from a bar graph and compare two of the categories. Students use the information from the created graphs to compare the graphs and answer "how many more" questions (LSSM 2.MD.D.10). 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, Lessons 15 and 16, students continue to solve one- and two-step word problems with various coin collections (LSSM 2.MD.C.8) while emphasis is placed on adding collections within 100 cents. In

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			Unit 6, Lesson 21, students apply geometry skills to an engaging application in the case of the activity, Pattern Block Store. Here students are directed to create two pattern block puzzles with 4 blocks and at least 1 hexagon. They are then told that each shape has a different price at the Pattern Block Store. Students decide which of the two puzzles would cost more to make (LSSM. 2.OA.A.1). This activity involves two steps to make a comparison - totaling up the cost of each puzzle using the chart given for the cost of each shape. Later in the year, students apply their knowledge of LSSM 2.OA.A.1 in Unit 9, Lessons 10-13. Students interpret the context of a given story and analyze models to determine which question or situation matches the representation. For example, Lesson 10 begins with a tape diagram showing a part as Elena's 29 apples and another part being 14 with the total unknown. Students determine what the diagram represents and then generate a question that could be answered. Then, students write story problems that match given equations with unknowns in all positions in Lesson 12, reaching the full extent of LSSM 2.OA.A.1. On Problem 6 in the End-of-Course Assessment, students apply skills of solving word problems involving lengths (LSSM 2.MD.B.5) as students answer, "How many centimeters longer is the necklace than the bracelet?" This item also encourages students to

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			justify their work by showing their thinking using drawings, numbers, or words. In Problem 8 in the same assessment, students solve a two-step word problem with an unknown by determining how much money Mai has based on the amount Diego has and then finding their total amount (LSSM 2.OA.A.1 and 2.NBT.B.5).
	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. For example, Unit 4, Lesson 8 focuses on both procedural skill and fluency and conceptual understanding. In the lesson, students represent addition and subtraction equations 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. For example, students solve the problem 15 + 7 on the number line. Students discuss with their partner how to use the number line to find the sum. Students can start at 15 and jump the number line 7 times to get a sum of 22. By solving problems such as 15 + 7, students are also counting within 1,000 (LSSM 2.NBT.A.2). Unit 5 first introduces the mathematical concept of the place value hundreds and then integrates conceptual understanding and procedural skill in later

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			lessons. In Lessons 1-3, students understand that 10 tens make 100 and begin to see the hundred as a unit (LSSM 2.NBT.A.1) so then they can begin to read and write three-digit numbers in various ways in Lessons 4-6 (LSSM 2.NBT.A.3). For example, in Lesson 6, students use place value understanding to represent numbers using unit form, base-ten numerals, expanded form, and words (LSSM 2.NBT.A.3). Students solve problems such as "Represent three hundred eighteen in two different ways." In Activity 2, students represent a given number using a three-digit number, a base-ten number diagram, expanded form, and words. With the new knowledge of hundreds as a value, students then begin to compare two three-digit numbers in Lesson 8-12 (LSSM 2.NBT.A.4).
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 practice standards are included in the section overview of each unit and in the teacher notes of each lesson. For example, in Unit 3, Lesson 12, students interpret and solve two-step problems involving length (LSSM 2.OA.A.1). After reading each story problem, students consider what questions could be asked and what information will be needed in the second part of the problem (MP.1). Students read

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☒ Yes ☐ No			each story with a partner, and then solve each story problem independently and compare their solutions. Students represent the problem in a way that makes sense to them and share different representations during the synthesis (MP.2), explaining how these representations helped solve the problem (MP3). In Unit 5, Lesson 1, Activity 1, students use blocks to represent a starting number, add ones until they reach 100, and discover they have 10 tens (LSSM 2.NBT.A.1). Students describe the total value of the blocks and make connections to previous work with ones, tens, and three-digit numbers (MP.7). 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).
	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. Opportunities to construct viable arguments and critique the arguments of others are embedded in the lessons and activities. 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

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			understanding of decomposing a ten when subtracting a one-digit number from a two-digit number to subtract two-digit numbers. Students also compare techniques used to find the difference, including diagrams and equations, and then reason with other students about the strategy used to solve the problem. 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 5, Lesson 12, Activity 1, students analyze a mistake in ordering numbers. Students use a list of numbers that two students put in order from least to greatest; however, one of the students disagrees with how they ordered the numbers. Students identify who they agree with and explain their thinking and justify their reasoning. In Unit 7, Lesson 7, Activity 2, students construct viable arguments as they discuss with a partner whether or not they would need to compose a ten or a hundred when adding their two- and three-digit numbers. In Unit 6, Lesson 13, students develop logical arguments and critique the arguments of others (MP.3) as they make decisions for why an event may occur during a.m. or p.m. hours.
	Required	**Yes**	Materials explicitly attend to the specialized language of mathematics. The

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	4c) Materials explicitly attend to the **specialized language** of mathematics.		materials encourage the use of accurate mathematical terminology. The materials include Warm-Up Routines intended to elicit student discussion and support the development of student thinking and precision with mathematical language, such as Notice and Wonder, Number Talk, Questions About Us, and What Do You Know About ___? For example, teacher guidance states that What Do You Know About ___? routine "elicits students' ideas of numbers, place value, operations, and groupings through visuals of quantity, expressions, and other representations." Math Language Routines (MLRs) provide additional supports that can be used as "an embedded structure of a lesson activity in which all students engage, or as a suggested optional support specifically for English Learners. For example, MLR8 Discussion Supports include strategies the teacher can use to support mathematical discourse, such as "Revoice student ideas to demonstrate mathematical language use by restating a statement as a question" and "Demonstrate use of disciplinary language functions such as detailing steps, describing and justifying reasoning, and questioning strategies." The materials include a glossary of terms used in each lesson. The vocabulary section in the units also provides guidance to teachers on how to use the vocabulary cards in the lesson. Teachers can project the vocabulary cards as slides and discuss

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			the terms with students. Teachers can also print the cards out and post them around the classroom to encourage students to use the correct terminology throughout the unit. Sample student responses are provided throughout the materials, setting the expectation for students to use mathematical language in their discussions and responses. For example, terms used in Unit 2 include compose and decompose. In Unit 2, Lesson 6, students interpret and compare representations that show decomposing a ten to subtract by place. One student decomposes a ten by crossing off a ten and drawing 10 ones. The other representation shows a student who begins their drawing with a ten decomposed into 10 ones. In the student sample responses for the lesson activity, students are encouraged to use the term decompose, such as, "I agree with Diego. Diego's diagram shows decomposing a ten so it shows 82 = 70 + 12." Unit 7 does not include any new terminology, but reinforces the terminology from Units 2-5 as students use place value understanding, the relationship between addition and subtraction, and properties of operations to add and subtract within 1,000. In Lesson 7, Synthesis, the teacher asks students to describe how their partner composed a ten to find the sum of a three- and two-digit number, emphasizing the term compose which was introduced in Unit 2. Activity 2 in the same

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			Lesson provides student-facing directions that include similar questions again emphasizing, to compose a ten. In the Unit 7 Checkpoint C, Problem 1, students match an expression with a given diagram, reiterating the difference between an expression and an equation. Unit 6, Lesson 4 face is introduced as a new term. During the Warm-Up, students engage in a Notice and Wonder routine intended to "elicit the language students use to describe and identify shapes while learning formal and informal descriptions of squares and cubes." The new term is listed on a sample poster for students as they work through Activity 1, describing a missing shape. In Activity 2 of the same lesson, the teacher asks, "Which of the solid shapes have faces that match these shapes?" As students sort their shape design cards into groups and match them to a solid shape, they use precise language when explaining why they match, such as "both of our cubes have 6 square faces."
	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 instructional material includes a Standards Overview section that lists the content standards and mathematical practice standards addressed in each lesson. The Teacher Guide for each Unit includes guidance on the practices used within the activities. The Teacher Notes section of

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			each lesson also lists the practice standards used and how the practice standards are used within the lesson. For example, in Unit 4, Lesson 1, students learn that numbers are represented on a number line as lengths from 0. Students choose their own length unit to make equally spaced tick marks and label them 0–20. The Teacher Notes state, "In order to make an accurate number line, students need to make strategic use of materials in order to measure the units on their number line. This could be a paper clip or a staple or the equally spaced lines on a lined sheet of paper (MP5)." In Unit 5, Lesson 10, students make place value comparisons. During the Warm-Up activity, students engage in Number Talk to elicit strategies for mentally adding a multiple of 10 to a number. The Teacher Notes state, "When students notice that only the digit in the tens place is changing and make connections between the tens in each expression, they look for and make use of structure and express regularity in repeated reasoning (MP7, 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	**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		

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consistent with the progressions in the Standards. ☐ Yes ☐ No	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. The materials include Adaptation Packs that are used to support students in accessing grade-level mathematics by addressing unfinished learning. Grade 2 includes 3 Adaptation Packs for the first three units of the materials. The Adaptation Packs list the prerequisite

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			standards needed to access grade-level content. For example, the 2.1 Adaptation Pack lists LSSM 1.OA.B4, 1.OA.C.5, 1.OA.C.6, and 1.OA.D.8 as prerequisite standards needed for students to access grade-level content in the unit which addresses LSSM 2.NBT.B.5, 2.NBT.B.6, 2.NBT.B.9, 2.OA.A.1, and 2.OA.B.2. Each unit provides a Learning Progressions video that details how the content of a unit builds upon prior knowledge. Each unit also includes a Full Unit Narrative that describes the learning within the unit along with the skills and concepts that should have been developed prior to the unit. For example, in Unit 1, students "represent and solve story problems within 20 through the context of picture and bar graphs that represent categorical data. Students build toward fluency with addition and subtraction." The Full Unit Narrative for Unit 1 states that "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." The Full Unit Narrative then explains how this prior knowledge connects to the content within the unit, such as, "Here, students are introduced to picture graphs and bar graphs as a way to represent categorical data. They ask and answer questions about situations

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			described by the data. The structure of the bar graphs paves the way for a new representation, the tape diagram." Additionally, each lesson lists the standard(s) addressed in the lesson, as well as Building On standards when applicable. For example, Unit 1, Lesson 1 addresses LSSM 2.NBT.B.5 and 2.OA.B.2 and builds on LSSM 1.NBT.C.4, 1.OA.C.6, and 1.OA.A.1. The materials also include Pre-Unit Practice problems within Section A Practice Problems which target concepts and skills that are prerequisite to the unit. Each problem indicates the standard addressed.
	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. Section A of each unit includes a set of Pre-Unit Practice Problems to assess prerequisite concepts and skills for the unit. The materials provide guidance on how to use the Pre-Unit Practice Problems to accelerate learning of prior grade-level concepts. Students complete the problems before the unit or during the first lesson of Section A. Teachers examine student work to determine which students need additional support with prerequisite skills. Each instructional task is accompanied by commentary about expected student responses and opportunities to advance student thinking so that teachers can adjust their

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			instruction depending on what students are doing in response to the task. Often there are suggested questions to help teachers better understand students' thinking.
	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. Each unit includes a set of Pre-Unit Practice Problems to address prerequisite concepts and skills for the unit. The Pre-Unit practice includes a teacher note guide that lists the solution to the problem, the prerequisite standard that is addressed, and how many points each problem represents. In addition, guidance suggests that the teacher use the recommended centers as activities outside of core instruction time. For example, for the 2.1 Pre-Unit Practice Problems, if students need additional support for item 1 which addresses LSSM 1.MD.C.4, guidance suggests using Sort and Display, Stage 1 center and Counting Collections, and Stage 1 center throughout the unit. In addition, the Adaptation Packs include guidance on how to incorporate target, aligned, prerequisite work into the current grade-level lessons. Teacher guidance suggests that they read the current grade-level unit standards and prior-grade connections, gather information on the prior grade content students may know, such as administering the Pre-Unit

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Practice Problems, and teaching the add-in lessons provided in the Adaptation Pack. For example, guidance within the Adaptation Pack for Unit 2 suggests adding in the following lessons prior to Section A if students do not show fluency with addition and subtraction within 10: Grade 1, Unit 3, Section C, Lessons 15-16, and Section D, Lessons 23-24.
	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**	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

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

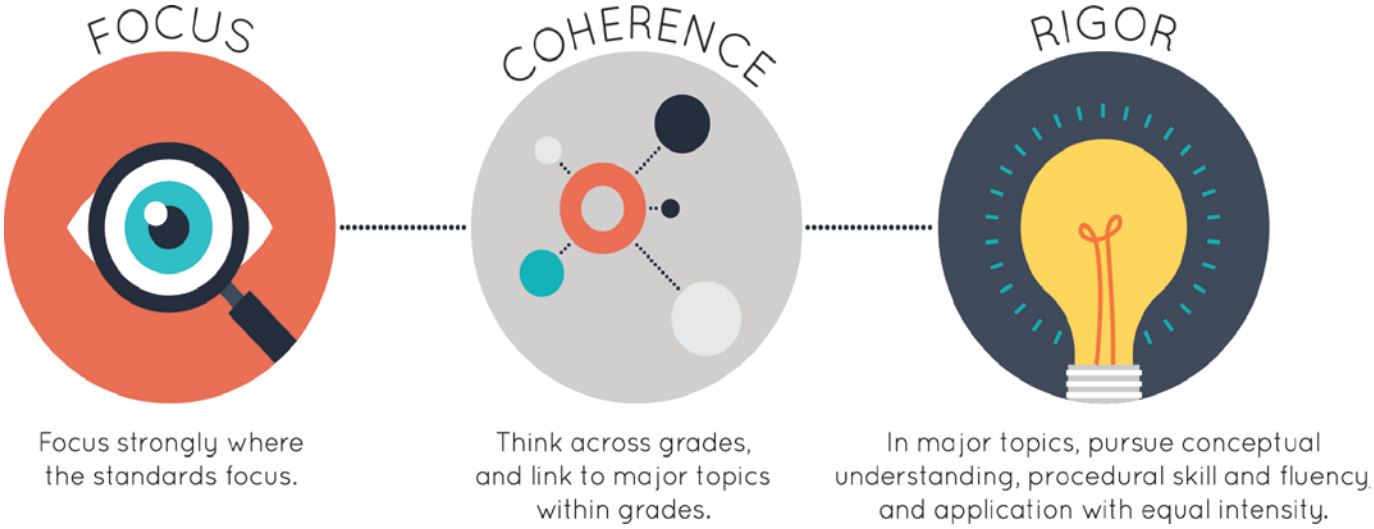
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			or more clusters in a domain and/or two or more domains in the grade level where these connections are natural and important.
	3. Rigor and Balance	**Yes**	Materials develop conceptual understanding 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 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. 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: **3**

Publisher: **Imagine Learning LLC**

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 at https://www.edreports.org/reports/overview/imagine-learning-illustrative-mathematics-k-5-math-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 131 instructional lessons, 73% of lessons are spent on major work of the grade. Specifically, 55% of lessons are spent on major standards alone, 18% are spent on a combination of major and supporting/additional standards, and 27% are spent on supporting/additional standards. The materials include 12 lessons that are either 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 Lessons 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 lesson Synthesis of Activity 3.1.
	Required **2b)** Materials include problems and activities that serve to connect two or more **clusters in a domain**, or two or more **domains in a grade/course**, in cases where these connections are natural and important.	**Yes**	Materials 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			and equal groups to scaled graphs (LSSM 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			shapes into equal parts by drawing lines 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 does not 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			largest. By the end of the activity, students 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?"

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Students determine that the shaded part 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),

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			such as the Number Talk Warm-Up in Unit 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 3.3 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. Additional Practice Problems are provided for more fluency practice. The same lesson structure is used for subtraction within 1,000 in Section B of the unit, supporting students with the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			fluency expectation of LSSM 3.NBT.A.2. Units 1-4 include multiple lessons that focus on multiplication in 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**	The 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			groups. In Activity 2, students solve word problems, such as “Jada has 5 bags. Each 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			quantity to the situations, such as n + 10 + 10 = 124. Students then solve a problem 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. 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 apply 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			them? a) equation _____ b) solution ___." (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,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
☒ Yes ☐ No			equations, and descriptions of the 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			write a division situation to match it. 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			analyze how well the questions assisted 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. Unit Materials within each Teacher's Edition of every unit include a vocabulary section with Vocabulary Cards that are used to introduce terminology that is needed for the students to successfully understand the concepts addressed in each unit. The students can click to see the word and definition. The words can be projected for review, printed out to create a word wall for the students to use a reference throughout the lessons, and printed out as a note-taking tool for the students to use throughout the lesson to apply how the word should be used and to write down their understanding of the terminology. Mathematical terminology is built within each lesson, and the 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. Materials incorporate Mathematical Language Routines (MLRs), instructional routines

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			that "leverage focus on language to foster deep conceptual understanding of mathematics" and "are included in each unit to provide all students with explicit opportunities to develop mathematical and academic language." 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. For example, in Unit 2, Lesson 1, Activity 2 Synthesis: Pattern Blocks to Compare Shapes, materials include teacher suggestions to help students understand the concept of area. The materials state, "Use this time in a number of ways, including posting questions verbally and calling on volunteers to respond, asking questions to respond to prompts in a written journal, asking students to add on to a graphic organizer or concept map, or adding a new component to persistent display like a word wall." 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			thinking with the class. Sample student responses are provided such as, "38 rounds to 40 so it could be his number." 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."
	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. In the Standards by Lesson Resource page, practice standards that naturally develop in each lesson are listed alongside the content standards aligned to each lesson of each unit. Within the digital content, the About this Lesson section provides explanations of the role of practice standards within the lesson and activities. For example, in Unit 7, Lesson 4, About this Lesson notes the use of MP.6 and MP.7 as students consider the geometric attributes a quadrilateral must have to be a rhombus, rectangle, or square. Guidance states, "In this lesson, students analyze examples and non-examples of rectangles, rhombuses, and squares in order to identify their defining attributes. As they discern and describe features that define these quadrilaterals, students practice

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			looking for structure (MP.7) and communicating with precision (MP.6).” In Unit 1, Lesson 16, students describe arrays and arrange objects into arrays. During the Warm- Up, students notice and wonder about an egg 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:	**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. The materials include Adaptation Packs that are used to support students in accessing grade-level mathematics by addressing unfinished learning. Grade 3

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			includes Adaptation Packs for all units, excluding Units 4 and 8. The Adaptation packs list the prerequisite standards needed to access grade-level content. For example, the 3.1 Adaptation Pack lists LSSM 2.MD.D.10, 2.OA.A.1, 2.OA.C.3, and 2.OA.C.4 as prerequisite standards needed for students to access grade-level content in the unit which addresses LSSM 3.MD.B.3, 3.OA.A.1, 3.OA.A.3, and 3.OA.A.4. Each unit provides a Learning Progressions video that details how the content of a unit builds upon prior knowledge. Each unit also includes a Full Unit Narrative 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 Full Unit Narrative 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 section lists the standard(s) addressed in the lessons, as well as Building On standards, when applicable. For example, Unit 1, Section A, addresses LSSM 3.MD.B and 3.MD.B.3 and builds on LSSM 2.MD.D, 2.MD.D.10, 2.NBT.B.5, and 2.OA.C.3. The materials also include Pre-Unit Practice problems within Section A Practice Problems which target concepts and skills

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			that are prerequisites to the unit. Each problem indicates the standard addressed.
	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. Section A of each unit includes a set of Pre-Unit Practice Problems to assess prerequisite concepts and skills for the unit. The materials provide guidance on how to use the Pre-Unit Practice Problems to accelerate learning of prior grade-level concepts. Students complete the problems before the unit or during the first lesson of Section A. Teachers examine student work to determine which students need additional support with prerequisite skills. Each instructional task is accompanied by commentary about expected student responses and opportunities to advance student thinking so that teachers can adjust their instruction depending on what students are doing in response to the task. Often there are suggested questions to help teachers better understand students' thinking.
	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. Each unit includes a set of Pre-Unit Practice Problems to address prerequisite concepts and skills for the unit. The Pre-Unit practice includes a teacher note guide that

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			lists the solution to the problem, the prerequisite standard that is addressed, and how many points each problem represents. In addition, guidance suggests that the teacher use the recommended centers as activities outside of core instruction time. For example, for the 3.1 Pre-Unit Practice Problems, if students need additional support for item 1 which addresses LSSM 2.MD.D.10, guidance suggests using the Sort and Display, Stage 2 center throughout the unit. In addition, the Adaptation Packs include guidance on how to incorporate target, aligned, prerequisite work into the current grade-level lessons. Teacher guidance suggests that they read the current grade-level unit standards and prior-grade connections, gather information on the prior grade content students may know, such as administering the Pre-Unit Practice Problems, and teach the add-in lessons provided in the Adaptation Pack. For example, the Adaptation Pack for Unit 1 suggests adding in the following lessons prior to Section A if students struggle with understanding picture and bar graphs with single unit scales: Grade 2, Unit 1, Section B, Lessons 8 and 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 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**	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

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

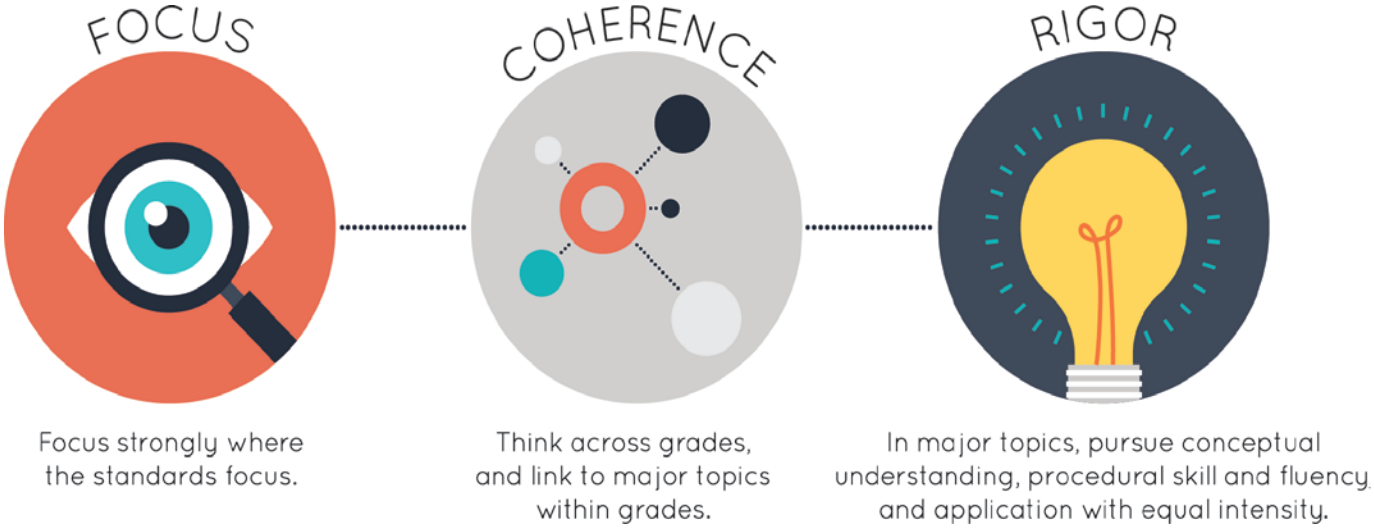
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			evident in the materials that the three aspects of rigor are not always treated together and are not always treated separately.
	4. Focus and Coherence via Practice Standards	**Yes**	Materials attend 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 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. Materials provide targeted, aligned, prerequisite work for the major work of

[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
			the grade directly connected to specific lessons and units in the curriculum.
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: **4**

Publisher: **Imagine Learning LLC**

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 at https://www.edreports.org/reports/overview/imagine-learning-illustrative-mathematics-k-5-math-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 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 1, Lesson 4 which is labeled optional to allow "students to practice multiplication within 100 and review strategies for finding products they don't know" and Unit 1, Lesson 8 "because it does not address new mathematical content standards." The Louisiana Teacher Implementation Guide for Grade 4 includes guidance on using lessons from Grade 3 to address LSSM 4.MD.D.8. The guide states that "The

[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
			following Grade 3 lessons address content for Grade 4 LSSM 4.MD.D.8 and should be ADDED to ensure full coverage." 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 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. For example, in Unit 1, Section B, students apply multiplication fluency within 100 and the relationship between multiplication and division to find factor pairs and multiples as they solve problems in context (LSSM 4.OA.A.3, 4.OA.B.4). The Unit B checkpoint assesses the content in the section with questions such as "Pencils come in packages of 10 and 12. Jada's class needs 60 pencils. Which packages of pencils would you use for Jada's class? Explain your reasoning" (LSSM 4.OA.A.3) and "Select all of the statements that are true. A. 19 is a prime number. B. The only factors of 9 are 1 and itself. C. 3 is a factor of 24. D. 56 is a multiple of 6." (LSSM 4.OA.B.4). In Unit 4, Section B, students make sense of whole numbers up to the hundred thousands place. Students analyze and draw base-ten diagrams and write multi-digit numbers in expanded form and develop an understanding of the ten times relationship between the value of a digit

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			compared to the value of the digit to its right (LSSM 4.NBT.A.1, 4.NBT.A.2).
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,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			4.NF.B.3c, 4.NF.F.3d). In Unit 5, Section A, students compare two quantities in terms 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. 200,000cm B. 400 m C. 3 km D. 60 cm."
	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 meaningful ways. For example, Unit 6, Lesson 21 connects the Number and Operations in Base Ten (NBT) and Operations and Algebraic Thinking (OA) domains. During the lesson, students

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			use various strategies and representations to reason about multi-step problems involving multiplication and division, including division problems in which students interpret the product, quotients, and remainders in context (LSSM 4.OA.A.3, 4.NBT.B.5, 4.NBT.B.6). For example, in Activity 2, students read the following problems, “Movie tickets are $9 each. The theater sold the same number of tickets two days in a row. The theater made $3,132 from ticket sales on the first day.” Students generate a list of mathematical questions that could be determined from this information. Students then answer those questions, such as “How many tickets were sold on the first day?” “How many tickets were sold on the first and second day?” Students then use this information to answer the following question “A medium drink is $7 and a small popcorn is $5. If each ticket holder purchases popcorn and a drink, how much money will the theater collect from the sales of popcorn and drink?” 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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 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. ☒ 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, students generate and reason about equivalent fractions and compare and order fractions with only the denominators: 2, 3, 4, 5, 6, 8, 10, 12, and 100 (LSSM 4.NF.A.1, 4.NF.A.2). Beginning in Section A, students make sense of fractions by using physical representations and diagrams and then progress to reasoning about the location of the numbers on the fraction line. In Lesson 1, students use fraction strips to represent

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			halves, fourths, and eights, labeling the fraction parts while making sense of the meaning of numerator and denominator in unit fractions. Students extend this learning by reasoning about fractions using tape diagrams. Students continue using the visual representations in Lesson 2 but extend their learning to non-unit fractions and fractions greater than 1. In Lesson 3, students reason about the relative size of two fractions with the same numerator or denominator using fractions strips to support their reasoning. In Lesson 5, students use number lines to understand that equivalent fractions describe the same point on the number line and identify those fractions on the number line (LSSM 4.NF.A.1, 4.NF.A.2). Students continue to extend this understanding in the next sections of the unit. In Section B, students generate equivalent fractions and use visual representations to reason about fraction equivalence. Finally, in Section C, students use visual representations or a numerical process to reason about fraction comparison. 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			to evaluate expressions and develop computational fluency." For example, in Unit 1, Lesson 7, Warm-Up Launch, students find the value of each of the following expressions mentally: 12 ÷ 3, 30 ÷ 3, 60 ÷ 3, and 72 ÷ 3. The Warm-Up strengthens students' fluency with dividing within 100 and prepares students for finding factor pairs of numbers during the lesson (LSSM 4.OA.B.4b). During Activity 2 of the lesson, students play multiple rounds of a game in which students find factors and multiples of a given number. In Unit 4, Lesson 10, Warm-Up Launch, students engage in a Number Talk activity in which they find the value of expressions mentally, including 650 + 75, 5,650 + 75, 50,650 + 75, and 500,650 + 75. This activity supports students in developing fluency with addition and subtraction of multi-digit numbers in preparation for fluently adding and subtracting numbers within 1,000,000 using the standard algorithm later in the unit and throughout the remaining units. After students build place value understanding for large numbers in Sections A-C, students add and subtract within 1,000,000 using the standard algorithm in Section D (LSSM 4.NBT.B.4). In Lesson 18, students add multi-digit numbers with composing using and subtract multi-digit numbers without composing using the standard algorithm. In Lesson 19, students add and subtract

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			multi-digit numbers with composing and decomposing using the standards algorithm. Students continue to build fluency with multi-digit numbers in Lessons 20-23. In Unit 7, Lesson 9, students use a protractor to measure angles (LSSM 4.MD.C.6). Students first make sense of one-degree angles in terms of a fraction of 360 degrees and then use a protractor to measure the angles. For example, in Activity 2, students observe four different examples in which a protractor has been placed over an angel. Students then measure each size of the angles in degrees. In Lesson 10, students use a protractor to find the value of each angle measurement and continue to practice this skill as they use a protractor to measure labeled angles included in different figures.
	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**	The 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 addition and subtracting fractions and equivalent fractions to solve problems in context (LSSM 4.NF.B.3d). In Activity 1, students

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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, Lesson 10, students expand on the concept of converting measurements within the same system (metric or customary) from larger units to smaller units and multiplicative comparisons to solve multi-step word problems (LSSM 4.MD.A.2, 4.OA.A.2, 4.OA.A.3). For example, in Activity 1, students use a data table that includes estimates of the farthest distances that some animals move in one day to solve measurement problems. The distances include measurements in meters, centimeters, and kilometers. Students first put the animals and their travel distances in order from shortest to longest and explain or show their reasoning. Then they determine if they agree with each of the following statements and explain their reasoning: “a. A giant tortoise can move 2 times as far as a snail can move in a day.” and “b. A dromedary can move 80 times as far as a giant tortoise can move in a day.” 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

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			time given in different units. Students 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 standards. Unit 5 integrates conceptual understanding and application as the students first analyze, describe, and represent multiplicative comparison situations and then solve one- and two-step problems involving multiplicative comparisons (LSSM 4.OA.A.1, 4.OA.A.2). In Lesson 2, students analyze and interpret images of discreet connecting cubes and tape diagrams and make connections between multiplicative comparison language and multiplication equations. Students make sense of each equation and reason about how the equation relates to

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			a corresponding image or diagram. In Activity 2, students first determine how the displayed cubes represent 3 times as many. Then students create a visual display that represents a given problem such as, "Jada has 4 times as many cubes as Kiran. Draw a diagram to represent the situation." In Unit 7, Lesson 8, students develop conceptual understanding of angle measurement in reference to a circle (LSSM 4.MC.C.5a). In Activity 1, students learn that a ray that turns all the way around its endpoint and back has made a full turn and that ray has turned 360 degrees. Students then describe 90, 180, and 270 degree turns. In Activity 2, students observe a half circle that includes a 120 degree angle and a 180 degree angle. Students then draw line segments to show angles of the following degrees: 90, 60, 45, 30, and 150. Students begin to recognize angle measure as an additive in Lesson 9, Activity 1 as they determine that there are seven 1 degree angles in a 7 degree angle. 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 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.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
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 2, Lesson 14: Fraction Comparison Problems, students compare sets of fractions with like and unlike denominators in the first activity by using benchmarks, writing equivalent fractions, or reasoning about the numerators and denominators (LSSM 4.NF.A.1, 4.NF.A.2). Students observe six sets of fractions along with clues and find one fraction that meets all three clues in each set. In the second activity, students interpret and solve problems involving fractional measurements in context. Both activities present a new setup, structure, or context, requiring students to make sense of the given information and the problems and to persevere in solving them (MP.1). In Unit 8, Lesson 4, students develop the concept of symmetry as they relate lines of symmetry to the lines of folding that create two identical halves and then reason about the meaning of lines of symmetry (LSSM 4.G.A.3). As students analyze examples of figures that do have a line of symmetry and those that

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			do not and develop a definition of line of symmetry, they use precise language (MP.6). Students may use tools strategically (MP.5), such as paper, rulers, and protractors, as they define and find lines of symmetry.
	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 1 Lesson 7, Activity 1, students find factors and multiples of given whole numbers from 1-100 and make statements that use the terms factors and multiples. Students share their statements with their partner and explain why their sentences make sense. During the Activity Synthesis, students answer the following question: "How does knowing the first and third quotients help you find the last quotient?" Unit 3, Lesson 3, students evaluate multiplication expressions of a unit fraction by a whole number and understand that fractions can be written as the product of a whole number and unit fraction. In Activity 1, students formalize observations about the connection between the whole number in a given multiplication expression and the numerator of the fraction that is the

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			resulting product by completing tables and describing the pattern. Students then discuss their findings with their partner. In Unit 4, Lesson 10, Activity 1, students make sense of the relationships between the values of the same digit in different numbers and write multiplication and division equations to represent these relationships. During the Synthesis of the lesson, students help one another improve their explanations as they critique each other's reasoning. Lastly, in Unit 9, Lesson 2, students apply what they know about equivalence and addition and subtraction of fractions to solve problems. Throughout the lesson, students have opportunities to reason quantitatively and abstractly as they connect their representations, including equations, to the situations and to compare their reasoning with others.
	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. Unit Materials within each Teacher's Edition of every unit include a vocabulary section with Vocabulary Cards that are used to introduce terminology that is needed for the students to successfully understand the concepts addressed in each unit. The students can click to see the word and definition. The

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			words can be projected for review, printed out to create a word wall for the students to use a reference throughout the lessons, and printed out as a note-taking tool for the students to use throughout the lesson to apply how the word should be used and to write down their understanding of the terminology. Mathematical terminology is built within each lesson, and the 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. Materials incorporate Mathematical Language Routines (MLRs), instructional routines that "leverage focus on language to foster deep conceptual understanding of mathematics" and "are included in each unit to provide all students with explicit opportunities to develop mathematical and academic language." 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. For example, in Unit 7, Lesson 6, students consider ways to compare angles and describe the size of angles. Students engage in a Card Sort in

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			Activity 1. Before this lesson, students developed an understanding that "angles are geometric figures made up of two rays that share a common endpoint." During the activity, students compare angles using language that makes sense to them. Students describe things such as the orientation of the rays, the length of the segments, the point that the ray shares, and the distance between the rays. During the Lesson Synthesis, the instructional routine MLR2 Collect and Display is utilized to record and organize the language used by the students. The teacher encourages students to notice the different ways they compare angles which elicits the need for more precise vocabulary which is the intent of the following lessons. 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."

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	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. In the Standards by Lesson Resource page, practice standards that naturally develop in each lesson are listed alongside the content standards aligned to each lesson of each unit. Within the digital content, the About this Lesson section provides explanations of the role of practice standards within the lesson and activities. For example, in Unit 4, Lesson 7, About this Lesson notes the use of MP.7 as students read, write, and represent multi-digit numbers up to ten-thousands. Guidance states that students "develop a sense of magnitude of 10,000. In the previous lesson, students counted by thousands and created 10 groups of 1,000 to make 10,000. This continues to build awareness of the structure of our number system with the base of ten (MP.7)." In Unit 5, Lesson 15, students apply their knowledge of multiplicative comparison and ability to convert feet and inches to solve a logic puzzle. Teacher guidance states, "They use several given clues to determine the heights of four objects. As they use clues to reason about the heights of the towers and who build them, students reason abstractly and quantitatively (MP.2)." In Unit 6, Lesson 14, students solve division problems that involve unknown factors. In Activity 1,

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			teacher guidance states, "students use the relationship between multiplication and division and their understanding of factors and multiples to solve problems about an unknown factor (MP.7)." 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)."
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,		

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	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.		
	6d) Materials provide 2-3 **comprehensive assessments** (interims/benchmarks) that measure student learning up to the point of administration.		
7. ADDITIONAL INDICATORS OF QUALITY:	**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		

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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	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. The materials include Adaptation Packs that are used to support students in accessing grade-level mathematics by addressing unfinished learning. Grade 4 includes Adaptation Packs for all units, excluding Units 7 and 9. The Adaptation packs list the prerequisite standards needed to access grade-level content. For example, the 4.1 Adaptation Pack lists LSSM 3.MD.C.6, 3.MD.C.7, and 3.OA.C.7 as prerequisite standards needed for students to access grade-level content in which the unit addresses LSSM 4.OA.B.4. Each unit provides a Learning Progressions video that details how the content of a unit builds upon prior knowledge. Each

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			unit also includes a Full Unit Narrative 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 Full Unit Narrative for Unit 2 states, "In this unit, students extend their prior understanding of equivalent fractions and comparison 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." Additionally, each section lists the standard(s) addressed in the lessons, as well as Building On standards, when applicable. For example, Unit 3, Section B addresses LSSM 4.NF.B.3a, 4.NF.B.3b, 4.NF.B.3c, 4.NF.B.3d, and 4.NF.B.4c while building on LSSM 3.NF.A.1 and 3.MD.B.4. The materials also include Pre-Unit Practice problems within Section A Practice Problems which target concepts and skills that are prerequisites to the unit. Each problem indicates the standard addressed.
	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. Section A of each unit includes a set of Pre-Unit Practice Problems to assess prerequisite concepts and skills for the unit. The materials provide guidance on

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			how to use the Pre-Unit Practice Problems to accelerate learning of prior grade-level concepts. Students complete the problems before the unit or during the first lesson of Section A. Teachers examine student work to determine which students need additional support with prerequisite skills. Each instructional task is accompanied by commentary about expected student responses and opportunities to advance student thinking so that teachers can adjust their instruction depending on what students are doing in response to the task. Often there are suggested questions to help teachers better understand students' thinking.
	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. Each unit includes a set of Pre-Unit Practice Problems to address prerequisite concepts and skills for the unit. The Pre-Unit practice includes a teacher note guide that lists the solution to the problem, the prerequisite standard that is addressed, and how many points each problem represents. In addition, guidance suggests that the teacher use the recommended centers as activities outside of core instruction time. For example, for the 4.1 Pre-Unit Practice Problems, if students need additional support for item 1 which addresses LSSM 3.MD.C.7a, guidance

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			suggests using the Can You Build It? Stage 1 and Rectangle Rumble, Stage 3 centers throughout the unit. In addition, the Adaptation Packs include guidance on how to incorporate target, aligned, prerequisite work into the current grade-level lessons. Teacher guidance suggests that they read the current grade-level unit standards and prior-grade connections, gather information on the prior grade content students may know, such as administering the Pre-Unit Practice Problems, and teach the add-in lessons provided in the Adaptation Pack. For example, the Adaptation Pack for Unit 1 suggests adding in the lessons prior to Section A if students struggle with understanding how multiplication and area are related: Grade 3, Unit 2, Section A, Lesson 4 and Section B, Lessons 5 and 8.
	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

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

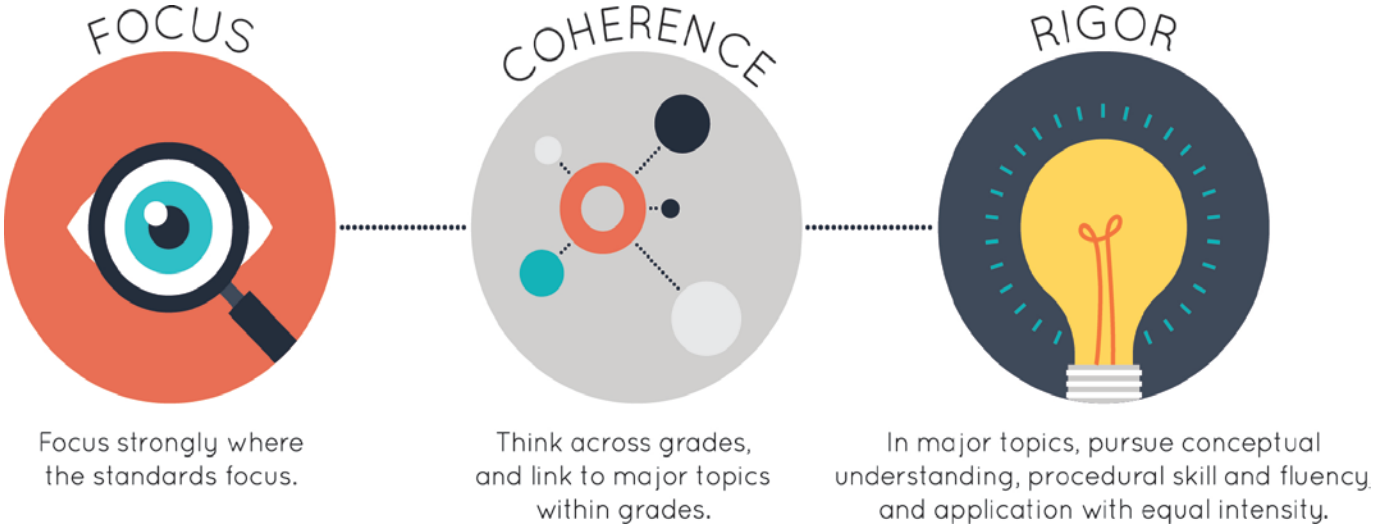
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			spend minimal time on content outside of the appropriate grade level. In assessment materials, assessment components do not make students/teachers responsible for any topics before the grade in which they are introduced.
	2. Consistent, Coherent Content	**Yes**	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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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. 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: **Imagine Learning LLC**

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 at https://www.edreports.org/reports/overview/imagine-learning-illustrative-mathematics-k-5-math-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, 89% of instructional lessons are spent on major work of the grade. Specifically, 73% of lessons are spent on major standards alone, 16% are spent on a combination of major and supporting/additional standards, and 11% 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 20, 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. Student Task Statements, a coordinate plane, and three points are provided for students. 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			4 equal pieces. How many pounds does each piece of the apple weigh? Explain 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 7.1, Activity: 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			5.MD.A.1 with the major work of LSSM 5.NBT.A.2. In the lesson, students engage in Activity 4.1: 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, Section B, 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) domains. 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			the volume of the figure, such as "(5 x 8 x 6) + (5 x 4 x 9)." Students interpret parentheses in the expression while 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, 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,

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			how wide was it? Plot this point on the coordinate grid."
Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ 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 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 do 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			most challenging. In Unit 3, Multiplying and Dividing Fractions, Lesson 4, students develop conceptual understanding as they practice constructing a model to develop 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

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			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 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

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			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, 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

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			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 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**	The 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Unit 2, Lesson 3, students write and interpret division expressions and equations that represent equal sharing situations. They explain the relationships between the dividend and the numerator and the 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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, in Unit 1, students draw on their prior knowledge of areas of rectangles to visualize 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 Synthesis focuses on why

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			students chose multiplication or division to solve the problems, providing opportunities for students to demonstrate procedural fluency and conceptual 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. 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.	**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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
☒ Yes ☐ No			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). 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	**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.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	(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.		The materials provide opportunities for students to discuss and justify their thinking and reasoning for the strategies they used to solve problems. From the 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			teacher asks several questions to stimulate students' thought processes and encourage mathematical discourse. In Unit 8, Lesson 5, Activity 1, students 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. Unit Materials within each Teacher's Edition of every unit include a vocabulary section with Vocabulary Cards that are used to introduce terminology that is needed for the students to successfully understand the concepts addressed in each unit. The students can click to see the word and definition. The words can be projected for review, printed out to create a word wall for the students to use as a reference throughout the lessons, and printed out as a note-taking tool for the students to use throughout the lesson to apply how the word should be used and to write down their understanding of the terminology. Mathematical terminology is built within

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			each lesson, and the 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. Materials incorporate Mathematical Language Routines (MLRs), instructional routines that "leverage focus on language to foster deep conceptual understanding of mathematics" and "are included in each unit to provide all students with explicit opportunities to develop mathematical and academic language." 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. 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 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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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 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. In the Standards by Lesson Resource page, practice standards that naturally develop

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			in each lesson are listed alongside the content standards aligned to each lesson of each unit. Within the digital content, the About this Lesson section provides explanations of the role of practice standards within the lesson and activities. For example, Unit 1, Lesson 9, About this Lesson 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 multiple practices in Unit 3, Lesson 3, Activity 1. During the activity, students notice the structure in a series of diagrams and the expressions that represent them. Teacher guidance states, "Students see how the diagram

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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 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.		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	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.		
	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.	**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.		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Materials provide timely supports to target specific skills/concepts to address students' unfinished learning in order to access grade-level work. ☐ Yes ☐ No	**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. The materials include Adaptation Packs that are used to support students in accessing grade-level mathematics by addressing unfinished learning. Grade 5 includes Adaptation packs for all units, excluding Units 3 and 8. The Adaptation packs list the prerequisite standards needed to access grade-level content. For example, the 5.2 Adaptation Pack lists LSSM 3.MD.C.7, 3.NF.A.1, 4.NBT.B.6, and 4.NF.B.4 as prerequisite standards needed for students to access grade-level content in which LSSM 5.NF.B.3, 5.NF.B.4a, 5.NF.B.4b, 5.NF.B.6, 5.OA.A.1, and 5.OA.A.2. Each unit provides a Learning Progressions video that details how the content of a unit builds upon prior knowledge. Each unit also includes a Full

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Unit Narrative 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 Full Unit Narrative 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 section lists the standard(s) addressed in the lessons, as well as Building On standards when applicable. For example, Unit 3, Section B addresses LSSM 5.NF.B.7, 5.NF.B.7a, 5.NF.B.7c, while building on LSSM 4.NBT.B.6. The materials also include Pre-Unit Practice problems within Section A Practice Problems which target concepts and skills that are prerequisites to the unit. Each problem indicates the standard addressed.
	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. Section A of each unit includes a set of Pre-Unit Practice Problems to assess prerequisite concepts and skills for the unit. The materials provide guidance on

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			how to use the Pre-Unit Practice Problems to accelerate learning of prior grade-level concepts. Students complete the problems before the unit or during the first lesson of Section A. Teachers examine student work to determine which students need additional support with prerequisite skills. Each instructional task is accompanied by commentary about expected student responses and opportunities to advance student thinking so that teachers can adjust their instruction depending on what students are doing in response to the task. Often there are suggested questions to help teachers better understand students' thinking.
	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. Each unit includes a set of Pre-Unit Practice Problems to address prerequisite concepts and skills for the unit. The Pre-Unit practice includes a teacher note guide that lists the solution to the problem, the prerequisite standard that is addressed, and how many points each problem represents. In addition, guidance suggests that the teacher use the recommended centers as activities outside of core instruction time. For example, for the 5.1 Pre-Unit Practice Problem, if students need additional support for item 1 which addresses LSSM 3.MD.C.7b, guidance

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			suggests using the Can You Draw It? Stage 4 and Can You Build It? Stage 1 centers throughout the unit. In addition, the Adaptation Packs include guidance on how to incorporate target, aligned, prerequisite work into the current grade-level lessons. Teacher guidance suggests that they read the current grade-level unit standards and prior-grade connections, gather information on the prior grade content students may know, such as administering the Pre-Unit Practice Problems, and teach the add-in lessons provided in the Adaptation Pack. For example, the Adaptation Pack for Unit 1 suggests adding in lessons prior to Section A if students struggle with understanding how the area of a rectangle and multiplication of area are related: Grade 4, Unit 1, Section A, Lesson 1.
	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

[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
			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**	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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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. 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.

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.

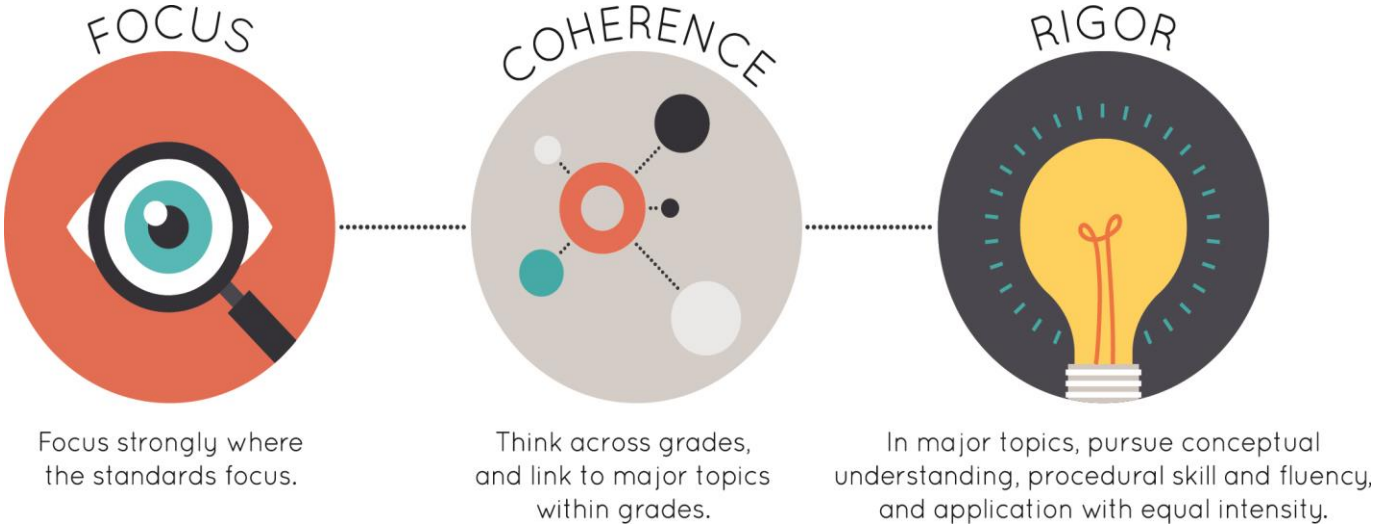
The 2021-2022 Teacher Leader Advisors are selected from across the state and represent the following parishes and school systems: Acadia, Ascension, Baton Rouge Diocese, Beauregard, Bossier, Calcasieu, Central Community, City of Monroe, Desoto, East Baton Rouge, East Feliciana, Evangeline, Franklin, 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

Qualified for Abbreviated Review[1]

Strong mathematics instruction contains the following elements:



Title: **Illustrative Mathematics**

Grade/Course: **K**

Publisher: **Imagine Learning LLC**

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 at https://www.edreports.org/reports/overview/imagine-learning-illustrative-mathematics-k-5-math-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	PUBLISHER RESPONSE
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 124 instructional lessons, 90% of lessons are spent on major work of the grade. Specifically, 71% of lessons are spent on major standards, 19% of lessons are spent on a combination of major standards and supporting/additional standards, and 10% of lessons are spent on supporting or additional standards. The materials include 13 lessons labeled as optional. In addition, LSSM K.MD.C.4 is not addressed in the materials.	Click or tap here to enter text.
	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. All lessons across units are related to grade-level work and align to the Louisiana Standards for Mathematics (LSSM) for Grade K. Assessments associated with the instructional material access on grade-level standards. For example, in Unit 4, students develop their understanding of addition and subtraction as they represent and solve story problems (LSSM K.OA.A.2). In Section A of	Click or tap here to enter text.

[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	PUBLISHER RESPONSE
			Unit 4 (Lessons 1-5), students understand addition as putting together two groups and counting the total number of objects and subtracting as taking away a number of objects from a group and counting what remains (LSSM K.CC.B.5). In Lesson 5, students use objects to show the action of addition. Students use counters to show 3 + 4. They start with 3 counters then add 4 more counters and count the total number of counters (LSSM K.OA.A.1) and then write the total in the box (LSSM K.CC.A.3). In Section B of Unit 4, students represent and solve story problems within 10 (LSSM K.OA.A.2). The type of problems in this section are limited to add to, result unknown, and take from, result unknown. In Lesson 8 of Unit 4, students show what happens in a story problem and solve it, such as: “8 birds were splashing in the fountain. 3 birds flew away.” Students use the counters to show 8 birds and then take away 3 counters to show that 3 birds flew away (LSSM K.OA.A.2). The Unit 4 End-of-Unit Assessment assesses grade-level content. On problem 4, students match each picture with the expression it shows, such as 5 + 3 and the picture that shows 8 blocks (LSSM K.OA.A.1). On problem 5, students write the value of each expression. Students draw in the box to show 3 + 2 and then write the total in the blank (LSSM K.CC.A.3). Unit 5, Make and Break Apart 10, begins with Section A, Making and Breaking Apart Numbers to 9,	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			leading into Section C, Make and Break Apart 10. Lesson 10 introduces students to the 10-frame, whereas in previous lessons students used 5-frames. Lesson 11 focuses on equations that show 10. The Warm-Up activities provide a variety of pictorial and numerical equations which make 10. The 11.1 activity provides a combination of 10 with red and yellow counters next to several equations. Students choose the equation that matches the counters in the 10-frame. Problem 5 includes 8 red dots and 2 yellow dots in a 10-frame. Students choose 10 = 8 + 2 as the correct match. Activity 11.2 switches to fingers. Students observe two sets of hands with some fingers colored red and the rest blue. They think about what is different about the hands. Both sets of hands represent 8 + 2, one set with 8 red fingers and 2 blue. The other hand shows 8 blue fingers and 2 red. These lessons focus on representing addition with objects and fingers as putting together (LSSM K.OA.A.1).	
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. Major work is developed prior to lessons that address supporting standards and, when supporting standards are addressed, the lessons reinforce major work of the grade by connecting back to the major standards. The supporting content is to classify objects and count the number of	Click or tap here to enter text.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			objects in categories (LSSM K.M.B), work with money (LSSM K.MD.C), and analyze, compare, create, and compose shapes (LSSM K.G.B). The materials connect these supporting standards to the major content of the grade. For example, in Unit 3, Lesson 5 students identify, describe, and compare circles and triangles. Students analyze two groups of objects: one with triangles and the other with circles. Students discuss with their partner what they notice about each group (LSSM K.G.B.4). As the lesson goes on, students begin to sort objects into two groups: objects that appear to be a triangle and objects that are not. As the lesson closes, students work with a partner to figure out how many objects are in each collection by counting the objects (LSSM K.CC.B.5) and then writing the total number of objects in each collection (LSSM K.CC.A.3), reinforcing major work of the grade that is developed in Unit 2. In Unit 7, Solid Shapes All Around Us, students identify, describe, analyze, compare, and compose two- and three-dimensional shapes. Counting, addition, and subtraction concepts (K.CC, K.OA), previously developed in Units 4 and 5, are revisited in the geometric contexts as students count and compare numbers and solve story problems involving shapes (LSSM K.G.B.4, K.G.B.5, K.G.B.6). In Lessons 1-3, students reinforce number concepts while working with pattern blocks. For example, in	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			Lesson 3, students put pattern blocks together to make a shape and answer questions such as, “How many squares did you use?” and “Did [you] use more triangles or rhombuses?” (LSSM K.G.B.6).	
	Required **2b)** Materials include problems and activities that serve to connect two or more **clusters in a domain**, or two or more **domains in a grade/course**, in cases where these connections are natural and important.	**Yes**	Materials 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 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 6, Lesson 9 connects the Number and Operations in Base Ten (NBT) and Operations and Algebraic Thinking (OA) domains. During the lesson, students connect their understanding of numbers 11-19 as ten ones and some more ones to expressions (10 + __) (LSSM K.NBT.A.1a). Students then match equations to 10-frame representations of teen numbers (LSSM K.OA.A.1). For example, students use a 10-frame with 9 extra counters. Students match the 10-frame model to the correct equation, 10 + 9 = 19. By using 10-frames, students gain an understanding that numbers are composed of ten ones and some extra	Click or tap here to enter text.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			ones (LSSM K.NBT.A.1a). Unit 8, Lesson 2 connects the Counting and Cardinality (CC) and Number and Operations in Base Ten (NBT) domains. During the Warm-Up, students observe 15 dots, ten of which are in a 10-frame and answer the questions "How many do you see?" and "How do you see them?" The Warm-Up continues with 13 and 19 (LSSM K.NBT.A.1). In Activity 1, students count up to 20 objects in collections and then use drawings, numbers, and words to describe what they counted (LSSM K.CC.A.3, K.CC.B.4, K.CC.B.5). Students who organized their collections are asked to share how and why they chose to organize the collections to deepen their understanding of place value. Lesson 3 integrates the Counting and Cardinality (CC) and Operations and Algebraic Thinking (OA) domains through story problems. Students use their knowledge of the counting process to solve add to, result unknown, and take from, result unknown story problems. In Activity 1, students use connecting cubes and 10-frame mats to solve story problems about people on a bus, such as "There were 7 people on the bus. Then 1 more person got on the bus. How many people are on the bus now?" Students show their thinking using objects, drawings, numbers, or words to solve for 8. Students then solve: "There were 10 people on the bus. Then 1 person got off the bus. How many people are on the bus	

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			now?" Students show their thinking using objects, drawings, numbers, or words to solve for 9 (LSSM K.CC.A.2, K.CC.B.4.c, K.OA.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. For example, in Unit 1, students develop an understanding of numbers and quantities by working towards counting up to ten and answering "how many of ___ are there?" questions by the end of the unit (LSSM K.CC.A.1, K.CC.B.4). Students use a variety of objects such as connecting cubes, pattern blocks, counters, 5-frames, and geoblocks as they progress from recognizing quantities to counting collections of objects. Students also engage in several routines such as Notice and Wonder, Act it Out, How Many Do You See, and Questions About Us to develop and demonstrate conceptual understanding. In Unit 5, Lesson 12, students compose and decompose 10 in multiple ways and find the number that makes 10 when added to a given number (LSSM K.OA.A.4). In the lesson, students	Click or tap here to enter text.

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			complete an activity called “Shake, Spill, and Arrange 10.” In groups of two, students take turns shaking and spilling 10 counters. Students then arrange the counters in 10 frames with 5 yellow counters and 5 red counters. Students use their counters to show equations, such as 10 = 8 + 2 using either 8 red counters and 2 yellow counters or 2 red counters and 8 yellow counters. Students continue building 10 with their red and yellow counters. In Unit 7, Solid Shapes All Around Us, Lesson 10, students correctly name shapes (LSSM K.G.A.2) and build shapes from clay (LSSM K.G.B.5). Students begin by using clay to build a shape that looks like a ball and identifying if it is flat or solid. Then they identify it as a sphere. Then they pick up an object that looks like a can and make it out of clay, repeating the same process as they did with the sphere. They repeat this process with a cube and cone. In the second part of the lesson, students work with partners to find geoblocks according to their description clues or attributes. In Unit 8, Lesson 15, students use two cards and find the sum or difference of each expression on the card. Students then compare the amounts to which is more. For example, two students are given a set of cards with the following expressions: 2 + 0 = __ and 4 + 1 = __. Students find the sum of each expression and determine which amount is the greatest (LSSM K.CC.C.6).	

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
	Required **3b)** ***Attention to Procedural Skill and Fluency:*** The materials are designed so that students **attain the fluencies and procedural skills** required by the 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 provide sufficient supports and opportunities to help students attain the required fluencies of the grade. In Kindergarten, students build fluency with adding and subtracting within 5 (LSSM K.OA.A.5). The lessons and activities provide several opportunities for students to add and subtract within 5. In Unit 6, Lesson 3, students develop fluency with addition and subtraction within 5 as they find the number that makes 5 when added 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). Warm-Up activities are provided within the materials and provide students the opportunity to strengthen their number sense or procedural skill and fluency. 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). In Unit 2, Lesson 12 students write numbers from 0 to 20 (LSSM K.CC.A.3). Students connect quantities to written and spoken numbers. For example, students find the bag that has the given number of objects, such as 8. Students sort through the bags to see which bag has the correct number of	Click or tap here to enter text.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			objects. As the lesson progresses, students choose a bag, count the number of objects in the bag, and write the total number. In Unit 4, Lesson 1, students count the total number of pattern blocks in their bag, determine the number of pattern blocks included, and write a number to record the total (LSSM K.CC.B.5). In Unit 8, Putting it All Together, Lesson 7, students Warm-Up with building fluency of adding and subtracting within 5 (LSSM K.AO.A.5). Students subitize dots in different formations and explain how many they see and how they see them. Later in the lesson students write numbers and draw pictures to represent different things in their school (LSSM K.CC.A.3).	
	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. LSSM K.OA.A.2 is the only application standard for Kindergarten. In Unit 5, Lesson 5, students recognize whether a story problem is an addition problem or a subtraction problem. Students show their thinking by using drawings, numbers, words, or objects. For example, students solve the following problem: “Elena was shopping at the market with her grandfather. Elena chose 4 mangoes. Her grandfather chose 2 pineapples. How many pieces of fruit did they choose?” Students decide whether to add or subtract to find how many pieces of fruit were chosen. Students apply their addition/subtraction strategy of drawing a	Click or tap here to enter text.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			picture and taking away or adding items as necessary (LSSM K.OA.A.2). In Unit 4, Lesson 9, students interpret how a drawing represents a story problem and solve a Take From, Result Unknown story problem. For example, the teacher reads the following problem to the students: "There were 4 markers at school. Elena brought 3 more markers to school. How many markers are at school now?" Students use connecting cubes to represent the problem and solve it. Students can also represent the problem by drawing a picture to represent the 4 markers that were at school and then the 3 markers Elena brought to school (LSSM K.OA.A.2). In Unit 4, Lesson 7, students use objects to act out story problems. In Lesson 8, students represent and solve story problems (LSSM K.OA.A.2). Students read questionless story problems that they discuss with a partner. They come up with questions they could ask about the story. Later students read story problems and show their thinking with objects, drawings, numbers, or words.	
	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. A majority of the standards for Kindergarten focus on conceptual understanding. The materials focus on conceptual understanding in Unit 1 as students build an understanding of the relationship between numbers and	Click or tap here to enter text.

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			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 2, Lesson 6, students use the terms more, fewer, and same to describe groups by exploring bags of materials and then determine the statement that matches or correctly describes the materials in the bag, such as “In this bag there are more red cubes than blue cubes.” Next students use cube towers and when given the signal, they find a partner to compare towers with using more, fewer, or same (LSSM K.CC.C.6). 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 practice standards are included in the section overview of each unit and in the teacher notes of each lesson. For example, 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. In Unit 4, Lesson 2, Warm-Up, the teacher asks students which season they prefer, winter or summer, and records student responses by placing circles in a 5-frame. Students then determine how many	Click or tap here to enter text.

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			students like winter better by counting (LSSM K.CC.B.5). Students use the structure of the 5-frame cards to determine how many students made each choice (MP.7). In Unit 7, Lesson 10, students write equations to show numbers 11-19 (LSSM K.NBT.A.1). Because students have only composed and decomposed numbers 11-19 as ten ones and some more ones throughout the unit, they express regularity in repeated reasoning (MP.8) by using 10 + __ to solve the problems.	
	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. Opportunities to construct viable arguments and critique the arguments of others are embedded in the lessons and activities. For example, in Unit 2, Lesson 17, students build cube towers to match each number from 1–10. In this activity, students put cube towers and numbers in order in a way that makes sense to them. Students may order the towers first and then match the numbers to the towers, match the numbers first and then match the towers to the numbers, or they may order the towers and the numbers separately. Students then discuss their ordering strategy with their partner. In Unit 8, Lesson 20 students decide if there are more or fewer than 10 objects in a	Click or tap here to enter text.

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			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. In Unit 3, students form and discuss an opinion about two of three bears that are similar. Because more than one correct answer exists, the discussion leads to the critiquing and reasoning of others. Students build upon each other's thinking and opinions until the teacher discloses there are multiple reasons why each of the bears could be excluded. In Unit 6, students Warm-Up by looking at dot cards. They are asked “How many do you see?” and “How do you see them?” Students share the different ways they see the number of dots.	
	Required **4c)** Materials explicitly attend to the **specialized language** of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. The materials encourage the use of accurate mathematical terminology. The materials include Warm-Up Routines intended to elicit student discussion and support the development of student thinking and precision with mathematical language, such as Notice and Wonder, Number Talk, Questions About Us, and What Do You Know About ___? For example, teacher	Click or tap here to enter text.

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			guidance states that What Do You Know About ___? routine "elicits students' ideas of numbers, place value, operations, and groupings through visuals of quantity, expressions, and other representations." Math Language Routines (MLRs) provide additional supports that can be used as "an embedded structure of a lesson activity in which all students engage, or as a suggested optional support specifically for English Learners. For example, MLR8 Discussion Supports include strategies the teacher can use to support mathematical discourse, such as "Revoice student ideas to demonstrate mathematical language use by restating a statement as a question" and "Demonstrate use of disciplinary language functions such as detailing steps, describing and justifying reasoning, and questioning strategies." The materials include a glossary of terms used in each lesson. The vocabulary section in the units also provides guidance to teachers on how to use the vocabulary cards in the lesson. Teachers can project the vocabulary cards as slides and discuss the terms with students. Teachers can also print the cards out and post them around the classroom to encourage students to use the correct terminology throughout the unit. Sample student responses are provided throughout the materials, setting the expectation for students to use mathematical language in their discussions and responses. For example, in	

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			Unit 5, Lesson 11, students learn about the term equation. During the Warm-Up activity, students engage in a Notice and Wonder routine intended to "elicit the idea that expressions and equations can be used to represent different compositions and decompositions of 10." Sample student responses include "There are pictures and expressions." "They are all ten." and "Each expression has different numbers." Then, in the Warm-Up Synthesis, the teacher writes out 10 = 7 + 3 and introduces the term equation. This activity prepares students for the next activity in which they match equations to 10-frames. In Unit 7, students identify, describe, analyze, compare, and compose two- and three-dimensional shapes. The unit includes the terms cone, cube, and cylinder. In Lesson 10, students identify and describe solid shapes. In Activity 1, students use clay to make a shape that looks like a ball. Students then determine if the shape is flat or solid and explain why. The teacher then identifies the shape as a sphere. The same activity structure is used for the cylinder, cube, and cone. In Activity 2, students describe shapes in their own language and provide clues so that their partner can identify the solid shapes provided.	
	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	Click or tap here to enter text.

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			instructional material includes a Standards Overview section that lists the content standards and mathematical practice standards addressed in each lesson. The Teacher Guide for each Unit includes guidance on the practices used within the activities. The Teacher Notes section of each lesson also lists the practice standards used and how the practice standards are used within the lesson. In Unit 4, Lesson 17, students add 0 and 1. During Activity 2, students observe Diego and Mai's recorded addition expressions and their values. The expression includes numbers added to 0 and 1. The Teacher Notes state, "The purpose of this activity is to notice the pattern that when 0 is added to a number, the number stays the same and the pattern that when 1 is added to a number, the total is the next number in the count sequence, or 1 more (MP7)." In Unit 1, Lesson 6, students look for small groups of objects. In Activity 2, students recognize and name quantities in picture books. The Teacher Notes state, "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."	

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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 Student Standards for Mathematics.	**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			

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☐ Yes ☐ No	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.			

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	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. The materials state 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." 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, "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" (LSSM K.CC.A.3, LSSM K.CC.B.5, LSSM K.G.B.4, and LSSM K.CC.C.7). This unit builds upon skills and concepts developed in Unit 3 where they investigated two-dimensional shapes, named and described shapes, used pattern blocks to build larger shapes and used positional words along the way.	Click or tap here to enter text.
	7e) Materials provide guidance to help teachers **identify students** who need prerequisite work to engage	**No**	Materials do not provide guidance to help teachers identify students who need	As mentioned in the justification/comments column for

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	successfully in core instruction, on-grade/course-level work.		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. However, the Full Unit Narrative for Unit 1 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."	indicator 7E, students enter Kindergarten with a range of experiences, skills, and concepts of counting. Because Kindergarten can be the first formalized educational experience, students need time to acclimate to this formal school experience, learn routines, build a mathematical community, and begin to develop a positive mathematical disposition. The first unit of Kindergarten was intentionally designed to be invitational - purposefully setting aside instructional time for students to build community and trust - between students and between students and teachers. Students perform better on assessments when relationships are fostered before they are evaluated, this practice also helps to avoid tracking of our youngest students at the onset of their formal school experience. NCTM "Principles to Actions" (2014) offers productive beliefs about mathematics that should influence assessments including an "ongoing process that is embedded in instruction to support student learning and make adjustments to instruction" and that "multiple data sources are needed to provide an accurate picture of student performance." Rather than offer a one-off diagnostic interview or written assessment designed to show what students *don't know* prior to beginning their school experience and ultimately

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				leading to the development of a negative mathematical identity, Imagine Learning K-12 Kindergarten offers joyful center activities on day one, allowing teachers the opportunity to watch and listen for what students *do know*, using an asset-based, built-in observation tool (a checklist). These observation tools are available the very first day and throughout the first unit to support teachers in ongoing formative assessment. It is widely known that diagnostic interviews and written assessments in Kindergarten negatively impact instructional time. Beth L. MacDonald and Jessica F. Shumway state that using centers that incorporate game play for ongoing formative assessments can "immediately inform educators of appropriate instructional strategies without stopping direct instruction." Teacher feedback from our users indicates that administering diagnostic assessments can take days or even weeks for a full class, which interrupts meaningful community building opportunities for students. In Imagine Learning K-12, we remove this burden and allow teachers to observe and assess Kindergarten students in less formal, more authentic settings through age-appropriate math learning and play.

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				Rather than starting with assessing whether students can “count to 100”, an end-of-year expectation, the prerequisite work is for students to engage in play through centers. Students have multiple opportunities to explore the math manipulatives that they will use throughout the year. Through this exploration students have opportunities to make connections from their lived experiences and funds of knowledge to more efficient strategies for counting and comparing, composing and decomposing shapes, subitizing, and other prerequisite concepts and skills. This strategic and intentional play is designed to engage students not only with what concepts and skills they currently possess, but allows them to authentically engage in the mathematical practices and think and communicate as mathematicians. In the first section of Unit 1, teachers have multiple opportunities to observe students doing the following, which address prerequisite Kindergarten concepts and skills: ● Say the count sequence to 10. ● Say one number for each object. ● Answer how many without counting again. ● Show quantities on fingers. ● Recognize and name groups of 1, 2, or 3 objects or images without counting.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				• Recognize and name groups of 4 objects or images without counting. • Identify groups with the same number of objects (for groups of up to 4 objects). Imagine Learning K-12 also includes End of Unit Assessment Guidance which supports teachers in the learning progression of Kindergarten mathematics. These supports will guide teachers in determining next steps for students, as well as suggestions for adjusting and tailoring instruction for students who have not yet mastered prerequisite skills. Citations: MacDonald, Beth L. & Jessica F. Shumway. (2016). Subitizing games: Assessing preschoolers' number understanding: Reflect and discuss. *Teaching Children Mathematics,* 22(6), 340–348. National Council of Teachers of Mathematics. *Principles to Actions*. National Council of Teachers of Mathematics, 2014.
	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.	**No**	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. While the materials provide	Students enter Kindergarten with a range of counting experiences, concepts, and skills. The first unit of Kindergarten is designed to be accessible to all learners regardless of their prior experience.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			Adaptation Packs that address unfinished learning for Grades 1-5, an Adaptation Pack is not included for Grade K.	Therefore, no counting is required for students to engage in the activities in the first three sections, though students may choose to count. Students also have opportunities to work with math tools and topics related to geometry, measurement, and data through a variety of centers. Because students enter Kindergarten with different funds of knowledge, the Kindergarten course intentionally guides teachers as they develop authentic relationships with their students, considering this may be their very first formal educational experience. Students need the opportunity to build trust with their teacher and their classmates in order to be comfortable showing what they really know. Oftentimes, beginning of the year assessments are given to these very young students by a stranger with whom they have not established trust or rapport and that negatively impacts how well they perform on them. At this time, prerequisite work for the major work for Kindergarten is not indicated by Student Achievement Partners or the Progressions documents. Instead, Imagine Learning K-12 provides Instructional Routines, Math Language Routines, Universal Design for Learning, *Advancing Student Thinking* prompts, detailed concept- and skill-based checklists, supporting centers (these

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
				review prior unit understandings and fluencies), and guidance for next day supports or prior unit supports. The Kindergarten Dependency Chart is helpful in assisting teachers with understanding prerequisite units or sections that can be used to support student learning of prerequisite skills during the school year. Each unit section and lesson offers building toward, addressing, and building on standards to help teachers understand the progression of learning in Kindergarten.
	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.	Click or tap here to enter text.

[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	PUBLISHER RESPONSE
	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.	Click or tap here to enter text.
	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.	Click or tap here to enter text.
	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	Click or tap here to enter text.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES	PUBLISHER RESPONSE
			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.	Click or tap here to enter text.
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.

Appendix II.

Public Comments

There were no public comments submitted.