

IMRA Review Cycle 2024 Report



Publisher Name	Program Name
Kiddom	IM360 Texas Math powered by Kiddom
Subject	Grade Level
Mathematics	6

Texas Essential Knowledge and Skills (TEKS) Coverage: 55.96%
English Language Proficiency Standards (ELPS) Coverage: 73.08%
Quality Review Overall Score: 209 / 227

IMRA Reviewers

Flags for Suitability Noncompliance 5

Indicator	Count of Flags
1. Prohibition on Common Core	4
2. Alignment with Public Education’s Constitutional Goal	0
3. Parental Rights and Responsibilities	0
4. Prohibition on Forced Political Activity	0
5. Protecting Children’s Innocence	0
6. Promoting Sexual Risk Avoidance	0
7. Compliance with the Children’s Internet Protection Act (CIPA)	1

Flags for Suitability Compliance 0

Indicator	Count of Flags
Alignment with Public Education’s Constitutional Goal, 2.1.1	0
Promoting Sexual Risk Avoidance, 6.2	0

Alleged Factual Errors 2

Public Feedback

Flags for Suitability Noncompliance 0

Rubric Indicator	Count of Flags
1. Prohibition on Common Core	0
2. Alignment with Public Education’s Constitutional Goal	0
3. Parental Rights and Responsibilities	0
4. Prohibition on Forced Political Activity	0
5. Protecting Children’s Innocence	0
6. Promoting Sexual Risk Avoidance	0
7. Compliance with the Children’s Internet Protection Act (CIPA)	0

Alleged Factual Errors 0

Public Comments 0

Quality Review Summary

Rubric Section	Quality Rating
1. Intentional Instructional Design	52 / 53
2. Progress Monitoring	24 / 28
3. Supports for All Learners	25 / 32
4. Depth and Coherence of Key Concepts	19 / 23
5. Balance of Conceptual and Procedural Understanding	64 / 66
6. Productive Struggle	25 / 25

Strengths

- 1.1 Course-Level Design: Materials include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course, with suggested pacing guides for various instructional calendars, explanations for the rationale of unit order and concept connections, guidance for unit and lesson internalization, and resources to support administrators and instructional coaches in implementing the materials as designed.
- 1.3 Lesson-Level Design: Materials include comprehensive, structured lesson plans with daily objectives, questions, tasks, materials, or instructional assessments required to meet the content and language standards. Materials provide a lesson overview outlining the suggested timing for each component, a list of necessary teacher and student materials, and guidance on the effective use of lesson materials for extended practice, such as homework, extension, and enrichment.
- 2.2 Data Analysis and Progress Monitoring: Materials include instructional assessments and scoring information that provides guidance for interpreting and responding to student performance, offer guidance on using tasks and activities to address student performance trends, and include tools for students to track their own progress and growth.
- 4.1 Depth of Key Concepts: Materials provide practice opportunities and instructional assessments that require students to demonstrate depth of understanding aligned to the TEKS, with questions and tasks that progressively increase in rigor and complexity, leading to grade-level proficiency in mathematics standards.
- 4.2 Coherence of Key Concepts: Materials demonstrate coherence across courses and grade bands through a logically sequenced scope and sequence, explicitly connecting patterns, big ideas, and relationships between mathematical concepts, linking content and language across grade levels, and connecting

- students' prior knowledge to new mathematical knowledge and skills.
- 5.1 Development of Conceptual Understanding: Materials include questions and tasks that require students to interpret, analyze, and evaluate various models for mathematical concepts, create models to represent mathematical situations, and apply conceptual understanding to new problem situations and contexts.
 - 5.2 Development of Fluency: Materials provide tasks designed to build student automaticity and fluency for grade-level tasks, offer opportunities to practice efficient and accurate mathematical procedures, evaluate procedures for efficiency and accuracy, and include embedded supports for teachers to guide students toward more efficient approaches.
 - 5.4 Development of Academic Mathematical Language: Materials provide opportunities for students to develop academic mathematical language using visuals, manipulatives, and language strategies, with embedded teacher guidance on scaffolding vocabulary, syntax, and discourse, and supporting mathematical conversations to refine and use math language.
 - 5.5 Process Standards Connections: Materials integrate process standards appropriately, nor do they provide descriptions of how they are incorporated and connected throughout the course, within each unit, or in each lesson.
- 6.1 Student Self-Efficacy: Materials provide opportunities for students to think mathematically, persevere through problem-solving, and make sense of mathematics, while supporting them in understanding multiple ways to solve problems and requiring them to engage with math through doing, writing, and discussion.
 - 6.2 Facilitating Productive Struggle: Materials support teachers in guiding students to share and reflect on their problem-solving approaches, offering prompts and guidance for providing explanatory feedback based on student responses and anticipated misconceptions.

Challenges

- 1.2 Unit-Level Design: Materials do not include academic vocabulary necessary to teach the concepts in the unit.
- 2.1 Instructional Assessments: Materials do not provide guidance to ensure consistent and accurate administration of instructional assessments or include standards-aligned items at varying levels of complexity.
- 3.1 Differentiation and Scaffolds: Materials do not include pre-teaching or embedded supports for references in text.
- 3.2 Instructional Methods: Materials do not include prompts or guidance to support teachers in modeling concepts to be learned.
- 3.3 Support for Emergent Bilingual Students: Materials do not provide

linguistic accommodations for more than 1 level or include guidance in supporting cross-linguistic connections through oral and written discourse.

- 4.3 Spaced and Interleaved Practice: Materials do not provide interleaved practice opportunities with previously learned skills and concepts across lessons and units.

- 5.3 Balance of Conceptual Understanding and Procedural Fluency: Materials do not explicitly state how the conceptual and procedural emphasis of the TEKS are addressed.

Summary

IM360 Texas Math powered by Kiddom is a 6–8 Mathematics program that focuses on big ideas thinking and real-world connections. The instructional materials give teachers comprehensive, structured, and detailed lessons that include various questions, tasks, and assessments. Materials include teacher guidance for differentiation and scaffolds with varying instructional approaches such as the Stronger and Clearer Each Time, Collect and Display, Co-Craft Questions, Three Reads, and Discussion Supports. Additionally, the program includes coherence across units by connecting content and language learned in previous courses/grade levels.

Campus and district instructional leaders should consider the following:

- While the product features comprehensive and detailed lessons with guidance for differentiation and variety of instructional approaches, the lessons do not align to the TEKS. The product includes areas of some alignment to the standards, such as integer concept development; however, the product does not address the depth of the context and student actions used in the grade 6 standards. In some cases, the product includes such standards as surface area and probability, which are not introduced in the TEKS until later grades. This misalignment of readiness standards, supporting standards, rigor, and process standards is seen throughout the product.
- The program includes opportunities for students to draw on prior grade-level knowledge; however, the discrepancy between the product and the TEKS indicates that prerequisite skills have not yet been taught to the students.

Intentional Instructional Design

1.1	Course-Level Design	15/15
1.1a	Materials include a scope and sequence outlining the TEKS, ELPS, concepts, and knowledge taught in the course.	5/5
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).	2/2
1.1c	Materials include an explanation for the rationale of unit order as well as how concepts to be learned connect throughout the course.	2/2
1.1d	Materials include guidance, protocols, and/or templates for unit and lesson internalization.	2/2
1.1e	Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.	4/4

The materials include a scope and sequence that outlines the TEKS, ELPS, concepts, and knowledge taught in the course. Materials include suggested pacing (pacing guide/calendar) to support effective implementation for various instructional calendars (e.g., varying numbers of instructional days–165, 180, and 210). Materials include guidance, protocols, and/or templates for unit and lesson internalization Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.

Evidence includes, but is not limited to:

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

- The materials include a supplemental scope and sequence for Texas in the Course Guide. This scope and sequence include the suggested pacing for instruction, assessment, and lesson breakdown. The lesson titles and specific learning targets are given for each lesson including the TEKS and ELPS alignment within that unit.
- The supplementary scope and sequence included in the Course Guide details the instruction of math concepts and knowledge taught in the course and a standardized chart outlining the lessons by standard.

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

- The materials include a suggested pacing calendar found in the supplementary Texas scope and sequence. The pacing calendar is designed for 155 days of initial instruction and provides teachers with an optional additional 23 days of extensions, reviews, assessments, and

reteach for an ending total of 178 days. Guidance is provided to reduce the number of days by omitting the last unit, reducing the pacing to 172 instructional days.

- The structured pacing guide outlines the lessons and activities for an instructional calendar. The weekly schedule, under the Course Overview, includes a clear outline of the lessons, indicating the suggested number of days per unit based on 60-minute class periods.

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

- The Unit Dependency Chart, located under the Course Overview, outlines the sequence of material to be used in upcoming units. For example, the materials state, "There is an arrow from 6.2 to 6.6, because students are expected to use their knowledge of contexts involving ratios (from 6.2) to write and solve equations representing such contexts (in 6.6)." The chart also explains how the course aligns vertically with previous learning and how it connects to future units and grades. For example, the materials state, "There is an arrow from 7.4 to 7.8, because students are expected to use their skills in representing percentages (from 7.4) when solving problems about probability (in 7.8)."
- The materials include a Narrative Section, located at the beginning of each unit, which outlines the key ideas for grade 6. The narrative describes the main components of each unit, the new terminology for the course, and how the content connects to prior grades. Materials include dependency diagrams on the online platform under Course Guide, Pacing Guide, and Dependency Diagram, which visually outline the flow of units taught via arrows in the diagram. The chart also indicates when a previously taught concept is revisited in future units.

Materials include guidance, protocols, and/or templates for unit and lesson internalization.

- The Priority and Category list in the Anticipation Guide includes guidance on the priority of the lessons throughout the units and a summary of what students will be learning to aid with internalization. The Teacher Guide for "How to Use These Materials" include outlines of how the unit lessons are structured and guidance on implementing instructional routines in the classroom. The materials state, "These lesson plans include a small set of activity structures and reference a small, high leverage set of teacher moves that become more and more familiar to teachers and students as the year progresses."
- The Priority and Category list in the Anticipation Guide includes guidance on the priority of the lessons throughout the units and a summary of what students will be learning to aid with internalization. The Teacher Guide for "How to Use These Materials" includes outlines of how the lessons are structured and includes guidance on implementing instructional routines in the routines in the classroom. The materials state, "These lesson plans include a small set of activity structures and reference a small, high leverage set of teacher moves that become more and more familiar to teachers and students as the year progresses."
- The Section Level Planning Guide at the beginning of each unit outlines the unit and includes guidance on areas within the resource including Explore, Deep Dive, Synthesize and Apply, and Anytime Resources.

Materials include resources and guidance to support administrators and instructional coaches with implementing the materials as designed.

- On the Support page of the Kiddom website, there are 19 articles available for administrators and instructional coaches that provide information and resources to help navigate Kiddom for their school or district. Categories for resources and guidance include Teaching With Kiddom, Features, Customizing Kiddom, Grading & Reporting, Kiddom Integrations, Students and Families, and Troubleshooting. For example, the article titled "What are Admin Assignment View Reports?" provides administrators with guidance on the student achievement report. Specifically, Assignment View reports "equip school and district leaders, like you, with tools and data to make better instructional decisions and resource allocation decisions."
- Materials include resources to support administrators and instructional coaches with implementing the materials as designed. The "Teacher Guide," located in the Course Overview, provides resources for administrators and instructional coaches to support the implementation of the materials. The "Typical IM Lesson" subsection explains the four phases of a typical lesson: warm-up, instructional activities, lesson synthesis, and cool-down. The How to Use These Materials subsection further breaks down the three phases of a typical activity: launch, student work time, and activity synthesis.
- The materials include resources to support administrators and instructional coaches, such as video training. The materials state, "As part of Kiddom's NEW Admin Insights Reporting Package, we now offer Usage Reports! These reports allow district and school leaders to gain insight into Kiddom activation and usage across schools. This video link provides materials that include resources and guidance to support administrators and instructional coaches in implementing the materials as designed."

Intentional Instructional Design

1.2	Unit-Level Design	3/4
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.	1/2
1.2b	Materials contain supports for families in both Spanish and English for each unit with suggestions on supporting the progress of their student.	2/2

The materials include comprehensive unit overviews that provide the background content knowledge necessary to effectively teach the concepts in the units. Materials do not include comprehensive unit overviews that provide academic vocabulary necessary to effectively teach the concepts in the unit. Materials contain supports for families in English for each unit with suggestions on supporting the progress of their students. Materials contain supports for families in both Spanish and English for each unit with suggestions on supporting the progress of their student.

Evidence includes, but is not limited to:

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

- The materials include a narrative section that includes an overview and background content knowledge, outlining the key ideas for the grade 6 materials. The narrative describes the main components of each unit, the new terminology for the grade level, and how the content connects to prior grades. Teachers are provided with a slide deck for the entire year of glossary terms that include the word, definition, and graphic or picture.
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- The materials provide access to a set of academic terms within the resources. At the beginning of the course and throughout the units, the materials contain Glossary Terms. This includes a slide deck providing "a complete grade-level list including word, definition, and picture for all vocabulary words introduced in the IM Math curriculum." However, academic vocabulary is not clearly provided in the unit overviews. Academic vocabulary directly connected with each lesson or activity is not evident. Academic vocabulary is only offered for the entire resource. The glossary terms provided are insufficient to teach each unit's concepts effectively.

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

- The materials contain resources to support families with information to assist their students in learning in English and in Spanish. Family Support Materials in each unit provide an overview

of student learning objectives and suggestions for ways caregivers can support the unit learning at home. Additionally, caregivers can access their student's progress.

- Each unit overview includes family support materials in English and Spanish. These materials can be accessed online or in PDF form and include lesson videos. The materials provide a description of problem-based curriculum, support for learners, and ideas to encourage learners to be successful.

Intentional Instructional Design

1.3	Lesson-Level Design	34/34
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.	30/30
1.3b	Materials include a lesson overview outlining the suggested timing for each lesson component.	1/1
1.3c	Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson.	2/2
1.3d	Materials include guidance on the effective use of lesson materials for extended practice (e.g., homework, extension, enrichment).	1/1

The materials include comprehensive, structured, detailed lesson plans that include questions, tasks, materials, and instructional assessments required to meet the content and language standards of the lesson. Materials include a lesson overview outlining the suggested timing for each lesson component. Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson. Materials include guidance on the effective use of lesson materials for extending practice.

Evidence includes, but is not limited to:

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.

- The online materials provide the teacher with comprehensive, structured, and detailed lessons that include questions to meet the content and language standards of the lesson. For example, in Unit 1, Lesson 1, the materials provide questions to ask students such as "What are some of the tools in the geometry toolkit and what are they used for?" and "Draw two shapes that you know do not have the same area. How can you tell?"
- The materials provide Unit Narratives and learning goals for the teacher to internalize the lesson. Teachers are provided with a pre-assessment to check for student readiness, a mid-unit assessment, and an end-of-unit assessment. All assessments include multiple ways for students to show their learning.
- The materials offer a comprehensive lesson plan that guides teachers to walk students through the tasks required to meet the standards of the lesson. Supports are offered for students with disabilities and students who are English language learners.
- The materials include a lesson narrative, learning goals, and student-facing learning targets. A list of required materials and a description of the required preparation for the upcoming lesson is included in the material. The lessons provide clear descriptions of how to launch tasks, advance students' thinking, and how to engage the class in an activity synthesis.

Materials include a lesson overview outlining the suggested timing for each lesson component.

- The materials provide timing for the units in the Texas Scope and Sequence. Teachers are provided with the number of days needed to teach the lesson and days needed for reteaching and assessment.
- The material includes overall timing for lesson components such as the warm-up, the instructional activities, the lesson synthesis, and the cool-down. Each of the lesson phases has a link in the system which requires teachers to click to determine the total timing for each lesson. For example, Unit 2 Lesson 1 contains four parts including 1.1: Warm-up for 5 minutes, 1.2: The Teacher's Collection for 10 minutes, 1.3: The Student's Collection for 20 minutes, and 1.4: Cool-down for 5 minutes for a total of 40 minutes for the lesson sequence.
- Insert evidence narrative for guidance here.

Materials include a lesson overview listing the teacher and student materials necessary to effectively deliver the lesson.

- The materials provide a section in the Course Overview titled "Required Materials" that lists the materials needed for each unit. This includes various items such as manipulatives, copies, and pre-cut materials. This section describes what teachers need to do before the lesson to prepare materials.
- At the lesson level, the materials provide a list of materials needed to support the lesson's objective by stating the Required Materials and the Required Preparation for the lesson. For example, In Unit 2, Lesson 1, the Required Materials state, "Students' collections of objects, Teacher's collection of objects, and Tools for creating a visual display" and the Required Preparation states "A few days before this lesson, ask students to bring a personal collection of 10-50 small objects. Examples include rocks, seashells, trading cards, or coins. Bring in your personal collection and display it ahead of time. Think of possible ways to sort your collection. (See the Launch section of the first activity for details). Prepare a few extra collections for students who don't bring one."

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

- The Section Level Planning guide for each lesson includes a description that includes guidance on what students can use for ongoing practice. In Unit 2, the materials state, "Assign one or more of the distributed practice problem sets from Lessons 1–5 to be completed over the time period that the section is being worked on."
- The Section Level Guide also includes "Anytime Resources" that can be used outside of instructional time for extended practice. Unit 2 suggests "Culminating Lessons from Unit 1 and Lesson 1 Activity 3" for extended practice.
- The Family Support Materials found at the beginning of each lesson offer teachers activities that can be sent home with students for extended practice. For example, the materials for

grade 6 Unit 1 describe the lesson, provide a list of materials, ask a question stem, and provide a solution to support students working at home.

Progress Monitoring

2.1	Instructional Assessments	20/24
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.	12/12
2.1b	Materials include the definition and intended purpose for the types of instructional assessments included.	2/2
2.1c	Materials include teacher guidance to ensure consistent and accurate administration of instructional assessments.	0/2
2.1d	Diagnostic, formative, and summative assessments are aligned to the TEKS and objectives of the course, unit, or lesson.	6/6
2.1e	Instructional assessments include standards-aligned items at varying levels of complexity.	0/2

The materials include a variety of instructional assessments at the unit and lesson level that vary in types of tasks and questions. Materials include the definition and intended purpose for the types of instructional assessments. Materials do not include ensure consistent and accurate administration of instructional assessments. Materials include diagnostic, formative, and summative assessments that align to the TEKS and objectives of the course, unit, and lesson. Materials do not include assessments that vary in levels of complexity.

Evidence includes, but is not limited to:

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.

- Materials provide various tasks at the unit level as seen in the grade 6 materials. Each unit includes a Check for Readiness diagnostic assessment, a formative cumulative practice, and a summative end-of-unit assessment. These materials feature a variety of question formats on the instructional assessments, including open-ended questions, short responses, multi-select, and multiple choice.
- Each lesson plan provides opportunities for formative assessment in various formal and informal ways. Opportunities include warm-ups, tasks throughout the lessons such as turn and talks, and cool-downs.
- The materials include a range of tasks at the lesson level. Each lesson includes a warm-up, activities, and a cool-down. The warm-ups often include activation of prior knowledge which may be considered diagnostic. For example, in grade 6, Unit 1, Lesson 2, the materials ask students to share what they remember about the concept of area from previous grade levels. This allows opportunities for students to share their understanding in a formative nature. The cool-downs are often open-ended questions that require students to show what they have learned.

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

- The materials include definitions of instructional assessments in the Course Overview, Teacher Guide, and Assessment section. This description includes the purpose of each assessment, guidance on strategies teachers might use to administer the assessments, and examples. For instance, information about the diagnostic assessment states "Most of the problems address prerequisite concepts and skills for the unit. Teachers can use these problems to identify students with below-grade needs, or topics to carefully address during the unit. Check Your Readiness also may include problems that assess what students already know of the upcoming unit's key ideas, which teachers can use to pace or tune instructions; in rare cases, this may signal the opportunity to move more quickly through a topic to optimize instructional time."
- The Teachers Guide includes a rationale for the intended purpose of instructional assessments. It provides a narrative that details the lesson that each question is related to and what to do if a student misses the item. For example, the resource states "This item assesses how students approach finding the area of a rectangle with whole-number side lengths. Including tick marks is to help students who wish to draw a grid of unit squares. Responses that show drawing with the incorrect number of unit squares, irregular rows, or irregular columns may indicate that students have not yet learned to structure two-dimensional space; that is, to see a rectangle with whole-number side lengths as composed of unit squares or composed of iterated rows or columns of unit squares."

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

- The Cumulative Practice questions located at the end of every lesson include notes for evaluating responses and samples of how students might respond. This is provided to assist teachers with evaluating student responses for instructional decisions. For example, in the Grade 6.1 Mid Unit Assessment A, Question 2 says, "Select all triangles that have an area of 30 square units." The "Note for Evaluating Responses" states, " Students selecting B have calculated perimeter rather than area. Students selecting D are treating the side of length 10 as the height. Students selecting E have multiplied the base and height but have not multiplied by 12. Students failing to select A have a major misconception about the area of a triangle. Students failing to select C may not have recognized the external height." This resource does not assist in the consistent or accurate administration of instructional assessments.
- Materials do not include teacher guidance to ensure accurate administration of the assessments. For example, at the end of Unit 1, materials include Grade 6.1 Mid Unit Assessment (A). The assessment includes the question, multiple choice responses, and the number of points for each question. The assessment does not include a teacher script or directions to support students in the administration of the assessment. Materials do not

include teacher guidance to ensure consistent and accurate administration of instructional assessments.

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

- The Section Level Planning Guide includes a table that indicates the objective and related assessment suggestions for each lesson. The publisher provides a separate Formative Assessments — TX TEKS document that shows the alignment of the TEKS. This document includes the diagnostic, formative, and summative assessments within the material.
- The cool-down formative assessment provides the objective of the lesson. The Unit 1.3 cool-down states "The purpose of this cool-down is to check how students are thinking about area after engaging in the activities. While the task prompts students to reflect on the work in this lesson, ideas about area from students' prior work in grades 3–5 may also emerge. Knowing the range of student thinking will help to inform the next day's lesson."

Instructional assessments include standards-aligned items at varying levels of complexity.

- The publisher provides a separate Formative Assessment document that outlines the alignment between the TEKS and the formative assessments within the resources. This resource includes the TEKS, the location of the formative assessment, and a description of what TEKS the formative assessment aligns with. The materials do not include items at varying levels of complexity.
- The End of Unit assessments include multiple-choice, multi-select, drawing, and short-answer open-response item types aligned to the assessment's objective. Items vary in item type but are not labeled as varying levels of complexity. There is no label of Depth of Knowledge or varying levels of Bloom's Taxonomy mentioned to support varying levels of complexity within the questions.

Progress Monitoring

2.2	Data Analysis and Progress Monitoring	4/4
2.2a	Instructional assessments and scoring information provide guidance for interpreting and responding to student performance.	2/2
2.2b	Materials provide guidance for the use of included tasks and activities to respond to student trends in performance on assessments.	1/1
2.2c	Materials include tools for students to track their own progress and growth.	1/1

The materials include instructional assessments and scoring information that provide guidance for interpreting and responding to student performance. Materials provide guidance for the use of included tasks and activities to respond to student trends in performance on assessments. Materials include tools for students to track their own progress and growth.

Evidence includes, but is not limited to:

Instructional assessments and scoring information provide guidance for interpreting and responding to student performance.

- The materials provide teachers with guidance on responding to student performance on assessments. The PDF version of the teacher’s guide includes suggestions for teachers on how to proceed with students who miss each question on the Check for Readiness Assessment. For example, in the Response to Student Thinking, teachers are told "If students struggle with the general concept of describing ratios in the cool-down, plan to focus on the verbal description of ratios when opportunities arise over the next several lessons. For example, in Activity 2 of Lesson 4, ask students to clearly articulate the association between the two quantities."
- The Cumulative Practice questions contain guidance for educators to assess student performance by providing evaluation criteria and examples of potential student responses. This resource is designed to help teachers maintain consistency in administering and evaluating each assessment item. For example, each cumulative assessment and end-of-unit assessment includes guidance on the total number of points for each test and the number of points for each question in the assessment. Within the Formative Assessment Opportunities section, the materials include information for teachers to interpret and respond to student responses as specified. The materials state, "Each instructional task is accompanied by commentary about expected student responses and opportunities to advance student thinking so that teachers can adjust their instruction depending on what students are doing in response to the task. Often, there are suggested questions to help teachers better understand students' thinking."

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

- Guidance is provided for teachers on how to respond to student performance on assessments. The cool-down provides a section, Responding to Student Thinking, which includes guidance on misconceptions. Lesson 1 cool-down states "If most students struggle with this item, plan to use this problem or a similar one as an additional warm-up activity."
- The diagnostic assessments, such as the Check Your Readiness, include guidance on how to respond to student thinking and direct teachers to tasks and activities such as additional warm-ups or lessons to support learning of the concepts missed.

Materials include tools for students to track their own progress and growth.

- The Student Dashboard allows students to track their progress and growth. Students can see late assignments, notifications about their assignments, grades, and teacher's feedback. This dashboard shows their overall grade but also breaks down the student's learning by standard.
- The section titled Information for Families provides students with learning targets and a self-assessment tool. The resource includes lesson summaries, lessons, and practice sets students can use to track their progress through the course.

Supports for All Learners

3.1	Differentiation and Scaffolds	6/8
3.1a	Materials include teacher guidance for differentiated instruction, activities, and/or paired (scaffolded) lessons for students who have not yet reached proficiency on grade-level content and skills.	3/3
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)	1/2
3.1c	Materials include teacher guidance for differentiated instruction, enrichment, and extension activities for students who have demonstrated proficiency in grade-level content and skills.	2/3

The materials include teacher guidance for differentiated instruction, activities, and/or paired (scaffolded) lessons for students who have not yet reached proficiency on grade-level content and skills. Materials include pre-teaching or embedded supports for unfamiliar vocabulary in text (e.g., figurative language, idioms, academic language). Materials do not include pre-teaching or embedded supports for references in text (e.g., figurative language, idioms, academic language). Materials include teacher guidance for enrichment and extension activities for students who are proficient in grade-level content and skills. Materials do not include guidance for differentiated instruction for students who are proficient in grade-level content and skills.

Evidence includes, but is not limited to:

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

- The Teacher’s Course Guide provides teachers with all the elements of the resource that provide more access for students with disabilities. These elements provide structure for all students who have yet to reach proficiency on grade-level content and skills. The structures the text provides include consistent lesson structure, concepts developed from concrete to abstract, brain breaks, and planned processing time. Additional supports are designed using the Universal Design for Learning Guidelines provided in the material. Each lesson is carefully designed to maximize engagement and accessibility for all students. The Course Guide states, "Purposeful design elements support access for all learners but are especially helpful for students with disabilities."
- Differentiated activities are included in the materials and provide guidance for teachers to support students who are still developing proficiency with grade-level content and skills. Lesson 1.3 in the grade 6 materials includes opportunities for students to work together in dialogue before responding to the teacher. This differentiated activity provides students time to process the information with a peer before sharing their thinking with the whole group.

- The Math Teacher’s Guide includes Supporting Diverse Learners, Universal Design for Learning, and Access for Students with Disabilities. These sections describe features of the lessons that support learners of different levels.

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 teacher guidance to support students with unfamiliar vocabulary found within the unit. For instance, Unit 7 includes guidance for teachers to introduce vocabulary such as "negative" by attaching it to prior knowledge such as degrees below zero in reference to temperatures.
- Lesson 1 Narrative Notes on Terminology states "Although the terms *figure*, *region*, and *shape* are used without being defined precisely for students, help students understand that sometimes our focus is on the boundary (which in this unit will always be composed of black line segments), and sometimes it is on the region inside (which in this unit will always be shown in color and referred to as 'the shaded region')." This provides the teacher with an overview of the academic vocabulary that will be used.
- Materials provide information to assist teachers in anticipating students using unfamiliar vocabulary for mathematical purposes such as comparing, explaining, and describing. Throughout the unit, students will benefit from routines designed to support and grow a robust disciplinary language, both for their sense-making and for building shared understanding with peers. Teachers can formatively assess how students are using language in these ways, particularly when students are using language to compare, explain, and describe.
- Materials do not include supports for unfamiliar references (e.g., figurative language, idioms, academic language) in the text.

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

- The materials state, "Every extension problem is made available to all students with the heading 'Are You Ready for More?' These problems go deeper into grade-level mathematics and often make connections between the topic at hand and other concepts. Some of these problems extend the associated activity's work, but some involve work from prior grades or units in the course. The materials state that these problems are "not routine or procedural and they are not just the same thing again but with harder numbers."
- The materials provide teacher guidance for enrichment activities for students who have demonstrated proficiency in grade-level content and skills. An example of an enrichment lesson can be found in Unit 1, Lesson 19, which states "This culminating lesson is optional. Students use what they learned in this unit to design a tent and determine how much fabric is needed."
- Materials do not include teacher guidance for differentiated instruction for students who have demonstrated proficiency in grade-level content and skills. The materials include a Section Level Planning guide that provides teachers with guidance on Deep Dive activities and

assessment suggestions. These activities are intended to support teachers with guidance on how to deepen the learning for students who have shown proficiency with the grade level content in the form of practice and assessment but do not include guidance for differentiated instruction.

Supports for All Learners

3.2	Instructional Methods	11/13
3.2a	Materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly).	4/6
3.2b	Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using a variety of instructional approaches.	4/4
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.	3/3

The materials include prompts and guidance that support the teacher in explaining and communicating the concepts to be learned. Materials do not include prompts and guidance to support the teacher in modeling the concepts to be learned. Materials include teacher guidance and recommendations for effective lesson delivery and facilitation using various instructional approaches. Materials support multiple types of practice and include guidance for teachers and recommended structures to support effective implementation.

Evidence includes, but is not limited to:

Materials include prompts and guidance to support the teacher in modeling, explaining, and communicating the concept(s) to be learned explicitly (directly).

- The Lesson Narrative or Activity Narrative provided in each lesson and unit guides teachers with prompts to explain the concept to be learned. For instance, Unit 1, Lesson 2 states, "This lesson begins by revisiting the definitions for area that students learned in earlier grades. The goal here is to refine their definitions (MP6) and come up with one that can be used by the class for the rest of the unit. They also learn to reason flexibly about two-dimensional figures to find their areas, and to communicate their reasoning clearly."
- Through the Launch of the lessons, the materials include explicit guidance and prompts to support the teacher in communicating the concept to be learned. Unit 1, Lesson 4 guides the teacher to "display the images of Figures A–F for all to see. Tell students that Figures A, B, and C are parallelograms and figures D, E, and F are not parallelograms. Arrange students into groups of two and provide access to geometry toolkits. Give students 1–2 minutes of quiet think time to complete the task. Afterward, give them a minute to discuss their answers and observations with their partner."
- While the materials do have a short lesson narrative for teachers in the Lesson Summary, the guidance does not provide teachers with clarity on how to model the concept for students. For example, the description in Unit 4, Lesson 6 says, "Students have used different diagrams to represent multiplication and division. In this lesson, tape diagrams are spotlighted and used more explicitly. They are more abstract and more flexible than other representations students may have chosen for thinking about division problems that involve fractions." From this description, teachers are not given examples to model or practice these ideas with students.

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

- The Course Guide includes teachers eight instructional routines for delivering and facilitating an effective lesson. These instructional approaches include Stronger and Clearer Each Time, Collect and Display, Critique, Correct, Clarify, Information Gap Cards, Co-Craft Questions, Three Reads, Compare and Connect, and Discussion Supports.
- Teachers are offered a variety of instructional approaches for delivering an effective lesson. For example, the Course Guide Course Overview Instructional Approaches section lists the "MLR1: Stronger and Clearer Each Time" strategy. This strategy is described as a chance to "provide a structured and interactive opportunity for students to revise and refine their ideas and verbal and written output." This routine provides a purpose for student conversation as well as fortifies output."
- The materials offer a variety of instructional approaches for facilitating an effective lesson. The Lesson 3 Activity Synthesis in Unit 4 asks teachers to "Select previously identified students to share their diagrams, sequenced from the more concrete (e.g., pictures of jars and cups) to the more abstract (e.g., rectangles, tape diagrams). Display the diagrams and equations for all to see. Ask them how they used the diagrams to answer the questions (if at all)."

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 provide teachers with guidance for effective implementation of the content. In Unit 3, Lesson 4 Activity Synthesis, the materials include information for teachers on what to tell students about conversions between tablespoons and cups before directing students to find different methods and discuss them. The Activity Synthesis states, "When discussing the last strategy, ask students how they would know whether to multiply or to divide. Highlight that we multiply or divide depending on the information we have."
- Materials support multiple types of practice to support effective implementation. Warm-ups, activities, and cool-downs are provided in every lesson for student practice. Materials provide step-by-step instructions for guided practice, independent practice, and collaborative practice. For example, Unit 6, Lesson 1 Launch asks the teacher to have students think-pair-share their ideas relative to representations of equations and variables.
- The materials include different learning structures, such as individual, small group, and whole group. For example, Unit 1 Lesson 1 Launch guides the teacher to give students quiet individual think time for a few minutes, small group sharing with their partners, and then a whole-class follow-up discussion.

Supports for All Learners

3.3	Supports for Emergent Bilingual Students	8/11
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.	1/2
3.3b	Materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs.	1/1
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.	6/8
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.	Not scored

The materials include teacher guidance on linguistic accommodations designed to engage students in using increasingly more academic language. Materials do not include guidance on providing linguistic accommodations for various levels of language proficiency. Materials include implementation guidance to support teachers in effectively using the materials in state-approved bilingual/ESL programs. Materials include guidance for teachers to support emergent bilingual students in developing academic vocabulary, increasing comprehension, and building background knowledge through oral and written discourse. Materials do not provide guidance in supporting cross-linguistic connections.

Evidence includes, but is not limited to:

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 Teacher's Guide provides linguistic accommodations through Math Language Routines designed to engage students in academic language development. For example, the Three Reads guide for Unit 3, Lesson 5, directs the teacher to "display only the problem stem ("A laundry service uses 10 gallons of detergent every 6 weeks"), without revealing the questions. "We are going to read this statement 3 times." After the first read, "Tell your partner what this citation is about." After the second read, "List the quantities. What can be counted or measured?" Reveal and read the questions. Ask "What are some ways we might get started on this?" If necessary, repeat the routine for the second situation."
- The materials include a broad section in each lesson called "Support for English Learners." This section includes one of the Math Language Routines with ideas on how to engage students in listening, speaking, reading, and writing with content. Each lesson in the materials includes one of these language routines for all students. The materials do not include

guidance on providing accommodations for students at various levels of language development.

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

- The materials provide Mathematical Language Routines (MLRs) that are "grounded in four design principles that promote mathematical language use and development." The materials define MLRs as "instructional routines that provide structured but adaptable formats for amplifying, assessing, and developing students' language."

The materials include a section titled Supporting Diverse Learners that supports teachers in effectively using the materials. The materials state, "Embedded MLRs are described in the teacher notes for the lessons in which they appear." They continue to state "MLRs are written into each lesson, either as an embedded structure of a lesson activity in which all students engage, or as a suggested optional support specifically for English learners."

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 Course Guide describes instructional strategies for developing academic vocabulary and increased comprehension through oral and written discourse. For example, the Clarify, Critique, Correct Routine states, "This routine fortifies output and engages students in meta-awareness."
- The Course Guide provides teachers with sentence frames to support Emergent Bilingual (EB) students in oral and written discourse to increase comprehension of the content. These sentence frames are open-ended to "amplify language production rather than constrain it." The sentence frames are generic enough to be used with any topic and provide the language functions of describing, explaining, justifying, generalizing, critiquing, comparing and contrasting, representing, and interpreting.
- Unit 1, Lesson 1 supports EB students in building background knowledge using Math Language Routine 2. This routine states, "The purpose of this routine is to capture a variety of students' words and phrases in a display that students can refer to, build on, or make connections with during future discussions, and to increase students' awareness of language used in mathematic conversations." The materials do not provide guidance on making cross-linguistic connections through oral or written discourse.

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

- The materials are not designed for dual language immersion programs. However, the materials include a section in each lesson called Support for English Learners. This section includes a Math Language Routine with ideas on how to engage students in listening,

speaking, reading, and writing with content. Each lesson in the materials includes one of these language routines for all students. The Course Guide also supports teachers by providing sentence frames to support emergent bilingual students in oral and written discourse to increase comprehension of the content.

Depth and Coherence of Key Concepts

4.1	Depth of Key Concepts	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.	1/1
4.1b	Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.	2/2

The materials provide opportunities for the students to demonstrate their depth of understanding aligned to the TEKS. Materials include teachers with questions and tasks that increase in rigor and complexity with grade-level mathematical standards.

Evidence includes, but is not limited to:

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.

- At the end of each unit, students complete an End-of-Unit Assessment that requires students to demonstrate their depth of understanding. The Teacher Guide states, "These assessments have a specific length and breadth, with problem types that are intended to gauge students' understanding of the key concepts of the unit while also preparing students for new-generation standardized exams."
- The publisher provides a separate document linking each unit to a list of TEKS covered in the lesson. For example, to address Texas Essential Knowledge and Skill standard 6.7A, Unit 6, Lesson 13, the Lesson Narrative states, "While they practice using the notation of expressions with exponents, students recall and apply their prior understanding of operations and connect those understandings to the meaning of exponents."

Questions and tasks progressively increase in rigor and complexity, leading to grade-level proficiency in the mathematics standards.

- The materials provide practice questions relevant to the lesson and increase in complexity and rigor. For example, in the Cumulative Practice Problems Set for Unit 4 Lesson 4 question 1, the students are given a three-part question. Part A asks the students to draw a diagram to represent the situation. Part B asks the students to write a multiplication or division equation to represent the situation. Part C asks the students to multiply their answer by $\frac{3}{4}$ to determine if their answer is correct. If the answer is not correct, students are instructed to revise their work.
- The materials provide teachers with an example of tasks that progressively increase in rigor and complexity. In the Teacher Guide, Unit 6, Lesson 7, teachers are given instructions for the TEKS on finding equivalent expressions leading to using the distributive property. The lesson

begins with students using tape diagrams to create equivalent expressions and then has students find equivalent expressions utilizing the distributive property.

- Tasks in the materials increase in rigor as the learning lessons move throughout the unit. For example, in Unit 2, students progress from lessons involving concrete and pictorial representations of ratios such as diagrams and number lines to solving problems involving more abstract thinking using proportional reasoning of equivalent ratios.

Depth and Coherence of Key Concepts

4.2	Coherence of Key Concepts	12/12
4.2a	Materials demonstrate coherence across courses/grade bands through a logically sequenced and connected scope and sequence.	2/2
4.2b	Materials demonstrate coherence across units by explicitly connecting patterns, big ideas, and relationships between mathematical concepts.	3/3
4.2c	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.	3/3
4.2d	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.	4/4

The materials demonstrate logically sequenced and connected scope and sequence across grade bands. Materials demonstrate coherence across units by explicitly connecting patterns, big ideas, and relationships between mathematical concepts. Materials demonstrate coherence across units by connecting the content and language learned in previous grades and what will be learned in future grades to the content to be learned in the current grade level. Materials demonstrate coherence between the students' prior knowledge of concepts and procedures to the current grade-level mathematical knowledge and skills at the lesson level.

Evidence includes, but is not limited to:

Materials demonstrate coherence across courses/grade bands through a logically sequenced and connected scope and sequence.

- The scope and sequence of the material describes how unit topics are logically sequenced. In the Unit Dependency Chart, an arrow indicates that a particular unit is designed for students who already know the material in a previous unit. The materials state that "Reversing the order would have a negative effect on mathematical or pedagogical coherence."
- The grade 6 Course Guide Narrative includes a detailed description of the progression of the units as well as how the units connect to prior grade levels. The materials are logically sequenced in the course narrative. For example, in the grade 6 progression details for Unit 1, the materials share details about prior grade-level experiences by stating, "Students began to learn about two- and three-dimensional shapes in kindergarten, and continued this work in grades 1 and 2, composing, decomposing, and identifying shapes." From here, materials continue to describe how to connect this prior learning to the current unit.
- The Course Guide provides teachers with a dependency guide that outlines the vertical alignment of each unit between grade 6 and grade 8. The Course Guide also provides teachers with a dependency guide for grade 3 through grade 8 for those who need to know the sequence of lower grades to work with their students. For example, the information in Unit 6.1 leads to Unit 7.7 which then leads to Unit 8.5.

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

- The materials begin with the concrete concept of Surface Area before moving on to Ratios, Percentages, Operations with Fractions, Operations with Decimals, Expressions and Equations, then Rational Numbers (which includes integer operations and graphing on the coordinate plane), and finally to Data Sets. Although districts may choose or prefer various sequences of instruction, this is a coherent flow of the big ideas that connect concepts for students across the grade 6 materials.
- The Course Guide Narrative describes coherence across units connecting big ideas of mathematical concepts. The sequence of concepts is as follows: Area and Surface Area, Ratios, Unit Rate and Percentages, Dividing Fractions, Arithmetic in Base 10, Expressions and Equations, Rational Numbers, and Data Sets and Distributions.

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 reference prior learning which assists teachers in understanding how to connect the content being learned in the current course to the previous grade level. Unit 3, Lesson 1 Warm-Up begins by prompting students to reason about units of measurement concepts they learned in grade 5. The materials reference this prior content learning as review-related work in grade 5, where students convert across different-sized standard units within a given measurement system and use conversions to solve multi-step, real-world problems.
- The materials describe what the students will learn and how it's related to concepts and language learned in future grade levels. For example, the Unit 2 Unit Narrative states "A proportional relationship is a collection of equivalent ratios, and such collections are objects of study in grade 7. In high school, after the study of ratios, rates, and proportional relationships, students discard the term *unit rate*."
- The materials connect the current grade-level content to how that content will be seen in future grade levels. For example, the Unit 1 Narrative provides the teacher with information about the content that students will see in grade 8. In this example, teachers are informed that "In grade 8, students will understand *identical copy of as congruent to* and understand congruence in terms of rigid motions, that is, motions such as reflection, rotation, and translation."

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 provide teachers with opportunities to learn about students' prior understanding of concepts and procedures. To connect to students' prior understanding, Unit 5, Lesson 1

asks students to engage in an activity to shop and calculate prices with money values and decimals. According to the materials, "This activity allows students to review decimal work in a money context. This activity also includes insights into how they estimate and calculate sums, differences, and products of decimals."

- The materials provide students with opportunities to connect prior knowledge of concepts and procedures from the current grade level. For example, in Unit 2 Lesson 2, the students participate in an activity, Collection of Snap Cubes, which serves two purposes. The first is to reinforce ratio language introduced in the previous lesson, and the second is to better understand the meaning of the term *diagram*.
- The materials include opportunities for students to use prior content knowledge to apply it to a new type of problem. The lesson narrative in Unit 6, Lesson 7 informs teachers that students learned about what percentages are and how to solve certain problems in an earlier unit. "At the time, they did not learn an efficient procedure for finding B in 'A% of B is C' given A and C, because they didn't have an efficient way to solve an equation of the form $px = q$. Now they do, so briefly revisit this type of problem."

Depth and Coherence of Key Concepts

4.3	Spaced and Interleaved Practice	4/8
4.3a	Materials provide spaced retrieval opportunities with previously learned skills and concepts across lessons and units.	4/4
4.3b	Materials provide interleaved practice opportunities with previously learned skills and concepts across lessons and units.	0/4

The materials provide spaced retrieval opportunities for previously learned skills and concepts across lessons and units. Materials do not provide interleaved practice opportunities with previously learned skills and concepts across the lessons and units.

Evidence includes, but is not limited to:

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

- The materials integrate skills from the current lesson and previous lessons within the same unit. For example, the Cumulative Practice Problem Set for 6.5.D has 10 questions from both long division (current lesson) and partial products (previous lesson).
- The materials provide a spiral review of concepts and skills across lessons. The Unit Assessments have questions about several concepts and skills from all lessons within the unit. For example, the 6.4 End-of-Unit Assessment has questions from several concepts and skills, such as when to divide based on the situation, dividing fractions, and solving problems with fractions.
- The materials provide students with opportunities for spaced retrieval practice to show mastery of previously learned concepts and skills across units. Unit 7, Lesson 1 Practice Problem Set includes practice questions from Unit 7 Lesson 1, but also includes questions from Unit 6, Lesson 4, and Unit 4 Lesson 13.

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

- The materials do not provide interleaved practice opportunities for skills and concepts across lessons and units. In Unit 5, Lesson 1.2, the students practice decimal operations, but there are no interleaved practice opportunities with previously learned skills and concepts across lessons and units. "In this activity, students perform decimal operations and estimate with money in a real-world context. They are asked to plan a dinner party for 8 guests with a \$50 budget. Students use an actual grocery store price list, select the foods they wish to serve, and determine an appropriate amount of each item."

- The materials leverage questions that are aligned to each lesson and unit instead of interleaved practice. The cumulative practice questions, mid-unit assessments, and end-of-unit assessments all include questions aligned to the current lesson and unit.
- The materials include a cumulative practice set at the end of each lesson. These question sets are focused on the skills in the current lesson and unit and do not include interleaved practice opportunities across lessons or units.

Balance of Conceptual and Procedural Understanding

5.1	Development of Conceptual Understanding	18/18
5.1a	Questions and tasks require students to interpret, analyze, and evaluate a variety of models and representations for mathematical concepts and situations.	12/12
5.1b	Questions and tasks require students to create a variety of models to represent mathematical situations.	2/2
5.1c	Questions and tasks provide opportunities for students to apply conceptual understanding to new problem situations and contexts.	4/4

The materials include questions and tasks that require students to interpret, analyze, and evaluate a variety of models and representations for mathematical concepts and situations. Materials include questions and tasks that require students to create a variety of models to represent mathematical situations. Materials include questions and tasks that provide opportunities for students to apply conceptual understanding to new problem situations and contexts.

Evidence includes, but is not limited to:

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

- The materials provide questions and tasks that require students to use models that support the learning of mathematical concepts and situations. For example, in Unit 6, Lesson 1 provides questions and tasks with tape diagrams that prompt students to interpret, analyze, and evaluate these diagrams to support their learning of expressions and equations.
- The materials provide questions and tasks that require students to use representations that support the learning of mathematical concepts and situations. For example, in Unit 8, Lesson 6 provides questions and tasks with histograms that prompt students to interpret, analyze, and evaluate representations to support their learning of histograms.

Questions and tasks require students to create a variety of models to represent mathematical situations.

- The materials include questions that require students to use models to represent situations. In the assessment section of the Teacher Guide, the materials note that questions provide multiple ways for students to demonstrate understanding using representations such as tables, graphs, diagrams, expressions, and equations. For example, in the Unit 8 Mid Unit Assessment, students are presented with a question where they must create a variety of histograms and dot plots to represent the data sets provided.
- The material includes tasks that require students to demonstrate an understanding of mathematical situations seen in data and how to represent the situations. The Design Principles include information about how when a new representation is introduced, it is often

presented with a familiar idea first and students are asked to interpret it. The new representations are connected to familiar representations or extended from familiar representations. Students are then given clear instructions on how to create such a representation as a tool for understanding or solving problems. The materials state, "For subsequent activities and lessons, students are given opportunities to practice using these representations and to choose which representation to use for a particular problem." In Unit 8, Lesson 6, students are tasked with creating histograms based on a set of data. In Unit 8, Lesson 4, students are tasked with creating dot plots based on the set of data provided.

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

- The materials include questions that prompt the student to apply conceptual understanding to new contexts. The Design Principles discuss the learning progress of students and as students consolidate their conceptual understanding they can see and understand more efficient methods of solving problems. The Grade 6 Unit 4 End-of-Unit Assessment requires students to apply what they have learned about dividing fractions to area and volume problems. At this point in the materials, the volume has not been discussed.
- The materials include tasks that prompt students to apply conceptual understanding to new contexts. For example, in Unit 2, students are given a real-world situation that requires students to independently apply the concept of volume to a situation involving ratios. This example asks students to find the volume of various dishes needed in a problem with different ratios.

Balance of Conceptual and Procedural Understanding

5.2	Development of Fluency	12/12
5.2a	Materials provide tasks that are designed to build student automaticity and fluency necessary to complete grade-level tasks.	2/2
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.	3/3
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.	6/6
5.2d	Materials contain embedded supports for teachers to guide students toward increasingly efficient approaches.	1/1

The materials provide tasks that are designed to build student automaticity and fluency for grade-level tasks. Opportunities are provided in the material for students to practice efficient, flexible, and accurate mathematical procedures within lessons and units. Materials include the opportunity for students to evaluate procedures, processes, and solutions for efficiency, flexibility, and accuracy within lessons and units. Support is embedded within the material for teachers to guide students toward increasingly efficient approaches.

Evidence includes, but is not limited to:

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

- The materials include tasks designed to build student automaticity and fluency throughout the lessons. The Typical IM Lesson describes the warm-up as an opportunity to strengthen number sense or procedural fluency by asking students to do mental arithmetic or reasoning numerically or algebraically. The warm-up also gives students a chance to make deeper connections and become more flexible in their thinking. One of the instructional routines used in the warm-up is a Number Talk. In Unit 5, Lesson 8.1, the teacher is instructed that "This Math Talk focuses on multiplication of a whole number and a decimal. It encourages students to think about properties of operations and to rely on what they know about place value to mentally solve problems."
- The materials provide distributed practice problems that give students ongoing practice, which supports developing automaticity and fluency. In Unit 5, the Unit Narrative states that "students learn an efficient algorithm for division and extend their use of other base-ten algorithms to decimals of arbitrary length." The materials include practice throughout the unit to help students build on their fluency and automaticity in using efficient algorithms.

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 offer students opportunities to practice being efficient, flexible, and accurate in their mathematical procedures when solving problems. In the Design Principles, the materials state that "carefully chosen anchor contexts are used to motivate new mathematical concepts, and students have many opportunities to make connections between contexts and the concepts they are learning. In some cases, students spend more time developing mathematical concepts before tackling more complex application problems, and the focus is on mathematical contexts." In Unit 4 Lesson 9, students are given a set of division problems and asked to work with a partner to devise word problems that could have the solution.
- The materials offer students opportunities that require manipulatives for hands-on exploration of mathematical concepts to develop procedural skills and fluency through efficient and accurate applications. In Unit 4, Lesson 14.3, the materials encourage teachers to provide half-inch cubes for the students to use to help with solving problems involving the volume of a cube.
- The materials include a warm-up at the beginning of each lesson. One of the instructional routines used in the warm-up is a Number Talk. The materials provide the teachers with structured math talks that lead to more efficient mathematics throughout the unit. In Unit 5, Lesson 8.1, the teacher is instructed that "This Math Talk focuses on multiplication of a whole number and a decimal. It encourages students to think about the properties of operations and to rely on what they know about place value to mentally solve problems. The understanding elicited here will be helpful later in the lesson when students decompose and multiply decimals beyond tenths later in the lesson."

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

- Students are provided with an opportunity to use flexible thinking. Unit 9 Lesson 9.1 asks students to work with a partner to obtain an accurate and efficient answer. The activity has students work in partners to use "Critique, Correct, Clarify" to allow students to improve a sample written response about the fairness of the district maps by "correcting errors, clarifying meaning, and adding details."
- Students work in partners to evaluate processes and solutions for accuracy throughout the unit. For example, in Unit 2, students learn to use double-number line diagrams and tables to represent and reason about equivalent ratios. The materials state, "These representations are more abstract than are discrete diagrams and offer greater flexibility." Students also work with equivalent ratios through tables while deciding which set is most efficient. One example of this is stated "The box-moving problem would be inefficient to represent with a number line diagram, since it would require making 8 half-hour jumps to find the total of 72. Either a tape diagram or a table showing more straightforward multiplication would be more efficient."

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

- Teachers are provided with embedded support to guide students towards increasingly efficient approaches when solving problems related to integers. In Unit 7, Lesson 1.2 guides teachers through how students can use a thermometer (vertical number line) to start internalizing negative values. In the Building Student's Thinking section, the teacher is told "If students count tick marks rather than the space between tick marks, and they include the starting tick mark in their count, consider asking: 'How did you represent the change in temperature on your number line?' and 'What would a temperature change of 1 degree Celsius look like on a number line?'"
- In the Unit 7 Lesson 1.2 Activity Synthesis, teachers are told to tell the students that "the purpose of this discussion is to introduce a negative number as a number that is less than zero, in contrast to a positive number as a number greater than zero." This support guides teachers on questions to ask to help build students' efficiency in increasing difficult problem-solving contexts.

Balance of Conceptual and Procedural Understanding

5.3	Balance of Conceptual Understanding and Procedural Fluency	14/16
5.3a	Materials explicitly state how the conceptual and procedural emphasis of the TEKS are addressed.	0/2
5.3b	Questions and tasks include the use of concrete models and manipulatives, pictorial representation (figures/drawings), and abstract representations.	6/6
5.3c	Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts.	8/8

The materials do not explicitly state how the conceptual and procedural emphasis of the TEKS are addressed. Material provides questions and tasks that include the use of concrete models and manipulatives, pictorial representations, and abstract representations. Support for students in connecting, creating, defining, and explaining concrete and representational models to abstract concepts is provided within the materials.

Evidence includes, but is not limited to:

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

- The lesson narratives include an overview of the lessons, the learning goals, and student-facing learning targets. Neither the learning goals nor the learning targets are aligned with the concepts or procedures aligned with the TEKS. For example, in Unit 5, Lesson 6 narrative, the learning goal is to "Interpret different methods for computing the product of decimals and evaluate (orally) their usefulness" but there is no alignment guidance about grade-level-specific TEKS.
- There is a separate TX TEKS IM document provided includes a list of the TEKS covered in each lesson. This list does not include how the materials explicitly state the conceptual and procedural emphasis of the TEKS addressed in the lesson.
- The materials provide questions and tasks that include opportunities for students to use concrete models and manipulatives to develop an understanding of abstract representations. For example, in Unit 2, Lesson 4 includes a task that uses concrete models to deepen the understanding that students have of the concept of ratios. The task has students use concrete objects such as beakers, food coloring, graduated cylinders, markers, and paper cups to practice mixing different batches for a color recipe to "obtain a certain shade of green." Using a concrete model to develop an understanding of ratios supports students as they move to abstract representations.
- Tasks utilizing pictorial representations are provided in the materials. For example, in Unit 6, Lesson 1 utilizes tape diagrams and Lesson 3 provides hanger diagrams in tasks for students to use as pictorial representations of expressions and equations.

Materials include supports for students in connecting, creating, defining, and explaining concrete and representational models to abstract (symbolic/numeric/algorithmic) concepts.

- In Unit 4, Lesson 4, the materials instruct the teacher to provide pattern blocks as a concrete model to guide students to the abstract concept of fraction division. The students connect that the pattern blocks can represent different values and groups. The text walks the teacher through how to guide students in creating, defining, and explaining how the pattern blocks can represent fraction division. It explains to the teacher that "Students use a concrete reasoning tool, pattern blocks, to explore 'How many groups?' questions where the size of a group is a fraction and the answer to the question (the number of groups) is a whole number. Students begin by identifying the value of different pattern blocks if a hexagon represents 1 whole. They then use the blocks to represent the multiplication of a whole number and a fraction and interpret the situation in terms of equal-size groups. Then students use the blocks to reason in the other direction and find out how many times a fraction goes into another number. They relate such questions to multiplication equations."
- In Unit 7, Lesson 18, the materials instruct the teacher to have students create a visual representation to guide them through the abstract concept of the least common denominator. Students will connect, define, and explain how their visual representation helped them. An example of this problem is "Read and discuss each problem with your group. Without solving, predict whether each problem involves finding common multiples or finding common factors. Circle one or more options to show your prediction. Then your teacher will assign one problem to your group. Work with your group to solve the problem. Then create a visual display that explains your group's mathematical thinking while solving the problem. Your display may include a diagram, lists, tables, equations, descriptions, and math vocabulary."

Balance of Conceptual and Procedural Understanding

5.4	Development of Academic Mathematical Language	14/14
5.4a	Materials provide opportunities for students to develop their academic mathematical language using visuals, manipulatives, and other language development strategies.	3/3
5.4b	Materials include embedded guidance for the teacher addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context.	2/2
5.4c	Materials include embedded guidance for the teacher 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.	9/9

The materials provide opportunities for students to develop their academic mathematical language using visuals, manipulatives, and other language development strategies. Materials include embedded guidance for the teacher to address scaffolding and supporting student development and use of academic mathematical vocabulary in context. Materials include embedded guidance for the teacher to support applying appropriate mathematical language to include vocabulary, syntax, and discourse. Materials provide guidance to support mathematical conversations that provide opportunities for students to hear, refine, and use math language with peers as they develop their mathematical language toolkit. Exemplar responses are provided for the teacher to support student responses to questions and tasks.

Evidence includes, but is not limited to:

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

- In Unit 2, Lesson 9.3, students are asked to use manipulatives such as a meter stick and stopwatch to experience ratios of distance and time. Students use these mathematical tools and manipulatives to develop the concept of rates. Throughout the lesson, the narrative asks students to use the language of per and at this rate to discuss the idea of constant rates. Manipulatives allow students to develop academic language while engaging with concrete mathematical materials.
- In Unit 8, Lesson 9.2, students are asked to use manipulatives such as snap cubes and straight edges to explore the concept of mean. Through snap cubes, students will explore the academic language of "mean or average in terms of equal distribution or fair share." Guidance for teachers includes how to use the snap cubes as physical piles as they work to arrange and balance the manipulatives to enhance their learning of the mathematical academic language.
- The materials offer teachers a slide deck in the Glossary Terms section with the grade-level vocabulary. The teacher can find the vocabulary slides for each unit at the beginning of the

unit. These glossary slides offer teachers the academic vocabulary, the definition, and a visual representation to share with the students.

- Suggestions are provided within the materials for different types of language development strategies. The Progression of Disciplinary Language guide provides suggestions for students to use their academic language through routines. The materials state that it is "designed to grow robust disciplinary language." It suggests that students use the strategy lists to critique, explain, interpret, and justify. This document provides routines and suggested prompts for students in building their mathematical language.

Materials include embedded guidance for the teacher addressing scaffolding and supporting student development and use of academic mathematical vocabulary in context.

- Each unit narrative provides teachers with a progression of mathematical language development. For example, Unit 3 states "In this unit, teachers can anticipate students using language for mathematical purposes such as interpreting, explaining, and justifying. Throughout the unit, students will benefit from routines designed to grow robust disciplinary language, both for their own sense-making and for building shared understanding with peers." The narrative then addresses when to support students through a table explaining the new terminology and in what lesson it will be developed.
- Mathematical Language Routine 2 (MLR2) provides teachers with embedded guidance by offering suggestions on how to scaffold mathematical language. This structure requires teachers to "capture students' oral words and phrases into a stable, collective reference. This routine intends to stabilize the fleeting language that students use during partner, small-group, or whole-class activities for students' own output to be used as a reference in developing their mathematical language." The strategy instructs the teacher to circulate and listen to students explain their representations of the problems to one another during the partner discussion. Teachers should listen to a variety of ways students describe their process. Then, the teachers record examples of the student language heard and diagrams seen on a visual display. This display will continue to be updated, introducing mathematical vocabulary next to student language as students move through an activity. Teachers should remind students that they can "borrow words, phrases or representations from the display to support their work. This will help students develop mathematical language about each representation."

Materials include embedded guidance for the teacher 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.

- In Unit 6, Lesson 1.2 provides guidance to teachers about what types of student responses they should hear at each level of the lesson. For example, one set of guidance reminds

teachers that at this point, "students are likely to express these ideas using informal language, and that is okay. Encourage them to revise their statements using more precise language, but there is no reason to insist they use particular terms." This provides teachers with guidance on what an exemplar of a student response would sound like at this stage in the learning progression.

- The Advance Student Thinking section in Unit 6, Lesson 1.3, gives teachers an exemplar of how students might respond to a task and what teachers might ask in response to those who need additional clarification. In this section, the guidance says "Students might draw a box with 3 for the equation $18=3\cdot y$. Ask students about the meaning of multiplication and specifically what $3\cdot y$ means. Ask how they could represent 3 equal groups of unknown size y . Students might think they need to show an unknown number (y) of equal groups of 3. While this is possible, showing 3 equal groups with unknown size y is simpler to represent." Guidance like this supports the teacher as they respond to various tasks within the materials.
- Embedded guidance for the teacher to support mathematical conversations is provided in Unit 7, Lesson 9.3. The Activity Synthesis states, "display sentence frames to support whole-class discussion." The lesson guides the teacher to use the examples "One strategy I used to choose a clue was..." or "One way that I checked that a value was a solution to the inequality (using the number line) was to..." These examples help to support student discourse as students develop their math language toolkit.

Balance of Conceptual and Procedural Understanding

5.5	Process Standards Connections	6/6
5.5a	Process standards are integrated appropriately into the materials.	1/1
5.5b	Materials include a description of how process standards are incorporated and connected throughout the course.	2/2
5.5c	Materials include a description for each unit of how process standards are incorporated and connected throughout the unit.	2/2
5.5d	Materials include an overview of the process standards incorporated into each lesson.	1/1

The process standards are integrated appropriately into the materials. Materials include a description of how process standards are incorporated and connected throughout the course. Materials include a description for each unit of how process standards are incorporated and connected throughout the unit. Materials include an overview of the process standards incorporated into each lesson.

Evidence includes, but is not limited to:

Process standards are integrated appropriately into the materials.

- The materials include a How to Use These Materials section that contains The Math Process Standards Chart. The chart outlines the TEKS process standards that are integrated in the materials.
- The materials include evidence of the process standards within the Activity Narrative description of each lesson. The mathematics process standards aligned to the lesson are in parentheses at the end of the description.

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

- The How to Use These Materials section describes how process standards are incorporated and connected throughout the course. It states, "The Math Process Standards describe the types of thinking and behaviors students engage in as they are doing mathematics." For example, "Students have an opportunity to explore the tools before they are asked to use them to represent mathematical situations in later lessons."
- The online materials include evidence of a description of how process standards, or mathematical practices, are connected throughout the course. In the How to Use These Materials section of the Teacher Guide, there is a Math Process Standards Chart section that states, "Teachers will notice that some instructional routines are generally associated with certain mathematical practices." Following, there is a description of how instructional

routines throughout the course align with mathematical practices. The chart also demonstrates how process standards connect throughout the course.

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

- The materials include a description for each unit of how process standards are incorporated and connected throughout the unit. In the How to Use These Materials section, there is a Math Process Standards Chart. This chart correlates the process standards present in each unit of the materials and each lesson.
- The materials include a Process Standards Integration Document for the TEKS and illustrate how the process standards build and connect throughout the units by connecting the student expectation with a narrative description of how the process standard(s) are represented in the units.

Materials include an overview of the process standards incorporated into each lesson.

- The materials include a description for each unit of how process standards are incorporated in the lessons. In the How to Use These Materials section, there is a Math Process Standards Chart. This chart provides a useful overview of how the process standards are incorporated into each lesson.
- Mathematical Process Standards are found in the warm-up activity of every lesson throughout the units. In the A Typical IM Lesson section, the materials state that the warm-ups "place value on students' voices as they communicate their developing ideas, ask questions, justify their responses, and critique the reasoning of others."

Productive Struggle

6.1	Student Self-Efficacy	15/15
6.1a	Materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics.	3/3
6.1b	Materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems and complete tasks.	6/6
6.1c	Materials are designed to require students to make sense of mathematics through doing, writing about, and discussing math with peers and teachers.	6/6

The materials provide opportunities for students to think mathematically, persevere through solving problems, and to make sense of mathematics. Materials support students in understanding, explaining, and justifying that there can be multiple ways to solve problems and complete tasks. Materials are designed to require students to make sense of mathematics through doing, writing about, and discussing math with peers and teachers.

Evidence includes, but is not limited to:

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

- The instructional materials encourage mathematical thinking and problem-solving through well-designed lessons that engage students with challenging problems and deepen their understanding of math concepts. Each lesson promotes exploration, reasoning, and resilience in problem-solving, and fostering strong mathematical skills. For example, in Unit 8 Lesson 17.3, students create and analyze simulations based on real-world scenarios.
- The materials include opportunities for students to utilize manipulatives as they make sense of mathematics. For example, Unit 8 Lesson 17.3 states "Arrange students in groups of three. Assign each group a question slip from the blackline master. Provide access to number cubes, compasses, protractors, rulers, paper bags, colored snap cubes, scissors, and coins. Give students 15 minutes for group work followed by a whole-class discussion."
- The materials provide students with opportunities to build perseverance through real-world mathematical scenarios. For example, Unit 3 Lesson 4.4 encourages teachers to "welcome any strategies for reasoning about equivalent ratios but encourage students to try to find efficient methods using multiplication and division."

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

- Lessons and tasks throughout the materials require students to explain or justify their thinking. For example, Unit 8 Lesson 2 states: "Justify (orally) whether a question is 'statistical' based on whether variability is expected in the data that could be collected" and to "match

survey questions to data sets representing possible responses and justify (in writing) why they match."

- The materials value diverse problem-solving approaches, supported by strategies and consistent instructional routines in the Supporting Diverse Learners section of the Teacher Guide. For example, the "MLR7: Compare and Connect" routine requires students to compare different mathematical approaches while explaining and justifying their various problem-solving methods.
- Embedded supports within the material provides opportunities for students to justify and explain multiple ways to solve problems. For example, in Unit 3 Lesson 14, the Learning Goals section explains that the student chooses and creates a tape diagram, double number line diagram, or table to solve problems involving percentages and explain (orally) the solution method. Then the student determines what information is needed to solve a problem involving percentages.

Materials are designed to require students to make sense of mathematics through doing, writing about, and discussing math with peers and teachers.

- Teachers are guided in facilitating meaningful discussions and activities, promoting collaborative learning of mathematical concepts. The activities often give students opportunities to write about mathematics with their teachers and peers. For example, "MLR1: Stronger and Clearer Each Time" is found in Unit 2 Lesson 5, and students will be "given a thought-provoking question or prompt and asked to create a first-draft response. Students meet with 2–3 partners to share and refine their responses through conversation. While meeting, listeners ask questions such as: 'What did you mean by . . .?' and 'Can you say that another way?' Finally, students write a second draft of their response that reflects ideas from their partners and improve their writing."
- The structure within the materials called Stronger and Clearer Each Time gives students an opportunity to do the math, then write about and discuss it, followed by revising all steps. The materials state, "To provide a structured and interactive opportunity for students to revise and refine their ideas and their verbal and written output, this routine provides a purpose for student conversation and fortifies output." The main idea is to have students think or write individually about a response, use a structured pairing strategy to have multiple opportunities to refine and clarify the response through conversation, and then finally, revise their original written response. Throughout this process, students should be pressed for details and encouraged to press each other for details."

Productive Struggle

6.2	Facilitating Productive Struggle	10/10
6.2a	Materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications.	6/6
6.2b	Materials offer prompts and guidance to assist teachers in providing explanatory feedback based on student responses and anticipated misconceptions.	4/4

The materials support teachers in guiding students to share and reflect on their problem-solving approaches, including explanations, arguments, and justifications. Materials offer prompts and guidance to assist teachers in providing explanatory feedback based on student responses and anticipated misconceptions.

Evidence includes, but is not limited to:

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 helping students articulate and reflect on their problem-solving methods through various tools. The Key Structures Document and Section Level Planning Guides provide frameworks for facilitating explanations, arguments, and justifications. Samples of questions to promote reflection, explanation, and justification include questions such as "What math did you learn and do today that connect to something you knew from an earlier unit or grade?" "Describe a time you used the math you learned today outside of school," and "How did your thinking change about something in math today?"
- Teachers are provided excellent insight into prompting students to put their thinking into words. Students' communication may be explaining, arguing, or justifying in these activities, but sharing and reflecting are always included. For example, "If a student is presenting an explanation, play the role of not understanding and say, 'Could you help me make sense of your thinking? Could you revise your explanation?'"
- The Course Overview provides a section, Supporting Diverse Learners, that describes the five Design Principles for Promoting Mathematical Language Use and Development. Principle 2: Optimize Output focuses on guiding students to share and reflect on their problem-solving approaches by explaining, arguing, and justifying. It states, "Opportunities for students to produce output should be strategically optimized for both (a) important concepts of the unit or course, and (b) important disciplinary language functions (making generalizations, making conjectures and claims, justifying claims with evidence, explaining reasoning, critiquing the reasoning of others, and comparing approaches and representations)."

Materials offer prompts and guidance to assist teachers in providing explanatory feedback based on student responses and anticipated misconceptions.

- The Unit 6 Lesson 3.4 Cool-Down guides teachers on how to provide feedback and determine next steps based on student responses. It states "students will have more opportunities to understand the mathematical ideas in this cool-down, so there is no need to slow down or add additional work to the next lessons. Instead, use the results of this cool-down to provide guidance for what to look for and emphasize over the next several lessons to support students in advancing their current understanding." Lesson Cool-Downs provide specific prompts to guide teachers in responding to student answers, ensuring feedback is informative and corrective.
- In the Responding to Student Thinking section, teachers are offered guidance on providing feedback to student responses. In Section A Checkpoint Task 1, teachers are instructed that "If students struggle to classify questions as categorical or numerical, plan to reinforce the idea in the following sections by asking students to classify questions as they arise. For example, when students create questions about collected bottle caps, have students classify their suggested questions or specifically create a question of each type." It also gives them a problem that they can work through with students who are struggling.