Kiddom, Inc.

English Mathematics, Algebra I

Kiddom Texas Math: Algebra 1

MATERIAL TYPE	ISBN	FORMAT	ADAPTIVE/STATIC
Full-Subject, Tier-1	**9798901105429**	**Both Print and Digital**	**Static**

Rating Overview

TEKS SCORE	ELPS SCORE	ERROR CORRECTIONS (IMRA Reviewers)	SUITABILITY NONCOMPLIANCE	SUITABILITY EXCELLENCE	PUBLIC FEEDBACK (COUNT)
41.07%	100%	18	Flags Not in Report	Flags in Report	0

Quality Rubric Section

RUBRIC SECTION	RAW SCORE	PERCENTAGE
1. Intentional Instructional Design	22 out of 28	79%
2. Progress Monitoring	22 out of 26	85%
3. Supports for All Learners	23 out of 27	85%
4. Depth and Coherence of Key Concepts	16 out of 19	84%
5. Balance of Conceptual and Procedural Understanding	37 out of 41	90%
6. Productive Struggle	22 out of 22	100%

Breakdown by Suitability Noncompliance and Excellence Categories

SUITABILITY NONCOMPLIANCE FLAGS BY CATEGORY	IMRA REVIEWERS	PUBLIC	Flags NOT Addressed by November Vote
1. Prohibition on Common Core	0	0	0
2. Alignment with Public Education's Constitutional Goal	0	0	0
3. Parental Rights and Responsibilities	0	0	0
4. Prohibition on Forced Political Activity	0	0	0
5. Protecting Children's Innocence	0	0	0
6. Promoting Sexual Risk Avoidance	0	0	0
7. Compliance with the Children's Internet Protection Act (CIPA)	0	0	0

SUITABILITY EXCELLENCE FLAGS BY CATEGORY	IMRA REVIEWERS
Category 2: Alignment with Public Education's Constitutional Goal	3
Category 6: Promoting Sexual Risk Avoidance	0

IMRA Quality Report

1. Intentional Instructional Design

Materials support educators in effective implementation through intentional course and lesson-level design.

1.1 Course-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.1a	All criteria for guidance met.	4/4
1.1b	Materials do not include multiple pacing calendars that reflect various numbers of instructional days.	1/2
1.1c	All criteria for guidance met.	2/2
1.1d	All criteria for guidance met.	2/2
1.1e	All criteria for guidance met.	2/2
—	**TOTAL**	11/12

1.1a – Materials include a scope and sequence outlining the TEKS, ELPS, and concepts taught in the course.

The "Course Overview" includes an "Algebra I Scope and Sequence" that outlines the specific order of the math Texas Essential Knowledge and Skills (TEKS), English Language Proficiency Standards (ELPS), and concepts taught throughout the instructional year.

The scope and sequence found in the "Course Overview" includes the TEKS and ELPS within each unit and lesson, as well as the concepts taught within the course. For example, Unit 1, Section A, Lesson 1 has three learning targets and covers six of the TEKS and four ELPS.

1.1b – Materials include suggested pacing (pacing guide/calendar) to support effective implementation for various instructional calendars (e.g., varying numbers of instructional days – 165, 180, 210).

A "Texas Math High School Pacing Guide," located in the *Course Guide for Algebra I*, includes the number of weeks and days of instruction for each unit for the school year.

The "Texas Math High School Pacing Guide" includes pacing for 32 weeks. The materials do not provide pacing for more than one instructional calendar.

The "Texas Math High School Pacing Guide" has a note at the bottom that states, "Pacing does not include time for student and staff holidays."

1.1c – Materials include an explanation for the rationale of unit order as well as how concepts to be learned connect throughout the course.

The "Course Narrative" located in the "Course Overview," includes a rationale for the unit order and how concepts in the scope and sequence connect for the course. It states, "The first unit starts with creating and interpreting equations and their graphs. This sets a tone for the course of understanding quantities in context."

The concepts to be learned throughout the course, located in scope and sequence, provides the explanation behind the Unit Progression.

1.1d – Materials include protocols with corresponding guidance for unit and lesson internalization.

The *Kiddom Texas Math High School Course Guide for Teachers* includes a section titled "Professional Learning Community (PLC)." The purpose of this section is to, "To support teachers and coaches in this collective work, each unit section has an activity identified as a 'PLC activity.'" Also included in this section is a structure for teachers to use as they work together in professional-learning communities. The section provides guidance for teachers "before, during, and after" the PLC meeting.

The materials include a *Course Guide*, which includes a "Curriculum Study for Educators." This document provides teachers with a comprehensive unit internalization protocol, as well as a lesson internalization protocol. These sections provide teachers clear guidance to prepare to use the materials during instruction.

1.1e – Materials include resources and guidance for instructional leaders to support teachers with implementing the materials as designed.

The *Kiddom Texas Math High School Course Guide* has a "PLC" section which states, "To support teachers and coaches in this collective work, each unit section has an activity identified as a PLC activity." However, a PLC activity was not found in the unit.

The materials include a *Course Guide*, which contains a section titled, "Administration Implementation Guide." This document provides resources and guidance for instructional leaders to support teachers with implementing the materials.

1.2 Unit-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.2a	Materials do not include academic vocabulary at the unit level or background knowledge.	0/2
1.2b	All criteria for guidance met.	2/2
—	**TOTAL**	2/4

1.2a – Materials include comprehensive unit overviews that provide the background content knowledge and academic vocabulary necessary to effectively teach the concepts in the unit.

The "Unit Narrative" includes a comprehensive unit overview with the unit learning goals, and a description of the unit.

The "Unit Narrative" does not include the background content knowledge and academic vocabulary necessary to effectively teach the concepts in the unit.

The materials include a glossary of terms for the course. The unit overviews do not include academic vocabulary.

1.2b – Materials contain supports for families in both Spanish and English for each unit with suggestions on supporting the progress of their student.

For each unit, there is an "Algebra I Unit FAQ" document that contains suggestions for families on how to support the progress of their student. For example, for Unit 1, the section called "What Can I Do to Support My Student at Home?" suggests asking students to explain concepts in their own words.

The materials provide support for families in English and Spanish.

1.3 Lesson-Level Design

GUIDANCE	SCORE SUMMARY	RAW SCORE
1.3a	Materials do not include lesson plans aligned to the ELPS.	7/8
1.3b	Materials are not specified as either teacher or student.	1/3
1.3c	All criteria for guidance met.	1/1
—	**TOTAL**	9/12

1.3a – Materials include comprehensive, structured, detailed lesson plans that include daily objectives, questions, tasks, materials, and instructional assessments required to meet the content and language standards of the lesson (aligned with the TEKS and the ELPS).

The Lesson Tabs within each unit include a presentation, lesson narrative, learning goals, learning targets (student-facing), the TEKS addressed, and the individual activities to complete the lesson; however, alignment to ELPS is not addressed in lesson plans. For example, in Unit 4, Lesson 1, there are three learning goals, three learning targets ("I can" statements), three of the TEKS, and four activities.

The lesson plan for Unit 11, Lesson 5 includes content standards of the lesson, daily objectives aligned to lesson standards, questions to check for understanding of lesson objectives, questions to promote the use of language to meet language objectives, tasks to promote mastery of the lesson objectives, a list of necessary materials, and a reference to how mastery of the content standards of the lesson will be assessed.

1.3b – Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson, and the suggested timing for each lesson component.

The "Lesson Overview" includes the materials needed for the lesson; however, the materials do not specify either teacher or student.

The materials include timestamps for overall activities in the Activity Narratives.

The materials include suggested timing for each lesson component within each lesson.

1.3c – Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, enrichment).

The materials provide guidance on using the practice problems within each lesson and strategies to implement the practice problems. For example, the material states, "Assign practice problems for

homework or for extra practice in class. Collect and score the problems . . . Decide which problems to assign."

The *Course Guide for* T*eachers* includes a section with guidance on the effective use of practice problems for extended practice.

2. Progress Monitoring

Materials support educators in effective implementation through frequent, strategic opportunities to monitor and respond to student progress.

2.1 Instructional Assessments

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.1a	The materials do not include diagnostic and summative assessments at the unit level that vary in types of tasks.	7/9
2.1b	All criteria for guidance met.	2/2
2.1c	All criteria for guidance met.	2/2
2.1d	All assessments are aligned to the learning objectives, but only the summative assessments show the alignment to the TEKS.	4/6
2.1e	All criteria for guidance met.	2/2
—	**TOTAL**	17/21

2.1a – Materials include a variety of instructional assessments at the unit and lesson level (including diagnostic, formative, and summative) that vary in types of tasks and questions.

The materials include instructional assessments that vary in type of questions and tasks. The "Assessment Guide" found within the *Algebra I Kiddom Math High School Course Guide for Teachers* identifies the Diagnostic Assessment as each unit's Check For Readiness. These are found within each unit. For example, Unit 2, assesses student readiness for Unit 2 instruction in the Check for Readiness. This pre-assessment includes the following question types: multi-select, fill in the blank, short answer, graphing, and multiple choice.

The "Assessment Guide" identifies each unit's End-Of-Unit Assessment as summative; every unit includes one (see any unit). Individual lessons also provide summative assessment through daily practice and summary activities. For example, Unit 11, Lesson 4 includes practice questions that vary in question types, including multiple choice, text entry, error analysis, and open response in which students explain their thinking.

The "Assessment Guide" also identifies various types of classroom discussion as formative assessments. These planned interactions vary and prepare the teacher a wide array of options to assess student learning.

The materials do not include diagnostic and summative assessments at the unit level that vary in types of tasks.

2.1b – Materials include the definition and intended purpose for the types of instructional assessments included.

The "Assessment Guide" defines and describes various types of diagnostic, formative, and summative assessments in the materials.

The "Assessment Guide" also describes the intended purpose for different assessments to inform the teacher on student learning so they may adjust instruction to meet students' needs. For example, the guide provides teachers with the guidance to assess how well students understand the work of the day when referring to the Cooldown Assessments.

2.1c – Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments.

The *Kiddom Math High School Teacher Resource Guide* includes teacher guidance to ensure accurate administration of instructional assessments. Learning goals are referenced multiple times in the *Kiddom Math High School Teacher Resource Guide* and within each lesson.

At the start of each End-of-Unit Assessment teachers receive notes on how to evaluate student responses for each question. For example, in Unit 5, the teacher instructions state, "Use of a four-function or scientific calculator is acceptable. Graphing calculators should not be used."

The *Course Guide* contains a section entitled "Assessment Guidance," which provides clear directions and a script for the teacher when giving assessments to ensure consistent and accurate administration.

2.1d – Diagnostic, formative, and summative assessments are aligned to the TEKS and objectives of the course, unit, or lesson.

Each unit includes a one to three problem Checkpoint Assessment that assesses the learning goals for that section. These formative assessments do not identify the associated TEKS.

While the Unit Assessment does not specify alignment of each question to TEKS, the course scope and sequence identifies the TEKS and objectives addressed by each Unit Assessment (summative assessment).

The Check for Readiness diagnostic assessment included in each unit describes the alignment to the learning objectives for the teacher, but does not include the alignment to the TEKS.

2.1e – Instructional assessments include TEKS-aligned items at varying levels of complexity.

Instructional assessments include multiple-choice, text-entry, multiselect, graphing, inline choice, and open-response items aligned to the TEKS. For example, in Unit 3, the End of Unit Assessment includes text entry, open-response, multiple choice, and multiselect items.

The Cumulative Practice Problem Set Assessment at the end of each lesson contains varying levels of complexity. For example, the Unit 6, Lesson 2, Cumulative Pp Set For Solving Systems by Substitution includes multiple choice, open-response, text-entry, and graphing questions.

2.2 Data Analysis and Progress Monitoring

GUIDANCE	SCORE SUMMARY	RAW SCORE
2.2a	All criteria for guidance met.	2/2
2.2b	All criteria for guidance met.	1/1
2.2c	All criteria for guidance met.	2/2
—	**TOTAL**	5/5

2.2a – Instructional assessments and scoring information provide guidance for interpreting student performance.

The materials provide guidance for teachers to interpret student performance with a "Note for Evaluating Responses" section for each question on unit assessments and lesson questions. For example, in Unit 10, Lesson 10, Question 5 provides teacher guidance with a rubric teachers can use to classify student work as tier 1, tier 2, or tier 3.

The materials provide guidance on how to continue "teaching grade-level content, with appropriate and aligned practice and support for students." The Cooldown Guidance is divided into three categories (More Chances, Points to Emphasize, and Press Pause) with suggestions on next steps to help students.

2.2b – Materials provide guidance for the use of included tasks and activities to respond to student trends in performance on assessments.

The materials include Section Overviews in each unit that provide teachers guidance on how to respond to student performance based on the instructional assessments. For each item on the lesson assessments, teachers are provided sample student responses with a detailed, and tiered analysis for a wide array of potential responses. For each potential response, teachers are provided suggestions on how to respond to student work.

The materials provide End-of-Unit Assessment Guidance that includes sample student responses, potential misconceptions, and common errors. For example, in Unit 9, the "Algebra 1.9 End-of-Unit Assessment" Question 1 states, "Students who select A may correctly identify (2, 0) as a point on the graph but mistake that point as the y-intercept. Students who select B may correctly identify the vertex as having an x-coordinate of 1 but miscalculate the value of $f(1)$, which should be -1. Students who choose C may correctly identify the vertex as being below the x-axis but assume that it means the graph opens downward, or they may do so because of the negative 2 x in the equation defining f."

2.2c – Materials include tools for teachers to track student progress and growth, and tools for students to track their own progress and growth.

Materials include tools for teachers to track student progress and growth, and tools for students to track their own progress and growth. Teachers and students have a Class Standard Mastery report, and students can check their progress weekly or monthly.

Additional information regarding tracking student progress and growth can be found on the Support Site. The article "What Insights Do My Reports Offer?" describes tools given to teachers and states, "The Reports help monitor student progress over time, track growth by mastery level, and analyze both class and student performance on individual standards." For students, the article "What Do My Reports Mean?" states, "The Reports feature. . . allows you to track your performance in each class based on standards and assignments."

3. Supports for All Learners

Materials support educators in reaching all learners through design focused on engagement, representation, and action/expression for learner variability.

3.1 Differentiation and Scaffolds

Guidance marked with a (T) refers to teacher-facing components. Guidance with an (S) refers to student-facing components.

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.1a	All criteria for guidance met.	3/3
3.1b	All criteria for guidance met.	2/2
3.1c	All criteria for guidance met.	2/2
—	**TOTAL**	7/7

3.1a – Materials include teacher guidance for differentiated instruction, activities, and paired (scaffolded) lessons for students who have not yet reached proficiency on grade-level content and skills.

The materials guide teachers in supporting students who have not yet reached proficiency on grade-level content through the "Advancing Student Thinking" section of each lesson. For example, in Unit 2, Lesson 2.2: "Paper Slicing," the materials state, "If students struggle to remember the meaning of area, ask them what they remember about the idea from their previous courses."

The materials provide differentiated activities through optional activities that reinforce concepts or skills that are below grade level. For example, in Unit 7, Lesson 2.3: "Windows of Graphs," the optional activity states, "The goal of this activity is to address a skill important to successfully using graphing technology: choosing an appropriate graphing window. Students are given three graphs representing a relationship from an earlier task. They comment on their effectiveness in representing the relationship and consider ways to adjust the graphing window to improve the information that the graph shows."

3.1b – Materials include pre-teaching or embedded supports for unfamiliar vocabulary and references in text (e.g., figurative language, idioms, academic language). (T/S)

The materials include embedded support to help students develop proficiency with unfamiliar vocabulary and references within the text. For example, in Unit 1, Lesson 6, Activity 3, students are guided to describe mathematical relationships as functions, and then create a graph of the function based solely on a verbal description.

The materials provide teacher guidance on preteaching for unfamiliar vocabulary and important terms through facilitating the development of anchor charts. In Unit 3, Lesson 6, teachers are guided to create a display of important terms and vocabulary. After asking the first question, the materials prompt teachers

to encourage students to use suggested language or diagrams. The materials also include examples of potential student responses to support teacher facilitation.

The materials include frequent, structured opportunities for students to talk with groups or partners using academic language, using the questions that are in the Activity Synthesis. For example, in Unit 10, Lesson 3, "Activity 3: Applying Polynomial Multiplication: Area Problems," the materials state, "Select previously identified students to share their responses and reasoning. Display their work for all to see. How did you use polynomial multiplication to calculate the area? Why is it important to simplify the resulting expression? Can you think of other real-world situations where you could apply polynomial multiplication?"

3.1c – Materials include teacher guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skill.

The materials include specific prompts (Are You Ready for More?) for differentiation during the lesson. These problems go deeper into grade-level math and make connections between the current topic and other concepts. For example, in Unit 8, Lesson 1.3: "Reaching 2,000," Question 4 is an extension of the lesson activity that requires a deeper understanding of the process behind exponents and functions. The materials provide detailed guidance to teachers on how to differentiate instruction for students who have demonstrated proficiency in grade-level content and skill in the "Teacher Resource Guide," which is found within the *Course Guide.*

The materials provide teacher guidance for extension and enrichment activities for students who have demonstrated proficiency in grade-level content through the optional activity lessons that are in some units. For example, Unit 1, Lesson 1.4: "Two Pools," includes teacher guidance for the optional activity, including possible student misconceptions, suggestions for how to redirect or clarify the misconception in the moment, facilitation guidance such as what to look for as student work, and questions to prompt deeper thinking.

3.2 Instructional Methods

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.2a	All criteria for guidance met.	4/4
3.2b	All criteria for guidance met.	2/2
3.2c	All criteria for guidance met.	3/3
—	**TOTAL**	9/9

3.2a – Materials include explicit (direct) prompts and guidance to support the teacher in modeling and explaining the concept(s) to be learned.

The materials include explicit guidance and support for the teacher in modeling and explaining concepts. For example, in Unit 11, Lesson 1, "Activity 1.2: Solving By Graphing," the "Advancing Student Thinking" section states, "If students enter the equation (x−5)(x−3)=0 into their graphing technology, they may see an error message, or they may see vertical lines. The lines will intersect the x-axis at the solutions, but they are clearly not graphs of a quadratic function. Emphasize that we want to graph the function defined by y=(x−5)(x−3) and use its x-intercepts to find the solution to the related equation."

The materials include questions and discussion prompts for teachers to engage students in a deeper understanding of mathematical concepts. For example, in Unit 7, Lesson 5.2: Beholding "Bounces," the "Activity Synthesis" section states, "Connect the discussion about growth factors to the data and what the factors tell us about whether the tennis ball satisfies the bounce regulations. Ask questions such as: "Do most of the data support the conclusion?" and "How can we explain the third bounce?"

Teachers can use the information in the Launch activity in Unit 4, Lesson 1, to guide the student through the process of buying a car. The following explicit guidance is provided to the teacher: The total price of the car is written as an equation. The teacher will then model, and students will have an opportunity to share with peers and the whole class. The teacher then leads a class discussion to develop the formula for the total cost of a car using variables.

3.2b – Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches.

The materials guide teachers in using a variety of instructional approaches; for example, in Unit 4, Lesson 2, the Launch part of the lesson provides guidance for lesson delivery stating, "Students are given time to reflect on their own, then paired with a peer for sharing preceding whole class discussion."

The materials in Unit 4, Lesson 6, include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches. The lesson supports practices such as reviewing students' prior knowledge of graphs and includes strategies like "Think Pair Share," "Notice and Wonder," and teacher-led whole-class discussion.

The Kiddom Texas Math High School Course Guide for Teachers includes teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches. For example, under the student work time the materials state, "The Launch of an activity frequently includes suggestions for grouping students. At different times, students are given opportunities to work individually, with a partner, and in small groups."

3.2c – Materials support multiple types of practice (e.g., guided, independent, collaborative) and include guidance for teachers and recommended structures (e.g., whole group, small group, individual) to support effective implementation.

The materials include a variety of opportunities for students to apply and practice the concepts they learn. The opportunities included are guided practice, individual practice, partner practice, whole group learning, and project-based learning. For example, in Unit 3, Lesson 1, "Activity 1.3: Food Markup," students work with partners, have a whole-group discussion, and then individual practice.

The materials provide guided instruction for teachers to implement instructional routines and structures. For example, in Unit 1, Lesson 2, "Activity 2.2: Card Sort: Possible or Impossible," the Launch section directs students to work in groups of two–four. The "Activity Synthesis" then guides a whole-class discussion, during which students share and reflect on their results. The lesson concludes with students working independently on the questions.

In Unit 3, Lesson 6, the materials provide suggestions for the teacher to support the effective implementation of the content. The Launch and "Activity Synthesis" section suggest what vocabulary to focus on, and the Discussion provides questions to ask to direct students' learning. "Think Pair Share" and whole-class discussion are two structures implemented in the lesson.

3.3 Support for Emergent Bilingual Students

An emergent bilingual student is a student who is in the process of acquiring English and has another language as the primary language. The term emergent bilingual student replaced the term English learner in the Texas Education Code 29, Subchapter B after the September 1, 2021 update. Some instructional materials still use English language learner or English learner and these terms have been retained in direct quotations and titles.

GUIDANCE	SCORE SUMMARY	RAW SCORE
3.3a	Materials do not include teacher guidance on providing linguistic accommodations for various levels of language proficiency, which are designed to engage students in using increasingly more academic language.	0/2
3.3b	All criteria for guidance met.	1/1
3.3c	The materials do not include guidance for teachers to support emergent bilinguals in making cross-linguistic connections through oral or written discourse.	6/8
3.3d	This guidance is not applicable to the program.	N/A
—	**TOTAL**	7/11

3.3a – Materials include teacher guidance on providing linguistic accommodations for various levels of language proficiency [as defined by the English Language Proficiency Standards (ELPS)], which are designed to engage students in using increasingly more academic language.

The materials provide teacher guidance on implementing linguistic accommodations, providing linguistic accommodations; however, the supports are not differentiated by language proficiency levels as defined by the ELPS or any other proficiency framework.

The accommodations provided in the materials are general and directed to all English Language Learners. For example, Unit 2, Lesson 3 provides guidance to the teacher to focus the English language learners on speaking and writing.

3.3b – Materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs.

The materials include implementation guidance for teachers in using the materials in a state-approved English as a Second Language (ESL) program. "The Course Overview: Kiddom's Approach to English Language Proficiency in Texas Math" includes eight Mathematical Language Routines (MLRs). An example of guidance in the implementation of the eight MLRs is found in Unit 7, Lesson 1, in a card sort activity that includes sentence frames and guidance to the teacher to group students in pairs.

Lessons include implementation guidance for teachers in the "Support for English Language Learners" section, which focuses on all of the strategies used to help expand academic vocabulary. For example, Unit 4 Lesson 2 on linear equations gives guidance in using strategies of feedback prompts, oral discussion, and opportunity for revision based on peer feedback.

3.3c – Materials include embedded guidance for teachers to support emergent bilingual students in developing academic vocabulary, increasing comprehension, building background knowledge, and making cross-linguistic connections through oral and written discourse.

The materials include guidance for teachers to support the development of academic vocabulary, increasing comprehension, and building background knowledge with emergent bilingual students. For example, in Unit 2, Lesson 4, several strategies include the display of sentence frames to assist students to explain the specific mathematical strategies they used in the activity. In Unit 1, Lesson 3, sentence stems are provided for use during whole-class discussion to encourage the use of the terms domain and range. In Unit 11, Lesson 1, students are prompted to draft written explanations of their mathematical thinking, share their writing with a peer, and revise their writing with a focus on evaluating the mathematical arguments of others when solving quadratic equations.

Many lessons provide opportunities to connect visual aids to key vocabulary terms and prompt the teacher to use the visual displays to build background knowledge students will need to apply the mathematical procedures. For example, Unit 4, Lesson 2, asks students to write equations that model linear relationships based on this background knowledge.

The materials do not include the use of cross-linguistic connections in either oral or written discourse.

3.3d – If designed for dual language immersion (DLI) programs, materials include resources that outline opportunities to address metalinguistic transfer from English to the partner language.

This guidance is not applicable because the program is not designed for dual language immersion (DLI) programs.

4. Depth and Coherence of Key Concepts

Materials are designed to meet the rigor of the standards while connecting concepts within and across grade levels/courses.

4.1 Depth of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.1a	All criteria for guidance met.	2/2
4.1b	All criteria for guidance met.	1/1
—	**TOTAL**	3/3

4.1a – Practice opportunities over the course of a lesson and/or unit (including instructional assessments) require students to demonstrate depth of understanding aligned to the TEKS.

The materials require students to show their understanding of the TEKS. For example, Unit 9, Lesson 6, Activity 3 requires students to interpret and describe the graph in the context and communicate mathematical reasoning and its implications using symbols and language. This practice addresses TEKS A1.1.D.

In Unit 4, Lesson 1, students practice solving problems in real-world situations, such as creating an expression to represent the quantities and relationships in planning a pizza party and presenting a cost estimate. This lesson addresses TEKS A1.4.C with students writing the linear function that provides a reasonable fit to linear data.

In Unit 11, Lesson 10, students apply the quadratic formula to solve equations, which addresses TEKS A1.8.A.

4.1b – Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics TEKS.

The materials contain questions and tasks that progressively increase in rigor and complexity. For example, in Unit 8, Lesson 3, students calculate account balances after certain time periods. Students then write equations that represent the account balance in terms of the number of months. Finally, students discuss a scenario related to the calculation of interest.

Throughout the units, students write equations with one variable, reason about the solutions, and interpret the solutions in context. They then progress to equations with two variables.

4.2 Coherence of Key Concepts

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.2a	All criteria for guidance met.	1/1
4.2b	Materials do not demonstrate coherence across units by connecting the content and language learned in previous courses and grade levels and what will be learned in future courses and grade levels to the content to be learned in the current course and grade level.	0/3
4.2c	All criteria for guidance met.	4/4
—	**TOTAL**	5/8

4.2a – Materials demonstrate coherence across units by explicitly connecting patterns, big ideas, and relationships between mathematical concepts.

Each unit's "Parent Guide" includes a "Frequently Asked Questions" section that explains the big ideas and the mathematical relationships that are developed within and across units.

Each unit's teacher directions include a "Section Overview" that explains the big ideas and relationships to the teacher. For example, in Unit 4, the "Section Level Planning Guide" breaks down the unit into "Section A: Writing and Modeling with Equations," then "Section B: Functions and Their Representations," then "Section C: Putting It All Together," and lastly, "Section D: Exponential Functions."

4.2b – Materials demonstrate coherence across units by connecting the content and language learned in previous courses/grade levels and what will be learned in future courses/grade levels to the content to be learned in the current course/grade level.

The materials do not demonstrate coherence across units by connecting the content and language learned in previous courses/grade levels and what will be learned in future courses and grade levels to the content to be learned in the current course and grade level.

There is no evidence that the materials demonstrate coherence to the language learned in previous courses or grade levels.

4.2c – Materials demonstrate coherence at the lesson level by connecting students' prior knowledge of concepts and procedures from the current and prior grade level(s) to new mathematical knowledge and skills.

The materials connect students' prior knowledge of concepts to new knowledge and skills. For example, Unit 6, Lesson 6, the "Lesson Narrative" states, "This lesson serves two main goals. The first goal is to revisit the idea (first learned in middle school) that not all systems of linear equations have a single

solution. Some systems have no solutions, and others have infinitely many solutions. The second goal is to investigate different ways to determine the number of solutions to a system of linear equations."

Earlier in the unit, students learned that the solution to a system of equations is a pair of values that meet both constraints in a situation and that this condition is represented by a point of intersection of two graphs. Here, students make sense of a system with no solutions in a similar fashion.

The materials connect concepts within the Algebra I course at the lesson level. For example, Unit 4, Lesson 1, "Lesson Narrative" states, "In subsequent lessons, students will continue to write and interpret expressions, equations, and inequalities that represent situations and constraints."

4.3 Coherence and Variety of Practice

GUIDANCE	SCORE SUMMARY	RAW SCORE
4.3a	All criteria for guidance met.	4/4
4.3b	All criteria for guidance met.	4/4
—	**TOTAL**	8/8

4.3a – Materials provide spaced retrieval opportunities with previously learned skills and concepts across lessons and units.

Lesson materials provide opportunities for spaced practice across units and lessons. For example, Unit 10, Lesson 5 embeds practice problems on previously learned concepts, such as factoring quadratic expressions, into the current lesson on solving quadratic equations by using the factored form of the equation.

The materials include Warm-ups for each lesson that embed spaced practice by including previously learned concepts. For example, Unit 2, Lesson 6, "6.1 Warm-Up Reading Representations" states, "The purpose of this Warm-up is for students to recall some of the ways functions can be represented, such as tables, graphs, equations, and descriptions".

4.3b – Materials provide interleaved practice opportunities with previously learned skills and concepts across lessons and units.

The materials provide interleaved practice opportunities. For example, in Unit 11, Lesson 2, students write expressions in factored form and build the skill to relate quadratic expressions in factored form to their equivalent counterparts in standard form. In later lessons in Unit 11, students are given the opportunity to practice the skills from Lesson 2 through mixed practice that includes content from those newer lessons.

Throughout Unit 6, students learn and apply multiple approaches to solving systems of linear equations. As the unit develops, students are asked to use the different approaches through mixed practice opportunities both within the lesson and within the provided practice workbook.

5. Balance of Conceptual and Procedural Understanding

Materials are designed to balance conceptual understanding, procedural skills, and fluency.

5.1 Development of Conceptual Understanding

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.1a	All criteria for guidance met.	3/3
5.1b	All criteria for guidance met.	1/1
5.1c	All criteria for guidance met.	1/1
—	**TOTAL**	5/5

5.1a – Questions and tasks require students to interpret, analyze, and evaluate models and representations for mathematical concepts and situations.

The materials provide questions and tasks that require students to interpret mathematical representations. In Unit 1, Lesson 1, the "Lesson Narrative" asks students to interpret or create graphs of functions.

The materials require students to analyze and evaluate models and representations. For example, in Unit 1, Lesson 1, students are given an activity, "Which One Does Not Belong," in which students examine four graphs of functions and determine a reason why each one might not belong to the undefined set.

The materials prompt students to evaluate models for mathematical concepts and situations. For example, in Unit 5, Lesson 6, students evaluate diagrams of Platonic solids to identify the number of vertices, edges, and faces of each solid.

5.1b – Questions and tasks require students to create models to represent mathematical situations.

The materials include questions that require students to create models to represent mathematical situations. For example, in Unit 1, Lesson 10, "Activity 10.4: Graphing The Microbes," students are given two questions where they create a graph of bacteria for the given time intervals.

The materials include tasks that prompt students to create models to represent mathematical situations. For example, in Unit 2, Lesson 2, students demonstrate an understanding of geometric sequences by cutting paper to model that the number of pieces of paper doubles while the area of each piece is halved.

In Unit 1, Lesson 1, "Activity 1.3: Flag Raising," the materials prompt students to sketch a possible graph that represents the height of a flag as a function of time.

5.1c – Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.

The materials provide opportunities for students to apply conceptual understanding to new problem situations and contexts. For example, in Unit 4, Lesson 1, students are asked to plan a pizza party and present a cost estimate. Students have to consider relevant variables, make assumptions and estimates, adjust their thinking, and perform calculations. The teacher clarifies that some quantities that might change include the price of the pizza (increase or decrease) and the number of students (if someone is absent).

In Unit 9, Lesson 1, students are asked to plan possible diagrams of a garden. The materials state, "This activity gives students a concrete experience with a quadratic relationship in a familiar geometric context. Given a rectangle with a fixed perimeter, students experiment with how changes to one side of the rectangle affect its area. Along the way, they notice that as one length increases, the area does not continue to increase; instead, at some point it begins to decrease."

5.2 Development of Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.2a	All criteria for guidance met.	2/2
5.2b	All criteria for guidance met.	3/3
5.2c	All criteria for guidance met.	3/3
5.2d	All criteria for guidance met.	1/1
—	**TOTAL**	9/9

5.2a – Materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level tasks.

The materials include spiraled Warm-up activities that build student automaticity and fluency necessary to complete grade-level tasks. For example, in Unit 1, Lesson 2, "Activity 1.1: Warm-Up—Number of Barks," the materials state, "This Warm-up prompts students to consider possible input and output values for a familiar function in a familiar context. The work here prepares students to do the same in other mathematical contexts and to think about domain and range in the rest of the lesson."

The materials provide fluency-focused practice problems within each lesson, including questions from the current lesson and review material from earlier in the same unit and previous units.

5.2b – Materials provide opportunities for students to practice the application of efficient, flexible, and accurate mathematical procedures within the lesson and/or throughout a unit.

The materials provide opportunities for students to practice the application of efficient mathematical procedures throughout a unit. For example, in Unit 9, students graph quadratic equations in the factored form, standard form, and vertex form.

The materials provide opportunities for students to practice the application of flexible mathematical procedures within the lessons. For example, in Unit 6, Lesson 4.2: "Classroom Supplies," the activity narrative states, "As students work, identify students who solve the system by graphing and those who solve by substitution. Ask them to share their work later".

The materials provide opportunities for students to practice the application of flexible mathematical procedures within a lesson. For example, Unit 10, Lesson 4, Cumulative Pp Set for Polynomial Division (Part 3) states, "Find each quotient using any method".

Materials provide opportunities for students to practice the application of accurate mathematical procedures throughout a unit. For example, in Unit 6, students practice solving systems of equations by graphing, substitution, and elimination.

5.2c – Materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within the lesson and throughout a unit.

The materials provide opportunities for students to evaluate procedures, processes, and solutions for efficiency. For example, Unit 11, Lesson 16.2: "The Dive," the "Lesson Narrative" states, "Monitor for students taking different approaches, such as: Graphing the function and finding and interpreting points on the graph; evaluating the function at relevant values; writing and solving equations whose solutions answer the questions. Some equations can be solved by rewriting it as a factored expression equal to 0, while some must be solved by completing the square or using the quadratic formula. Rewriting the given expression in a different form—for example, rewriting it in vertex form to find the maximum value of the function."

The materials provide opportunities for students to evaluate procedures, processes, and solutions for flexibility. For example, in Unit 3, Lesson 9.2: "Exploring Linear Equations" the "Activity Synthesis" states, "Discuss why different forms may be useful in different contexts. Highlight how the slope and specific points on the line are visible in all forms."

The materials provide opportunities for students to evaluate procedures, processes, and solutions for accuracy within the lesson and throughout the unit. For example, in Unit 5, Lesson 3, Cumulative Pp Set: For Which Variable to Solve For? (Part 2) includes an error analysis question in which students are given a student work sample and determine where the student made an error in solving an equation.

5.2d – Materials contain embedded supports for teachers to guide students toward increasingly efficient approaches.

The materials contain embedded supports for teachers to guide students toward increasingly efficient approaches as the unit progresses. For example, in Unit 4, students begin by writing equations to model relationships, then graph equations, followed by forming linear equations in multiple forms, and then writing equations of lines.

Embedded supports within the materials guide teachers to help students move toward increased efficient approaches within the lessons. The materials suggest how students should be arranged in groups and how to begin and lead through class discussions. For example, in Unit 2, Lesson 3.2: "Three Sequences," the materials suggest pairing students up and for the teacher to "Begin the discussion by asking students how A and C are alike and different . . . Some students may notice the similarity between an arithmetic sequence and a linear function. Invite these students to share their observations, such as how both are defined by a constant rate of change."

5.3 Balance of Conceptual Understanding and Procedural Fluency

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.3a	All criteria for guidance met.	2/2
5.3b	All criteria for guidance met.	3/3
5.3c	All criteria for guidance met.	6/6
—	**TOTAL**	11/11

5.3a – Materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed.

The materials describe how conceptual and procedural content are developed together, in alignment with the TEKS. The "Course Overview" provides an explicit explanation of how students progress from procedural to conceptual understanding of linear equations, inequalities, and systems of linear equations and inequalities, ensuring a coherent and connected learning experience.

The materials describe the progression from procedural to conceptual understanding in the "Section Level Planning Guide" found within each unit. For example, in Unit 4, the "Section Level Planning Guide" describes how students start with fundamental concepts of linear relationships by writing expressions with variables and numbers. Then, students interpret and explain functions and their representations with functional notation, graphical representations, and real-world situations. Next, students use functions to model and make predictions with real-world situations. Finally, students explore the fundamental concept of functions through various representations and then apply this knowledge to write and interpret exponential equations. This progression specifically aligns to the concepts and procedures called for in TEKS A.3.B, A.2.B, A.2.C, and A.3.C (in that order).

The "Family Support Materials" outline what students will specifically do and how students will connect the main ideas in each unit to the procedures taught. For example, for Unit 2, the "Family Support Materials" provide a "Frequently Asked Questions" handout, which describes the main ideas taught in Unit 2.

5.3b – Questions and tasks include the use of concrete models and manipulatives, pictorial representations (figures/drawings), and abstract representations, as required by the TEKS.

The materials provide questions and tasks that include concrete models and manipulatives (e.g., in Unit 2, students use scissors to cut paper to model a given scenario and then identify the corresponding geometric sequence).

The materials provide questions and tasks that include pictorial representations (e.g., in Unit 1, Lesson 6, students are prompted to create a table and graph the corresponding data to represent the costs of bagels in a given scenario).

The materials provide questions and tasks that include abstract representations (e.g., in Unit 6, students are asked to write a system of equations to represent specific problem situations and then interpret the solution of the system).

5.3c – Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts, as required by the TEKS.

The materials include support for connecting the concrete and representational models to abstract concepts. For example, Unit 1, Lesson 4 supports students connecting, creating, defining, and explaining concrete and representational models to abstract as required by the TEKS for this unit. The video presentation, the Launch, and the "Activity Synthesis" provide the instruction with step-by-step instructions and strategies to ensure the students are engaged and have a deeper understanding of the mathematical concepts through multiple representation of the content presented.

The materials connect the concrete models to the abstract in order to support students' learning as required by the TEKS. For example, in Unit 6, Lesson 1, students begin by writing an equation to represent a constraint presented in a real-world problem. They then graph the equation and complete a data table to represent the relationship. When a new constraint is introduced, students repeat the process with a new equation, graph, and table. Finally, students explain their results, summarizing the relationships between the equations, graphs, and data tables, and reinforcing the connections between concrete representations and abstract mathematical concepts.

5.4 Development of Academic Mathematical Language

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.4a	All criteria for guidance met.	3/3
5.4b	All criteria for guidance met.	1/1
5.4c	All criteria for guidance met.	6/6
—	**TOTAL**	10/10

5.4a – Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, and other language development strategies.

The materials provide opportunities for students to develop their academic mathematical language using visuals. The "Course Overview" includes a glossary that provides visuals for vocabulary words when appropriate; for example, for the phrase "solution to a system of equations," there is a visual of a graph with two lines and an arrow pointing to the intersection point with the label of "solution."

The materials provide opportunities for students to develop academic mathematical language using visuals (slide presentations, digital objects, graphing technology), manipulatives (paper slicing, tables, charts, graphs), and language development strategies such as questioning, communication strategies, and instruction routines embedded in the lesson. For example, Unit 2 on Sequences provides all three elements.

Materials provide opportunities for students to develop their academic mathematical language using manipulatives. For example, Unit 1, Lesson 2 includes a "Card Sort" at the beginning of the lesson to discuss possible domain input values for a real-world situation. Teachers are guided to put students into groups of two–four for their card sort and then discuss their decisions with other groups. In the "Activity Synthesis," the students are encouraged to share out and discuss any disagreements. This activity helps students build academic mathematical language by engaging in peer discussions about content such as the domain of a function.

Materials provide opportunities for students to develop their academic mathematical language using other language development strategies. For example, Unit 9, Lesson 3 uses multiple representations (visuals) as well as color-coded graphing and a glossary with words and visual representations to utilize as language development strategies.

5.4b – Materials include embedded teacher guidance to scaffold and support students' development and use of academic mathematical vocabulary in context.

Materials include embedded teacher guidance to scaffold and support students' development and use of academic mathematical vocabulary in context. For example, in Unit 1, Lesson 1, students are prompted to interpret graphs of different functions. The materials have questions embedded in the teacher notes

under the "Launch" section, such as "What might be reasonable units to use for the axes of the graphs?" and "How do we know that each graph represents a function?" These questions support the development of students' academic vocabulary in math-related contexts.

Materials include embedded teacher guidance to scaffold and support students' development and use of academic mathematical vocabulary in context. For example, in Unit 1, Lesson 9, students are to work in groups to match expressions and tables with situations. The materials have questions embedded in the teacher notes under the "Activity Synthesis" section, such as "How could you tell (a certain table) matched one of the situations?" and "Besides evaluating the expression, how could you tell (a certain expression) matched one of the situations?" These questions support the development of students' academic vocabulary in math-related contexts.

In Unit 9, Lesson 1, students begin learning about quadratic functions. The teacher guidance includes vocabulary to introduce to students that includes linear and exponential in reference to the graphs.

5.4c – Materials include embedded teacher guidance to support the application of appropriate mathematical language to include vocabulary, syntax, and discourse to include guidance to support mathematical conversations that provide opportunities for students to hear, refine, and use math language with peers and develop their math language toolkit over time as well as guide teachers to support student responses using exemplar responses to questions and tasks.

The materials provide support for teachers to facilitate mathematical discussions among students to hear, refine, and use their mathematical language toolkit. For example, in Unit 4, Lesson 5, students are instructed to graph two points on graph paper, draw the line that connects the two points, and then identify the x- and y-intercepts. The "Activity Synthesis" invites students to share their work and use guided questions such as, "What patterns do you notice about the position of the x-intercept and y-intercept?" and "How might the slope of the line affect the position of these intercepts?" These questions support the development of students' mathematical language toolkit.

Every lesson includes group discussions that provide opportunities for students to hear, refine, and use mathematical language. For example, in Unit 11, Lesson 1, students are grouped in pairs and discuss their responses with their partners. At the end of the lesson, the materials provide teacher guidance to lead a whole-class discussion by providing questions to ask students, vocabulary to support conversations, syntax, and discourse.

Materials include embedded teacher guidance to support student responses using exemplar responses to questions and tasks by including sample responses in the teacher notes. For example, in Unit 7, Lesson 9, there is a task where students are given $500 and asked to choose between two investment options each with a different interest rate and time frame, asked to choose the better option and then

build a mathematical model for each option to support their thinking. In the teacher notes, there is a sample response included to be used as an exemplar to help support students and the teacher.

5.5 Process Standards Connection

GUIDANCE	SCORE SUMMARY	RAW SCORE
5.5a	All criteria for guidance met.	1/1
5.5b	The materials do not include a description of how TEKS process standards are connected throughout the course.	0/2
5.5c	Materials do not include a description for each unit of how the TEKS process standards are incorporated and connected throughout the unit.	0/2
5.5d	All criteria for guidance met.	1/1
—	**TOTAL**	2/6

5.5a – TEKS process standards are integrated appropriately into the materials.

The TEKS process standards are integrated appropriately into the materials. In the *Course Guide*, the section titled "What's in a Kiddom Math Lesson?" describes how the process standards are integrated in each lesson and how each session of the lesson provides opportunities for the student to analyze and communicate mathematical concepts to real-world situations. It states, "The Warm-up strengthens procedural fluency; the Launch helps connect with an unfamiliar context; the 'Activity Synthesis' allows time to make connections to new learning; the Cooldown determines students' understanding of the content."

The materials provide evidence of the process standards integrated appropriately into the activities. For example, in Unit 4, students plan a pizza party by estimating the cost, researching the materials needed, formulating a plan, determining a solution, justifying the solution, and communicating the reasonableness of the solution.

The materials integrate the process standards appropriately. For example, in Unit 4, Lesson 4, the relevant process standards are clearly demonstrated in a lesson on equations and their graphs. Activity 4.3 directs students to use graphs while communicating the meaning of certain points and how the graph can be used to answer questions regarding a savings account. This activity integrates the TEKS process standard A.1D.

The materials provide evidence of the process standards integrated appropriately into the activities through each "Section Level Planning Guide." In Unit 4, the "Planning Guide" states, "students will be asked to examine patterns and explore multiple representations, make connections between function notation and explaining their meaning in everyday language, as well as recognizing how some real-world situations will require domain restrictions and require the use of the piecewise functions."

5.5b – Materials include a description of how TEKS process standards are incorporated and connected throughout the course.

The materials include a description of how the TEKS process standards are incorporated throughout the course. The scope and sequence provided in the "Course Overview" includes which process standards are included within each lesson.

The materials include a description of how the TEKS process standards are incorporated throughout the course. For example, in Unit 4, students are asked to examine patterns and explore multiple representations, make connections between function notation and explaining their meaning in everyday language, as well as recognize how some real-world situations will require domain restrictions and require the use of piecewise functions.

The materials do not include a description of how the TEKS process standards are connected throughout the course.

5.5c – Materials include a description for each unit of how TEKS process standards are incorporated and connected throughout the unit.

The materials do not include a description of how the TEKS process standards are incorporated throughout the unit. There is a scope and sequence document that provides a chart with units and then lessons, and what process standards are present in each lesson.

The materials do not include a description of how the TEKS process standards are incorporated and connected throughout the unit.

5.5d – Materials include an overview of the TEKS process standards incorporated into each lesson.

The materials include an overview of the TEKS process standards incorporated at the beginning of each lesson on the first page in the introduction under "Texas Essential Knowledge and Skills." For example, in Unit 1, Lesson 1, the process standards addressed are A.1A, A.1B, A.1D, and A.1G. These are listed with the content standards.

The materials include a lesson overview that lists the TEKS that are addressed within the lesson. For example, in Unit 3, Lesson 1, the TEKS listed include A.1.A: apply mathematics to problems arising in everyday life, society, and the workplace.

6. Productive Struggle

Materials support students in applying disciplinary practices to productive problem-solving, including explaining and revising their thinking.

6.1 Student Self-Efficacy

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.1a	All criteria for guidance met.	3/3
6.1b	All criteria for guidance met.	6/6
6.1c	All criteria for guidance met.	3/3
—	**TOTAL**	12/12

6.1a – Materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics.

The materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics. For example, in Unit 4, Lesson 1, the material provides students with the task of planning a pizza party for their class. This task requires students to complete several steps, including estimating the cost and writing an expression both numerically and algebraically to represent that estimate. Throughout the process, students must explain their mathematical thinking.

The materials provide opportunities for students to think mathematically, persevere through solving problems, and make sense of mathematics. For example, in Unit 5, Lesson 2, students plan a road cleanup after a parade. This task requires students to complete several steps, including determining the miles for each volunteer, writing an algebraic equation to represent how many miles each volunteer needs to clean, and then representing the expression in both a table and a graph. Throughout the process, students must explain their mathematical thinking.

The materials provide opportunities for students to think mathematically, persevere through solving problems, and make sense of mathematics. For example, in Unit 1, Lesson 4, students are asked to write an equation that represents the relationship between the number of games, x, and the number of rides, y, Jada can purchase with a fixed amount of money. The next question asks students to explain what the other two equations from the previous question could mean.

6.1b – Materials support students in understanding, explaining, and justifying that there can be multiple ways to represent and solve problems and complete tasks.

The materials support students in understanding, explaining, and justifying that there can be multiple ways to represent problems. For example, in Unit 2, Lesson 7, students are given problem cards that ask them to represent sequences using a table, graph, and a recursive definition. Students work with a partner to ask for the necessary information to find the matching card.

The materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems. For example, in Unit 6, students are asked to solve systems of equations using substitution, graphing, and elimination. Then, students justify their chosen method and explain their reasoning to a partner or group.

The materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems. For example, in Unit 6, Lesson 4 highlights the various ways that a student may solve a system of equations. Students are asked to solve systems of equations using substitution, graphing, and elimination. Then, students justify their chosen method and explain their reasoning to a partner or group.

6.1c – Materials are designed to require students to make sense of mathematics through multiple opportunities for students to do, write about, and discuss math with peers and teachers.

The materials are designed to help students make sense of mathematics through frequent opportunities to engage in mathematical thinking and written explanation with their peers. For example, in Unit 4, Lesson 4, students work in pairs to solve problems related to linear equations. They collaborate to discuss their reasoning and respond in writing to prompts such as: "Choose any point that is not on the line, state its coordinates, and explain what it tells us."

The materials are designed to support students in making sense of mathematics through frequent opportunities for peer discussion. For example, in Unit 8, Lesson 1, students work in pairs to answer questions related to simple and compound interest, discussing their reasoning with one another. During the "Activity Synthesis," the materials encourage whole-class discourse, stating: "Consider surveying the class to see the choices students made. Select students who made different choices to explain their responses, starting with those who opted for the bonds. Display their reasoning and graphs for all to see."

The materials provide opportunities for students to identify and analyze patterns through discussion and productive struggle, which they then use to derive general rules applicable to broader mathematical contexts. For example, in Unit 2, Lesson 1, students solve puzzles to informally develop recursive rules for generating terms in a sequence. The activity is designed to prompt discussion around identifying whether a sequence is arithmetic, geometric, or neither. Students apply these insights to write recursive rules for various types of sequences.

The materials are designed to require students to make sense of mathematics through multiple opportunities for students to do, write about, and discuss math with peers and teachers. *The Kiddom Math Texas Math: High School Course Guide for Teachers* includes the "MLR1 Stronger and Clearer Each Time." "The routine offers a structured and interactive opportunity for students to revise and refine their

ideas and their verbal and written output (Zwiers, 2014). This routine provides a purpose for students' conversation through the use of a discussion-worthy and iteration-worthy prompt."

6.2 Facilitating Productive Struggle

GUIDANCE	SCORE SUMMARY	RAW SCORE
6.2a	All criteria for guidance met.	6/6
6.2b	All criteria for guidance met.	4/4
—	**TOTAL**	10/10

6.2a – Materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications.

The materials support teachers in guiding students to share their problem-solving approaches through explanations, arguments, and justifications. For example, in Unit 1, Lesson 6, teachers are directed to have students work in pairs and take turns sharing their functions and representations. The lesson includes guiding questions that prompt students to justify their reasoning, along with productive argumentative prompts.

The materials support teachers in guiding students to reflect on their problem-solving approaches with explanations, arguments, and justifications. In Unit 5, Lesson 3, the Warm-up gives support to teachers for having students choose how to rearrange an equation, and then students reflect on their method with peers in a debate style, using argumentation and justification. In "Activity 3.2: Cargo Shipping," students work in groups of three to four and then share their answers. The teacher support in the launch section gives guidance to have students reflect on how they found the number of cars that can be shipped.

Materials support teachers in guiding students to explain and reflect on their problem-solving approaches. For example, in Unit 1, Lesson 5, students work with a partner to match equations with their corresponding slopes and y-intercepts. The materials prompt teachers to encourage students to take turns explaining their matching strategies to one another. During the "Activity Synthesis," students are further supported in reflecting on their thinking through targeted discussion questions, such as: "How would you describe the matching process or the strategy? Was it fairly efficient or laborious? Was it prone to errors?" and "Would you still use graphs to make the matches if the graphing needed to be done by hand?"

6.2b – Materials include prompts and guidance to support teachers in providing explanatory feedback based on student responses and anticipated misconceptions.

The materials include prompts to support teachers in providing explanatory feedback based on student responses and anticipated misconceptions. For example, in Unit 4, Lesson 4, the "Warm-up" includes teacher prompts in the notes for evaluating responses for question 1 to provide feedback based on student responses to the question. In Activity 4.2, the "Advancing Student Thinking" section provides

prompts to teachers for giving students explanatory feedback on the anticipated misconception of understanding what the points that are not on the line mean and understanding how to read a graph.

The materials include guidance to support teachers in providing explanatory feedback based on student responses and anticipated misconceptions. For example, in Unit 2, Lesson 5, "Activity 5.3: Let's Define Some Sequences," the "Anticipated Misconceptions" section provides teachers with explanatory feedback for helping students with defining a function recursively. The "Activity Synthesis" section, offers guidance to teachers to give feedback to students based on their responses and states, "Conclude the discussion by inviting students to share things they notice about the definitions for the different sequence types. (The arithmetic sequences have adding or subtracting a term, the geometric sequences have multiplying by a term, and the sequence that is neither is a mix of adding and multiplying.) If not brought up by students, remind them that arithmetic sequences are a type of linear function and geometric sequences are a type of exponential function, so it makes sense to see only addition and subtraction for arithmetic sequences and only multiplication for geometric sequences."

The materials include guidance to support teachers in providing explanatory feedback based on anticipated misconceptions. For example, in Unit 1, Lesson 2, the "Anticipated Misconceptions" section includes common misconceptions students may have when working with domain and range. It also includes a prompt for teachers to "Ask students if it is possible to use a different scale on each axis or, if the function is graphed using technology, to adjust the graphing window."