DEPARTMENT of EDUCATION
louisiana Believes

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

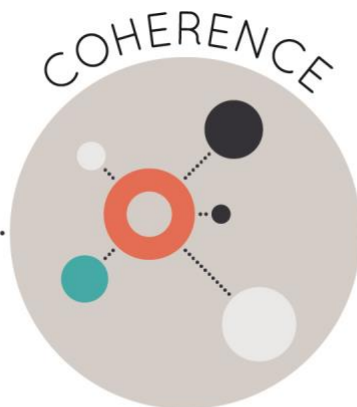**FULL CURRICULUM**
Instructional Materials

Strong mathematics instruction contains the following elements:

FOCUS

Focus strongly where the standards focus.

COHERENCE

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

RIGOR

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

Title: **Algebra 1**   Grade/Course: **Algebra I**

Publisher: **Accelerate Education**   Copyright: **2017**

Overall Rating: **Tier III, Not representing quality**

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

STRONG	WEAK
	1. Focus on Major Work (Non-Negotiable)
	2. Consistent, Coherent Content (Non-Negotiable)
	3. Rigor and Balance (Non-Negotiable)
	4. Focus Coh. via Practice Std (Non-Negotiable)

To evaluate each set of submitted materials for alignment with the Standards, begin by reviewing the indicators listed in Column 2 for the non-negotiable criteria in Section I. If there is a "Yes" for all indicators in Column 2 for Section I, then the materials receive a "Yes" in Column 1. If there is a "No" for any indicator in Column 2 for Section I, then the materials receive a "No" in Column 1.

For Section II, begin by reviewing the required indicators in Column 2 for each criterion. If there is a "Yes" for all required indicators in Column 2, then the materials receive a "Yes" in Column 1. If there is a "No" for any required indicators in Column 2, then the materials receive a "No" in Column 1.

Tier 1 ratings receive a "Yes" in Column 1 for Criteria 1 – 7.
Tier 2 ratings receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria.
Tier 3 ratings receive a "No" in Column 1 for at least one of the non-negotiable criteria.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
SECTION I: NON-NEGOTIABLE CRITERIA: Submissions must meet all of the non-negotiable criteria in order for the review to continue.			
Non-Negotiable **1. FOCUS ON MAJOR WORK[1]:** Students and teachers using the materials as designed devote the large majority[2] of time to the major work of the grade/course. ☐ Yes ☒ No	**REQUIRED** **1a)** Materials should devote the large majority of class time to the major work of each grade/course. Each grade/course must meet the criterion; do not average across two or more grades.	No	Materials do not devote the majority of class time to the major work of Algebra I as defined by the Louisiana State Standards for Mathematics. Of the lessons, 58% address standards outside of the course, both above and below grade level. Combining the instructional lessons that address only major standards with instructional lessons that address a combination of major and supporting/additional standards 42% of lessons address major work of the grade.
	REQUIRED **1b)** In any one grade/course, instructional materials should spend minimal time on content outside of the appropriate grade/course. Previous grade/course content should be used only for scaffolding instruction. In assessment materials, there are no chapter tests, unit tests, or other such assessment components that make students or teachers responsible for any topics before the grade/course in which they are introduced in the Standards.	No	Materials do not spend the appropriate amount of time on course level work, and assessment materials include components that make students and teachers responsible for topics before the course in which they are introduced in the Standards. Several below course level standards are addressed throughout the curriculum. For example, Module 2: Linear Relationships addresses standards below course level in its entirety. The unit begins with lessons pertaining to the 7th grade Ratio and Proportion domain, and then continues with lessons addressing several Expressions and Equations standards from 6th and 8th Grade. Several assessment items are present that make students responsible for content before they are introduced in the standards. For example, a provided assessment item of the Semester B Exam has students identify the inverse of a set of coordinate pairs, which is not addressed until Algebra 2 LSSM F-BF.B.4. Multiple questions on the Semester B Exam have students determine the common denominator of a rational equation, add rational expressions with denominators of x-6, and divide and simplify a rational expression. Each of these assessment questions align to Algebra 2 LSSM A-REI.A.2. Another question on the Semester B Exam provides multiple graphs and asks students "Which of the

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

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			following is the graph of an even degree polynomial with a negative lead coefficient?" The concept of even and odd functions is not addressed until Algebra 2 LSSM F-BF.B.3.
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.	**No**	Materials do not consistently connect supporting content to major content in meaningful ways so that focus and coherence are enhanced throughout the year. The materials fail to include important connections that would enhance focus and coherence. Due to several lessons addressing standards above and below course level work, connections among the course level standards are missed. According to the LA Teacher Companion Document for Algebra I, LSSM A1: F-BF.A.1 should be taught concurrently and in support of A1: F-FI.A.3. Although the Curriculum Map states that LSSM A1: F-BF.A.1 is addressed in Module 1: Tools of the Trade, Lesson 1.3, "Evaluating Algebraic Expressions Containing Exponents," the lesson focuses on evaluating expressions containing exponents and applying the rules of exponents (LSSM 6.EE.A1 & 8.EE.A1) instead of determining exponential functions from context. In only addressing the procedural aspects of exponents, this lesson does not fully support LSSM A1: F-FI.A.3 in describing sequences as functions.
	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.	**No**	Materials do not include problems and activities that serve to connect two or more clusters in a domain. Most of the lessons in the materials are driven by a single standard, and many of the naturally connecting clusters/domains appear within different units. For example, the LA Teacher Companion Document for Algebra 1 suggests that LSSM A1:A-CED.A.4 and A1:A-REI.B.3 are taught concurrently. However, the materials do not provide any lessons that are aligned with LSSM A1:A-CED.A.4. The Creating Equations (A-CED) and Reasoning with Equations and Inequalities (A-REI) domains are logically connected within the standards; however, the materials fail to provide lessons for content standards that align within each of these domains.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
Non-Negotiable **3. RIGOR AND BALANCE:** Each grade's instructional materials reflect the balances in the Standards and help students meet the Standards' rigorous expectations, by helping students develop conceptual understanding, procedural skill and fluency, and application. ☐ Yes ☒ No	**REQUIRED** **3a) *Attention to Conceptual Understanding:*** Materials develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards or cluster headings by amply featuring high-quality conceptual problems and discussion questions.	**No**	Materials do not develop conceptual understanding of key mathematical concepts, especially where called for explicitly in specific content standards such as LSSM A-REI.B.4b, "Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation." In Module 9: Quadratic Functions, Lesson 9.1, "Introduction to Quadratic Equations," the aligned lesson objectives state, "Students will identify a quadratic function, solve quadratic equations by finding the square root, $x^2 = c$, use the distributive property to multiply binomials to produce a quadratic trinomial, and use the zero-product property to solve a quadratic equation given in factored form." The lesson begins by displaying a video that describes the use of quadratics in determining the flight path of a rocket, followed by students graphing the path of a rocket given a table of data. In the following lesson components, students are provided text information on the definition of a quadratic function, two examples to identify as quadratic or not, and video/text instruction to procedurally solve for the given variable with limited conceptual focus as to why the procedure works. This lesson does not appropriately scaffold and lay a conceptual foundation for students to fully understand the use and structure of a quadratic equation as it relates to the key features that will be defined. Another example can be found within Module 3: Creating Graphical Models, Lesson 3.10, "Graphing Linear Inequalities and Absolute Value," which provides direct instruction that responds to the question "How do you graph an inequality?" (LSSM A-REI.D.12-Graph the solutions to a linear inequality in two variables as a half-plane). A text explanation initially responds to the provided question with, "Graphing an inequality on the Cartesian Plane is similar to graphing an inequality on a number line. For example, dotted lines are like open-holed-points as you will see in this video." The video lesson then

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			provides step-by-step instruction on graphing without providing students the opportunity to explore and conceptualize the content.
	REQUIRED **3b) *Attention to Procedural Skill and Fluency:*** The materials are designed so that students attain the fluencies and procedural skills required by the Standards. Materials give attention throughout the year to individual standards that set an expectation of procedural skill and fluency. In grades K-6, materials provide repeated practice toward attainment of fluency standards. In higher grades, sufficient practice with algebraic operations is provided in order for students to have the foundation for later work in algebra.	No	The instructional materials are not designed so that students attain the fluencies and procedural skills required by the LSSM for Algebra I. Major LSSM A-REI.B.3, "Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters" focuses on the procedural skills and fluency component of rigor. Module 2: Linear Relationships, Lesson 2.10, "Solving Linear Inequalities" provides two practice problems related to this major content standard within the actual instructional lesson. At the end of the lesson, students are presented with eight problems to review for the Solving Linear Inequalities Quiz. Three out of eight of these problems require students to actually solve linear inequalities in preparation for the four question quiz. Question 2 of the quiz requires students to solve a linear inequality where there are infinite solutions, but students are not given any practice problems where this is addressed before the quiz. The Linear Inequalities Self-Check provided in the Linear Relationships Module Review provides students ten procedural problems to solve inequalities in one variable but is not provided in the content materials until after the quiz. None of these problems require students to solve inequalities where there are infinite solutions or no solution. Additionally, LSSM A-CED.A.4, "Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations," aligns to the procedural skills and fluency component of rigor. This standard is addressed in Module 2: Linear Relationships, Lesson 2.8 "Solving Equations with Variables on Both Sides," where there are two examples of literal equations used for instructional purposes, one involving perimeter and the other involving conversion between Celsius and Fahrenheit. In addition to these, there are two examples for students to practice solving literal

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			equations within the lesson. One of the Linear Relationships Module Review problems focuses on solving literal equations, resulting in little to no procedural skill focus as it relates to LSSM A-CED.A.4.
	REQUIRED **3c)** *Attention to Applications:* Materials are designed so that teachers and students spend sufficient time working with engaging applications, including ample practice with single-step and multi-step contextual problems, including non-routine problems, that develop the mathematics of the grade/course, afford opportunities for practice, and engage students in problem solving. The problems attend thoroughly to those places in the content Standards where expectations for multi-step and real-world problems are explicit.	**No**	Materials are not designed to spend sufficient time working with engaging, non-routine, real-world application tasks that require multi-step solutions. Many problems are present that involve real-world context, but do not require a multi-step solution or application. This is evident in the assignment section of Module 2: Linear Relationships, Lesson 2.3, "Percent Problems," as well as Lesson 2.4, "Calculating the Percent of Change," aligned to LSSM A-CED.A.1. Students respond to a direct command to calculate the percent change in context. Students are guided to "Write a proportion to find the amount of people in the club last year" and then to "Solve the proportion in part (a)" without the opportunity for students to choose a tool or appropriate model. These problems require no complex thought or multi-step process necessary to show full mastery of application of skills. In Module 2: Linear Relationships, Lesson 2.9, "Modeling and Solving Real World Problems," students are provided four practice problems within the lesson where context is provided but do not warrant a multi-step solution or application of skills that engage students in problem solving. In Module 7: Exponents, Lesson 7.9, "Exponential Growth and Decay," aligned to A1:S-ID.B.6 , there are 6 lesson practice problems where students determine exponential growth or decay. Exponential decay practice problem 3 states, "Angelo is getting better at baking cookies. It took him two hours to make his first batch. Each time he makes them after that, he reduces his time by 1/6. How long does it take him to bake the cookies after his 5th time? (HINT: Change the time to minutes)." The materials provide the exponential decay formula and a hint to note what units are needed to solve correctly, reflecting a procedural and routine type approach in order to

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
			solve and failing to address the application component of A1:S-ID.B.6.
	REQUIRED **3d)** *Balance:* The three aspects of rigor are not always treated together and are not always treated separately.	**No**	It is not evident in the materials that the three aspects of rigor are not always treated together and are not always treated separately. Due to the evidence provided in 3a, 3b, and 3c, it is apparent that the component or components of rigor intended by the standards are not adequately addressed, resulting in an imbalance of rigor across the curriculum.
Non-Negotiable **4. FOCUS AND COHERENCE VIA PRACTICE STANDARDS:** Materials promote focus and coherence by connecting practice standards with content that is emphasized in the Standards. ☐ Yes ☒ No	**REQUIRED** **4a)** Materials address the practice standards in such a way as to enrich the content standards of the grade/course; practices strengthen the focus on the content standards instead of detracting from them, in both teacher and student materials.	**No**	Materials do not address the practice standards in such a way to enrich the content standards of the course. For example, there is a lack of problems/activities that use MP3, construct viable arguments and critique the arguments of others. This is especially apparent in Module 2: Linear Relationships, Lesson 2.10, "Solving Linear Inequalities," where part of the lesson objective is to interpret whether a solution is viable or non-viable (LSSM A1:A-CED.A.3). Although students write an explanation justifying the solution as viable or non-viable, students are not prompted to critique the argument of other classmates nor justify why a given answer is correct or not. Additionally, there is a lack of problems and activities that require the use of MP5, use appropriate tools strategically. In many of the modules, when mathematical tools are needed, there is no student choice involved. The curriculum materials guide students in selecting methods and tools necessary in the focus content, such as in the Systems of Equations Exam where the majority of the questions tell students directly what method should be used (graphing, substitution, or elimination) to solve a given system of equations (LSSM A-REI.C.6).
SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY			
Additional Criterion **5. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL CONTENT:** Materials foster focus and	**REQUIRED** **5a)** Materials provide all students extensive work with course-level problems. Review of material from previous grades and courses is clearly identified as such to the teacher, and teachers and students can see what their	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
coherence by linking topics (across domains and clusters) and across grades/courses by staying consistent with the progressions in the Standards. ☐ Yes ☐ No	specific responsibility is for the current year.		
	REQUIRED **5b)** Materials relate course-level concepts explicitly to prior knowledge from earlier grades and courses. The materials are designed so that prior knowledge becomes reorganized and extended to accommodate the new knowledge.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	5c) Materials include learning objectives that are visibly shaped by LSSM cluster headings and/or standards.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
Additional Criterion **6. ALIGNMENT CRITERIA FOR STANDARDS FOR MATHEMATICAL PRACTICE:** Aligned materials make meaningful and purposeful connections that enhance the focus and coherence of the Standards rather than detract from the focus and include additional content/skills to teach which are not included in the Standards. ☐ Yes ☐ No	**REQUIRED** **6a)** Materials attend to the full meaning of each practice standard. Over the course of any given year of instruction, each mathematical practice standard is meaningfully present in the form of assignments, activities, or problems that stimulate students to develop the habits of mind described in the practice standard. Alignments to practice standards are accurate.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **6b)** Materials provide sufficient opportunities for students to construct viable arguments and critique the arguments of others concerning key grade-level mathematics that is detailed in the content standards (cf. MP.3). Materials engage students in problem solving as a form of argument, attending thoroughly to places in the Standards that explicitly set expectations for multi-step problems.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	6c) There are teacher-directed materials that explain the role of the practice standards in the classroom and in students' mathematical development.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	6d) Materials explicitly attend to the specialized	**Not Evaluated**	This section was not evaluated because the non-

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
	language of mathematics.		negotiable criteria were not met.
Additional Criterion **7. INDICATORS OF QUALITY:** Quality materials should exhibit the indicators outlined here in order to give teachers and students the tools they need to meet the expectations of the Standards. ☐ Yes ☐ No	**REQUIRED** **7a)** There is variety in what students produce. For example, students are asked to produce answers and solutions, but also, in a grade-appropriate way, arguments and explanations, diagrams, mathematical models, etc.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	REQUIRED **7b)** There are separate teacher materials that support and reward teacher study including, but not limited to: discussion of the mathematics of the units and the mathematical point of each lesson as it relates to the organizing concepts of the unit, discussion on student ways of thinking and anticipating a variety of student responses, guidance on lesson flow, guidance on questions that prompt students thinking, and discussion of desired mathematical behaviors being elicited among students.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7c) Support for English Language Learners and other special populations is thoughtful and helps those students meet the same standards as all other students. The language in which problems are posed is carefully considered.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7d) The underlying design of the materials distinguishes between problems and exercises. In essence, the difference is that in solving problems, students learn new mathematics, whereas in working exercises, students apply what they have already learned to build mastery. Each problem or exercise has a purpose.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7e) Lessons are appropriately structured and scaffolded to support student mastery.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.
	7f) Materials support the uses of technology as called for in the Standards.	**Not Evaluated**	This section was not evaluated because the non-negotiable criteria were not met.

CRITERIA	INDICATORS OF SUPERIOR QUALITY	MEETS METRICS (YES/NO)	JUSTIFICATION/COMMENTS WITH EXAMPLES
FINAL EVALUATION *Tier 1 ratings* receive a "Yes" in Column 1 for Criteria 1 – 7. *Tier 2 ratings* receive a "Yes" in Column 1 for all non-negotiable criteria (Criteria 1 – 4), but at least one "No" in Column 1 for the remaining criteria. *Tier 3 ratings* receive a "No" in Column 1 for at least one of the non-negotiable criteria.			
Compile the results for Sections I and II to make a final decision for the material under review.			
Section	**Criteria**	**Yes/No**	**Final Justification/Comments**
I: Non-Negotiables	1. Focus on Major Work	No	The materials do not devote a large majority of time to major work of Algebra I and assess students on standards that are beyond the grade level for Algebra I.
	2. Consistent, Coherent Content	No	Focus and coherence are not enhanced through meaningful connections between supporting and major content, and connections are not consistently made between two or more clusters within a domain, or two or more domains in the grade.
	3. Rigor and Balance	No	The three aspects of rigor are not addressed in balance throughout the curriculum materials.
	4. Focus and Coherence via Practice Standards	No	Materials do not use the practice standards to enrich and strengthen the focus of the content standards.
II: Additional Alignment Criteria and Indicators of Quality	5. Alignment Criteria for Standards for Mathematical Content	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	6. Alignment Criteria for Standards for Mathematical Practice	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
	7. Indicators of Quality	Not Evaluated	This section was not evaluated because the non-negotiable criteria were not met.
FINAL DECISION FOR THIS MATERIAL: **Tier III, Not representing quality**			

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

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

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

The 2018-2019 Teacher Leader Advisors are selected from across the state and represent the following parishes and school systems: Ascension, Bossier, Caddo, Central, Desoto, East Baton Rouge, Einstein Charter Schools, Iberia, InspireNOLA, Jefferson, KDHSA (Jefferson Parish Charter), Lafayette, Lincoln, Livingston, Orleans, Ouachita, Pointe Coupee, Rapides, Recovery School District, RSD - Choice Foundation, RSD – FirstLine, RSD – NOCP, St. Charles, St. Mary, St. Tammany, Tangipahoa, Vermilion, West Baton Rouge, West Feliciana, Zachary. This review represents the work of current classroom teachers with experience in grades 3-12.

Appendix I.

Publisher Response

The publisher had no response.

Appendix II.

Public Comments

There were no public comments submitted.