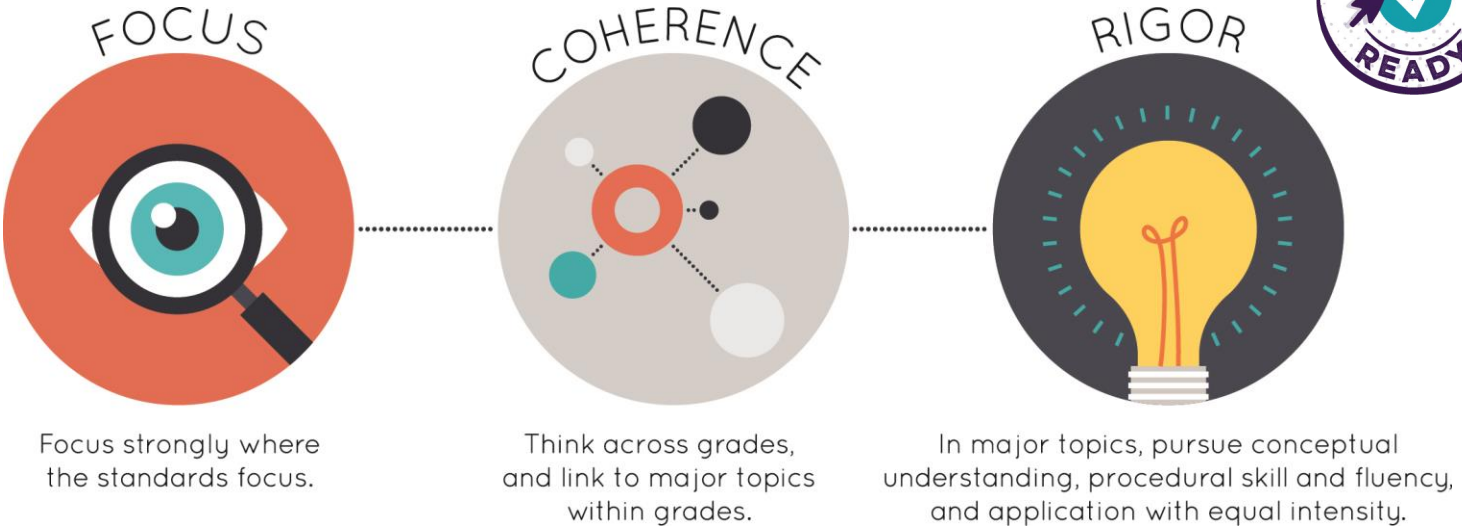
Instructional Materials Evaluation Tool for Alignment in Mathematics Grades K – 12 (IMET)

FULL CURRICULUM
Instructional Materials

Qualified for Abbreviated Review[1]

Strong mathematics instruction contains the following elements:



Title: **Illustrative Mathematics** Grade/Course: **6-8**

Publisher: **Imagine Learning LLC** Copyright: **2018**

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 6 (Tier 1) Grade 7 (Tier 1) Grade 8 (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 https://edreports.org/reports/overview/learnzillion-illustrative-mathematics-6-8-math-2019.

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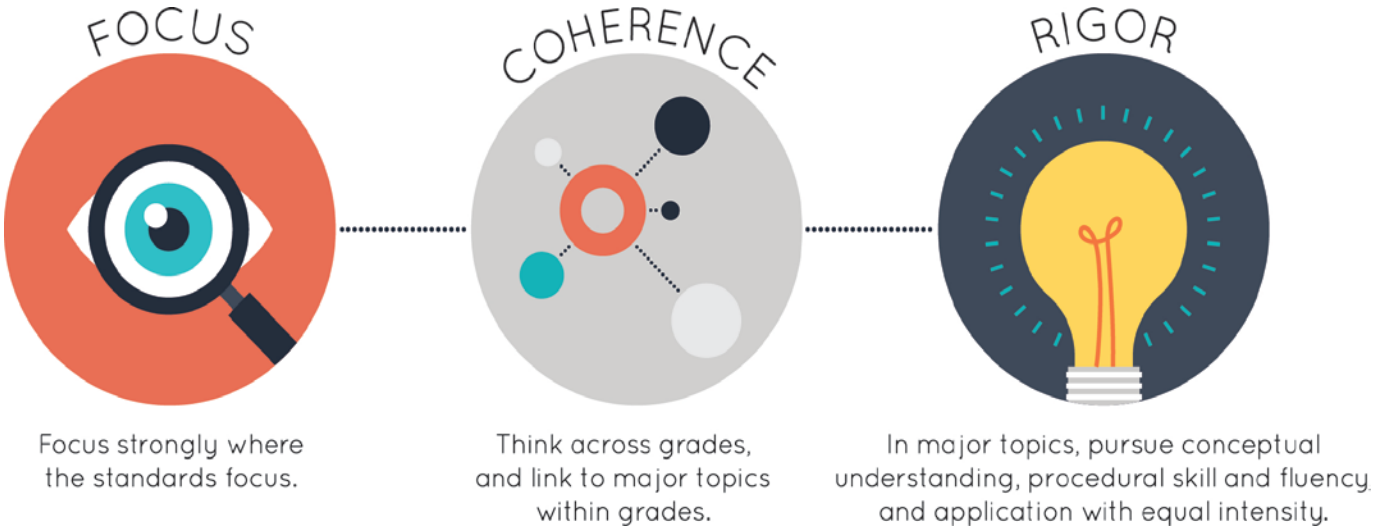

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6. Quality of Assessments	
7. Additional Indicators of Quality	

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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: K-12 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 145 instructional lessons 67% of lessons are spent on major work of the grade. Specifically, 57% of lessons are spent on major standards, 10% of lessons are spent on a combination of major standards and supporting/additional standards, and 33% of lessons are spent on supporting or additional standards. In addition, the Louisiana Teacher Implementation Guide omits two lessons from the materials as they address content beyond the grade level.
	Required **1b)** Instructional materials, including assessments, spend minimal time on content outside of the appropriate grade/course **during core math class 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. Lessons and assessment items that address content outside of the grade level are clearly labeled as optional or to omit. For example, Unit 8, Lessons 11 and 12 address mean absolute deviation (LSSM 7.SP.B.3); however, guidance included in the Louisiana Implementation Teacher Guide suggests omitting both lessons, including the Practice Problems, as well as

[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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			Problem 6 and 7 on the Unit 8 Mid-Unit Assessment. Unit 9 is an optional unit in which students apply skills and concepts from previous units. All other lessons across the topics are related to grade-level work and align to the Louisiana State Standards for Mathematics (LSSM) for Grade 6. Each lesson includes Learning Goals, Warm-up, Activities, Lesson Synthesis, and a Cool-down that aligns to grade-level standards. For example, the Unit 1, Lesson 5, Learning Goal is to "investigate the area of a parallelogram." The Warm-Up activity includes the following problem: "Elena and Tyler were finding the area of this parallelogram." Students observe two different strategies on how Tyler and Elena found the area and determine if the strategies are the same or different. Based on the Warm-Up Activity, Activity 5.2 uses the idea of examples and non-examples of base and height in reference to the parallelogram. During the Lesson Synthesis, students synthesize their knowledge from the lesson on how they decided on the base and height of corresponding parallelograms to determine the relationship to the area. In Activity 5.4, Cool-down, students observe two figures that are parallelograms and determine the base, height, and area (LSSM 6.G.A.1, 6.EE.A.2a, and 6.EE.A.2c).

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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. Culminating lessons are provided to connect major and supporting content. Major work is often developed and then reinforced in lessons that address supporting standards. For example, Unit 4, Lesson 17 connects supporting work to major work as students solve real-world and mathematical problems involving area, surface area, and volume (supporting LSSM 6.G.A) while applying and extending previous understandings of multiplication and division to divide fractions by fractions (major LSSM 6.NS.A). Students first develop an understanding of LSSM 6.NS.A.1 in the first 16 lessons of Unit 4. This understanding is then reinforced and applied in Lesson 17. For example, in Activity 17.1, students observe various flat USPS flat-rate shipping information for different size boxes. The size of each box is also provided. Then students read the following problem, "An artist makes necklaces. She packs each necklace in a small jewelry box that is 1 3/4 inches by 2 1/4 inches by 3/4 inch. A department store ordered 271 necklaces. The artist plans to ship the necklaces to the department store using flat-rate shipping boxes from the post office. Students determine which flat-rate box should be used to minimize the shipping cost (LSSM

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			6.G.A.2 and 6.NS.A.1). Additionally, Unit 3, Lesson 17 connects supporting work of the Geometry (G) domain to major work of the Ratios and Proportional Relationships (RP) domain which was first developed in Units 1 and 2. During Activity 17.2, students observe a floor plan of a room. Students use composite shapes to find the area of the room in square feet (LSSM 6.G.A.1). Students then find the number of gallons required to paint two coats, and using the price per gallon, determine the cost to paint the room (LSSM 6.RP.A.1).
	Required **2b)** Materials include problems and activities that serve to connect two or more **clusters in a domain**, or two or more **domains in a grade/course**, in cases where these connections are natural and important.	**Yes**	Materials 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 5, Lesson 13 connects the Number System (NS) and Expressions and Equations (EE) domains. In Activity 13.1, the Warm-up prepares students for the lesson by reviewing decimal division (LSSM 6.EE.A.4). In Activity 13.2, students calculate quotients of two decimals by multiplying both numbers by an appropriate power of 10, and, as a result, work only with whole numbers. For example, “Think of one or more ways to find 3 ÷ 0.12. Show your reasoning.” (LSSM 6.NS.B.2 and 6.NS.B.3). Unit 6, Lesson 19 connects Clusters B (Use substitution to determine whether a given number in a specified set makes an equation or inequality true) and C (Use

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			variables to represent two quantities in a real-world problem that change in relationship to one another) of the Expressions and Equations (EE) domain. The Learning Goal states, "Create a table and a graph that represent the relationship in a given equation." In Activity 19.2, students work with equations, such as e = 6s where e is the total edge length of a regular tetrahedron and s is the length of one side. Students "get to know" their equation by rewriting the equation using their own words and identifying the meaning of all variables, using words such as sum, difference, product, or quotient (LSSM 6.EE.B.6). Students verify values are solutions and find additional solutions by substituting for the variable (LSSM 6.EE.B.5). Students complete the lesson by graphing the equation and identifying independent and dependent variables (LSSM 6.EE.C.9).
	Required **2c)** Materials connect **prerequisite learning** within the context of new learning in such a way that allows teachers to build and support connections between the relevant prerequisite standards and grade/course-level work in support of students' access to content (connections are explicit from the student perspective).	**Yes**	Materials connect prerequisite learning within the context of new learning in such a way that allows teachers to build and support connections between the relevant prerequisite standards and grade-level work in support of students' access to content. Each unit consists of a Check Your Readiness Assessment that assesses prerequisite concepts and skills for the unit and provides scoring guidance with a description of the connection to lesson materials. For example, in Unit 6, Check Your Readiness Assessment, Problem 1,

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			states, “Write 10^3 without an exponent” and “Evaluate 5 x 10^2 + 3.” (LSSM 5.NBT.A.2). The scoring guidance explains to teachers that this problem assesses basic knowledge of exponents and is first encountered in Lesson 12, Meaning of Exponents within Unit 6. In Lesson 12, students “expand on their previous work with exponents.” In addition, this prior knowledge is useful for Lesson 14 when students evaluate expressions with exponents and other operations, such as 2^2+25 and 2^3 x 10 (LSSM 6.EE.A.1). Each unit includes a Full Unit Narrative. This narrative provides an in-depth explanation of the progression of unit content and how it relates to prerequisite knowledge. For example, the Unit 7 Full Unit Narrative explains that the first section of the unit introduces students to signed numbers as they describe the relationship and relative positions of two signed numbers on a number line. Guidance notes that “Previously, when students worked only with non-negative numbers, magnitude and order were indistinguishable: if one number was greater than another, then on the number line it was always to the right of the other number and always farther from zero.” This learning is extended in the unit as students distinguish between the absolute value of a number and its location on a number line (LSSM 6.NS.C.7) as they compare two signed numbers. In the second section,

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			students represent and graph inequalities (LSSM 6.EE.B.6). Students use this understanding of distance location and direction to plot points in the four quadrants of the coordinate plane and to find distances between these points (LSSM 6.NS.C.8).
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:*** Across the majority of the materials, students have regular opportunities to actively and incrementally make sense of mathematical ideas and construct meaning for the various reasons and contexts in which mathematical ideas are useful in order to **develop conceptual understanding of key mathematical concepts as called for explicitly by the standards**. Conceptual understanding is attended to in this way throughout the learning sequence and within both teacher- and student-facing materials 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. Students have access to high-quality conceptual problems over time and an opportunity to demonstrate conceptual understanding. The materials develop conceptual understanding of grade-level content through scaffolds, conceptual problems, and discussion questions throughout each lesson. In addition, students use various models and representations, such as diagrams, graphs, number lines, and equations to build conceptual understanding over time. For example, in Unit 3, Lesson 1, Activity 1.2, students compute a unit rate as they learn about the tallest high rise in the world, Burj Khalifa. Students analyze and solve the following problem: "A window-washing crew can finish 15 windows in 18 minutes. If this crew was assigned to wash all the windows on the outside of the Burj Khalifa, how long would the crew be washing at this rate?" (LSSM 6.RP.A.2). Before this unit, students developed an understanding of ratios and ratio

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			language. This lesson introduces students to unit rate without using the language "rate per 1." Students solve the problem with a strategy and/or representation of their choice, such as a ratio table. Students then discuss the various ways they found the answer. In Unit 6, Lesson 8, Activity 8.2, students use diagrams to determine whether or not expressions are equal. Using grid paper, students model x + 2 and 3x, when x is 2, and x + 2 and 3x, when x is 1. Students understand that expressions may or may not be equivalent. In Activity 8.3, students identify equivalent expressions using knowledge of operations and their properties. For example, students recognize that a + a + a is equal to 3a or 1a is equal to a (LSSM 6.EE.A.4). Throughout Unit 7, students develop conceptual understanding within the Number System domain as they study signed numbers and how they relate to numbers they already understand. In Lesson 2, Activity 2.2, students build on their understanding of the negative side of a number line through the use of vertical number lines (thermometers). Students continue this work with a paper-folding activity to develop an understanding of horizontal number lines with values to the left and right of zero. For example, in Activity 2.3 students sketch a line and add tick marks to the right of 0. Students fold the paper vertically through zero and use symmetry to sketch tick marks of equal

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			distance on the opposite side of zero. Students then number those marks with negative values and answer questions such as, “Two opposite numbers are 4 units away from each other. What are the numbers?” Students recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line (LSSM 6.NS.C.5).
	Required **3b) *Attention to Procedural Skill and Fluency***: In line with the demand of the standards, the materials are designed so that students **attain the required fluencies and procedural skills** in service of developing their ability to solve more complex tasks. Materials attend to individual standards that set an expectation of procedural skill and fluency throughout the year. Materials provide students with opportunity to develop the procedural skills and fluencies demanded by the standards in a manner that allows for meaningful application rather than isolated practice.	**Yes**	Materials are designed so that students attain the fluencies and procedural skills required by the standards. Students build and consolidate conceptual understanding before shifting towards procedural skill and fluency. Fluency is provided throughout activities to build on previously taught skills and concepts. Every lesson begins with a Warm-up that either helps students prepare for the lesson or provides students the opportunity to strengthen their number sense and procedural skills. Warm-ups that focus on number sense and procedural skills prompt students to engage in “mental arithmetic or reason numerically or algebraically.” In addition, the materials include lessons that focus solely on procedural skill and fluency as called for by the standards. For example, in Unit 5, students extend their knowledge of place value with whole numbers to compute sums, differences, products, and quotients of multi-digit whole numbers and decimals using algorithms (LSSM 6.NS.B.2, 6.NS.B.3). In Lesson 3, students

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			make connections between adding and subtracting with diagrams and subtracting using vertical calculations as they add and subtract decimals with few non-zero digits. In Lesson 4, students work with longer decimals, beyond the thousandths place, and determine which method is more efficient, noting the challenges of both diagrams and vertical calculations, such as using base-ten diagrams might take too long using so many pieces. In Activity 4.3, students use the structure of adding and subtracting whole numbers to find missing addends while adding and subtracting decimals using the vertical calculation. In the Practice Problems, students procedurally solve several problems using vertical calculations. In Lessons 5-8, students focus on multiplying decimals, again, by making connections between diagrams and the standard algorithm. In Lesson 10, Activity 10.2, students develop procedural skill and fluency of long division as they review the base-ten diagram and partial quotients method for calculating 657 3 (LSSM 6.NS.B.2). Unit 7, Lessons 16-18 focus on factors and multiples (LSSM 6.NS.B.4). In Lesson 16, students develop an understanding of a common factor and then determine the greatest common factor of two whole numbers, such as in Activity 16.4 as students solve, “What is the greatest common factor of 24 and 64?” In Lesson 17, students develop an

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			understanding of a common multiple and then determine the least common multiple of two whole numbers, such as in Activity 17.5 as students solve, "What is the least common multiple of 6 and 9?" Finally, in Lesson 18, students solve problems using common factors and multiples. In Activity 18.4, students engage in Factors and Multiples Bingo in which students place Bingo chips on their board that match teacher statements, such as "All multiples of 15," "All factors of 100," and "All common multiples of 4 and 10."
	Required **3c) *Attention to Applications:*** Materials are designed so that across the majority of the course, students have the opportunity to apply and experience applications of mathematics in relevant and meaningful ways. This is done through consistent and varied work with **engaging real-world applications**, including problems that build students' proficiency with selecting and applying an efficient method to find a solution and determining whether the solution makes sense. The problems attend thoroughly to those places in the content standards in which expectations for multi-step and real-world problems are explicit.	**Yes**	Materials are designed so that students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade, afford opportunities for practice, and engage students in problem-solving. When students engage with application problems, they provide solutions, reasoning, justification, and/or modeling in such a way to demonstrate understanding. For example, in Unit 6, Lesson 3, Activity 3.3, students connect diagrams to equations and solutions in real-world application problems with balanced hangers. Students observe balanced hangers with each piece labeled with its weight, such as x and 3 on one side and 8 on the other. Students write

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			equations for the hanger and solve for the unknown variable. For example, students observe a balanced hanger with 11 on one side and four z's on the other and determine the equation is 11 = 4z. Students then solve for the unknown value of z (LSSM 6.EE.B.7). Throughout Unit 2, using several real-world contexts, students begin their study of ratios using multiple methods of modeling to demonstrate understanding. The Inspire Math video for Unit 2 showcases the mathematics by providing a context for the use of models and ratios. The video describes the relationship between temperature and the number of female American Alligators hatched. Students watch the video and use a model to represent the relationship (LSSM 6.RP.A.3). In Lesson 8, Activity 2 students use ratios to determine the unit prices. Students solve problems such as: "Twelve large bottles of water cost $9. What is the cost per bottle of water? or A 10-pound sack of flour costs $8. What is the cost per pound of flour?" Students find the "price for one" using the division method or the double number line method. In Activity 3, students continue to model and divide to find unit rate. In pairs, students answer questions such as "Pizza costs $1.25 per slice. At this rate, how much will 6 slices cost?" or "Neon bracelets cost $1 for 4. What is the cost per bracelet? At this rate, how much will 11 neon bracelets cost?"

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			This additional practice builds proficiency with selecting and applying efficient methods to find solutions (LSSM 6.RP.A.3.b).
	Required **3d)** ***Balance:*** Across the majority of the materials, the three aspects of **rigor** are not always treated together and are not always treated separately. There is a **balance** of the three aspects of rigor within the grade/course.	**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 three aspects of rigor are embedded throughout the materials and reflect the balance of rigor in the standards. Throughout Unit 4, students use tape diagrams to extend and demonstrate their knowledge of fractional division in different contexts to ensure fluency (LSSM 6.NS.A.1), integrating all three components of rigor. For example, in Unit 4, Lesson 3, Activity 2 students solve the following problem, “Priya filled 5 jars, using a total of 712 cups of strawberry jam. How many cups of jam are in each jar?” Students sketch a tape diagram to represent this relationship. Students use equal groups to build a division problem (LSSM 6.NS.A.1). In Lesson 4, Activity 4.2, students interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions. For example, in Lesson 12, Activity 3, in pairs, students evaluate problems such as: “A runner ran 1 4/5 miles on Monday and 6 3/10 miles on Tuesday. How many times her Monday’s distance was her Tuesday’s distance?” (LSSM 6.NS.A.1). Unit 7, Lesson 3 focuses on conceptual understanding. In

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			Activity 3.2, students compare the temperatures in Alaska over a given week. Students plot the temperature on the number line to determine which day had the lowest temperature. Problem 3 states the temperature in Anchorage, Alaska was -21 degrees and the temperature in Minneapolis, Minnesota was -14 degrees. Jada said, "I know that 14 is less than 21, so -14 is also less than -21. This means that it was colder in Minneapolis than in Anchorage." Students agree or disagree and explain their reasoning (LSSM 6.NS.C.7.b). In Activity 3.3, students order numbers on a number line. Students explain whether or not inequality statements are true. For example, -3/2 is farther from 0 than −3/4 or 5/4 is farther from 0 than −3/2. In the Lesson 3 Cool Down, students write, interpret, and explain statements of order for rational numbers in real-world contexts. Students interpret the following problem: "The elevation of Death Valley, California, is -282 feet. The elevation of Tallahassee, Florida, is 203 feet. The elevation of Westmorland, California, is -157 feet. Compare the elevations of Death Valley and Tallahassee using < or >." (LSSM 6.NS.C.7a).
Non-negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Aligned materials make meaningful and purposeful connections that	**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	**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

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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	present throughout the year in assignments, activities, and/or problems.		provide students with an opportunity to engage with the practice standards in each lesson and support students in the development of mathematical practices, contributing to students' habits of mind as students develop procedural skills and fluency, and conceptual understanding. For example, in Unit 1, Lesson 11, Activity 11.4, students determine the area of an unfamiliar polygon and think about various ways to determine the area. The activity reinforces the practice of sense-making (MP.1). As students work with the complex structures to determine the area, students make use of the structure (MP.7) of the pinwheel in their reasoning (LSSM 6.G.A.1). For example, students find the area of the shaded region in square units of a pinwheel and show their reasoning. In Unit 2, Lesson 6, Activity 6.2, students reason abstractly (MP.2) to determine the next sequence on a double number line, using appropriate tools (MP.5). For example, the problem states that drink mixtures are made by mixing 4 teaspoons of powdered drink for every cup of water. Students used a double number line diagram to show their explanation for the ratio (LSSM 6.RP.A.3). In Unit 2, Lesson 16, students make sense of a real-world problem and choose among three tools to solve the problem (MP.1, MP.5). In Activity 16.2, students analyze and solve the following problem: "A teacher is planning a class trip to the aquarium. The

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			aquarium requires 2 chaperones for every 15 students. The teacher plans accordingly and orders a total of 85 tickets. How many tickets are for chaperones, and how many are for students?" Students solve the problem using a number line, a table, or a tape diagram. Students discuss which strategy they preferred for this problem and why (LSSM 6.RP.A.3).
	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 course-level mathematics that is detailed in the content standards. The materials provide opportunities for students to engage in mathematical reasoning through viable arguments and critique student work and opportunities for students to discuss their thinking and reasoning for the strategies they used to solve problems throughout the materials. For example, in Unit 1, Lesson 2, Activity 2.3, students use the areas of composite shapes from the previous activity to reason about the area of each tangram shape. Students practice articulating how they know that these observations are true. For example, students find the areas of assigned triangles and construct individual explanations. Students then explain their answer to their partner to come up with an agreement about the answers and explanations. In Unit 3, Lesson 10, Activity 10.2 students learn the meaning of percentages using dollars and

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			cents. Since money patterns only hold up in the context of percentages of 100 of a quantity, students consider situations outside of 100. For example, students observe the following situation, “The value of 6 quarters is 50% of the value of a dollar because the value of 6 quarters is 150 cents, which is 50 cents greater than 100 cents. This means that the value of 6 quarters is 50% of the value of a dollar.” Students identify the error, critique the reasoning, and write a correct explanation. In this situation, students use verbal or written explanations accompanied by a table to construct arguments.
	Required **4c)** Materials explicitly attend to the **specialized language** of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. Mathematical language is emphasized throughout the lessons within each unit. Typically, terms are not identified until students have the opportunity to learn about the concept and then formalize a definition. The materials include instructional routines intended to support students in mathematical language development, such as Algebra Talk. During the routine, students observe an expression, and take a few minutes to think about a strategy. Students share solution strategies. The purpose of the routine is to encourage students to think about math and to use mathematical language as they talk about math. The materials use and encourage the use of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			accurate mathematical terminology when talking about skills, concepts, and solution processes. Embedded into each unit, students have opportunities to engage with mathematical language in answers, explanations, and during mathematical discourse. Each unit includes a Progression of Disciplinary Language which explains how and when students encounter disciplinary language throughout the unit. A table lists new terminology, where it is introduced and also notes "when students are expected to understand the word or phrase receptively and when they are expected to produce the word or phrase in their own speaking or writing." For example, in Unit 6, Progression of Disciplinary Language, students are expected to "Interpret tape diagrams involving letters that stand for numbers," "Describe patterns of growth that can be represented using exponents," and "Explain how to use equations to solve percent problems." Additionally, students are expected to understand the term variable receptively in Lesson 2 and are expected to produce the term in their speaking or writing by Lesson 16. In Unit 7, Lesson 2 students learn about opposites on a number line and deepen their understanding of distance on a number line in the context of negative numbers. In Activity 2.3, the materials do not explicitly introduce students to the word absolute value, but students compare numbers'

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			distances from 0 on a number line. Students use mathematical language in this lesson when referring to opposite numbers and then formalize the term absolute value in Lesson 6. Then, in Lesson 6, Activity 2, students engage with the following problem: "A flea is jumping on a number line. a. If the flea starts at 1 and jumps 4 units to the right, where does it end up? How far away from 0 is this? b. If the flea starts at 1 and jumps 4 units to the left, where does it end up? How far away from 0 is this?" The definition of absolute value is then explicitly stated in Problem e. Students learn to represent absolute value using proper notation. Students find $\|-7\|$ and explain what it means using content specific language. In Lesson 2, Activity Synthesis students explain the difference between a number's opposite and a number's absolute value and discuss whether the absolute value of a number always means changing the sign.
	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 Full Unit Narrative describes what the students will learn and be able to do within the unit and includes the practice standards that are utilized across the unit. Lesson overviews, labeled "About this Lesson" also note the practice standards that are used within the lesson.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Additionally, teacher-directed materials, such as Anticipated Misconceptions and Activity Introductions, provide teachers with strategies to develop the practice standards during the lesson. Instructional routines are embedded in the materials, some of which encourage the use of and support students' development of the math practices. For example, Clarify, Critique, Correct uses MP.3, Information Gap uses MP.6, Notice and Wonder often incorporates MP.7. For example, the Unit 6 Full Unit Narrative states, “The second section introduces balanced and unbalanced ‘hanger diagrams’ as a way to reason about solving the linear equations of the first section. Students write linear equations to represent situations, including situations with percentages, solve the equations, and interpret the solutions in the original contexts (MP.2), specifying units of measurement when appropriate (MP.6).” In Lesson 13, students utilize MP.3 and MP.7. Teacher guidance states, “In this lesson, students analyze the structure of expressions (MP.7) to apply their understanding of exponents. While they practice using the notation of expressions with exponents, students recall and apply their prior understanding of operations and connect those understandings to the meaning of exponents. They write, interpret, and evaluate expressions with exponent notation where the exponents are whole

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			numbers and the bases may be whole numbers, fractions, or decimals." Additionally, students are expected to "Critique (orally and in writing) arguments that claim two different numerical expressions are equal" and "Justify (orally and in writing) whether numerical expressions involving whole-number exponents are equal." (MP.3).
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 by providing consistent opportunities for students to engage with various types of problems with multiple problem structures and diverse representations of student understanding and solutions.		See EdReports for more information.
	Required **5b)** 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.		
	Required **5c)** Support for **diverse learners**, including English Learners and students with disabilities, are provided. Appropriate suggestions and materials are provided for **supporting varying student needs** at the unit and lesson level using an accelerating learning approach. The language in which questions and problems are posed is not an obstacle to understanding the content, and if it is, additional supports are included (e.g., alternative teacher approaches, pacing and instructional delivery options, strategies or suggestions for supporting access		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	to text and/or content, suggestions for modifications, suggestions for vocabulary acquisition, extension activities, etc.). Materials include **teacher guidance to help support special populations** and provide the opportunities for these students to meet the expectations of the standards and enable regular progress monitoring.		
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, frequent, and varied **assessment opportunities** are embedded into materials and measure student progress toward achieving the full expectation of standards. These assessment opportunities reflect the balance of the standards as presented in the materials. Guidance is provided so that teachers can use assessments to inform the next instructional steps.		
	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 contexts. Assessment items require students to produce solutions as well as construct arguments, explanations, and models in grade/course-appropriate ways.		
	6c) Materials provide **small-scale formative assessment** items designed for the purpose of timely identification of individual students' **unfinished learning** with the prerequisite math knowledge and skills that are most directly connected to successful engagement with the upcoming grade/course-level mathematics lessons. The frequency and quality of assessments are designed to ensure teachers have appropriate tools to plan for addressing unfinished prerequisite learning at minimum every 15-20 instructional days.		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	6d) Scoring guidelines and rubrics align to standards, incorporate criteria that are specific, observable, and measurable, and provide sufficient guidance for interpreting a wide range of student performance and emerging conceptions and targeted support to engage in core instruction.		
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 total amount of content is **viable** for a 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.		
	7c) Materials provide **targeted, aligned, and actionable prerequisite work** from the appropriate prior grade-level standards to accelerate student learning to immediately upcoming grade/course-level standards (e.g. targeted mini lessons, tutoring sessions).	**Yes**	Materials provide targeted, aligned, and actionable prerequisite work from the appropriate prior grade-level standards to accelerate student learning to immediately upcoming grade-level standards. Each unit includes a Check Your Readiness assessment that "formatively provides teachers with information about where students are along a progression of understanding." Most of the problems on the Check Your Readiness assessment address prerequisite skills and concepts for the unit, and this pre-unit diagnostic assessment is assigned before the start of the unit. The results of the assessment

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			support teachers in instructional decision-making and whether to address prerequisite skills using either the item-by-item guidance to "inform just-in-time adjustments to instruction within the lessons" or the Adaptation Pack of the unit which "incorporates prior grade-level knowledge and skills, when necessary, to support access to current grade-level content." The Adaptation Pack lists essential prior concepts needed to engage with the content of the current unit and provides a brief narrative of the approach of the unit. The Adaptation Pack suggests adding lessons from prior grade levels to either activate prior knowledge or to use for just-in-time support before a lesson. If the lessons are integrated into whole group instruction, a modified plan is provided to show how the suggested lessons could be incorporated into the unit to provide support and review as needed. For example, the Grade 6, Unit 2, Introducing Ratios, Adaptation Pack identifies the following essential prior concepts: additive reasoning, use of a number line, dividing one whole number by another, and multiplication as scaling. Guidance suggests that teachers "analyze student responses to the 6.2 Check Your Readiness Assessment for missed learning of grade 6 content to make decisions about pacing" and implement a day-by-day modified plan. For example, the guidance suggests incorporating Grade 5,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Unit 3, Lesson 10 on Day 2 and Grade 5, Unit 3 Lesson 12 on Day 3. In addition, the Check Your Readiness assessment includes scoring guidance for each item. The scoring guidance provides a detailed solution and a narrative. Within the narrative, guidance is provided if "most students struggle with this item." For example, on the 6.2 Check Your Readiness assessment, item 1 assesses LSSM 4.NF.A.1. If most students struggle with this item, the guidance suggests to "use this item for error analysis before beginning Lesson 6." The materials also provide a Check Your Readiness Assessment Planning Table that is used to support planning decisions after student work is evaluated. For example, the Check Your Readiness Assessment Planning Table for 6.1 notes that item 1 assesses LSSM 3.MD.C.6, 3.MD.C.7a, 3.MD.C.7b, and 4.MD.A.3, and the content of the item is first encountered in Lesson 1: Tiling the Plane. If students struggle, the following guidance is provided: "Plan to use the activities in Lesson 1 to support their understanding of area. The Practice Problems in Lesson 1 can be used for extra practice in calculating area. In Lesson 2 they will calculate area as they decompose and rearrange shapes to find area. Plan to emphasize tiling and square units in the warm-up of Lesson 2 if students struggle to make sense of tiling the rectangle with 30 squares to find its area."

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	7d) Materials provide guidance to help teachers regularly **identify and flexibly group students** who need prerequisite work to engage successfully in the current core instruction (i.e. a given module, topic or lesson set), on-grade/course-level work and when to administer these supports.	**No**	Materials do not provide guidance to help teachers regularly identify and flexibly group students who need prerequisite work to engage successfully in the current core instruction. Although teachers use the Check Your Readiness pre-unit assessment to identify students who need prerequisite work, additional guidance on flexibly grouping students is not provided. Guidance is only provided if most students struggle or if most students do well. In addition, the Adaptation Packs only include whole group modifications, and guidance is not provided to support individuals or small groups.

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 course. Materials spend minimal time on content outside of the appropriate grade level. In assessment materials, assessment components do not make students 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

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

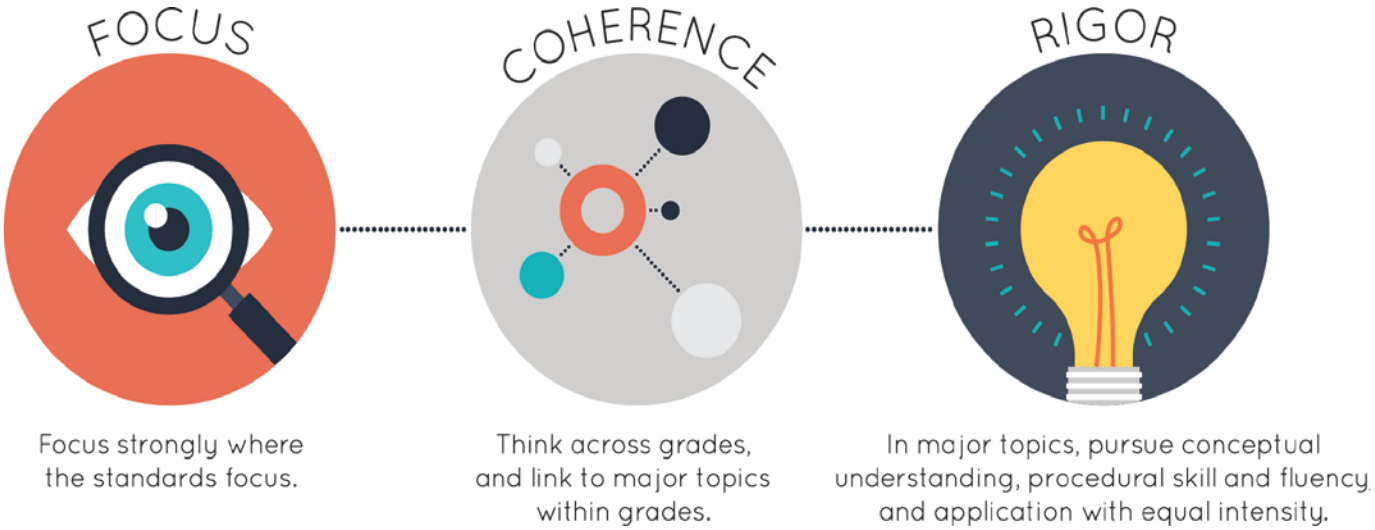
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			throughout the year. Materials include problems and activities that connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important.
	3. Rigor and Balance	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in 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/course-level content in a meaningful way and is present throughout the year in assignments, activities, and/or problems. 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. Materials explicitly attend to the specialized language of mathematics. Mathematical language is emphasized throughout the lessons within each mission. Materials include teacher-

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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 provide targeted, aligned, and actionable prerequisite work from the appropriate prior grade-level standards to accelerate student learning to immediately upcoming grade-level standards. However, materials do not provide guidance to help teachers regularly identify and flexibly group students who need prerequisite work to engage successfully in the current core instruction, on-grade-level work and when to administer these supports. See EdReports for more information.
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: **7**

Publisher: **Imagine Learning LLC**

Copyright: **2018**

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. Additional Indicators of Quality	

[1] Abbreviated Reviews are conducted in K-12 ELA and K-12 Math for submissions that **Meet Expectations** for Gateways 1 and Gateway 2 through EdReports. Reviewers considered these reports as they reviewed materials for alignment to Louisiana state standards and quality Non-negotiable indicators. See the full EdReports review https://edreports.org/reports/overview/learnzillion-illustrative-mathematics-6-8-math-2019.

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: K-12 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 145 instructional lessons, 65% of lessons are spent on major work of the grade. Specifically, 51% of lessons are spent on major standards, 14% of lessons are spent on a combination of major standards and supporting/additional standards, and 35% of lessons are spent on supporting or additional standards.
	Required **1b)** Instructional materials, including assessments, spend minimal time on content outside of the appropriate grade/course **during core math class instruction**. Content beyond grade/course-level should be clearly labeled as optional.	**Yes**	Materials spend minimal time on content outside of the appropriate grade/course level. In assessment materials, assessment components do not make students/teachers responsible for any topics before the grade in which they are introduced. Unit 9 is an optional unit in which students apply skills and concepts from previous units. To ensure full coverage of LSSM 7.SP.B.3, including mean absolute deviation, the Louisiana Teacher Implementation Guide suggests adding the following Grade 6 materials: Unit 8, Lessons 11-12, including the Practice Problems; Unit 8 Mid-Unit Assessment, Problems 6-7. All lessons across the topics are related to grade-level work and align to the Louisiana State Standards for Mathematics (LSSM) for Grade 7. Each

[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
			lesson includes Learning Goals, Warm-up, Activities, Lesson Synthesis, and a Cool-down that aligns to grade-level standards. For example, Unit 1, Lesson 10, Activity 10.2, students practice creating scale drawings and determining the relationship between the scaled area and the actual area (LSSM 7.G.A.1). A map is given that shows a plot of land in the shape of a right triangle with the base 120 meters and the height 90 meters. The teacher assigns a scale to use on centimeter graph paper. Students calculate the area of the triangle they drew based on the scale factor. Students then compare their scale area calculation to the actual area of the drawing. Assessment items included in the Unit 5 End-of-Unit Assessment align directly to LSSM 7.NS.A which is addressed throughout Unit 5. For example, in Problem 1 of the assessment, students find sums and differences of signed numbers. Problem 2 states, “A heron is perched in a tree 50 feet above sea level. Directly below the heron, a pelican is flying 17 feet above sea level.” Students choose all statements that are true. Students must understand the difference between distance and difference. Students select answers such as “The difference in height between the pelican and the heron is -33 feet,” while not choosing answers such as “The distance between the heights of the pelican and heron is -33 feet.” This distinction

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			demonstrates a student's understanding that the distance between two rational numbers is the absolute value of their difference (LSSM 7.NS.A.1c).
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. Culminating lessons are provided to connect major and supporting content. Major work is often developed and then reinforced in lessons that address supporting standards. For example, in Unit 8, Lesson 4, Activity 4.3, students see that an estimate of the probability for an event should be close to what is expected from the exact probability. Students think about the outcomes if they tossed a coin 100 times. Students are given the following situations to determine if they think the result is surprising or not: "a. You flip the coin once, and it lands heads up. b. You flip the coin twice, and it lands heads up both times. c. You flip the coin 100 times, and it lands heads up all 100 times" (LSSM 7.RP.A and 7.SP.C.6). Major cluster 7.RP.A is first developed in Units 2-4 and then reinforced in this lesson. A similar connection is evident in Unit 8, Lesson 7. In Activity 2, students consider the profitability of the ski business, Alpine Zoom. Students create a simulation to determine the likelihood of snow over 10 days if the probability of snow is 1/3 (LSSM 7.SP.C.8c). Students conduct the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			experiment and estimate the probability of snow over 10 days. Students use this information to predict whether or not Alpine Zoom will make money (LSSM 7.RP.A.3). In Activity 7.5, Cool Down, students observe simulation data about two batteries and "estimate the probability that at least one battery will die before 15 hours" has passed (LSSM 7.SP.C.8.c and 7.RP.A).
	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 6, Lesson 12 connects Clusters A (Use properties of operations to generate equivalent expressions) and B (Solve real-life and mathematical problems using numerical and algebraic expressions and equations) of the Expressions and Equations (EE) domain. The Learning Goal states, "Solve story problems about percent increase or decrease by drawing, by writing, and solving an equation." In Activity 3, students solve the following problem: "A store is having a sale where all shoes are discounted by 20%. Diego has a coupon for $3 off of the regular price for one pair of shoes. The store first applies the coupon and then takes 20% off of the reduced price. If Diego pays $18.40 for a pair of shoes, what was their original price before the sale and without the coupon?" Students explain their answers. One

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			possible strategy is to write the equation 0.8 (x − 3) = 18.40 to show that Diego paid 80% of the original value minus $3 (LSSM 7.EE.A.2). Using algebraic strategies, students solve the equations to find the original price of the shoes was $26 (LSSM 7.EE.B.3, LSSM 7.EE.B.4a). Unit 7, Lesson 5, connects the Expressions and Equations (EE) and Geometry (G) domains as students use equations to solve for unknown angles. In Activity 5.2, students practice solving equations that represent the relationship between angles (LSSM 7.EE.B.4, 7.G.B.5). For example, students solve the following problem: "Elena and Diego each wrote equations to represent these diagrams. For each diagram, decide which equation you agree with, and solve it. You can assume that the angles that look like right angles are indeed right angles."
	Required **2c)** Materials connect **prerequisite learning** within the context of new learning in such a way that allows teachers to build and support connections between the relevant prerequisite standards and grade/course-level work in support of students' access to content (connections are explicit from the student perspective).	**Yes**	Materials connect prerequisite learning within the context of new learning in such a way that allows teachers to build and support connections between the relevant prerequisite standards and grade-level work in support of students' access to content. Each unit consists of a Check Your Readiness Assessment that contains questions with previous grade-level standards along with scoring guidance with a description of the connection to lesson materials. For example, in Unit 2, Check Your Readiness Assessment, Problem 1, students solve the following

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			problem: “An airplane flew across the Pacific Ocean. The table shows the amount of time and the distance traveled when the airplane was traveling at a constant speed. a. Complete the table with the missing values. b. Explain or show your reasoning.” (LSSM 6.RP.A.1, 6.RP.A.3a). The scoring guidance explains to teachers that this problem assesses unit rate and is first encountered in Lesson 2, Introducing Proportional Relationships with Tables within Unit 2. In the unit, students use tables to solve problems involving constant speed. Each unit includes a Full Unit Narrative. This narrative gives an in-depth explanation of the progression of unit content and how it relates to prerequisite knowledge. For example, in Grade 6 students use positive and negative numbers to represent quantities in real-world contexts (LSSM 6.NS.C.5). The Unit 5 Narrative states that students build on their previous knowledge of negative numbers to represent changes in temperature and elevation with addition and subtraction expressions and equations (LSSM 7.NS.A.1b). The Learning Narrative videos provide insight into which practice standards are utilized in the lessons. The narrative describes the scaffolding used to support student knowledge. For example, the Unit 4 narrative explains that in the first section of the unit, students deepen their understanding of ratio, scale factor,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			and constant of proportionality to solve real-world problems and to solve equations with fractions and percents (LSSM 7.RP.A.1). In the second section, students extend their understanding of proportional relationships to find percent increase or decrease using tape diagrams, equations and other representations (LSSM 7.RP.A.3).
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:*** Across the majority of the materials, students have regular opportunities to actively and incrementally make sense of mathematical ideas and construct meaning for the various reasons and contexts in which mathematical ideas are useful in order to **develop conceptual understanding of key mathematical concepts as called for explicitly by the standards**. Conceptual understanding is attended to in this way throughout the learning sequence and within both teacher- and student-facing materials 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. Students have access to high-quality conceptual problems over time and an opportunity to demonstrate conceptual understanding. The materials develop conceptual understanding of grade-level content through scaffolds, conceptual problems, and discussion questions throughout each lesson. In addition, students use various models and representations, such as diagrams, graphs, number lines, and equations to build conceptual understanding over time. For example, in Unit 2, Lesson 11, Activity 11.3, students develop an understanding that a straight line on a graph represents a proportional relationship. Students plot a point that shows the number of seagulls, 4, and the number of pounds of garbage they ate, 10, and then draw a line through this point and (0, 0). Students then plot the point (1, k), find the value of k, and explain what the value of k tells them about this

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			context. Students determine that k = 2.5, and that this value tells the number of pounds of garbage consumed per seagull (LSSM 7.RP.A.2d). In Unit 4, students continue to develop conceptual understanding by solving multi-step problems that are set in contexts that involve fractions and percentages. In Lesson 3, students observe a table that shows the cost for 6 feet of rope as $7.50. Students then analyze two different strategies to find how much was paid for 50 feet of rope using a ratio table. Students discuss the different methods, find the amount paid for 50 feet of rope, and then discuss how they found the constant of proportionality and what it means in this context (LSSM 7.RP.A.2b). In Unit 5, students use tables and number lines to represent sums and differences, and they represent and interpret sums and differences in the coordinate plane. In Lesson 2, Activity 2.2 students explain how the following situation is represented on a number line, “If the temperature starts at 40 degrees and increases 10 degrees, what will the final temperature be?” Students continue to represent changes in temperature on a number line and interpret the sums in a real-world context (LSSM 7.NS.A.1b). In Lesson 3, students continue to interpret sums of rational numbers in real-world contexts. In Activity 3.2, students complete a table of values representing a mountaineer at 400 feet

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			above the ground. Students represent changes in elevation using an equation and a number line (LSSM 7.NS.A.1b). Students respond to questions such as, "What happens when the two addends have opposite signs and the number with the larger magnitude is positive?" and "How can you tell when the sum will be zero?" (LSSM 7.NS.A.1b).
	Required **3b) *Attention to Procedural Skill and Fluency***: In line with the demand of the standards, the materials are designed so that students **attain the required fluencies and procedural skills** in service of developing their ability to solve more complex tasks. Materials attend to individual standards that set an expectation of procedural skill and fluency throughout the year. Materials provide students with opportunity to develop the procedural skills and fluencies demanded by the standards in a manner that allows for meaningful application rather than isolated practice.	**Yes**	Materials are designed so that students attain the fluencies and procedural skills required by the standards. Students build and consolidate conceptual understanding before shifting towards procedural skill and fluency. Fluency is provided throughout activities to build on previously taught skills and concepts. Every lesson begins with a Warm-up that either helps students prepare for the lesson or provides students the opportunity to strengthen their number sense and procedural skills. Warm-ups that focus on number sense and procedural skills prompt students to engage in "mental arithmetic or reason numerically or algebraically." In addition, the materials include lessons that focus solely on procedural skill and fluency as called for by the standards. For example, Unit 4, Lesson 2, Activity 2.3, students become fluent in calculating unit rate from a ratio of fractions (LSSM 7.RP.A.1). During the activity, students observe two different distances and hours for two different people. The following

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			information is provided: “Lin ran 2 3/4 miles in 2/5 of an hour. Noah ran 8 2/3 miles in 4/3 of an hour.” Students analyze one of the scenarios and answer questions such as “How far did Noah run in 1 hour?” “How long would it take Noah to run 1 mile at that rate?” and “Who ran faster, Noah or Lin?” Students write an equation and fluently solve to compute unit rates associated with ratios of fractions (LSSM 7.RP.A.1). In Unit 6, Lesson 10, students use fluency with rational number arithmetic to solve one-variable equations of the form $px + q = r$ and $p(x + q) = r$ (LSSM 7.EE.B.4a). In Activity 3, students solve equations using either the distributive property or by dividing by p. In Problems 4 and 5, students solve $-10(x - 1.7) = -3$ and $5.4 = 0.3(x + 8)$. In Lesson 11, students continue to build fluency with solving equations with various situations. For example, in Activity 3, Problem 1, students solve the following problem: “Priya was busy studying this week and ran 7 fewer miles than last week. She ran 9 times as far as Elena ran this week. Elena only had time to run 4 miles this week.” Students represent the situation with an equation to find how many miles Priya ran last week (LSSM 7.EE.B.4a). In Problem 4, students solve the following problem: “During a run in the canyon, the students are at an elevation of 128 feet. After descending at a rate of 50 feet per minute, they reach an elevation of −472 feet. How

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			long did the descent take?" Students write and solve the equation. In Unit 6, Lesson 20, Warm-Up, students explain why each of the following statements is true: 5 + 2 + 3 = 5 + (2 + 3) 9a is equivalent to 11a - 2a, and 8a - (8a - 8) is equivalent to 8. As students provide explanations, they work toward fluency in writing expressions with fewer terms (LSSM 7.EE.A.1).
	Required **3c) *Attention to Applications:*** Materials are designed so that across the majority of the course, students have the opportunity to apply and experience applications of mathematics in relevant and meaningful ways. This is done through consistent and varied work with **engaging real-world applications**, including problems that build students' proficiency with selecting and applying an efficient method to find a solution and determining whether the solution makes sense. The problems attend thoroughly to those places in the content standards in which expectations for multi-step and real-world problems are explicit.	**Yes**	Materials are designed so that students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade, afford opportunities for practice, and engage students in problem-solving. When students engage with application problems, they provide solutions, reasoning, justification, and/or modeling in such a way to demonstrate understanding. For example, Unit 2, Lesson 1, Activity 1.3, students study scale drawings as a transition to the study of proportional relationships (LSSM 7.G.A.1). Students observe four different crescent moon shapes on a grid and respond to the following prompt: "What do Moons A, B, and C all have in common that Moon D doesn't? Use numbers to describe how moons A, B, and C are different from moon D." Students use the grid to find the dimensions of each moon and then use a table or double number line to show how

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			moons A, B, and C are different from Moon D. In Unit 6, students formulate linear equations and use them to solve real-world problems. In Lesson 2, students use tape diagrams to model and make sense of stories. Problem 1, Activity 2 states, “Mai made 50 flyers for five volunteers in her club to hang up around school. She gave 5 flyers to the first volunteer, 18 flyers to the second volunteer, and divided the remaining flyers equally among the three remaining volunteers.” (LSSM 7.EE.B.3) Activity 3 provides additional practice with tape diagrams. Problem 1 states, “Noah and his sister are making gift bags for a birthday party. Noah puts 3 pencil erasers in each bag. His sister puts x stickers in each bag. After filling 4 bags, they have used a total of 44 items.” Students discuss how the group diagrams are alike and different (LSSM 7.EE.B.3). In Lesson 16, Activity 2, students read four real-world situations and decide which inequality best represents the situation, such as: “The Garden Club is planting fruit trees in their school’s garden. There is one large tree that needs 5 pounds of fertilizer. The rest are newly planted trees that need ½ pound fertilizer each.” In Activity 3, students use this inequality to explain what the variable represents, write a question that can be answered by the inequality, and explain what the solution

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			means in terms of the situation (LSSM 7.EE.B.4.b).
	Required **3d) *Balance:*** Across the majority of the materials, the three aspects of **rigor** are not always treated together and are not always treated separately. There is a **balance** of the three aspects of rigor within the grade/course.	**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 three aspects of rigor are embedded throughout the curriculum. The materials reflect the balance of rigor in the standards. For example, Unit 3, Lesson 9, integrates all components of rigor as students extend their understanding of finding the area of regions around circles and the area of fractions of circles. In Activity 9.3, students combine the two strategies to find the area of a complex real-world object. For example, students solve the following problem: "The field inside a running track is made up of a rectangle 84.39 m long and 73 m wide, together with a half-circle at each end. The running lanes are 9.76 m wide all the way around. What is the area of the running track that goes around the field? Explain or show your reasoning." (LSSM 7.G.B.4). Unit 5, Lesson 2 focuses on the conceptual aspect of rigor using the context of temperature. In Activity 2, Problem 2 students use a number line to represent a starting temperature of 40 degrees and a decrease of 50 degrees. Students interpret signed numbers by positioning them on number lines to find the final temperature and to write an equation to represent the situation (LSSM 7.NS.A.1b). Conceptual understanding is

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			also addressed in Lesson 5 when students model subtraction on a number line by relating it to addition with a missing addend. In Problem 3, students draw a number line diagram to model (−8) − (−3). Students find the difference and explain their reasoning (LSSM 7.NS.A.1c). Later in the unit, in Lesson 14, Activity 2 and 3, students apply practice fluency with rational number arithmetic to solve real-world problems involving unknown quantities (LSSM 7.NS.A.3). In Activity 2, students observe a table that shows the water level of a tank draining at a constant rate of 14 liters per minute with an initial water level of 770 liters. Students write expressions to find the level in the tank after t minutes. In Activity 3, students solve the following problem: "A utility company charges $0.12 per kilowatt-hour for energy a customer uses. They give a credit of $0.025 for every kilowatt-hour of electricity a customer with a solar panel generates that they don't use themselves." Students find the amount of energy used and the amount due at the end of the month.
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	**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 and support students in the

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
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			development of mathematical practices, contributing to students' habits of mind as students develop procedural skills and fluency, and conceptual understanding. For example, in Unit 1, Lesson 2, Activity 2.3, students practice identifying corresponding parts of scaled copies (LSSM 7.G.A.1). Students organize corresponding lengths in a table and see that there is a single factor that relates to each length in the original triangle (MP.8). Throughout Unit 6, students seek patterns or structures to model and solve problems. In Lesson 4, Activity 2 students use tape diagrams (MP.4 Model with Mathematics) to represent situations such as, "Elena is cutting a 30-foot piece of ribbon for a craft project. She cuts off 7 feet, and then cuts the remaining piece into 9 equal lengths of x feet each." (LSSM 7.EE.B.3, LSSM 7.EE.B.4a). Students look for and make use of structure (MP.7) to represent the situations in the form of px+q=r and to find the solution for the number of markers in each pack and the length of each piece of ribbon. In Lesson 7, students continue to use hangar diagrams to model (MP.4) the mathematics using the form px+q=r. For example, students interpret the hangar as the equation 7=3x+1. This visual representation is used to support understanding of using properties of equality to solve equations (LSSM 7.EE.B.4a). In Unit 8, Lesson 10, students consider available tools to make

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			mathematical decisions (MP.5). In Activity 10.3, students design a simulation to estimate a probability using number cubes, compasses, protractors, rulers, paper bags, colored snap cubes, scissors, and coins. In addition, students present arguments (MP.3) for the simulation method they choose (LSSM 7.SP.C.8c).
	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 course-level mathematics that is detailed in the content standards. The materials provide opportunities for students to engage in mathematical reasoning through viable arguments and critique student work and opportunities for students to discuss their thinking and reasoning for the strategies they used to solve problems throughout the materials. For example, in Unit 3, Lesson 10 students analyze two students' answers to three different questions involving circumference and area of circles. Question 1 states, "How many feet are traveled by a person riding once around the merry-go-round?" Students determine if 8π feet or 4π feet is more reasonable and justify their answers. Question 2 states, "How much room is there to spread frosting on the cookie?" Students consider which answer is more reasonable, 2.25π in^2 or 6π cm^2. In Unit 6, Lesson 11, Activity 11.3, students solve word problems that can be represented by

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			equations in the form p(x + q) = r or px + q = r. Students create a visual display of the problems and engage in a gallery walk. Students use sticky notes to leave questions or comments on the visual displays. Students return to their own display and review the questions and comments. In Unit 7, Lesson 1, Activity 1.4, students address the common error of reading a protractor from the wrong end. Students critique someone else's thinking and make an argument if they agree with either student's claim. For example, "Tyler and Priya were both measuring angle TUS. Priya thinks the angle measures 40 degrees. Tyler thinks the angle measures 140 degrees. Do you agree with either of them? Explain your reasoning."
	Required **4c)** Materials explicitly attend to the **specialized language** of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. Mathematical language is emphasized throughout the lessons within each unit. Typically, terms are not identified until students have the opportunity to learn about the concept and then formalize a definition. The materials include instructional routines intended to support students in mathematical language development, such as Algebra Talk. During the routine, students observe an expression, and take a few minutes to think about a strategy. Students share solution strategies. The purpose of the routine is to encourage students to think about math and to use mathematical

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			language as they talk about math. The materials use and encourage the use of accurate mathematical terminology when talking about skills, concepts, and solution processes. Embedded into each unit, students have opportunities to engage with mathematical language in answers, explanations, and during mathematical discourse. Each unit includes a Progression of Disciplinary Language which explains how and when students encounter disciplinary language throughout the unit. A table lists new terminology, where it is introduced and also notes "when students are expected to understand the word or phrase receptively and when they are expected to produce the word or phrase in their own speaking or writing." For example, in Unit 8, Progression of Disciplinary Language, students are expected to "Describe patterns observed in repeated experiments," "Explain possible differences in experimental and theoretical probability," "Justify when samples are or are not representative of a larger population," and "Compare methods for writing samples spaces." Additionally, students are expected to understand the term outcome receptively in Lesson 2 and are expected to produce the term in their speaking or writing by Lesson 3. In Unit 2, students develop an understanding of proportionality and are expected to be productive with the phrase, constant of proportionality, by

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Lesson 7. Across Lessons 1-6, students build an understanding of proportionality. For example, in Unit 2, Lesson 2, Activity 2, given the information that 2 cups of dry rice will serve 6 people, students complete missing values in a table. Students discuss methods used to find the missing values, including the use of a unit rate and moving across the table. Students are then introduced to the term proportional relationship. The materials explicitly state, "Whenever we have a situation where two quantities are always in the same ratio, we say there is a proportional relationship between the quantities." In Activity 3, students observe a table to determine the relationship between 8 teaspoons of honey to 10 cups of flour. Sample students' responses are provided, such as: "The relationship between the amount of honey and the amount of flour is a proportional relationship" or "The amount of honey is proportional to the amount of flour." All expected responses include the new term, proportional or proportional relationship, encouraging students to use new math terminology in their answers.
	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 Full Unit Narrative describes what the students will learn and be able to do within the unit and includes the practice standards that are utilized across the unit.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Lesson overviews, labeled “About this Lesson” also note the practice standards that are used within the lesson. Additionally, teacher-directed materials, such as Anticipated Misconceptions and Activity Introductions, provide teachers with strategies to develop the practice standards during the lesson. Instructional routines are embedded in the materials, some of which encourage the use of and support students' development of the math practices. For example, Clarify, Critique, Correct uses MP.3, Information Gap uses MP.6, Notice and Wonder often incorporates MP.7. For example, the Unit 4 Full Unit Narrative states, that in the last section of the unit, “In small groups, students identify important quantities in a situation described in a news item, use diagrams to map the relationship of the quantities, and reason mathematically to draw conclusions (MP.4). This is an opportunity to choose an appropriate type of diagram (MP.5), to state the meanings of symbols used in the diagram, to specify units of measurement, and to label the diagram accurately (MP.6). Each group creates a display to communicate its reasoning and critiques the reasoning shown in displays from other groups (MP.3).” In Lesson 12, students utilize MP.1, MP.6, and MP.7. Teacher guidance states, “In this lesson, students consolidate what they have learned over the last few lessons and solve a variety of

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			multi-step percentage problems involving taxes, tips, and discounts, including problems involving fractional percentages. They continue to move towards using equations to represent problems, which enable them to see the common underlying structure behind different problems (MP.7).” Additionally, students are expected to “Explain (orally) how to calculate the percentage, given the dollar amounts before and after a sales tax, tip, or discount.”
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 by providing consistent opportunities for students to engage with various types of problems with multiple problem structures and diverse representations of student understanding and solutions.		See EdReports for more information.
	Required **5b)** 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.		
	Required **5c)** Support for **diverse learners**, including English Learners and students with disabilities, are provided. Appropriate suggestions and materials are provided for **supporting varying student needs** at the unit and lesson level using an accelerating learning approach. The language in which questions and problems are posed is not an obstacle to understanding the content, and if it is,		

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	additional supports are included (e.g., alternative teacher approaches, pacing and instructional delivery options, strategies or suggestions for supporting access to text and/or content, suggestions for modifications, suggestions for vocabulary acquisition, extension activities, etc.). Materials include **teacher guidance to help support special populations** and provide the opportunities for these students to meet the expectations of the standards and enable regular progress monitoring.		
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, frequent, and varied **assessment opportunities** are embedded into materials and measure student progress toward achieving the full expectation of standards. These assessment opportunities reflect the balance of the standards as presented in the materials. Guidance is provided so that teachers can use assessments to inform the next instructional steps.		
	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 contexts. Assessment items require students to produce solutions as well as construct arguments, explanations, and models in grade/course-appropriate ways.		
	6c) Materials provide **small-scale formative assessment** items designed for the purpose of timely identification of individual students' **unfinished learning** with the prerequisite math knowledge and skills that are most directly connected to successful engagement with the upcoming grade/course-level mathematics lessons. The frequency and quality of assessments are designed to		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	ensure teachers have appropriate tools to plan for addressing unfinished prerequisite learning at minimum every 15-20 instructional days.		
	6d) Scoring guidelines and rubrics align to standards, incorporate criteria that are specific, observable, and measurable, and provide sufficient guidance for interpreting a wide range of student performance and emerging conceptions and targeted support to engage in core instruction.		
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 total amount of content is **viable** for a 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.		
	7c) Materials provide **targeted, aligned, and actionable prerequisite work** from the appropriate prior grade-level standards to accelerate student learning to immediately upcoming grade/course-level standards (e.g. targeted mini lessons, tutoring sessions).	**Yes**	Materials provide targeted, aligned, and actionable prerequisite work from the appropriate prior grade-level standards to accelerate student learning to immediately upcoming grade-level standards. Each unit includes a Check Your Readiness assessment that "formatively provides teachers with information about where students are along a progression of understanding." Most of the problems on the Check Your Readiness assessment address prerequisite skills and concepts for the unit, and this pre-unit diagnostic

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			assessment is assigned before the start of the unit. The results of the assessment support teachers in instructional decision-making and whether to address prerequisite skills using either the item-by-item guidance to "inform just-in-time adjustments to instruction within the lessons" or the Adaptation Pack of the unit which "incorporates prior grade-level knowledge and skills, when necessary, to support access to current grade-level content." The Adaptation Pack lists essential prior concepts needed to engage with the content of the current unit and provides a brief narrative of the approach of the unit. The Adaptation Pack suggests adding lessons from prior grade levels to either activate prior knowledge or to use for just-in-time support before a lesson. If the lessons are integrated into whole group instruction, a modified plan is provided to show how the suggested lessons could be incorporated into the unit to provide support and review as needed. For example, the Grade 7, Unit 3, Measuring Circles, Adaptation Pack identifies the following essential prior concepts: find the perimeter of polygons and find the constant of proportionality. Guidance suggests that teachers add Lessons 6.1.6 and 6.19 from Grade 6, and remove Lessons 7.35 and 7.3.11 to "Begin by reviewing how to find the area of parallelograms (6.1.6) and triangles (6.1.9), then review finding the constant of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			proportionality. This leads to the reasoning that the circumference of a circle is proportional to its diameter, with a constant of proportionality π. Finally, students encounter informal derivations of the relationship between area, circumference, and radius." The modified lesson plan suggests adding Lesson 6.16, Activities 2 and 3, on Day 1 and Lesson 6.19, Activities 1-4, on Day 2, and then begin with Lesson 7.3.1 on Day 3. In addition, the Check Your Readiness assessment includes scoring guidance for each item. The scoring guidance provides a detailed solution and a narrative. Within the narrative, guidance is provided if "most students struggle with this item." For example, on the 7.3 Check Your Readiness assessment, item 2 assesses LSSM 6.EE.A.2. If most students struggle with this item, guidance suggests to "plan to incorporate these expressions into Activities 2 and 3 of Lesson 10 to connect how students used the squares' side lengths to find the perimeters and areas." The materials also provide a Check Your Readiness Assessment Planning Table that is used to support planning decisions after student work is evaluated. For example, the Check Your Readiness Assessment Planning Table for 7.2 notes that item 1 assesses LSSM 6.RPA.1 and 6.RP.3a, and the content of the first item is first encountered in Lesson 2: Introducing Proportional Relationships with Tables. If

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			students struggle, the following guidance is provided: "Plan to first do the activity Batches of Trail Mix in grade 6, unit 2, lesson 11, so that students can first see a simpler example of a table of equivalent ratios."
	7d) Materials provide guidance to help teachers regularly **identify and flexibly group students** who need prerequisite work to engage successfully in the current core instruction (i.e. a given module, topic or lesson set), on-grade/course-level work and when to administer these supports.	**No**	Materials do not provide guidance to help teachers regularly identify and flexibly group students who need prerequisite work to engage successfully in the current core instruction. Although teachers use the Check Your Readiness pre-unit assessment to identify students who need prerequisite work, additional guidance on flexibly grouping students is not provided. Guidance is only provided if most students struggle or if most students do well. In addition, the Adaptation Packs only include whole group modifications, and guidance is not provided to support individuals or small groups.
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 course. Materials spend minimal time on content outside of the appropriate grade level. In assessment materials, assessment components do not

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

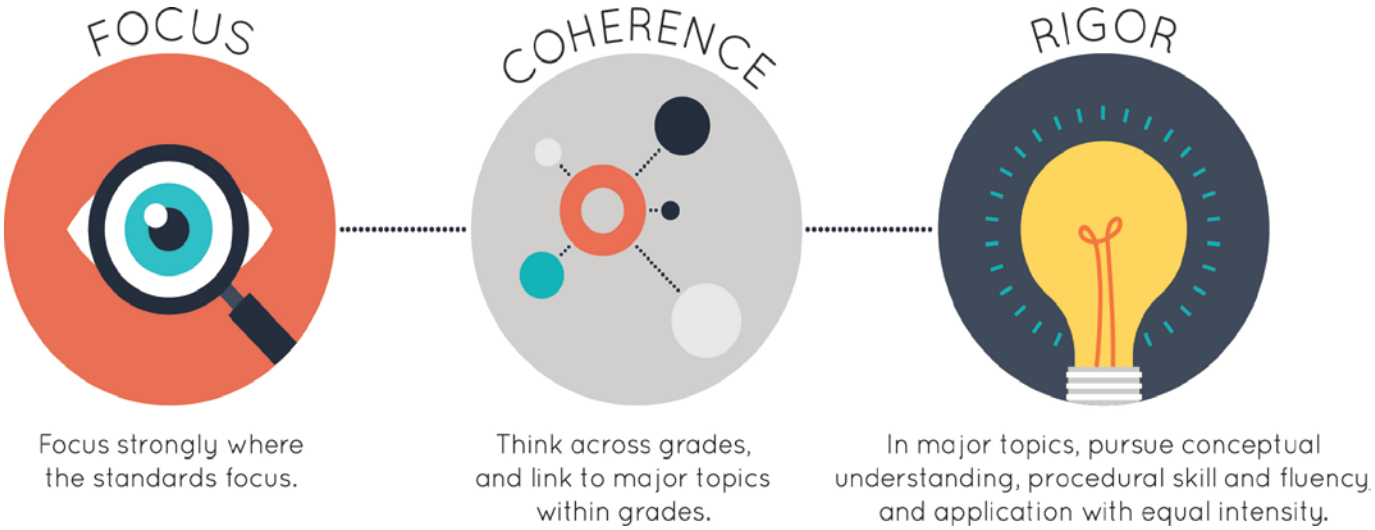
CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			make students responsible for any topics before the grade in which they are introduced.
	2. Consistent, Coherent Content	**Yes**	Materials connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. Materials include problems and activities that connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important.
	3. Rigor and Balance	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in 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/course-level content in a meaningful way and is present throughout the year in assignments, activities, and/or problems. Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade/course-level

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			mathematics that is detailed in the content standards. Materials explicitly attend to the specialized language of mathematics. Mathematical language is emphasized throughout the lessons within each mission. 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 provide targeted, aligned, and actionable prerequisite work from the appropriate prior grade-level standards to accelerate student learning to immediately upcoming grade-level standards. However, materials do not provide guidance to help teachers regularly identify and flexibly group students who need prerequisite work to engage successfully in the current core instruction, on-grade-level work and when to administer these supports. See EdReports for more information.
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: **8**

Publisher: **Imagine Learning LLC**

Copyright: **2018**

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. Additional Indicators of Quality	

[1] Abbreviated Reviews are conducted in K-12 ELA and K-12 Math for submissions that **Meet Expectations** for Gateways 1 and Gateway 2 through EdReports. Reviewers considered these reports as they reviewed materials for alignment to Louisiana state standards and quality Non-negotiable indicators. See the full EdReports review https://edreports.org/reports/overview/learnzillion-illustrative-mathematics-6-8-math-2019.

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: K-12 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, 81% of lessons are spent on major work of the grade. Specifically, 69% of lessons are spent on major standards, 12% of lessons are spent on a combination of major standards and supporting/additional standards, and 20% of lessons are spent on supporting or additional standards.
	Required **1b)** Instructional materials, including assessments, spend minimal time on content outside of the appropriate grade/course **during core math class 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. Unit 9 is an optional unit in which students apply skills and concepts from previous units. All lessons across the topics are related to grade-level work and align to the Louisiana State Standards for Mathematics (LSSM) for Grade 8. Units and lessons focus on grade 8 standards. Each lesson includes Learning Goals, Warm-up, Activities, Lesson Synthesis, and a Cool-down that aligns to grade-level standards. For example, Unit 2 lessons and the End-of-Unit Assessment address cluster 8.G.A (Understand congruence and

[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
			similarity using physical models, transparencies, or geometry software). For example, on Problem 5a of the End-of-Unit Assessment, students determine which polygons are similar to Polygon A and select all that apply (LSSM 8.G.A.4). On Problem 5b, students "choose one of the polygons that are similar to Polygon A, and describe a sequence of transformations that take Polygon A to the selected polygon (LSSM 8.G.A.4)." Unit 4 lessons and End-of-Unit Assessment addresses cluster 8.EE.C (Analyze and solve linear equations and pairs of simultaneous linear equations). For example, during Lesson 13, Warm-Up, students think-pair-share about the following scenario: The teacher shows students a graph with two lines graphed on it. Students use the lines to decide whether each statement is true or false and explain their reasoning (LSSM 8.EE.C.8a).
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. Culminating lessons are provided to connect major and supporting content. Major work is often developed and then reinforced in lessons that address supporting standards. For example, in Unit 5, Lesson 5, Activity 5.3 the teacher displays a graph about garbage. Students work in pairs to determine if the graph shows the amount

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			of garbage produced as a function of time or the time as a function of the amount of garbage produced (LSSM 8.F.A.1 and 8.F.B.5). Major LSSM 8.F.A.1 is first developed in Lessons 1-4 and then reinforced in Lesson 5. Unit 6, Lesson 6 connects supporting LSSM 8.SP.A.3 to major LSSM 8.EE.B.6. LSSM 8.EE.B.6 is first developed in Unit 3, and then reinforced in this lesson. In the Warm-up, students estimate the slope of a line given several points that are close to but not on the line. Students share results and explain their reasoning. A slope triangle is drawn with a horizontal distance of one to review that the vertical distance is the slope (LSSM 8.EE.B.6). Connections are made to slope throughout the lesson. In Activity 3, students view a scatter plot and linear model of car price and mileage. Students discuss the meaning of slope in the context of this problem. Students work through two additional problems answering the questions, "What is the slope of the line in the scatter plot for each situation and What is the meaning of the slope in that situation?" (LSSM 8.SP.A.3). Major LSSM 8.EE.B.6 is first developed in Units 2 and 3 and then reinforced in this lesson.
	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,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			Unit 3, Lesson 8 connects the Expressions and Equations (EE) and Geometry (G) domains. In Activity 8.2, students solve the following problem: “Diego earns $10 per hour babysitting. Assume that he has no money saved before he starts babysitting and plans to save all of his earnings. Graph how much money, y, he has after x hours of babysitting (LSSM 8.EE.B, 8.G.A.1).” Unit 3, Lesson 12 connects Clusters B (Understand the connections between proportional relationships, lines, and linear equations) and C (Analyze and solve linear equations and pairs of simultaneous linear equations) of the Expressions and Equations (EE) domain. In Activity 12.2, students work in pairs to solve the following problem: “At the corner produce market, apples cost $1 each and oranges cost $2 each. Students use the information to determine the cost of the following combination of apples and oranges: a. 6 apples and 3 oranges, b. 4 apples and 4 oranges, c. 5 apples and 4 oranges, and d. 8 apples and 2 oranges (LSSM 8.EE.B, 8.EE.C). Unit 8, Lesson 2 connects the Expressions and Equations (EE), Functions (F), and the Number System (NS) domains. For example, in Activity 2.2, Problem 1, students “use the circle to estimate the area of the square shown.” During Problem 2, students “use the grid to check their answer from problem 1 (8.EE.A.2, 8.NS.A).” In Activity 2.3, Problem 1, students find the area of three squares,

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			estimate the side lengths, and then write the exact lengths for the sides of each square. On Problem 2, students complete a table by filling in the missing lengths and areas. In Problem 3, students plot all of the side lengths and area points on the coordinate plane (8.EE.A.2, 8.F.B).
	Required **2c)** Materials connect **prerequisite learning** within the context of new learning in such a way that allows teachers to build and support connections between the relevant prerequisite standards and grade/course-level work in support of students' access to content (connections are explicit from the student perspective).	**Yes**	Materials connect prerequisite learning within the context of new learning in such a way that allows teachers to build and support connections between the relevant prerequisite standards and grade-level work in support of students' access to content. Each unit consists of a Check Your Readiness Assessment that contains questions with previous grade-level standards along with scoring guidance with a description of the connection to lesson materials. For example, in Unit 1, Check Your Readiness Assessment, Problem 4, students solve the following problem: "Lines AB and CD intersect at E and angle E is 50 degrees. Students use this information to determine the measurement of angle AED and angle DEB (LSSM 7.G.B.5)." The scoring guidance explains to teachers that this problem assesses students' ability to identify and use facts about adjacent and vertical angles to calculate angles and is first encountered in Lesson 14, Alternate Interior Angles. Each unit includes a full unit narrative. This narrative gives an in-depth explanation of the progression of unit content and how it relates to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			prerequisite knowledge. For example, the Unit 1 narrative states that in Grade 7 students learned that angle measures are maintained in scaled drawings (LSSM 7.G.B.5). In Grade 8, students gain an understanding of rigid transformations (translation, rotation, and reflections), and they learn that angles and distances are maintained by any sequence of rigid transformations. The Learning Narrative videos give insight into which practice standards are utilized in the lessons. The narratives describe the scaffolding used to support student knowledge. For example, the Unit 1 narrative video explains that students will use and extend their knowledge of geometry to identify and describe rigid transformations. Students will also learn about congruent angles, and that the sum of angles in triangles always equals 180 degrees. The Unit 7 narrative video explains that students will deepen their understanding of the properties of exponents and scientific notation. The video also explains that students should have some understanding of writing and evaluating simplified expressions with positive whole number exponents (LSSM 6.EE.A.1).
Non-negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous	**Required** **3a)** ***Attention to Conceptual Understanding:*** Across the majority of the materials, students have regular opportunities to actively and incrementally make sense of mathematical ideas and construct meaning for the various reasons and contexts in which mathematical	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in the standards. Students have access to high-quality conceptual problems over time and an opportunity to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☒ Yes ☐ No	ideas are useful in order to **develop conceptual understanding of key mathematical concepts as called for explicitly by the standards**. Conceptual understanding is attended to in this way throughout the learning sequence and within both teacher- and student-facing materials featuring high-quality conceptual problems and discussion questions.		demonstrate conceptual understanding. The materials develop conceptual understanding of grade-level content through scaffolds, conceptual problems, and discussion questions throughout each lesson. In addition, students use various models and representations, such as diagrams, graphs, number lines, and equations to build conceptual understanding over time. For example, in Unit 2, Lesson 8, students construct arguments to establish facts about the sum of angles and exterior angles of triangles (LSSM 8.G.A.5). In Activity 8.2, Problem 1, students create triangles using pasta. Each student is given a measurement for Angle A by the teacher. Students then decide the side lengths and the other two angles. After creating their triangles, students find other classmates whose Angle A matches theirs. They compare their triangles to determine how they are the same and different, and decide whether the angles are congruent or similar. In Unit 3, Lesson 10, students extend their understanding with slope triangles to develop a method for finding the slope of any line when provided the coordinates of two points on the line (LSSM 8.EE.B.6). In Activity 10.2 students use a graph to plot points, (1, 11) and (8, 2), and draw a line that passes through both points. Students then respond to the following prompts: “Without calculating, do you expect the slope of the line

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			through (1, 11) and (8, 2) to be positive or negative?" and "Calculate the slope of this line." In Unit 5, Lessons 1 and 2 focus on introducing students to the idea of functions. Students develop the concept of a "function as a rule that assigns to each allowable input exactly one output" (LSSM 8.F.A.1). In Lesson 1, Activity 1.2, Guess My Rule, students develop the idea of input-output rules as they engage in a partner activity with four rule cards. One partner tells their partner an input, the other partner uses the rule card and responds with the corresponding output, and the first partner tries to guess the rule. In Activity 1.3, Making Tables, students observe and analyze various input-output diagrams that include the same input and output, but different rules. Students fill in tables with missing outputs and add two more input-output pairs to the table. Students develop an understanding that different rules can determine the same input-output pair. In Lesson 2, students learn the term function and connect function language to previous understanding of independent and dependent variables. In Activity 2.2, students develop an understanding of the structure of a function as something with only one output as they draw input-output diagrams for situations such as measurement conversions.
	Required	**Yes**	Materials are designed so that students attain the fluencies and procedural skills

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	3b) ***Attention to Procedural Skill and Fluency***: In line with the demand of the standards, the materials are designed so that students **attain the required fluencies and procedural skills** in service of developing their ability to solve more complex tasks. Materials attend to individual standards that set an expectation of procedural skill and fluency throughout the year. Materials provide students with opportunity to develop the procedural skills and fluencies demanded by the standards in a manner that allows for meaningful application rather than isolated practice.		required by the standards. Students build and consolidate conceptual understanding before shifting towards procedural skill and fluency. Fluency is provided throughout activities to build on previously taught skills and concepts. Every lesson begins with a Warm-up that either helps students prepare for the lesson or provides students the opportunity to strengthen their number sense and procedural skills. Warm-ups that focus on number sense and procedural skills prompt students to engage in "mental arithmetic or reason numerically or algebraically." In addition, the materials include lessons that focus solely on procedural skill and fluency as called for by the standards. For example, in Unit 4, Lesson 3, students solve linear equations with one variable (LSSM 8.EE.C.7). In Activity 3.2, students engage in a Matching Equation Moves activity. The teacher distributes 6 numbered cards that show two equations and 5 lettered cards that describe a move that turns one equation into another. Students match the number cards to the correct letter card. One of the letter cards does not have a match, so students write two equations showing the described move. For example, students match a number card with the two equations $3x + 7 = 5x$ and $7 = 2x$ with the lettered card B that includes the move, Add $-3x$ to each side. Then, in Activity 3.3, students observe two

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			different methods for finding the value of a in the problem 14a = 2(a - 3). Students determine if they agree with the solution and describe the different strategies used. In Unit 4, Lesson 6, Activity 6.1, students observe a triangle and a square. The triangle includes two side lengths of 2x and a base of x - 8. The square's side length is x + 2. Given the information that the triangle and the square have equal perimeters, students find the value of x and the perimeter of the figures (LSSM 8.EE.C.7). Students continue to solve linear equations in one variable throughout the lesson and in the Practice Problems. For example, in Problem 1, students solve "2b + 8 - 5b + 3 = -13 + 8b -5" and "2c - 3 = 2(6 - c) + 7c." In Unit 8, Lesson 11, students apply the Pythagorean Theorem to determine the distance between points on a coordinate plane (LSSM 8.G.B.8). In Activity 11.3, students use three points on a coordinate plane, (-14, 9), (-14, -3), and (16, -3), and use the Pythagorean Theorem to find the distance between each pair of points. Students continue practicing this skill in Activity 11.4. In groups, students select one set of the provided coordinate pairs. Students draw a right triangle with the coordinate pairs to determine the length of the legs. Using the Pythagorean Theorem, students find the distance between the coordinate pairs.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	Required **3c) *Attention to Applications:*** Materials are designed so that across the majority of the course, students have the opportunity to apply and experience applications of mathematics in relevant and meaningful ways. This is done through consistent and varied work with **engaging real-world applications**, including problems that build students' proficiency with selecting and applying an efficient method to find a solution and determining whether the solution makes sense. The problems attend thoroughly to those places in the content standards in which expectations for multi-step and real-world problems are explicit.	**Yes**	Materials are designed so that students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade, afford opportunities for practice, and engage students in problem-solving. When students engage with application problems, they provide solutions, reasoning, justification, and/or modeling in such a way to demonstrate understanding. In Unit 3, Lesson 4, students graph proportional relationships and interpret unit rate as the slope of the graph (LSSM 8.EE.B.5). For example, in Activity 4.2, Problem 3, students determine the rate of change by solving the following problem: "If Tyler had 16 cups of lemonade mix, how many cups of water would he need for each recipe? Explain your reasoning by creating a graph or a table." In Unit 4, Lesson 16, students solve real-world problems leading to two linear equations with two variables (LSSM 8.EE.C.8c). For example, in Activity 16.2, students solve the following problem: "Students are selling grapefruits and nuts for a fundraiser. The grapefruits cost $1 each, and a bag of nuts costs $10 each. They sold 100 items and made $307. How many grapefruits did they sell?" Throughout Unit 5, using real-world contexts, students compare properties of

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			two functions, each represented in a different way (LSSM 8.F.A.2). For example, in Lesson 7, Activity 7.2 students observe a table and a graph representing the temperature in two cities. Students interpret the graphs to decide, "How much greater was the highest recorded temperature in City B than the highest recorded temperature in City A during this time?" and "Compare the outputs of the functions when the input is 3." In Activity 7.4 students use a table and a verbal description to make sense of two representations of distance, one with a constant and one with a non-constant speed. Students answer questions such as the following: "How many miles per minute is 55 miles per hour?" "Who had traveled farther after 5 minutes? 10 minutes?" "How long did it take Elena's family to travel as far as Andre's family had traveled after 8 minutes?" and "For both families, the distance in miles is a function of time in minutes. Compare the outputs of these functions when the input is 3. (LSSM 8.F.A.2).
	Required **3d) *Balance:*** Across the majority of the materials, the three aspects of **rigor** are not always treated together and are not always treated separately. There is a **balance** of the three aspects of rigor within the grade/course.	**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 three aspects of rigor are embedded throughout the curriculum. The materials reflect the balance of rigor in the standards. For example, Unit 4, Lesson 13 focuses on conceptual understanding. In Activity 13.1, students

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			observe a graphical representation of a system of equations. Students show their understanding of solutions to systems by responding to the statement, “There are no values of x and y that make y = -x + 10 and y = 2x + 4 true at the same time.” Students reason that this statement is untrue since the equations intersect at a point. In Activity 13.2, students algebraically solve systems and use their understanding of solutions to systems to determine the reasonableness of responses (LSSM 8.EE.C.8a). Unit 5, Lesson 7, integrates conceptual understanding and application as students compare functions in different ways, look for similar context, and interpret each representation (LSSM 8.F.A.2). In Activity 7.3, students analyze an equation and graph of volumes of two different objects. Students note that “The volume, V, of a cube with side length s is given by the equation $V=s^3$. The graph of the volume of a sphere as a function of its radius is shown.” Students make sense of the two functions as they compare the inputs and outputs of both representations and answer questions such as “Is the volume of a cube with side length s=3 greater or less than a sphere with radius 3?” and “Compare the outputs of the two volume functions when the inputs are 2.” Unit 5, Lesson 21, Activity 21.1 integrates all three aspects of rigor as expected of LSSM 8.G.C.9. Students solve the following problem: “Four students

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			each calculated the volume of a sphere with a radius of 9 centimeters and they got four different answers. Han thinks it is 108 cubic centimeters. Jada got 108π cubic centimeters. Tyler calculated 972 cubic centimeters. Mai says it is 972π cubic centimeters. Do you agree with any of them? Explain your reasoning." Unit 6, Lesson 6, Activity 6.4, focuses on conceptual understanding. During the lesson, students examine five scatter plots and decide whether it would be appropriate to fit a linear model to the data. If the data indicates a linear association, students identify whether the data has a positive slope, a negative slope, or a slope of zero (LSSM 8. SP.A.2).
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 and support students in the development of mathematical practices, contributing to students' habits of mind as students develop procedural skills and fluency, and conceptual understanding. For example, in Unit 1, Lesson 2, Activity 2.3, groups of three students sort a set of nine cards with rigid transformations. Students sort the cards based on whether they demonstrate a rotation, translation, or reflection. To refine their mathematical

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			communication skills, students use clear and precise language (MP.6) to justify their categorization of each card (LSSM 8.G.A.1). In Unit 3, Lesson 14, Activity 14.3 students contextualize to understand the meaning of a number as it relates to a problem (MP.2). The problem states, "The Fabulous Fish Market orders tilapia, which costs $3 per pound, and salmon, which costs $5 per pound. The market budgets $210 to spend on this order each day." Students define the variables and write an equation to represent this situation. Students list ways to determine solutions to the situation which requires interpretation of points on and off the graph (LSSM 8.EE.C.8a). In Unit 7, Lesson 4, Activity 4.3, Problem 4, students critique the reasoning of a student response (MP.3). In this activity, students discuss the following problem with a partner: Noah says, "If I try to write 100 in expanded form, it should have zero factors that are 10, so it must be equal to 0." (LSSM 8.EE.A.1). In Unit 8, Lesson 1, Activity 1.3, students estimate the side lengths of 3 squares from the area (LSSM 8.NS.A.2). In Problem 3, students estimate the side length of square B using tracing paper or a ruler (MP.5).
	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 course-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 engage in mathematical reasoning through viable arguments and critique student work and opportunities for students to discuss their thinking and reasoning for the strategies they used to solve problems throughout the materials. For example, in Unit 2, Lesson 7, students explain that two-dimensional figures are similar if one is formed by translations, rotations, and reflections. In Activity 7.2, Problem 1, students explain their reasoning for determining whether two polygons are similar or not. They discuss the following problem: "Priya says, 'The two polygons are similar because the sides are all the same.' Clare says that the two polygons are not similar because the angles are different. Do you agree with either Priya or Clare? Explain your reasoning." In Unit 3, Lesson 3, students use verbal or written explanations accompanied by graphs to construct arguments. In Activity 3.2, Launch, students use an equation and a blank set of axes to graph the following situation: “Jada and Noah counted the number of steps they took to walk a set distance. To walk the same distance, Jada took 8 steps and Noah took 10 steps.” Students explain how they know that the equation, description, graph, and table all represent the same situation. In Unit 6, Lesson 5, Activity 5.2, students analyze four scatter plots and practice drawing lines that fit

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			the data. The class engages in a discussion about the characteristics that make a line fit the data set well.
	Required **4c)** Materials explicitly attend to the **specialized language** of mathematics.	**Yes**	Materials explicitly attend to the specialized language of mathematics. Mathematical language is emphasized throughout the lessons within each unit. Typically, terms are not identified until students have the opportunity to learn about the concept and then formalize a definition. The materials include instructional routines intended to support students in mathematical language development, such as Algebra Talk. During the routine, students observe an expression, and take a few minutes to think about a strategy. Students share solution strategies. The purpose of the routine is to encourage students to think about math and to use mathematical language as they talk about math. The materials use and encourage the use of accurate mathematical terminology when talking about skills, concepts, and solution processes. Embedded into each unit, students have opportunities to engage with mathematical language in answers, explanations, and during mathematical discourse. Each unit includes a Progression of Disciplinary Language which explains how and when students encounter disciplinary language throughout the unit. A table lists new terminology, where it is introduced and also notes “when students are expected to understand the word or

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			phrase receptively and when they are expected to produce the word or phrase in their own speaking or writing." For example, in Unit 5, Progression of Disciplinary Language, students are expected to "Generalize about what happens to inputs for each rule," "Justify claims about volumes of cubes and spheres based on graphs," and "Compare different representations of functions." Additionally, students are expected to understand the term function receptively in Lesson 2 and are expected to produce the term in their speaking or writing by Lesson 8. For example, Unit 5, Lesson 1 introduces the concept of functions while the actual term is not introduced until Lesson 2 (LSSM 8.F.A.1). As the unit continues, students develop and expand on the definition as they work with different representations of functions. Activity 1.2 introduces students to the concept of input-output rules as they work in partners to determine the rule of input-output pairs. During the Activity Synthesis of Activity 1.3, students answer questions such as, "What are some other situations when a rule might not have a valid input?" A sample student response states, "Any time an operation requires you to divide by 0, or when the input must be non-negative, such as a side length of a square when you know the area." In Unit 7, Lesson 5, students extend the rules they have developed for working with powers

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			to negative exponents. In Activity 5.2, students use the patterns they use to multiply numbers by 10, to determine how to write 10^{-7} as a fraction. Students continue working with rules for negative exponents throughout the lesson. During the Lesson Synthesis, the teacher asks, "How is 10^{3} related to 10^{-3}?" A sample student response states, "Exponents tell us to repeatedly multiply by a base. Whether the base is 10 or 1/10, the structure of repeated multiplication is the same."
	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 Full Unit Narrative describes what the students will learn and be able to do within the unit and includes the practice standards that are utilized across the unit. Lesson overviews, labeled "About this Lesson" also note the practice standards that are used within the lesson. Additionally, teacher-directed materials, such as Anticipated Misconceptions and Activity Introductions, provide teachers with strategies to develop the practice standards during the lesson. Instructional routines are embedded in the materials, some of which encourage the use of and support students' development of the math practices. For example, Clarify, Critique, Correct uses MP.3, Information Gap uses MP.6, Notice and Wonder often

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			incorporates MP.7. For example, the Unit 3 Full Narrative states, "The unit begins by revisiting different representations of proportional relationships (graphs, tables, and equations), and the role of the constant of proportionality in each representation and how it may be interpreted in context (MP.2)." and "Students analyze another linear relationship (height of water in a cylinder vs number of cubes in the cylinder) and establish a way to compute the slope of a line from any two distinct points on the line via repeated reasoning (MP.8). They learn a third way to obtain an equation for a linear relationship by viewing the graph of a line in the coordinate plane as the vertical translation of a proportional relationship (MP.7)." In Lesson 6, students utilize MP.2 and MP.4. Teacher guidance states, "In the first activity, students match situations to graphs and then interpret different features of the graph (slope and y-intercept) in terms of the situation being modeled (MP.2)." and "Interpreting features of a graph or an equation in terms of a real-world context is an important component of mathematical modeling (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 by providing consistent opportunities for students to engage with various types		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	of problems with multiple problem structures and diverse representations of student understanding and solutions.		
	Required **5b)** 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.		
	Required **5c)** Support for **diverse learners**, including English Learners and students with disabilities, are provided. Appropriate suggestions and materials are provided for **supporting varying student needs** at the unit and lesson level using an accelerating learning approach. The language in which questions and problems are posed is not an obstacle to understanding the content, and if it is, additional supports are included (e.g., alternative teacher approaches, pacing and instructional delivery options, strategies or suggestions for supporting access to text and/or content, suggestions for modifications, suggestions for vocabulary acquisition, extension activities, etc.). Materials include **teacher guidance to help support special populations** and provide the opportunities for these students to meet the expectations of the standards and enable regular progress monitoring.		
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	**Required** **6a)** Multiple, frequent, and varied **assessment opportunities** are embedded into materials and measure student progress toward achieving the full expectation of standards. These assessment opportunities reflect the balance of the standards as presented in the materials. Guidance is provided so that		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
assessed grade-specific Louisiana Student Standards for Mathematics. ☐ Yes ☐ No	teachers can use assessments to inform the next instructional steps.		
	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 contexts. Assessment items require students to produce solutions as well as construct arguments, explanations, and models in grade/course-appropriate ways.		
	6c) Materials provide **small-scale formative assessment** items designed for the purpose of timely identification of individual students' **unfinished learning** with the prerequisite math knowledge and skills that are most directly connected to successful engagement with the upcoming grade/course-level mathematics lessons. The frequency and quality of assessments are designed to ensure teachers have appropriate tools to plan for addressing unfinished prerequisite learning at minimum every 15-20 instructional days.		
	6d) Scoring guidelines and rubrics align to standards, incorporate criteria that are specific, observable, and measurable, and provide sufficient guidance for interpreting a wide range of student performance and emerging conceptions and targeted support to engage in core instruction.		
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'	**Required** **7a)** The total amount of content is **viable** for a 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		

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
unfinished learning in order to access grade-level work. ☐ Yes ☐ No	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.		
	7c) Materials provide **targeted, aligned, and actionable prerequisite work** from the appropriate prior grade-level standards to accelerate student learning to immediately upcoming grade/course-level standards (e.g. targeted mini lessons, tutoring sessions).	**Yes**	Materials provide targeted, aligned, and actionable prerequisite work from the appropriate prior grade-level standards to accelerate student learning to immediately upcoming grade-level standards. Each unit includes a Check Your Readiness assessment that "formatively provides teachers with information about where students are along a progression of understanding." Most of the problems on the Check Your Readiness assessment address prerequisite skills and concepts for the unit, and this pre-unit diagnostic assessment is assigned before the start of the unit. The results of the assessment support teachers in instructional decision-making and whether to address prerequisite skills using either the item-by-item guidance to "inform just-in-time adjustments to instruction within the lessons" or the Adaptation Pack of the unit which "incorporates prior grade-level knowledge and skills, when necessary, to support access to current grade-level content." The Adaptation Pack lists essential prior concepts needed to engage with the content of the current unit and provides a brief narrative of the approach of the unit. The Adaptation Pack suggests adding lessons from prior grade levels to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			either activate prior knowledge or to use for just-in-time support before a lesson. If the lessons are integrated into whole group instruction, a modified plan is provided to show how the suggested lessons could be incorporated into the unit to provide support and review as needed. For example, the Grade 8, Unit 4, Linear Equations and Linear System, Adaptation Pack includes the following information regarding essential prior concepts: “In this unit, students build on their grade 6 and 7 work with equivalent expressions and equations with one occurrence of one variable, learning algebraic methods to solve linear equations with multiple occurrences of one variable. Students learn to use algebraic methods to solve systems of linear equations in two variables, building on their grade 7 and 8 work with graphs and equations of linear relationships. Understanding of linear relationships is, in turn, built on the understanding of proportional relationships developed in grade 7 that connected ratios and rates with lines and triangles.” Guidance suggests that teachers add Lessons 7.67, 7.68, 7.69, 7.610, and 7.6.11 from Grade 7 and remove Lessons 8.4.1, 8.4.8, 8.4.15, and 8.4.16. The modified lesson plan suggests adding Lessons 7.6.7 and 7.6.8 on Day 1, Lesson 7.6.9 on Day 2, Lesson 7.6.10 on Day 3, and Lesson 7.6.11 on Day 4. In addition, the Check Your Readiness

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			assessment includes scoring guidance for each item. The scoring guidance provides a detailed solution and a narrative. Within the narrative, guidance is provided if "most students struggle with this item." For example, on the 8.4 Check Your Readiness Assessment, item 2 assesses LSSM 6.EE.A.3. If most students struggle with this item, guidance suggests to "plan to revisit it before Activity 3 to review using the distributive property." The materials also provide a Check Your Readiness Assessment Planning Table that is used to support planning decisions after student work is evaluated. For example, the Check Your Readiness Assessment Planning Table for 8.4 notes that the content of this item is first encountered in Lesson 3: Balanced Moves. If students struggle, the following guidance is provided: "Plan to revisit it before Activity 3 to review using the distributive property. Use hanger diagrams as a context for reviewing the distributive property. Monitor student strategies during the Activity for students who need more practice writing equivalent expressions using the distributive property. Another opportunity to practice using the distributive property appears in Lesson 7."

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	7d) Materials provide guidance to help teachers regularly **identify and flexibly group students** who need prerequisite work to engage successfully in the current core instruction (i.e. a given module, topic or lesson set), on-grade/course-level work and when to administer these supports.	**No**	Materials do not provide guidance to help teachers regularly identify and flexibly group students who need prerequisite work to engage successfully in the current core instruction. Although teachers use the Check Your Readiness pre-unit assessment to identify students who need prerequisite work, additional guidance on flexibly grouping students is not provided. Guidance is only provided if most students struggle or if most students do well. In addition, the Adaptation Packs only include whole group modifications, and guidance is not provided to support individuals or small groups.

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 course. Materials spend minimal time on content outside of the appropriate grade level. In assessment materials, assessment components do not make students 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

[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
			throughout the year. Materials include problems and activities that connect two or more clusters in a domain, or two or more domains in a grade, in cases where these connections are natural and important.
	3. Rigor and Balance	**Yes**	Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in 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/course-level content in a meaningful way and is present throughout the year in assignments, activities, and/or problems. 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. Materials explicitly attend to the specialized language of mathematics. Mathematical language is emphasized throughout the lessons within each mission. Materials include teacher-

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			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 provide targeted, aligned, and actionable prerequisite work from the appropriate prior grade-level standards to accelerate student learning to immediately upcoming grade-level standards. However, materials do not provide guidance to help teachers regularly identify and flexibly group students who need prerequisite work to engage successfully in the current core instruction, on-grade-level work and when to administer these supports. See EdReports for more information.
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 2023-2024 Teacher Leader Advisors are selected from across the state and represent the following parishes and school systems: Allen, Ascension, Bienville, Caddo, Calcasieu, Catholic Diocese of Baton Rouge -REACH Department, CSAL, D'Arbonne Woods Charter School, East Baton Rouge, Hynes Charter School Corporation, Iberia, Iberville, Jefferson, Lafayette, Lafourche, Lincoln, LSU Laboratory School, Madison, Natchitoches, Orleans, Ouachita, Rapides, Richland, St. Landry, St. Martin, St. Mary, St. Tammany, Tangipahoa, University View Academy, Vermillion, Webster, West Feliciana, and Zachary Community Schools. This review represents the work of current classroom teachers with experience in grades K-12.

Appendix I.

Publisher Response

The publisher had no response.

Appendix II.

Public Comments

There were no public comments submitted.

Appendix III.

Tech Ready Endorsement

LOUISIANA DEPARTMENT OF EDUCATION

Academic Content

Tech Readiness Endorsement

Imagine Learning Platform

- Imagine Learning EL Education, K-5
- Imagine Learning, Guidebooks
- Imagine Learning Illustrative Math

Section I: Non-Negotiable Criteria

Materials must meet all Non-Negotiable Criteria in Section I for the review to continue to Section II.

Criteria	Indicator of Quality	Determination
Required Browser	The curriculum platform **does/does not** need a specific browser (Internet Explorer, Safari, etc.) to launch.	Meets Required Indicator
Operating System	Operates on Google, Microsoft, and Apple OS	Meets Required Indicator
SSO (Single Sign On)	The product is SSO utilizing Google, Clever, Microsoft, or another SSO method thus no external account should be created and no personal information should be collected and/or shared.	Meets Required Indicator
Cyber Security	Has either SOC II or GDPR certification	Meets Required Indicator

Section II: Additional Criteria of Tech Readiness

Functionality	
Criteria	**Score/Evidence**
LMS Integration	Minor Concerns (2) The Imagine Learning platform has limited compatibility with major learning management systems (LMS). The platform supports integration with Schoology and Canvas, under the IMS Global Standards integration. However, there is no evidence of integration with Google Classroom. Setting up the integration requires a manual process, and while the setup instructions are clear, they may not be the most user-friendly for teachers. While the platform supports Schoology and Canvas, those

	seeking Google Classroom integration may need to explore alternative options.
Scale	Minor Concerns (2) Teachers are able to create multiple groups and add co-teachers. Districts are able to use Clever/Classlink for rostering. Assignments may be assigned to all students or individual students. Assignments may only be assigned once to a student. There is no evidence that the platform has the functionality to split students into smaller groups or subgroups. There is no indication of the maximum number of students in a class/group. There are optional filters to analyze data for specific grades, schools, and teachers for administrators. Teachers are able to pull data for item analyses, highest and lowest performing standards, etc. Analytics and reporting are available at the class level and the student level, but are not available by subgroups.
Ease of Use	Minor Concerns (2) Upon initial login, teachers are presented with the option to take a "Guided Tour." During this tour, teachers learn how the materials are organized and are provided visual cues and pop-up messages that provide additional information and context for accessing and using the materials. Teacher/Admin view of the program appeared organized with an easy-to-use layout. The dashboard buttons are the most frequently used components such as home, classes, data, saved lessons, help, and grade bands. Throughout the platform, there are several "How to" guides that users can access to learn about navigating different aspects of the platform. Menus, buttons, and interactive elements are prominently displayed and labeled. The platform features interactive elements such as virtual manipulatives and centers for students to access. At the bottom of the lesson player, students can click the tools button to access digital tools such as calculators and other interactives.
Teacher and Staff Support	
Criteria	**Score/Evidence**
Data	Serious Concerns (1) Teachers and school leaders have access to some metrics concerning student performance. The data dashboard information loads data into the dashboard overnight. Updates made to scores reflect the following day and provide student scores by assessment, assignment, and standard. The dashboard also offers a view of lessons and activities. Dashboard views are available for site, grade, school, teacher, and student. Reports are generated by overall student assignment scores for specified standards and assignments. On assessments, items are aligned to standards. On activities and lessons, the items are partially aligned with standards. Reports are limited and do not report on login frequency, trends, or time spent on activities. There is limited ability to export data in a variety of formats.
Training Resources	Works Well (3) Training resources are divided into 5 categories: General Concepts for Everyone, For Teachers, For Authors, For Site Admins, and For Students. Within each category, there are specific items under each topic with videos and directions. Webinars and information regarding professional development opportunities are provided on the website. There is also a Contact Us link if users are unable to find the help needed in the

	Platform Guides.
Professional Learning	Works Well (3) The platform provides virtual and in-person options to support schools and districts, however, it is unclear if the cost of the service is included in the subscription. There is also a customer service manager who is designated to plan, monitor, and support curriculum implementation. Embedded opportunities are also available in the digital platforms for teachers to build professional learning communities. A variety of webinars are provided. Additional resources are available in the Curriculum Guides, Teaching Notes, and Additional Materials section of ILC. The Curriculum Guide includes information that reflects recent curricular updates.
Accessibility	
Criteria	**Score/Evidence**
Mobile Functionality	Works Well (3) The platform is compatible with mobile devices including: • Apple Devices (iPad, iPhone, iPod Touch) • Google Android Devices • Chromebook Devices (that are still receiving updates) • Windows Tablets
Offline Functionality	Serious Concerns (1) No offline mode option. The materials would have to be downloaded into PDFs and assessed offline.
Additional Required Download	Works Well (3) No additional downloads are required. Most recent stable versions of Microsoft Edge, Google Chrome, and Apple Safari are recommended. Specific versions of operating systems are also recommended.
Administration	
Criteria	Score/Evidence
Onboarding	Works Well (3) Teachers are alerted when an account is created for them. Imagine Learning has onboarding information for users that includes information such as how to log in and how to get started on the platform.
Communication	Works Well (3) There is not a communication feature in the platform, which means there is no need for administrative control of communication.
Tech Support	Works Well (3) In addition to the embedded tutorials, the platform provides technical support through a contact form, email, chat, and phone number. There is also a real-time system status check and automatic troubleshooting feature. If an issue requires escalation, a customer success manager will be available to expedite.

Reports	Works Well (3) The platform features three reports in the Data Dashboard. Each view in the Data Dashboard includes the following reports with data organized by the breakdown categories presented in the view. • **Overview Report:** This is an overall summary based on student assignment scores. The report shows the average of all assignment scores as well as a chart that breaks down the number of assignments with scores that fall within each range (0-50%, 51-79%, 80-100%). This report also includes the "Bottom" and "Top" standard scores summary which is based on average item scores for assignment items associated with specified standards. • **Performance Report:** This report includes the average of assignment scores organized by categories. This report also includes an Assignment value. This value is the total number of student assignments contributing to the average score. In the Teacher view of the Dashboard, Performance tables are organized by class. An 'Archived' badge will appear on any archived classes on this page. Archived students will also appear. The 'People' tab in your classes indicates which individual students have an archived status. • **Standards Report:** This report includes the average of the item scores for items aligned with the specified standard, organized by breakdown category. Users can select "Bottom 5," "Top 5," and "All" standards when filtered by an assignment type. When filtered by one or more specific assignments, only the "All" standards view is available. Notes about standards alignment: • Not all digital items in IL Classroom curricula are aligned to standards. When the Dashboard view includes assignments in which no items are aligned to standards, users will see a "Criteria" flag indicating that partial standard alignment exists.

Final Determination

Section I: Non-Negotiable Criteria of Tech Readiness: All Criteria Met
The Imagine Learning Platform satisfies Section I: Non-Negotiable Criteria of Tech Readiness by meeting all four of the required indicators of quality:

- Required Browser: The curriculum does not need a specific browser to launch. It works on Safari, Chrome, Edge, and Firefox.
- Operating System Capability: The platform operates on Google, Microsoft, and Apple operating systems. It works on Apple, Google, Microsoft, and Firefox.
- Single Sign-On (SSO): The platform utilizes SSO and does not require the creation of external accounts.
- Cybersecurity: The platform has ISO 27001:2013 certification.

Section II: Additional Criteria of Tech Readiness score:

32 out of 39 within the 13 criteria fields required for Tech Readiness Endorsement.

The Imagine Learning platform satisfies Section II: Additional Criteria of Tech Readiness by scoring **32** out of **39** points within the 13 criteria fields. The Imagine Learning Platform received a score of 3, or "Works Well", in 8 of the 13 criteria. The platform received a score of 2, or "Minor Concerns", for the following criteria:

- LMS Integration
- Scale
- Ease of Use

The reviewers noted the following concerns:

- LMS Integration: The platform has limited compatibility with major learning management systems. While the platform supports Schoology and Canvas, those seeking Google Classroom integration may need to explore alternative options.
- Data: Reports are limited and fail to reflect or indicate login frequency or time spent on modules.
- Offline Functionality: No offline mode option. The materials would have to be downloaded into PDFs and assessed offline.

The Imagine Learning Platform was awarded the Tech Readiness Endorsement because it met all of the requirements in Section I and received a score above 80% in Section II.

Tech Readiness Endorsement: **Tech Readiness Endorsement Granted**